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Ruth Gehrmann

FUTURE T/ISSUES

ORGAN TRANSPLANTATION IN LITERARY AND MEDICAL NARRATIVES

MEDICAL & HEALTH HUMANITIES
AESTHETICS, ANALYSES, APPROACHES

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Edited by
Mita Banerjee, Monika Pietrzak-Franger
and Anita Wohlmann

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For Marc and Olivia, who are all of my futures.

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Contents

1 Introduction: Speculating Transplantation

Any idea of tomorrow is linked to today: Thinking about the future, be it in terms of scientific prognoses or dystopian imaginaries, necessarily relies on speculation based on what is known, hoped, or feared in the present. Naturally, then, the future is a construct – the speculative result of asking: "What if?". Even though I want to engage with days yet to come, the notion of a single future thus needs to be abandoned immediately. This study is not interested in how accurate a specific prediction turned out to be – rather, the process of producing possible futures lies at the core of my endeavor. This notion resonates with Margaret Atwood who explains that her *Year of the Flood* (2009) is "A future, not THE future" (*In Other Worlds* 4). To Atwood, the future remains an unknown, as "from the moment now, an infinite number of roads lead away to 'the future', each heading in a different direction" (*In Other Worlds* 4). Each of these directions is triggered by focusing on different access points in the present and by choosing a specific point of reference for one's thought experiment. In this book, I want to further investigate the significance of wondering "what if?" and sketch its relevance both within and beyond the artistic realm. I aim at showing that speculation is a shared endeavor that crosses disciplinary boundaries and hereby argue that in creating possible futures, medical and literary narratives intersect and fertilize each other. In the following pages, I want to apply this idea of speculation to the medical realm by focusing on a much-discussed development of the 20th century: organ transplantation. But before, I need to outline the conventions of the texts I am most interested in, speculative fiction and medical life writing.

In the literary realm, speculating the future has predominantly been tied to one genre: science fiction. Science fiction began to be perceived as a literary genre rather than pulp fiction as its impact grew in the course of the 20th century. Science fiction addresses the cultural significance of scientific developments and appears as a vital tool to navigate the growing influence of technology, thus, the "grounding of SF in the material rather than the supernatural becomes one of its key characteristics" (Roberts 5). By appearing as the artistic solution to thought experiments, science fiction offers frameworks for a world continuously shaped by a variety of impacts – be they economic, technological or societal. Eric Carl Link explains: "In terms of its impact on the culture at large, one might make the case that science fiction is *the* central narrative genre of the twentieth century, especially in the United States" (17, emphasis in original). Theoretical engagement with the genre refers back to Darko Suvin's focus on the novum as "an important deviation from the author's norm of reality" ("The State of the Art in Science Fiction Theory" 36). Accordingly, Suvin situates science fiction at the intersection of

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cognition and estrangement, as "*SF is, then, a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition*" (*Metamorphoses of Science Fiction* 7–8, emphasis in original). Suvin's fundamental work thus emphasizes aspects that are central to my understanding of speculation: he relates to the construction of alternative frameworks, experimental realms in which contemporary processes or imagined developments can be discussed. With regard to the future, these frameworks function as possible pathways that enable the scrutiny of present developments. Regarding my interest in speculation, these engagements with the future correlate the known and the unknown and thereby facilitate complex musings about cause and effect. Here, science fiction allows for the intersection of the personal and the collective, for instance when considering the societal implication of technological change that is specific to lived realities.

While the term science fiction has been broadened to also contain texts not focusing on science or technology, and, as Farah Mendelsohn notes, "has not remained static" (4), the recent employment of "speculative fiction" appears specifically appealing for my endeavor. Marek Oziewicz explains that speculative fiction, "has recently been used in reference to a meta-generic fuzzy set supercategory – one defined not by clear boundaries but by resemblance to prototypical examples – and a field of cultural production" (1). Speculative fiction is positioned at the intersection of ongoing cultural, literary and political developments that may also oppose notions of Western science tied to the term science fiction. The term's openness and emphasis on speculative practices appears particularly fitting for *Future T/Issues*, which, too, correlates narratives beyond genre-distinction by understanding speculation as a shared undertaking.

Whereas the field of speculative fiction – as the name already implies – thus openly and proudly speculates, the life sciences tend to be framed as distinctly non-speculative. This reading, of course, is understandable: The idea of a doctor openly speculating might cause concern. However, as I aim at showing, medical practice is deeply intertwined with speculation. Considering, for instance, this quote assigned to Hippocrates: "Declare the past, diagnose the present, foretell the future; practice these acts. As to diseases, make a habit of two things – to help, or at least to do no harm" (McCullough 134).[1] Hippocrates's impact on Western medicine remains undeniable even about 2,400 years later. The Hippocratic Oath is still commonly sworn by physicians and clearly establishes a sense of coherency in

1 This translation of Old Greek published in *The Historical Dictionary of Medical Ethics* simultaneously interprets Hippocrates's instructions and adds an "at least" to his premise of doing no harm.

Western medicine, even though Hippocrates's authorship has been questioned and ongoing adjustments to the oath have been emphasized (Hulkower 42). Rather than focusing on the physician and their search for knowledge, the quoted passage concentrates on the patient's well-being. Patient-care is positioned in a temporal framework in which present, past and future need to be recognized and approached in a specific manner. The future, the quote suggests, demands to be "foretold" and is thereby distanced from present and past which are introduced in less speculative terms. Without running the risk of putting too much emphasis on these words translated from the Greek original, it is striking that in this early and highly influential medical text, "foretelling" – or speculating – the future is granted significance in treatment and is introduced as an intrinsic part of medical practice.

Despite claims on non-speculation, then, medical practice can be read as also pertaining to the future: By focusing on the possibility of speculation, the "foretelling" as we might suggest with reference to Hippocrates, medical narratives reveal their shared interest with speculative fiction. This investment in the future has been highlighted by Cornelius Borck who explains that "[f]or one hundred and fifty years medicine as a science [Wissenschaft] has carried the connotation of being a promise for the future" (15, my translation). Borck's comment frames medicine's ties to the future, it appears as a "promise", a positive factor working towards universal benefit. Yet despite this future-orientation, medicine is not typically perceived as being prone to speculation as medical professionals are eager to emphasize. As Nobel Prize-winning immunology scholar Peter Medawar explains in his autobiography from 1988, "[s]cientific discovery cannot be premeditated" (161). To Medawar, what could be discovered remains unknowable – in effect, speculating about the future appears useless. Despite this claim, however, outlining the future remains a central aspect of scientific endeavor, ranging from grant application, to diagnosing the risks of surgery, to planned experiments. Therefore, I read medical approaches to the future as ambiguous: The future needs to be approached in order for medical practice to progress, at the same time, medicine has to appear non-experimental, reliable and thus scientific.

This ambiguous relation to the future also translates into an ambiguous affinity with speculation as a mode of meaning-making and is prominently expressed in examples of life writing. In her autobiography, Maria Siemionow, who famously transplanted the first face in 2008, emphasizes the role of the future for current considerations:

> But the farther you reach beyond what you are absolutely certain can be done, the farther you move into an unknown where rewards and risks are not well defined. . . . The challenge of balancing anticipated rewards against estimated risks reaches back to the origins of the profession. (115–16)

Siemionow introduces the unknowable quality of the future as a necessary part of patient-treatment as risks and possible benefits are estimated. Here, the outcomes of treatment are also cause for uncertainty, they are "not well defined." The surgeon's engagement with the future appears obvious, however, her quote also presents her understanding of medicine as non-speculative as she deliberately "balances" what can be "anticipated" and "estimated." The quote further underlines the significance of the future for medical endeavors while simultaneously illustrating a restraint to openly speculate. Medicine's future-orientation thus works against medical professionals' aim of a non-speculative approach, since engagement with the future also triggers speculation. Hereby, I want to argue, speculation is revealed as a hidden feature of medical discourses and I propose that the speculative mode tends to be traceable only at the margins of medical narratives.

Given this marginalized position of the speculative mode in medicine, it has not found considerable attention in critical analysis so far, however, it has been addressed in Emily Russell's compelling concept of "speculative medicine" from 2019. Here, the literary scholar emphasizes the necessarily speculative elements of medical practice and Russell explains with regard to the developments of transplant practices that "[i]t takes a tremendous effort of imagination and a fundamental temporal reframing to continue such experimentation in the face of these setbacks" (268). In order to denote this "imaginative entreprise", she develops the term of "speculative medicine" and specifically refers to the genre of speculative fiction (268). In the realm of speculative medicine, Russell explains, "the failures of today are consumed by an overwhelming priority given to the promise of the future" (268). By tracing speculation in medical and literary narratives, I want to follow up on Russell's concept and her insistence on the speculative element in medicine. Hereby, my approach also surpasses boundaries of genre and discipline.

Both medicine and literature, then, share a key ingredient, a basic endeavor pursued both by the openly fictional writing of Atwood and the medical instructions proposed by Hippocrates: They engage with the future in order to navigate developments in the present. In both the medical and the fictional realm, the future is rendered a space in which present trajectories are made visible and considered for further scrutiny.

If we consider speculation as a shared undertaking that crosses boundaries between the realm of fiction and the realm of science, it becomes a powerful tool to cross disciplinary boundaries and to bridge the gap between medical and literary discourses. In *Speculation: A Cultural History from Artistotle to AI* (2021), Gayle Rogers underlines the significance of speculation: "Speculation provides the language and conceptualization by which we produce contingent knowledge, ideas,

abstractions, risks, and even more money and financial gains, all of which radically shape our individual and collective futures" (3). Following Rogers's understanding of speculation as a form of language, it is particularly noteworthy that it can be understood as a language that makes conversation across disciplines possible. Depending on context, speculation takes on different forms and triggers different reactions, prominently, in finance, "speculation" is used to denote investments with high risks and the possibility of substantial returns. James J. Angel and Douglas M. McCabe explain that "speculation – and the criticism of it – has continued to the present day. This is not a black and white issue, as speculation is an important part of our modern business culture" (278). Speculation may be met with criticism yet also forms the foundation of many conversations – both within and beyond the realm of business. In my endeavor to trace the role of speculation in engagements with organ transplantation, I understand it as a mode of thinking that deliberately follows the question of "what if?" and that attempts to create meaning by either projecting present trajectories into the future or, in the sense of alternative histories, by wondering how the present would be impacted if the past had developed differently. I thus also draw from Rogers's assessment of speculation as "a certain kind of thinking and acting: a charged and unruly (and sometimes unscrupulous) 'cognitive provisionality,' rather than more rational and deliberate planning, knowing and constructing" (3). This reading appears particularly fruitful in the context of speculation as a political force that is prominently expressed in speculative fiction from the Global South. At the same time, I also want to draw attention to ways that the speculative mode occurs at the margins of medical texts that refrain from open speculation. Hereby and by perceiving the speculated future as a realm shared by different disciplines, *Future T/Issues* also argues against a reduction of the speculative mode to the fictional, non-scientific field.

Tying into Atwood's establishment of multiple futures, the act of speculation is also one of creativity: It embellishes specific elements while abandoning others, thus creating an abundance of possibilities. In my endeavor to further investigate speculation as a common trait, it is for this reason vital to focus on a point of reference that inspires people to speculate, to further engage and to wonder: "what if?". The specific phenomenon that forms the core of my discussion drew speculative engagements long before it became medically feasible and continues to do so even after it became medical practice: Organ transplantation. Organ transplantation appears as such an interesting point of reference because it intersects a host of vital topics that tend to be projected into the future. Talking about transplantation oftentimes entails speaking about mortality and about the most intimate *parts* of oneself: The inside of one's body. At the same time, transplant practices are closely related to geo-political location and the social disparities between Global South and North, they are shaped by legal frameworks and impacted by re-

ligious readings. Given this position at the intersection of the personal and the global, opting for transplantation appears as both, a personal decision and as deeply entangled with lived experience and socio-political surroundings.

It may also be due to this position at the intersection of a variety of fields and discussions that organ transplantation has developed into a staple of narrative engagements that both anticipate and shape readings of the practice. While the possibility to transplant organs already occurs in narrative form in mythical representations of Cosmas's and Damian's transplantation of a leg in the 3rd century,[2] Mary Shelley's *Frankenstein; Or the Modern Prometheus* (1818) follows a being totally constructed from post-mortem tissues. Since its publication more than 200 years ago, Shelley's work has become a template lending itself to frame alienation and physical change, as the case of Mr. A., who received a liver in 1979 suggests. Mr. A. suffers from what he calls the "Frankenstein syndrome", and an article in *The American Journal of Psychiatry* from the same year explains that: "He felt that he had been 'pieced together', and was a different entity, 'as opposed to being a regular human'" (Dubovsky et al. 1091). Yesheen Yang derives that "[i]n aligning himself with the wretched reanimated creature, Mr. A. expresses not only a sense that his body is fractured, but also a notion that he is isolated by his condition of surgical multiplicity" (182). Here, the impact of narrative on framings of transplantation is revealed in chosen terminology, which also emphasizes the pluripotent, individual quality of literary metaphors.

The long-lasting impact of such narrative frames becomes exemplarily clear in Dr. Sergio Canavero's plans to transplant a full human body which he presented in 2017. The surgeon himself deliberately links his HEAVEN project[3] to Shelley's novel, claiming that it holds the key to his endeavor (Brodwin). Given that the novel refrains from any specific instructions and was written long before Canavero's attempt, the key he refers to has to be ideological, rather than biotechnological. It appears unsurprising that several articles have followed the surgeon's example and have portrayed Canavero's planned surgery with reference to *Frankenstein.* Tristan Greene, for instance, titles an article for *TNW:* "Human Head Transplants, and the Mad Scientist Who'll Perform Them", and explains that "[t]he mysterious work of Dr. Sergio Canavero is the stuff of grade-B horror movies" (Greene). Emily Russell analyzes that in coverage of Canavero "calls to horror narratives serve as footholds for public attempts to understand experimental medicine within the frame of the familiar" (215). The pervasiveness of horror imagery in the public

2 For further reference on Cosmas and Damian's transplantation of a leg, see "Cosmas and Damian Revisited" by Bruce W. Conolly and Mario Benanzio.

3 The acronym stands for Head Anastomosis Venture Project.

realm comes to the fore and the speculative mode presented in the novel also migrates into medical narratives. "Frankenstein", then, encompasses a vast range of anxiety-inducing notions, as well as prejudices about biomedical developments that are deliberately alluded to both in- and beyond the medical sphere.

Here, I use *Frankenstein* to underline the impact of stories about transplantation on the perception of the practice, however, this tendency can by no means be reduced to Shelley's work. For instance, and in a comparable reference, heart recipient Claire Sylvia describes herself post-transplant as Humpty Dumpty, since she had "experienced a great fall, a traumatic breaking apart" (113). Such references to literary engagements illustrate the impact of fictional storylines and position transplantation in reciprocal connection with its societal, political, and legal contexts. Similarly, Veronique Campion-Vincent's studies on organ theft narratives indicate that even though contemporary myths about stolen eyes or kidneys may not be factually true, they present "symbolic truths" by opening a counter-narrative to readings of medical progress and advancement ("Organ Theft Narratives" 32). Thereby, these narratives express disenfranchised voices and enable deeper understandings of the socio-political contexts of tissue transfer. As Naarah Sawers claims, "it is through stories that any form of cultural authority is granted, and when fictional narratives ideologically underscore and support cultural shifts, a populace can feel comfortable with all manners of cultural practices" (169). Sawers thereby highlights the importance of storytelling for processes of meaning-making, a connection that also emphasizes the need to include different forms of narrative in the analysis of biomedical developments. These fictional accounts, then, allow for the appreciation of how the body is culturally processed. In a speculative realm, they also suggest that structural relations impact the reading of bodily tissues and allow for exploitative treatment. Herein lies a key role of how my approach uses fictional representations: The employment of speculative elements facilitates the discussion of transplantation beyond its mere medical feasibility and expresses how tissues are culturally produced.

As these examples suggest, transplantation is perceived as cause for speculation even by those invested in the practice. Engaging in the act of wondering "what if?", however, might also entail engaging with uncertainty – uncertainty about where transplantation might lead. While speculative fiction has openly followed this line of thought, as will be further developed in the chapters of this book, medical narratives tend to focus less on said uncertainty. Obviously, eradicating uncertainty in favor of positive outlooks is vital for anyone engaged in the practice. Consider, for instance, Christiaan Barnard asserting in *One Life* in 1969: "I'm not experimenting. I know what I can do. We've proved we can transplant a heart and make it work" (393). Barnard's claim on non-experimentality may appear surprising given that heart-recipients faced extremely low survival rates in the 1960s.

Louis Washkansky, for instance, who was the recipient in the first successful interhuman heart transplantation, lived for 18 days after the operation (Stolf 425). Barnard's claim could be read as a remark on the immune system hindering long term survival, rather than surgical skill. At the same time, the emphasis on scientific success and non-experimentality expressed here suggests a need to affirm the relevance and reliability of the practice in the 1960s. Working against Barnard's claim on predictability, transplant surgeon Thomas Starzl[4] frames the practice as unknowable even almost twenty years after Barnard's comment: "Thus, transplantation became the Pandora's box of 20th-century science" ("Small Iowa Town" 13). Starzl's reference to Greek mythology not only illustrates the dominance of narrative motifs for ongoing processes of meaning-making but establishes the belief in possibly disastrous effects of organ transplantation. In these examples, I argue, the ongoing fascination with transplantation in both speculative fiction and -medicine can be gleaned: Speculative fiction's investment in following the question of "what if?" is mirrored in the surgeons' musings about technological progress and its impact on transplantation.

So far, I have tried to introduce the notion that speculation is a shared tool that arises in both medical and literary narratives, however, the connection can be further strengthened by exemplifying how narratives of science fiction enter surgeons' musings. It is vital to consider that even though several authors mention science fiction, they are prone to diminish its importance. Medawar appears as a prime example for this tendency:

> Although H.G. Wells and Jules Verne were important in a general sort of way, colouring my thoughts and then turning them towards science, the only really informative reading I indulged in was the admirably well-written series of elementary science books by Ernest Benn. Each *Benn's Sixpenny Booklet* was on a subject, such as "Atoms", "The Earth" or "the Stars". (22)

The role Medawar grants Jules Verne and H.G. Wells is highly noteworthy, specifically because he dismisses them. After all, it was Wells and Verne, Medawar remembers, who influenced his thinking ("colouring my thoughts") and raised his interest in science ("turning them [his thoughts] towards science"). The underlying impact, their "general" importance, as Medawar notes, is clearly established. It is therefore particularly striking that the physician juxtaposes them with the only "really informative reading," the science books of his youth, whose factual nature is underlined by the inclusion of their specific scope and topic. Even though Wells

4 Thomas Starzl has been known as the "father of transplantation" (Eghtesad and Fung) and performed the first human liver transplant in 1963.

and Verne are thus presented as an inspiring force for Medawar's thinking and scientific interest, they are clearly subordinated to the more instructive, non-fictional readings of his youth. Another surgeon who was arguably shaped by endeavors of science fiction is Thomas Starzl, whose father, R.F. Starzl, was a journalist, owned a newspaper and was a published author of science fiction in the 1920s and '30s (Starzl, *The Puzzle People* 10). As his father left his career as a writer of fiction behind, he further developed his investment in mechanics. Thomas Starzl explains:

> The science fiction, now behind him, had been a hollow exercise of imagination. The love of translating ideas into real structure led to his next passion, which could be seen in the steadily expanding dimensions of the machine shop in the basement of our house. (*The Puzzle People* 12–13)

His father's career as an author is reduced to "a hollow exercise of imagination" and stands opposed to his following mechanical endeavors. At the same time, however, both occupations cannot be fully separated as they are presented as relying on "[t]he love of translating ideas into real structure." Both science fiction and mechanics thereby become means of construction in which the abstract is made concrete. These examples of Medawar and Starzl are not supposed to indicate that any given transplant surgeon is ultimately inspired by works of science fiction, rather they serve to illustrate shared interests of the scientific, technological and speculative realm.

The permeability of medical narratives to speculative elements, then, can oftentimes be found in the texts' margins. This notion is prominently exhibited by transplant surgeon William H. Frist who in his autobiography from 1989 relates to Greek mythology when referring to his patients as "chimera" (67). "Chimerism" has been used in various scientific disciplines and varies in meaning depending on context.[5] The term hinges upon the merging of different kinds of entities, in its original context, a minotaur, for instance, consists of both human and bull parts. For Frist, on the other hand, the term appears hopeful; referring to an episode in the Eighties, he muses:

> We were a long way from the morning Louis Washkansky had declared himself the new Frankenstein monster. A medical symbol for transplantation was, in fact, the chimera. For classical scholars, the chimera was a monster, a mythological, fire-breathing beast with a lion's head, a goat's body, and a serpent's tail. Genetically, a chimera was an organism composed of two or more distinct tissues or an artificially produced individual having tissues of

5 For a brief introduction to different meanings of "chimerism" see Bourret et al., p. 1.

> several species. Commonly, chimera implied something ineffable, an idle fancy, an impossible dream. (67)

Frist distances his concept from previous perceptions and presents earlier days of transplantation as long gone. Rather than following Washkansky, the heart recipient of the first successful heart transplantation, and his reference to *Frankenstein*, Frist employs a motif known in both legend and medicine, the chimera. Even though he admits to its previous readings as monstrous, he repurposes it to denote a positive outlook. Frist's reconceptualization of the term as an "impossible dream" adds a layer of miracle and incredulity to transplant proceedings. Fittingly, he applies the term to his transplant patients and ties himself into the actualization of the impossible dream of chimerism. Musing about a transplant patient, he explains: "He did seem something of an impossible dream, made up of medical history, personal tragedy, courage, a lot of hope, some skill, a good deal of chance, but real, alive – one of my tender chimeras" (67). The speculative potential of Frist's approach becomes apparent: both "hope" and "chance" play into the patient's successful recovery who is now distanced from existing as a fully human being. Moreover, by using the possessive pronoun "my", the transplant patient is framed as belonging to their surgeon. Even though Frist distances himself from Washkansky's Frankenstein-metaphor, his introduction of "chimera" follows a comparable line of thought. Similar to Washkansky, Frist distances the transplant recipient from other post-operative patients. Frist's term "chimera" hereby underlines the Othered status of transplanted patients, who are described in non-human terms and suggests deviation from a perceived norm.

The undeniable impact of narrative tropes on physicians' readings of patient bodies can be traced further in several examples from different geographical contexts. Particularly the ties between different, possibly monstrous, forms of life and patients prevail. In 2007, Canadian surgeon Todd labels a patient with an open chest "the ET girl" (95) and characterizes her surgically altered body as a form of alien life. The surgeon presents the patient's room as a spectacle: "The unit and indeed the whole hospital buzzed about ET. There was a regular queue outside the window of her room, and we had to mount extra security to prevent too much of a sideshow atmosphere" (97). The attempts to prevent "a sideshow atmosphere" oppose the label of E.T. and the connotation of strangeness and intrigue it entails. Moreover, Todd's flippant tone and the chosen narrative reference suggests his personal difficulty to conceptualize the opened body. Steven Spielberg's *E.T. The Extra-Terrestrial* (1982) becomes a short-cut, a reference to docile yet foreign life. I use this example to show that rather than employing medical language to depict the patient's condition, speculative imagery appears as a tool to express the transgressive force of surgical intervention. In a similar vein and also referencing a work of

popular culture, U.S. American cardiothoracic surgeon Magliato refers to the recipient of an artificial heart as a "bionic woman" (157). In contrast to Todd, she hereby primarily focuses on technological advancement as a means to supersede human limitations. These examples emphasize the broad range of speculative imagery: While Todd presents his patient as a gazed-upon alien in need of human assistance, Magliato frames hers as a technologized heroine. Both examples establish that pop cultural representations impact these physicians' readings of their patients. While before the operation, the patient was described as human, the surgeons employ references to the non- or posthuman body to present the post-operative patient. Thereby, they are not only distanced from non-transplant patients, but their status appears to be permanently changed. Moreover, these references substantiate my deliberate intersection of medical and literary discourses as the impact of speculative narrative on conceptualizations of medical developments is clearly established. This intersection is particularly noteworthy because surgeons position their speculative endeavors and references at the margins of their accounts, in the form of short anecdotes, while speculative fiction openly invests in them.

These examples have shown that literary tropes are not confined to the fictional realm, neither can they be reduced to impacting lay audiences – as Magliato explains, spending time in an anatomy lab reminded her of Robin Cook's *Coma* (132) (see chapter 5.2). Instead, I understand speculative storytelling as a blueprint for the discussion of biomedical progress and as a prominent impact on the forms speculative medicine may take. Employment of literary motifs, however, does not necessarily entail knowledge of the primary text or the origin of a legend, rather, the use of literary tropes enables references to complex questions and challenges in a comparatively simple form. For instance, a reference to *Frankenstein* alludes to a variety of anxiety-inducing notions without the need to offer any specifics. At the same time, I use these examples to underline a common desire to reduce science fiction's relevance to the margins of surgeons' life narratives. This reading, in turn, introduces a new approach to life writing studies as it not only embraces the field's fictional quality but establishes how literary motifs – speculative ones in particular – permeate its borders. By focusing on these marginalized comments, I present the pervasiveness of the speculative mode in both literary and medical narratives.

By tracing the pervasiveness of the speculative mode, this study thus attempts to emphasize the complex, multifaceted and continuing discussion on organ exchange by bringing different forms of writing into conversation and by establshing the unique contribution of fictional narrative for the discussion of biomedical advancement. My study follows three aims:

1. As a work of literary analysis, *Future T/Issues* focuses on the discussion of transplantation in speculative fiction since the 1960s and underlines the contribution of fictional voices to biomedical discussions.
2. With reference to the field of medical humanities, it highlights the close interconnections between the fictional and seemingly factual realm by navigating shared features within works of speculative fiction and autobiographical writings, as well as jurisdictional texts and reports.
3. This analysis draws attention to the shared endeavor of speculation that is not only openly employed in fictional works but prominently shapes surgeons' accounts of their endeavors in the field of transplantation.

In order to follow this tripartite aim, the following chapters engage with decades of the 20th and 21st century. The presented demarcations between decades should not be understood as absolute because ongoing developments hardly yield to artificial timeframes. Graham Thompson fittingly agues: "If there are several expressions that can help to try and distil the values of a particular historical moment – Zeitgeist, 'spirit of the age,' 'sign of the times' – none automatically coincides with the ten-year period known as decade" (1). Nevertheless, the use of decades, speaking about "the Sixties," for instance, also actively shapes public understanding of a given time as Colin Harrison explains:

> [W]hat does it mean to think of history in terms of decades? As a unit of measurement the limitations are obvious: a decade misrepresents processes of change that do not sit within a ten-year-span, and tends to homogenize the events of a period rather than place the accent on conflicts and discontinuities. But the idea of the decade has also become embedded in popular consciousness, influencing the way we think about culture as well as history. (1)

Decades, despite their limitations, appear as a structuring means that is not only applied ex-post but that is ingrained in readings of cultural developments. Even though Thompson convincingly argues that American culture does not "allow a definition of the decade that can sustain narratives of uniformity and commonality" (2), I employ decades to underscore the connectedness between texts and their position in the specific time of their publication. To also allow for a discussion beyond these assigned time frames, the conclusion offers a comparative outlook that attempts to interrelate the chapters and transgress the imposed decades.

Following this introduction, "Organ Transplantation: A Cultural Phenomenon" presents transplantation as a culturally embedded procedure. I am specifically interested in the ways that transplants cross borders: Borders between individuals, geographical borders but also narrative borders. It is especially noteworthy that transplantation is inseparably connected to a distinct reading of the human body, one which separates between transplantable organs on the one, and non-

transplantable brain as the seat of the person, on the other hand. Transplantation, then, cannot be separated from its cultural contexts.[6] The socio-political specificity of framing the human body and its tissues becomes exemplarily clear in discussions about brain death which take different form across national and cultural borders. Japan, for instance, only accepts brain death in case organ transplantation is desired.[7] Hereby, I emphasize that the possibility to transplant specific organs can only be approached while being aware of the practice's intrinsic ties to the body as being socially and culturally conditioned. This cultural specificity is further underlined by chosen examples of speculative fiction and their resonances in medical narratives. The chapter thereby introduces shared strategies of fictional and medical narratives and particularly emphasizes how both engage with the future. By placing specific emphasis on the difficulties and anxieties which continue to be tied to the practice of transplantation even today, this chapter frames transplantation as a cultural phenomenon, pertaining to a complex interplay of individual and society, national and global, and life and death. By referring to a variety of different texts and going beyond the Western context, I specifically pay attention to the ways that fictional storylines, prominently exhibited in organ theft narratives of the Global South, correlate transplantation and disenfranchisement.

In order to trace the mapped correlation between literary and medical narratives and to showcase the role of speculation in both, this second chapter offers a reading of Philip K. Dick's often overlooked *The Penultimate Truth* (1964). It puts Dick's text in conversation with the account of the famous surgeon who transplanted the first heart in 1967: Christiaan Barnard. Here, I show that despite Barnard's claim about the non-experimental nature of transplantation, speculation is prominently featured in his account. Moreover, 1960s newspapers frame transplantation as an element of "Your Fantastic Future" (V. Cohn, "Your Fantastic Future") and imagine it as part of America's technologized destiny. Dick's novel, too, insists on transplantation's role in days yet to come but pays particular attention to its societal significance. *The Penultimate Truth* depicts a society in which access to artificial organs is inseparably tied to social status. Reading Dick's work in its medial, literary and medical contexts thereby allows for the perception of shared interests in public and fictional presentations, prominently the reading of transplantation as part of the future. At the same time, the fictional text navigates matters still at the heart of discussions on transplantation: Who receives organ and how the social standing of disenfranchised groups might impact access to health care. Here-

6 For further reference on the significance of socio-political setting and cultural contexts for constructions of corporality see Farzad Sharifian et al.

7 For further reference on organ transplantation and brain death in Japan see the homepage of Japan's Organ Transplant Network "Views on Brain Death".

by, the text strongly resonates with discussions of the geo-political specificity of transplant practices in which body parts tend to move from Global South to North, but not vice versa (Scheper-Hughes, "Theft of Life" 10).

While the 1960s saw vast potential in transplantation and imagined it as a beneficial contribution to the future, transplantation faced major difficulties in the 1970s as the associated chapter emphasizes. As transplant rejection challenged survival rates, some assumed that the excitement surrounding organ exchange was about to fade. Transplant surgeon William H. Frist explains: "Most surgeons who had jumped on the transplant bandwagon abandoned the procedure" (63). However, as the immune-suppressive drug cyclosporine was developed in the early '80s, survival rates increased, and transplantation became more feasible as a repeatable practice. These promising developments in medicine notwithstanding, my discussion of three U.S. American examples emphasizes that the act of transplantation continued to present ample cause for speculation even at this time of medical progress. A short story by Larry Niven, "The Defenseless Dead" (1973), Robin Cook's medical thriller *Coma* (1977) and Daniel C. Dennett's "Where am I?" (1981) position transplantation at the intersection of legal and philosophical negotiations. By employing Niven's text, I underline the reciprocal relationship between the construction of transplantable bodies and jurisdictional frameworks. Cook's *Coma* also intertwines transplantation with institutional power as his medical conspiracy not only established the medical thriller genre but created an epitomal image of powerless patients. In this chapter I specifically engage with transplantation in close connection with institutionalized power and legal frameworks. Hereby, I aim to show that transplantation intertwines with a variety of fields beyond medicine, ranging from jurisdiction and acceptable forms of punishment to the limits of a brain-centered understanding of the human body. By referencing legal documents, media portrayals and examples of life writing, the chapter underlines their mutual ties. At the same time, however, I also highlight the irreplaceable surplus value of the fictional form in negotiating the individual dimension of societal and medical developments. Hereby, it not only becomes apparent that transplantation is always and necessarily part of a larger conversation, I also show that even though fictional texts are deeply entangled in the discussions of their time, they offer long-lasting and impactful images and actively shape how meaning is created from medical practice.

The chapter on the 1990s aims at decentering Western readings of speculative fiction and discussions on transplantation by drawing attention to transnational engagements. In the 1990s, transplant proceedings developed further, more organs could be used, and the number of performed transplantations increased ("National Data"). Against this backdrop of increasing numbers, my discussion of Manjula Padmanabhan's *Harvest* (1997), Nalo Hopkinson's *Brown Girl in the Ring* (1998)

and Rachel Anderson's *The Scavenger's Tale* (1998) exemplifies that speculative fiction positions transplantation in the framework of social and financial disparities. By referring to organ theft narratives, this chapter follows Véronique Campion-Vincent's understanding of their significance in "convey[ing] powerful protests and anti-elite messages" ("Organ Theft Narratives" 32). Hereby, I aim at showcasing fictional narratives as a form of resistance to structural inequality. My reading underlines that transplant proceedings are correlated with matters of socio-political lived experience, as is expressed in the construction of different markers of demarcation, such as age, class, race and dis/ability. Positioned in the framework of an ongoing technologization of medicine, these texts insist on the disparities of global contexts and relate to often-neglected perspectives on supposedly accessible and equal medical systems.

In the 21st century, transplantation has come to be perceived as an "established and practical definitive treatment option for patients with end-organ dysfunction" (Black et al. 1). Despite this claim to non-experimentality, however, this chapter shows that in the 21st century the practice still offers ample ground for speculation both within and beyond the fictional realm. Aside from Bud Shaw's *Last Night in the OR* (2015), the decades discussed in this chapter also allow for the inclusion of two autobiographies by female physicians: face-transplanting surgeon Maria Siemionow's *Face to Face* (2009) and heart surgeon's Kathy Magliato's *Heart Matters* (first published as *Healing Hearts: A Memoir of a Female Heart Surgeon* in 2010). By focusing on speculation, I show that these medical autobiographies project transplantation into the future and thus present a narrative of the practice as part of medicine's quest for universal benefit. Read in this framework, Nancy Farmer's *The House of the Scorpion* (2002), Neal Shusterman's *Unwind* dystology (2007–2014) and Fred Venturini's *The Heart Does Not Grow Back* (2014) all present medical practice and the bodies it impacts as deeply tied to social position. At the same time, these texts, despite varying in audience, tone and theme, challenge the praise of biotechnological advancement. Instead, transplantation becomes part of complex scientific processes, and its employment is shaped by interdisciplinary discussions. In this vein, I want to show in this chapter that despite the surgeons' insistence on transplantation's contribution to the lives of many and despite the fact that the 21st century has already seen many successful procedures, speculative works continue to tie transplantation to disenfranchisement. Hereby, I show that fictional engagements surpass an understanding of the body as being beyond social demarcation and instead opt for a reading of human tissue as being inseparably tied to social disparities.

The following chapters thereby establish the multi-faceted discussion of transplantation and analyze the pluripotent role of speculation in different genres and narratives. As this introduction has already indicated, this analysis remains neces-

sarily and deliberately fragmented and does not attempt to present a cohesive history of transplantation in speculative fiction. Rather, I aim at bringing vignettes from different areas of discourse, temporal and geographical location into conversation, thus highlighting contextual references but also astounding similarities between works from various cultural frameworks. By drawing from Russell's concept of speculative medicine, I suggest that speculation also occurs in medical engagements with transplantation and offer further insight into the construction of the human body. Hereby, I also navigate which forms speculation may take and how it is employed in different genres and disciplines. In effect, I trace that future tissues are conceptualized as both: Life-saving material that contributes to the survival and lives of many (as medical life writing underlines), on the one hand, and as vulnerable to social context and thus as culturally produced (as speculative fiction emphasizes), on the other. Speculation, then, also serves to introduce deviant readings of transplantation in the future and to establish the surplus value of literary texts' insistence on cultural entanglements.

Hereby, this study shows that the fictional is not merely as discursive as it may seem, and the factual is not free from speculation. Rather, both present specific forms of engagements with the future that are shaped by disciplinary contexts and modes of publication. By engaging with speculation, the shared future-orientation of discussions about transplantation is revealed. Hereby, I suggest that the future is a space shared by (openly) fictional and (presumably) factual realms. By emphasizing the shared "What if?" which connects medical progress and fictional engagements, *Future T/Issues* sets out to be an erosive force of disciplinary boundaries and establishes a dual perspective on human tissues – as a biological resource *and* as a social issue.

2 Organ Transplantation: A Cultural Phenomenon

The medical humanities have emphasized that medical practice cannot be separated from the specificities of its setting and needs to be understood in conversation with other disciplines and forms of expression, such as literature or art (2).[8] Rather than perceiving of medicine and culture as two distinct realms, it is vital to understand the former as part of the latter. Considering, for instance, how surgeon L. Bailey frames organ transplantation as a contribution to the lives of many by stating that "the story of organ transplantation is a paradigm of medical progress" (27). Even though Bailey clearly aims at establishing transplantation's long-lasting effects and non-experimental status beyond the realm of speculation, he also roots it in the cultural realm: It is – and has – a "story". Even more, this narrative draws a paradigm of progress, a development directed towards the future.

This quote appears as a fitting opening for this chapter in which I want to introduce transplantation as a cultural phenomenon and further investigate the uncertainties still linked to it. This discussion suggests that understanding transplantation solely as "a paradigm of medical progress" runs the risk of neglecting its significance as a cultural practice. Rather, this chapter already traces organ transplantation's potential to function as a transgressive force, which surpasses bodily boundaries and crosses disciplinary lines. Different frames of meaning-making thus intersect in transplantation and Moloney and Walker emphasize that it "can be understood as a 'gift of life' but also within a framework that is bio-medical in origin" (311). Understanding transplantation merely within a single framework, then, excludes cultural layers always present in the procedure's conceptualization. In fact, the practice relies upon not only the contribution of a variety of disciplines but also upon a specific reading of the human body that enables the exchange of tissues.

8 The intersection of medicine and the humanities has also been prominently supported and enacted in the field of Narrative Medicine. Maura Spiegel and Rita Charon argue for the mutual benefit to both disciplines: "The skills of the literary scholar gradually became deeply valued by nurses, doctors, social workers, and their patients, while the clinical viewpoints of doctors and nurses contributed urgent new methods in the teaching and writing of those literary scholars" (133).

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2.1 The Body and the Self

The constructed nature of understanding the self as independent from the body's functions is expressed in Virginia Woolf's essay "On Being Ill" (1926) in which she explains: "All day, all night the body intervenes; blunts or sharpens, colours or discolours, turns to wax in the warmth of June, hardens to tallow in the murk of February" (32). The "intervening" body, its impact on lived experience and its ever-changing conditions are introduced and the experiencing self cannot be separated from the body's individual workings. These readings are not limited to the living body and Joralemon explains that "one of the most characteristically human activities is the treatment of the dead as though some quality of the 'person' is still present" (347). Given this intersection of body and self, it appears unsurprising that the intervention presented by transplantation practice can also impact readings of selfhood. Hereby, a double perspective comes to the fore: On the one hand, body and self are distanced in order to allow for tissue transfer, on the other, the impact of psychological factors, which might also be shaped by the experience of illness, for the success of transplantation has been underlined. Surgeon Siemionow explains that patients need to be "psychologically fit" for transplant. She further explains this notion by referring to the first hand transplantation in France after which the recipient had the limb removed again, for Siemionow, "an example of an error in judgement made in selecting a candidate for a transplant" (158). The distance between self and body is thereby simultaneously upheld and problematized by transplant practices.

The seperation of body and self has to be upheld because it is this disentanglement that allows for an organ to become part of another individual and to impact their lived embodied experience. While this separation, commonly aligned with the Enlightenment, presents a first premise, the body itself needs to be fragmented further. In order to pursue transplant practices, the person has to be understood as dead, while the transplantable tissue needs to remain alive. Therefore, for the concept to fully take root and to allow for this intersection of life and death, the brain has to be perceived as different from the rest of the body. This distance between body and self, and between brain and the rest of the body appears as an underlying principle that is situated in the context of Western approaches to the human body. Unsurprisingly, the human body and its cultural framings are highly sensitive to temporal, geographical and socio-political contexts.

In the Western context of transplant practices, the body was primarily separated from- and subordinated to the self. This reading, as Elizabeth Grosz argues in her feminist approach to the body, also reiterates dualisms and hierarchies with regard to a body/mind separation (1). Anthropologists Nancy Scheper-Hughes and Margaret M. Lock trace the distinction of body and self to Hippocrates and his

instruction to "treat only what was observable and palpable to the senses" (9). Most prominently, and name-giving to the Cartesian dualism of body and mind, Renée Descartes concludes that "nature contains two basic independent kind of things, the mental and the physical" (Ostenfeld 9), or as Scheper-Hughes and Lock explain, the "palpable body and intangible mind" (9). Descartes derives that the mind remains the realm of theology, the body that of science (Scheper-Hughes and Lock 9). Thereby, Descartes "succeeded in linking the mind/body opposition to the foundations of knowledge itself, a link which places the mind in a position of hierarchical superiority over and above nature, including the nature of the body" (Grosz 23). This distinction also connects the body to the realm of the physical and the objective – a perspective that contributes to a mechanistic view of the body. Fittingly, Oliva Wiebel-Fanderl observes that the human body had already been seen as a machine before Descartes, but that his work brought the breakthrough for this conception (354). Jon Turney therefore argues that "Cartesian mechanism essentially portrays all organisms as automata" (15).

Unsurprisingly, such objectifying perspectives on the human body have also triggered critical engagements.[9] Michel Foucault's *The Birth of the Clinic*, first published in 1963 and translated into English ten years later, prominently suggests the impact of seeing the body as a distanced entity. With reference to the developments of modern medicine in the 18th century and its employment of medical observation, Foucault speaks of

> the period in which illness, counter-nature, death, in short, the whole dark underside of disease came to light, at the same time illuminating and eliminating itself like night, in the deep, visible, solid, enclosed, but accessible space of the human body. (195)

Understanding the human body as "accessible" triggers the employment of the "medical gaze" as doctors "agreed to approach the object of their experience with the purity of an unprejudiced gaze" (195). While reading the human body as a distanced, objectified entity that allows for unambiguous interpretation of its afflictions in Western medicine thus appears problematic, it is interesting to note that Svenaeus has also brought forth the notion that in specific cases, "good forms of objectification can even make the patient feel more at home with himself by incorporating a richer understanding of what goes on in the body" ("The Phenomenology of Objectification" 142). Such forms of objectification, Svenaeus goes on to note, entail the "acknowledgement of the lived-body dimen-

9 For a summary of critical approaches to objectified readings of the body, see Fredrik Svenaeus's "The Phenomenology of Objectification in and Through Medical Practice and Technology Development", pp. 141–142.

sion" ("The Phenomenology of Objectification" 143). Objectification, then, does not necessarily equal poor treatment, however, this perspective is commonly neglected in the fictional tales that form the canon of this study, as will be emphasized in their discussion.

Moreover, it is also vital to not only consider who is being studied, but also, who is doing the studying. Since the world is experienced via the senses, the body also shapes lived experience. As was just discussed, Hippocrates aims to draw conclusions based on what is "palpable to the senses" (qtd. in Scheper-Hughes and Lock 9). This seeming factuality, however, presents the possible pitfall of not taking the observer's – namely the physician's – position and physical condition into account. Firstly, the observed symptoms are intricately tied to a health professional's education and accompanying knowledge scape, which in turn are part of a specific cultural framework. Secondly, the sensual capacities to hear, smell or observe are based on the functions of an individual body. Seemingly objective treatments can therefore not be entirely separated from bodily experience which shape relations between individuals and their surroundings. At the same time, I want to point out that physicians themselves are part of ongoing cultural negotiations that impact their approach to medical treatment and shape what is "palpable to the senses."

Tying into these problematizations, recent decades have brought major changes to the perception of the body. By now, numerous critics have called for an appreciation of the body beyond its significance as either a symbol or an object of medical interest. Mariam Fraser and Monica Greco summarize this development and claim in their introduction to *The Body: A Reader* (2004): "For while the body and the organism have offered metaphors for the social world, they have not traditionally been considered relevant as subjects for sociological analysis in their own right" (1). They furthermore explain that since the 1980s, this trend has been neglected and interest in the body has peeked again (1). A prior example for this trend is Bryan Turner's *The Body and Society*, first published in 1984. Here, Turner argues that "[t]here exists a theoretical prudery with respect to human corporality which constitutes an analytical gap at the core of sociological enquiry" (33). The mentioned "prudery" applies to the body in its corporal significance, in effect creating a gap in sociological research. Scheper-Hughes and Lock have worked on different conceptions of the body and begin by perceiving "the body as simultaneously a physical and symbolic artifact, as both naturally and culturally produced, and as securely anchored in a particular historical moment" (9). While this reading keeps the body open to symbolic readings, it establishes its significance beyond human construction: The body's physical presence constitutes significance in its own right and surpasses divisions of the natural and the cultural.

So far, I have attempted to sketch the complexities of the human body, its dual role as a product of cultural imagination and as a physical reality. Yet, if transplantation relies on a separation between body and self, this notion of "self" needs to be addressed, too. A thorough discussion of concepts of self extends beyond the scope of this book, so that it appears more useful to navigate terminology and applicability rather than offering a conclusive overview here. Clearly, engagements with the self have brought forth a multitude of responses which are bound to differ in theological, psychological, or philosophical discussions. Since Antiquity, considering the self has constituted a central paradigm of Western thought whose impact remains ongoing.[10] An emphasis on reason that tends to be related to Kant[11] also becomes apparent in philosopher Christine M. Korsgaard's work which differentiates humans and animals by the principle of rationality. She ties this seperation to self-consciousness since "reason is a power we have in virtue of a certain type of self-consciousness – consciousness of the grounds of our own beliefs and actions" (ix). Here, the matter of consciousness both in relation to actions and convictions is presented as distinctly human. Yet while a sense of self is depicted as a universal human trait, each particular self is distinguished by a claim to complexity and privacy. The self appears highly elusive and pluripotent: It constitutes a basic human condition yet is defined by its uniqueness. Philosopher and psychologist Rom Harré's approach embraces this elusiveness of the self. In contrast to Descartes, Harré explains that the self cannot be seen as a single entity, rather, it comprises a variety of aspects. He designates three different kinds of self and applies the term to one's sense of location and perspective, one's specific set of attributes, which may vary or develop, as well as "to the impression of his or her personal characteristics that one person makes on another" (4). The self is thus influenced not only by personal traits and preferences but is also situated in relation to one's specific surroundings. He further argues:

> We seem to have three aspects of personhood in focus at the same time. Though none are really entities, that is thing-like in the manner of existence and behaviour, we have forged a way of speaking about them using nouns, the very grammatical form that entity talk takes, in our several uses of the expression the self. (5)

Here, Harré also underlines how language and terminology shape reality: The linguistic framing of a singular self establishes an entity that, according to the author, eludes the complex interplay of varying versions of self. It is not only since the En-

10 For further reference on the impact of Plato and Aristotle on the separation of body and self, and concepts of the mental, see Ostenfeld, pp. 9–23; 42–72.

11 For further reference on Kant's readings of the self, see Melnick, pp. 3–11.

lightenment that the term "self" can be related to the reasoning human being, their specific characteristics as well as their surroundings' perception of said traits. The term's applicability for my undertaking predominantly appears in its prevalence and its its distinction from "body."[12]

While the separation of body and self appears vital to the development of transplantation, it might be perceived as working against lived experience. As Scheper-Hughes points out "[t]he body provides the grounds of certainty for saying that one has a 'self' and an existence at all" (*The Last Commodity* 45). Even though the body might be framed as subordinated to the self, its impact appears undeniable: Human existence as we know it appears indistinguishable from corporality. A body's unique workings, then also vastly impact individual lived experience.

This short introduction to the conceptual foundations has thus not focused on cutting into the body, as is commonly done in transplant practices. Rather, it was a brief attempt to underline that transplantation is facilitated by a specific mind-set that allows for organs to migrate between bodies: a mindset that calls for the separation of body and self – even though both are culturally produced and negotiated. The practice, even though it finds its expression as a surgical intervention, is inseparably tied to considerations of philosophical and medical culture that allow for said treatment of the body.

2.2 Brain Death

Previously, I have discussed that in order for transplantation to be possible, for tissues to cross the boundaries into another body, the body needs to be disentangled from the self – yet, there is one prominent exception: The brain. For brain death to be accepted as factual death, a prerequisite of postmortem transplantation, the brain needs to be perceived as the governing instance. However, this governing role of the brain is culturally specific and Farzad Sharifian et al. summarize:

12 A second influential concept, "person", seems to come closest to "self", as philosopher Fredrik Svenaeus argues, who decides to use both terms interchangeably ("Organ Transplantation and Personal Identity" 141). Yet Peter Goldie suggests an integral difference between personality and self as the prior is "connected with the Latin word persona, a mask of the kind that used to be worn by actors; character emerges when the mask is removed" (Goldie 13). According to him, personality is closely tied to an individual's behaviors, feelings and capabilities. Harré, on the other hand, states that a "person is a unique embodied being, rich in attributes and powers of many kinds, having a distinct history and, importantly, being morally protected and liable to be called to account as a morally responsible actor" (Harré 71). Harré defines "person" as a concept that is, firstly, tied to the body and which, secondly, relates to societal responsibility. Personhood, then, can be understood as a broader term, referring to both internal and physical workings of the individual.

"Both cultural models of the mind and more scientific approaches in philosophy and/or medicine have in various cultures invoked central parts of the human body as the locus of the human mind" (3–4). Rather than separating both realms, it is vital to perceive of the close connection between cultural framings of the body and the medicine practiced in a given region. By understanding the interventions of medicine as a specific cultural practice that touches upon readings of the body both alive and dead, a more thorough understanding of medical interventions becomes feasible. Referring to the cultural incorporation of the body, Sharifian et al. map different geographical regions and tie them to approaches to the body. They speak of "abdomicentrism" to refer to a focus on the abdomen related to "the Southern Asian, Polynesian, and other disparate cultures, including the Basque culture", while "cardiocentrism", as a focus on the heart, is referred to China, Japan and Korea (4–5). They subsequently explain:

> As we move our eyes towards the west, we find, in the Greek-based West Asian, European and North-African cultures, various forms of dualism between mind and matter, including the body, and the dualism between the head/brain (as the seat of the intellect) and the heart (as the seat of emotions). (5)

The alignment of the brain with individual selfhood and the heart with emotion appears as a recurrent motif in metaphorical employment of said organs and is also expressed in transplant narratives. Moreover, this reading of "cerebrocentricism" ties into the establishment of brain death as the legal definition of death.

In 1968, the year following the first heart transplantation, the Ad Hoc Medical Committee of Harvard Medical School developed a consensus for whole brain death. After discussions on how to incorporate brain death into the states' statutes (S. H. Johnson 9), brain death was judicially established by the "Uniform Brain Death Act" in 1978. Three years later the adjusted "Uniform Determination of Death Act" was approved by the American Medical Association and the American Bar Association. It states:

> Part (1) codifies the existing common law basis for determining death – total failure of the cardiorespiratory system. Part (2) extends the common law to include the new procedures for determination of death based upon irreversible loss of all brain functions. The overwhelming majority of cases will continue to be determined according to part (1). When artificial means of support preclude a determination under part (1), the Act recognizes that death can be determined by the alternative procedures. (*Uniform Determination of Death Act* 1)

The act thus combines both previous definitions of heart death, the failure of the heart and respiratory system, with the developed determination of irreversible loss of brain function. Interestingly, the act begins with a bodily symptom – "fail-

ure of the cardiorespiratory system" – and then moves on to "the new procedures for the determination of death based upon irreversible loss of all brain functions." This shift is noteworthy since it highlights the influence of developing technology. The change in perspective indicates that instead of bodily symptoms, the technological means that enable their evaluation are given a primary role in the law. This focus on technology is further emphasized by the The Uniform Law Commission which passed the act. In their summary of the act they explain: "It was plain that legal recognition only of traditional criteria – which rely on measuring cessation of respiration and circulation – would no longer suffice" and furthermore add that "[d]irect detection of loss of brain function is a product of very modern technology" ("Determination of Death Act Summary"). As these statements indicate, brain death is irreversibly tied to the technology enabling its detection. Therefore, the concept moves a patient's death beyond what can be observed by the mere eye: The declaration of death is bound to the employment of technological instruments. It is also interesting to note the time gap between the emergence of transplantation practice in the 1960s and the jurisdictional establishment of brain death in 1981: Early transplantations were performed without the established concept of brain death and thus at the borders of legal justifiability (Rüter and Zerkowski 15).

The intricate ties between the jurisdictional establishment of brain death and cultural contexts are further substantiated in intercultural discussions. Prominently, in Japan brain death was met with disapproval and is still not universally accepted today. Accordingly, while the Japanese Organ Transplantation Act from 1997 makes organ transplantation possible, brain death was never accepted as a general criterion of death (Ida 9). Therefore, brain death is framed as one definition of death alongside the traditional cardiac death (Ida 9). The law thus posed severe difficulties for transplantation medicine since family consent was needed even if patients had registered as donors (Egawa et al. 523). The revision in 2010 changed the law from an "opt-in" to an "opt-out" system, "leading to the progressive increase in the number of brain death donors" (Egawa et al. 523). Until today, "brain death is acknowledged as human death only when a transplant is to be performed", as the Japan Organ Transplant Network's homepage indicates ("Views on Brain Death"). This connection of brain death and organ transplantation suggests that brain death is not equaled with death, rather it serves as a means to allow for organ donation. Hereby, the example from Japan indicates that transplantation practice and brain death are part of specific cultural discourses. Even more, the attempt to increase brain-dead donors exemplifies that the Western death criterion is no given standard but is continuously renegotiated.

In contrast to Japan, brain death is accepted as the governing death criterion in the U.S. Nevertheless, despite the cultural embeddedness of the concept, contact with a brain-dead patient may deviate from what one might expect from encoun-

tering a corpse. Several critics have noted that the discrepancy between the patient's apparently living body and their status as dead may cause uncertainty in the observer. Accordingly, Ulrike Baureithel and Anna Bergmann explain that brain death "radically breaks with previously valid and safe symptoms of death, such as cardiac and respiratory arrest, lividity, rigor mortis, process of decay or livor mortis" (8, my translation). The symptoms of cardiac arrest are palpable to the senses of hearing, seeing and feeling – the ventilated brain-dead patient, however, does not yield to these expectations. Brain death thus contradicts what Schlich calls "phenomenological death" (65, my translation) and Vera Kalitzkus argues that the brain-dead patient's appearance brings forth "signs of life" and loved ones see themselves confronted with "a living corpse" (108, my translation). This discrepancy, however, forms the very basis for organ transplantation, which relies on the simultaneity of the patient's death and the survival of their organs. Baureithel and Bergmann derive that "an ontological paradox" is created, since the brain-dead patient now consists of a living and a dead part (8, my translation). Thereby, the experience of encountering a deceased person is tremendously altered by the definition of death and the practice of ventilation. Baureithel and Bergmann conclude that contact with a brain-dead patient calls for "constantly renewed rational strategies of perception" (9, my translation). This notion is also emphasized in the account of relatives as suggested in the documentary *Dying to Live* who explain that "the hardest part was that his body there looks like he's breathing" (*Dying to Live* 22:47). Brain death therefore poses difficulties to previously held conceptions of death, calls for a renegotiation of assessing a deceased person and might also complicate the acceptance of a loved one's passing.

Further challenging previous conceptions of death, it has been noted that brain death merely declares death at a certain point of the dying process. Baureithel and Bergmann argue that the brain death concept "standardizes and shortens the dying process to one fixed point" (229, my translation). Mitsumasa Matsuo adds that while usually dying is "a continuing and ongoing process" (83, my translation), it needs to be reduced to a single moment in order to distinguish between a living and a dead body (84). Moloney and Walker argue in a similar vein that the traditional concept of death as a process "conflicts with the medical, legal and ethical requirement in the transplantation process for a single 'defining moment'" ("Talking about Transplants" 316). In other words, brain death might be understood as the point of no return, hereby, it also appears less absolute than cardiovascular death and has been read as not "death itself, but rather the currently representative sign of death" (Schweizer 97, my translation). This neglect of death as a process also impacts ritualistic processes and Moloney and Walker ascertain that "with the more traditional definition of death, that is inclusive of a burial with the body intact, members felt that they had time between notification of death and the burial

to say goodbye" ("Talking about Transplants" 316). The temporal necessities of organ donation therefore might call for adjustments in the grieving process and require a reframing of the deceased body that can oppose prior encounters or expectations.

The redefinition of death as brain death thus already reveals possible friction and I want to draw particular attention to fears and anxieties brought forth by the legal change which, in turn, are culturally processed. Especially impactful is the anxiety of premature declaration of brain death as was argued by Susan E. Morgan et al. who explain that premature declaration of death lists "among the deepest and most strongly held fear[s] about organ donation among the general public" (Morgan, Harrison, et al. 677). While the connection between organ transplantations and the juridical establishment of brain death cannot be denied, anxieties of premature declaration tend to be based on an assumed correlation between demand for organs and declaration of brain death.

In fact, fears of being declared dead because of a demand for organs resonate with early reports on the practice. For instance, in 1968 an article from Australia explained: "South African heart surgeon Christian Barnard yesterday said surgeons must have the right to stop treating dying patients whose organs were destined for transplant" (qtd. in Moloney and Walker, "Messiahs, Pariahs and Donors" 211). Announcements such as these reflect poorly on transplantation medicine and work against the establishment of brain death as anatomical fact, instead, the quote assumes that transplant surgeons may influence the diagnosis. The impactful fear of premature declaration of death can also be related to ongoing discussions on the timing of death. In an article titled "Dead Enough" (2005), for instance, philosopher Walter Glannon vehemently argues for earlier transplantation practice. Referring to the better results of living tissue in transplantation, he explains that earlier organ retrieval would honor the donor's wish to save lives more fully (Glannon). While admitting that harvesting life-sustaining organs from a living donor poses severe ethical problems, Glannon claims that with regard to the donor, "chances are high that we would be taking nothing from him of value" (Glannon). The comment, and its clearly speculative nature, exhibits great uncertainty concerning the possible effects of this early organ retrieval and appears potentially troubling to those struggling with the concept of brain death. Here, organ transplantation is tied to a demand in organs and is presented as a decision made by physicians rather than as a diagnosis based on specific anatomical symptoms. Prevailing fears of premature declaration of brain death seem to tie into these readings of medical professionals' authority of deciding based on concerns beyond the patient's individual condition or chances.

In fact, and unsurprisingly, the process of declaring brain death is governed by a series of procedures and cannot be based on physicians' personal discretion.[13] However, as Eelco F.M Wijdicks et al. explain in 2010, these procedures show "considerable practice variation" (1912). Nevertheless, their studies could not detect any case in which brain function recovered after brain death had been declared (1912). It seems that fears of premature declaration of brain death are not primarily based on reports of patients regaining brain function. Rather, I read these anxieties as indicative of a possible distrust in medical authority and impartiality in relation to transplant practices.

As a culturally specific concept, brain death is based on distinct framings of the body and the self. As the example of brain death in Japan illustrates, relating the death of a person to the ceasing of brain functions relies upon a cerebrocentric approach that is not universally applicable. While brain death has been jurisdictionally established and is a factual tool, the development of the concept occurs in the specific framework of transplantation practice and technological progress. Since transplantation deeply impacts this reconceptualization of death, I suggest that fears about premature declaration of death also indicate an awareness that brain death is in fact inseparably tied to the development of transplant practices. Furthermore, the fear of premature declaration further illustrates anxieties about a possibly corruptible medical authority over death and also suggest that experiences with brain-dead patients differ from prior framings of the deceased body.

2.3 Organ Retrieval

In 2010, the World Health Organization issued their "Guiding Principles on Human Cell, Tissue and Organ Transplantation." The compiled list of eleven principles determines, for instance, whose organs may be donated (2). By offering "an orderly, ethical and acceptable framework", these principles encourage organ donation and present an additional step against unethical retrieval practices (1). As C. Rudge et al. explain, an "equal emphasis on the need for all countries to work to achieve 'self-sufficiency' by establishing effective deceased donation programmes" (i48) still remains. Organ transplantation operates within both national and international frameworks, however, these frameworks may not align. While the guidelines strive for international agreement on what might constitute ethical organ transplantation practices, major variations between nations remain. Where-

13 For further information on the determination of brain death in the U.S. see Aboubakr and Alameda.

as the U.S. have decided for an opt-in option, meaning that every person who wants to donate has to declare themselves a donor, the U.K. emplaced an opt-out system in 2020.[14]

Organ retrieval requires a treatment of the human body and its organs as separable and employable entities – rather than perceiving of the corpse as a mere shell, retrieval reconfigures its value for the purpose of donation. Thereby, retrieval also calls for reframing mourning processes as Kalitzkus explains. She summarizes that in case of organ donation, death is separated into three distinct phases: brain death, "factual death", referring to the harvest of organs and the perception of the patient as dead, and "definite death", the instance when the organs cease to function in the recipient's body (149, my translation). Kalitzkus's model suggests a temporal reframing of mourning: While death as a process of dying is limited to a specific point in time by the brain death diagnosis, the processes of mourning are prolonged by the practice of organ retrieval and implantation. Thereby, her findings illustrate a certain tension: On the one hand, the retrieval of organs depends on the acceptance of brain death as death of the person, on the other, the mourning for the transplanted organ implies remaining ties between tissue and deceased person. While the acceptance of brain death and donation indicates a cerebrocentral conception of the body, the mourning for organs depicts the separated body as the last remaining part of the deceased individual. Organ retrieval thus both relies upon- and challenges the conception of a body-self divide.

Organ retrieval brings two perspectives on the body to the fore: It appears as a resource for life-saving organs and invokes individual meaning in relation to the deceased person. This double perspective can be further navigated via readings of the body as an object and as a subject as discussed by Annemarie Mol and John Law. They argue that "while the object-body is exposed and publicly displayed, the subject-body is private and beyond, or before, language" (43). The presented reading offers a twofold perspective on the body, which in its role as an object is displayed to the outside, while the subject-body is felt from the inside. Secondly, the differentiation suggests that the body comes before language and is bound to the self even before individual expression is acquired. Hereby, the body is simultaneously depicted as ultimately tied to the self and as an object that remains exposed to its environment. While Mol's and Law's distinction directly refers to the "living body" (43), the concept can also be fruitfully applied to readings of brain-dead patients. Given that brain death establishes individual death yet ventilation keeps transplantable organs alive, the roles of object body and subject body intersect. This intersection can be related to the three phases of death presented by Ka-

14 For further information on opt-in and opt-out policy see Shepherd et al.

litzkus: The object body has died and can therefore be donated and separated. The subject body, on the other hand, is closely tied to the deceased patient's self and is mourned at a later point in time. Harré argues that "[t]o be one and the same person one must, at least, have a unique spatio-temporal location" (7). This integrity is dissolved by organ retrieval and the deconstruction of the object body. The tendency to mourn for failing recipient organs, however, emphasizes the perceived ties between donated body parts and lost loved ones. Drawing from these frameworks, it can be suggested that the clearance for organ donation does not change the body's status as a subject body in parts – a tendency that also impacts understanding individual tissue in transplantation.

Organ retrieval thus reveals that the body, even though intrinsically tied to one specific individual, can be treated as an object. This process of objectification, of establishing a separation between self and body to the degree that tissues can become part of another body, tends to present cause for concern. Especially striking and persistent are anxieties concerning the body's employment for personal and financial gain. Moloney and Walker explain that "the idea that the body is the sum of its parts, and that individual parts are able be removed and replaced lends itself to the notion that these parts, as in any machine, can be bought and sold" ("Talking about Transplants" 310). The distance between subject body and object body is emphasized: The body becomes a machine, assembled either from functioning- or from malfunctioning but replaceable parts. Often, such fears of objectification are entangled with skepticism towards the medical system. According to Moloney and Walker, fears prevail that organs could be cleared for retrieval because of the financial gain of a corrupted system ("Talking about Transplants" 310).

The possibility to transplant, then, turns body parts into valuable – and in extension – sellable entities, a notion that forms the basis for the international practice of organ selling and trading. The trade routes of organs follow specific patterns that are deeply entangled with socio-economic difference as Nancy Scheper-Hughes establishes in several of her studies. In her work on organ theft narratives she explains: "As in Brazil, individuals in Cape Town squatter camps referred to the directionality of the exchanges: organs moving from poor and black bodies . . . for transplantation into more affluent white bodies" ("Theft of Life" 10). There is, then, a racial dimension to the geographical move of organs. Moreover, the trade corresponds with- and crosses divisions of regions known as "Third" and "First World"[15] and clearly places specific focus on the Global South. The monodirection-

15 The term "Third World" remains problematic, as Hoagland and Sarwal argue that it "presupposes a shared experience and common history with those other countries that fall under the terms dominion" (13). Thereby, the term runs at risk of becoming "a too easy and comfortable maneuver of geographical, historical, and cultural slippage" (14). They further state: "Put another way,

al trade, in which tissues cross geographical boundaries in one- and financial means in the other direction presents the commodifiable body as Scheper-Hughes argues. Hereby, the market for organs relates to a complex network of medico-cultural paradigms:

> The uninhibited circulation of bought and sold kidneys, exemplifies a neo-liberal political discourse based on juridical concepts of the autonomous individual subject, equality (at least, equality of opportunity), radical freedom, accumulation, and universalism, expressed in the expansion of medical rights and medical citizenship. (*The Last Commodity* 17)

Scheper-Hughes emphasizes the variety of discourses and knowledge systems addressed by a global market for organs that insists on free choice and that is embedded in medicalized, economized readings of the body. The exchangeability of body parts also majorly benefitted from the introduction of cyclosporine as immunosuppressive therapy in the early 1980s as indicated for instance by Lawrence Cohen ("The Other Kidney: Biopolitics beyond Recognition" 11). Moreover, Scheper-Hughes follows organ-trading around the globe and emphasizes the international connections of the trade. She asserts:

> The outlaw surgeons who practice their illicit operations in rented, makeshift clinics or, just as often, in operating rooms of some of the best public or private medical centers in the city, do so under the frank gaze of local and national governments, ministries of health, regulatory agencies, and professional medical associations. (*The Last Commodity* 34)

This troubling conclusion pertains to the practices of organ selling between donors and recipients from diverging financial and socio-political contexts.[16] At the same time, Scheper-Hughes thus exemplifies the speculative potential of the organ trade: Hidden in plain sight, it appears unsurprising that the trade invites worry and speculation.

The organ trade refers to living donations, nevertheless, the commodifiability of the body also resonates with fears surrounding unwanted post-mortem organ

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when uttered or read, many people have a sense of what (and where) the third world is, even if they are unaware of the nuances, and to be forthright, the racism attending the term" (15). According to Hoagland and Sawal, the term still holds values, especially because it is uncomfortable and "reflect[s] the inequality of current cultural global dynamics" (14). They also underline the term's "subversive and unsettling potential" (15). The term "Third World" is employed to signify structural inequality yet should not obscure or reduce complex and unique histories of specific geo-political regions.

16 For further information on what Scheper-Hughes calls "The New Atlantic Trade Triangle" see *The Last Commodity*, p. 38.

retrieval. The organ trade, as was just discussed with reference to Scheper-Hughes, ties transplant practices to corruption, even more, it suggests that these digressions can be found among high-ranking hospitals. Furthermore, Scheper-Hughes indicates that illegal practices happen under "the frank gaze" (*The Last Commodity* 34) of impassive governments and thus further ties transplantation to policymaking. Naturally, the fear of financially motivated, involuntary organ retrieval needs to be differentiated from the organ selling industry, since the latter relies on a notion of donor compensation and voluntary exchange of goods. Still, as Scheper-Hughes argues, the voluntariness of organ sales needs to be further investigated with reference to the donor's living conditions. On a similar note, the donor's financial gain has been perceived as dismissible, given that a substantial part of the money is needed for post-operational care (Budiani-Saberi and Delmonico 925). Nevertheless, the existence of organ trafficking also gives room to fears of corruption and criminal practices in retrieval processes. The prevailing anxiety of explanting organs for money therefore needs to be read within the framework of the objectivized and marketable body, and with reference to an audience that is anxious about possible corruption in the medical industries.

Comparable to the declaration of brain death, organ retrieval reveals conflicting perspectives on the human body. As organ retrieval brings divergent readings of object- and subject body to the fore, it also further emphasizes the impact of transplant practices on engagements with death and mourning. Moreover, prevailing fears about involuntary organ retrieval for financial gain resonate with practices of organ marketing and its relation to corruption within the medical profession. These considerations also present the vulnerability of the human body to external readings given that subject bodies can be treated as commodifiable objects. Thereby, the transplantable body appears at the intersection of subjectivized readings and objectified treatments. These divergent framings of the body are central for my interdisciplinary undertaking because they emphasize not only the cultural constructedness of transplant experiences but emphasize the pluripotent role of the human body that depends on disciplinary realms. For medical practice, an awareness of medicine's cultural embeddedness is vital because it allows for a more thorough understanding of both physicians and patients' reactions and ultimately allows for better treatment.

2.4 Implantation

At its very core, organ transplantation facilitates the intersection of two bodies. It therefore necessarily includes two perspectives: that of the receiver and that of the donor, which, unsurprisingly, can be very different and situationally specific.

While brain death and organ retrieval primarily relate to the donor's and their loved ones' perspectives, engagements with implantation concentrate on the recipient's position and possible struggles. While the moment of organ receival presents the end of life on the wait list and gives hope for a significantly prolonged lifespan, it also vastly impacts the recipient body. In fact, implantation demands constant medication and challenges notions of embodied personhood, a tendency that is further complicated by metaphorical framings of the donation as a "Gift of Life." Moreover, receiving a transplant needs to be understood as a chronic experience that deeply impacts recipients' lifestyles. Here, life writing further serves to underline this aspect, with heart recipient Claire Sylvia explaining in her autobiography *Change of Heart:* "'A transplant is a mixed blessing,' said one of the nurses. 'To some extent, you'll just be exchanging one set of problems for another'" (70). While for Sylvia her survival is more important than the "problems" implantation might entail (70), the nurse's comment reveals the ongoing impact of transplantation beyond surgery.

While consenting to organ donation is often treated as an important yet difficult topic, the experience of receiving an organ tends to be framed as a survival story, told to encourage organ donation. For instance, transplant surgeon Frist explains with reference to the positive development of one of his patients that "he had every chance of living a long, happy, normal life" (105). Here, transplantation facilitates a return to normalcy and a return to a status prior to illness is implied. Fittingly, in the documentary *Dying to Live*, patients are prominently displayed following daily tasks and physical activities (3:40), thus living what can be assumed to be the "normal" life Frist refers to.

Such narratives, however, do not necessarily align with the lived experience of patients who have received transplanted tissue. Even though the patient's life might have been saved and a sense of self remains, transplantations nevertheless bring forth undeniable changes. The severe alterations of the body can also cause new engagements with the self as Wiebel-Fanderl observes. She explains that the question of identity arises on two levels: "who am I with my new heart?" and "who am I as a chronically sick person?" (185, my translation). Wiebel-Fanderl hereby introduces that the received organ, specifically the heart, impacts a sense of personhood and establishes a link between the statements of "Who I am" and "What my body is." At the same time, she questions the notion of "normalcy" established by Frist and refers to the post-transplant experience as one of chronic sickness. On a similar note, Maureen Fallon et al. stress the influence of constant medical supervision, risk of rejection and heavy medication on the life of a transplanted patient (562).

In this context, a basic question arises: Can the self remain unaltered if the body has been changed in an integral manner? While a purely mechanistic reading

suggests that the self remains untouched, understanding body and self in interconnection counteracts this assumption. First of all, the human being only exists in its corporeal form and Harré derives that "the fact of embodiment is not an accidental feature of what it is to be a person" (72). The human body – which is always also culturally produced – is tied to human life as we know it. Scheper-Hughes fittingly concludes: "Humans both are and have a body" (*The Last Commodity* 45). As was already addressed with regards to physicians using their individual senses to detect illness, lived experience is also shaped by the functioning of an individual's body. Kathryn James explains that "[t]he body is both the vehicle through which an individual experiences life and the dictator of the material limits of these same experiences" (23). The body, then, is the sole medium to experience one's surroundings, simultaneously enabling and limiting how the world is perceived. The body and the self are presented in a reciprocal relationship: not only is the body shaped by an individual's life – sport, diets, illnesses – it also impacts how the world is experienced and, in effect, the choices that are made. Svenaeus highlights this interconnectedness of self and body: "The self becomes attuned through its bodily being, and such attunement is necessary for all forms of human understanding (that we know about)" ("Organ Transplantation and Personal Identity" 141). The notion of "attunement" Svenaeus introduces is compelling in the discussion of transplantation as it also suggests familiarity with one's body. This familiarity, this knowing one's body "like the back of our hand", however, is challenged by organ implantation.

Given the challenge presented by transplantation, it appears unsurprising that organ receival has also been tied to changes in identity-formation. Svenaeus speaks of a change in "qualitative identity in preserving numerical identity that is, the transplant recipient does not believe herself to be (and neither do we believe her to be) another person, but a change in personal identity has nevertheless taken place since important self-traits have been changed" ("Organ Transplantation and Personal Identity" 141). Svenaeus' reading of "important self-traits" links physical transformations to changes of the self. This notion is further underlined in his approach to implantation: "Organ transplantation not only offers ways of treating diseases, congenital defects, impairments, and injuries, it also influences processes of self-formation in different ways for the persons treated" ("Organ Transplantation and Personal Identity" 140). Organ implantation is introduced as a procedure that deeply affects each patient on a varying and highly personal level. Transplantation becomes a private matter that influences both: body *and* self. Sociocultural and medical anthropologist Lesley Sharp explains with reference to her study on transplant experiences:

> . . . [T]ransplantation is a personally transformative experience in which the transfer of organs to otherwise irreparable bodies often radically alters an organ recipient's definition of self. These personal transformations are dynamic and develop within the context of a particular cultural milieu. Thus this study underscores the need to view transplantation as a social process that develops over time. (360)

Sharp positions the experience of transplantation at the intersection of cultural milieu and individual lived experience. Moreover, she clearly emphasizes the chronic experience of transplantation and its ongoing significance for individual lives.

Following up on the individual significance of transplantation, it appears fruitful to refer to life writing to further negotiate the possibility of change presented by implantation. Jean-Luc Nancy's account of his heart transplantation *L'Intrus*, translated as *The Intruder*, was first published in 2000. It is specifically interesting for my endeavor because even though it pertains to the non-fictional realm, his account employs science fiction imagery to express the post-surgery experience. The metaphorical quality of Nancy's account already becomes apparent in the image of the intruder and Donna McCormack argues that "[t]he image of the intruder is central to human organ transplantation rhetoric. The external, fleshy other crosses a supposedly definitive and divisive line by traversing and settling inside the epidermal layer of an other's self" ("Intimate Borders" 170). The presence of an Other is established within supposedly uncrossable corporal boundaries. This infringement is further propelled by the presence of technology which Nancy refers to tales of science fiction. He describes:

> I am the illness and the medical intervention, I am the cancerous cell and the grafted organ, I am the immuno-depressive agents and their palliatives, I am the bits of wire that hold together my sternum, and I am this injection site permanently stitched in below my clavicle, just as I was already these screws in my hip and this plate in my groin. I am becoming like a science-fiction android, or the living-dead . . . (13)

Nancy's narrative allows for insightful conclusions on the lived experience of implantation. Especially noteworthy is the repetition of the personal pronoun "I." While the personal self appears to be at the forefront, it is related to both disease and treatment, to organic tissue, as well as to technological instruments, and is extended to the transplanted heart. Nancy reveals that intrusions into his body reconfigure his sense of self and blur the boundaries between self and other, as well as of inside and outside. Thereby, his self is tied to the changes within his body and he explains: "I was already these screws in my hip." What he considers to be himself is no longer bound to an organic subject body but depends on the current state of medical treatment. In Nancy's text, the self appears almost indis-

tinguishable from his body, whose unstableness causes feelings of insecurity and estrangement. With reference to Nancy's text, Philip M. Adamek explains: "What is disturbed is not only what is innermost or ownmost (one's heart, body, or soul), but equally one's presumed self-defining singleness, and the capacity to represent to oneself or appropriate for oneself this singleness" (194). The transplanted heart is thereby also framed as counteracting claims to uniqueness.

Most interestingly, Nancy indicates that the technology working in – or as – his body separates him from the human experience. As an "android", his status as human is closely tied to his physical condition, to the organic nature of his tissues. Moreover, turning into a "living-dead" can be connected to the concept of brain death, which positions bodies at the intersection of life and death. The employment of speculative tropes in this context is interesting and it seems that Nancy, struggling to voice his experiences, relates to fictional motifs to express his inner turmoil. *L'Intrus* thereby suggests ongoing renegotiations of the concept of self after transplantation. At the same time, my reading also draws attention to his employment of speculative elements and emphasizes that speculative tropes impact readings of the recipient body and the patient's experience.

So far, it has become clear that implantation challenges the separation between body and self and that critics have emphasized that severe physical change also impacts a sense of self. These changes to the self, however, have also been linked to the receival of tissues in a more abstract sense, suggesting a link between donated tissues and the donor's presence. Prominently, fears prevail that the incorporation of an organ may lead to the adaption of the donor's characteristics. Renée C. Fox and Judith P. Swazey state that "the recipient may have great concern or apprehension about absorbing a donated part of another known or unknown individual into his or her body, person and life" (35). The correlation between body, personhood and life is further emphasized in Wiebel-Fanderl's study of heart transplant patients who repeatedly express fears of being influenced and actively changed by the received organ. One male patient, for instance, remembers several conversations in which people indicated that the transplanted organ itself might influence him, as if it had a personality of its own (186). Especially striking is an interviewee who claims that ever since her husband received the heart of a female donor he kept on cleaning, something he had not done before the operation (192). The gendered framing of the heart is tied to the husband's increased interest in cleaning – and thus underlines the role of the donor in conceptualizing the changes brought by transplantation. Wiebel-Fanderl convincingly explains that due to the sickness and new time schedules, new behavioral patterns develop: These changes, however, tend to be assigned to the received organ (192). The fact that the individual is affected by severe sickness, surgery and transplantation is thus ascribed to the new body part, whose role as "the intruder" is emphasized.

Despite working within the recipient's body, the received tissues, then, still tend to be conceptualized in relation to the donor's body.

Even more, fearing the donor's presence indicates organ transplantation's potential to blur lines of demarcation. A prominent instance is the perceived challenge of donations between different sexes, as the collected reports of heart-transplanted patients by Wiebel-Fanderl indicate (188). She perceives of such difficulties as particularly important given that post-transplantation medicaments may also impact gendered traits of appearance, such as, for instance, beard growth and increased development of the breast (188). While these transformations clearly show that the transplantation process does not end with surgery, they also present internal physical change to the outside world. Comparable to organ retrieval, the processes of implantation thereby emphasize that the changing body, when read as an "extension of self" (Kalitzkus 225, my translation), is intrinsically tied to its cultural situatedness.

What can be derived, then, from this discussion of organ transplantation as a cultural phenomenon? As was shown, transplantation practices rely on Western concepts of a body-self divide and a cerebrocentric approach to the body, while at the same time, they challenge the integrity of body and self and renegotiate death as a process. Therefore, each step of transplantation – diagnosis of brain death, organ retrieval and implantation – causes uncertainty and need for further discussion. In conclusion, transplantation appears as a boundary-crossing endeavor that impacts human beings on a personal level, yet that also relates to global structures and inequalities. Three of these crossings appear particularly relevant for this analysis.

1. Transplantation emphasizes tensions between mechanic readings of the body and notions of embodied personhood. As transplantation ultimately uses human organs as exchangeable parts, it relies upon a Cartesian separation of body and mind. This separation, however, is necessarily limited: Brain death intersects body and self by insisting on the brain's governing role in the human body. Transplantation thereby brings tensions between readings of the object- and the subject body to the fore and complicates personhood as an embodied experience.
2. Transplantation is positioned between the private and the global realm. On the one hand, it establishes the individual's body as vulnerable to external manipulation and objectified readings. The opening of the body and the infringement of its boundaries touches upon readings of the body as an intimate part of individual personhood. Its possible manipulations are intrinsically tied to national contexts and jurisdictional frameworks – such as lawful definitions of brain death – and are specific to a given country. On the other hand, transplantation appears as a matter of international interest and relates to the eco-

nomic functions of a globalized market for organs. As a related instance of its border-crossing potential, illegal markets show how organs pass borders between countries, normative systems and individuals. Transplantation, enabled by biochemical and pharmaceutical progress, thereby allows for changing perspectives on bodies in a globalized world and simultaneously impacts their conceptualization on the private and the global scale.

3. Transplantation transgresses previously established boundaries of life and death. Emily Russell explains with regard to post-mortem organ transplantation: "This practice flies in the face of many of our most enduring concepts, most particularly the strict separation between the dead and the living and the self and others" (1–2). Not only do clinically dead bodies intermingle with the living, transplantation of specific vital organs also relies upon a renegotiation of death as brain death. Transplantation, then, crosses corporal, geographical and conceptual boundaries and thereby impacts the human body in its physical integrity and its cultural specificity.

Therefore, I trace transplantation's boundary-crossing potential not only in its role for a variety of disciplines but also with reference to its significance as a cultural practice. Joralemon explains that physicians "have assumed that society would accept the authority of medical science and make the changes necessary in conceptions of death and personhood for transplantation to progress" (340). Rather than following an understanding of "medical authority," the embeddedness of the practice in cultural concepts of body and personhood appears undeniable. At the same time, transplantation also renegotiates these certainties exemplifies their susceptibility to cultural contexts.

3 Terminology and Approach

At its core, *Future T/Issues* intertwines speculative fiction and life writing and argues for the surplus value of literary narratives as well as their impact on- and shared strategies with medical narratives. Yet before I can engage with the diachronic analysis of speculative fiction's engagement, it appears vital to first address the basic constituents of this endeavor and to briefly navigate the field of life writing, concepts of speculative fiction as a genre, and discuss the theoretical approach synthesized for this interdisciplinary undertaking.

3.1 Life Writing and Speculative Fiction: Negotiating Terminology

Yet, if I aim to intertwine fiction and life writing, how can both be separated in the first place and how can life writing be approached conceptually?

Autobiographical texts appear in complex interplay with the temporal arrangment of one's life narrative and reflect upon processes of identity-formation. Sidonie Smith and Julia Watson explain in *Reading Autobiography: A Guide for Interpreting Life Narratives:* "We might best approach life narrative, then, as a moving target, a set of shifting self-referential practices that, in engaging with the past, reflect on identity in the present" (1). The writing self is thereby positioned in relation to an individually experienced history as Smith and Watson further argue: "While it may not be meaningful as an objective 'history of times,' it is a record of self-observation, not a history observed by others" (6). The insistence on personal lived experience is correlated with the narrative practice of autobiography. Recent years have seen a development in the field towards the employment of the umbrella term "life writing" which also includes, as Alfred Hornung summarizes, "free forms in all kinds of media" (38). This introduction of "free forms" suggests the openness of the term and Hornung further explains that they "have democratized the field of life writing, increasingly used by women, ethnic minorities and postcolonial migrants of different classes and different persuasions for autoreflection" (38). Given developments in the use of media, the study of life writing thus becomes an undertaking that also allows for valid conclusions about representation of given socio-political milieus.

Within the realm of life writing, doctor's autobiographies tend to follow a comparatively traditional, chronological autobiographical form, thus tying into Smith and Watson's use of autobiography as "the traditional Western mode of the retro-

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spective life narrative" (4). Moreover, medical autobiographies correspond with public perspectives on medicine as Donald Pollock explains:

> [A]utobiographies are social acts of representation that are part of the public construction of the domain of medicine; while the life stories of physicians may appear simply to describe medicine, they also constitute and reproduce medical domains in ways that are highly sensitive to historical changes in the social system and culture of medicine. (340 – 41)

Pollock's assessment suggests that physician autobiography not merely presents but actively shapes perceptions of medical practice. This impact, however, is also influenced by narrative form since "the narrative structure imposed on physician autobiography subtly shapes both the author's and the reader's conception of human events as story-like and temporally bounded, and often as tokens of generic moral lessons" (Pollock 341). Given this insertion of lived experience to a given narrative frame and the resonances with ethical expectations, the authenticity of medical representation in autobiography needs to be continuously negotiated. At the same time, implied readership shapes autobiographies by physicians: A surgeon targeting an interested lay audience will include information of hospital life "behind the scenes" yet tends to introduce and comment upon medical vocabulary and knowledge.

Similar to "life writing," the term "speculative fiction" has been notoriously difficult to define, as R.B. Gill explains: "Speculative fiction, a widely read but ill-defined grouping of works, fits uneasily into our notions of standard literature" (71). This opposition to what Gill understands as "standard literature" already presents speculative fiction on the fringes of literary discourse. Fittingly, Dick, who Thomas M. Disch understands as "a science fiction writers' science fiction writer" (ix), received praise "exclusively from other SF writers, not from the reputation makers of the Literary Establishment, for he was not like writers' writers outside genre fiction" (Disch ix). A lot has happened since Dick's death in 1982, and speculative fiction has become both a growing force on the literary market and a matter of scholarly interest.

It seems useful to begin this investigation of genre with a first point of divergence: How can speculative fiction and science fiction be differentiated? While some, for instance iconic writer Robert A. Heinlein, have perceived speculative fiction as a subgenre to science fiction, science fiction has also been subordinated to speculative fiction (Wolfe 122). Gill follows this line of thought by arguing that "speculative fiction is marked by diversity; there is no limit to possible micro-subjects and, understandably in such a mixed field, no standard definition" (72). However, in order to establish a working definition, Gill adds that the "emphasis is not so much on possible though fictional matters as on events that are impossible

under the physical laws and constraints of our ordinary world" (72). On a similar note, M. Keith Booker and Anne-Marie Thomas explain in *The Science Fiction Handbook* "that many studies of science fiction as a genre begin with lengthy mediations on the definition of science fiction, often in order to distinguish it from other forms of 'speculative' fiction such as fantasy and horror" (3). Speculative fiction is used as an umbrella term, referring to categories beyond science fiction. Darko Suvin further differentiates science fiction via its focus on the "novum" and explains in 1978: "SF is distinguished by the narrative dominance of a fictional novelty (novum, innovation) validated both by being continuous with a body of already existing cognitions and by being a 'mental experiment' based on cognitive logic" ("On What Is SF Narration" 45). Accordingly, science fiction might include what is scientifically impossible (by working as a "mental experiment"), while navigating the workings of the novum in a logical framework. Related to the matter of the novum, Adam Roberts explains "that the premise of an SF novel requires material, physical rationalization, rather than a supernatural or arbitrary one" (5). P.L Thomas further underlines the importance of science for the genre: "Thus, one common element of SF may be expressed as an examination of the pursuit of science by highlighting the dangers inherent in *who* is governing that science and *why*" (Thomas 18, emphasis in original). Rather than solely focusing on scientific developments, science fiction is integrally invested in the social dimensions of employed science and also engages with matters of responsibility.

While speculative fiction has thus been read as an overarching term, science fiction has been bound to a more specific approach to the material world and the functions of science. Nevertheless, the overlaps between both terms appear obvious and also come to the fore in Margaret Atwood and Ursula Le Guin's discussion of both terms. While finding a conclusive differentiation to works of fantasy, "the key distinction between fantasy and science fiction was one of possibility: fantasy could never happen, while science fiction could" (Evans), seperating speculative and science fiction appears more difficult. Atwood prefers to label her work in terms of speculative fiction, while Le Guin understands her writing as science fiction. Moreover, Le Guin argues for the classification of Atwood's work as science fiction, too, since *The Year of the Flood* (2009) uses science fiction strategies, namely "to extrapolate imaginatively from current trends and events to a near-future that's half prediction, half satire" (Le Guin), Le Guin's understanding of science fiction thus deviates from Suvin's initial concepts and illustrates the dynamic developments of the field. Atwood, however, offers another reading of science fiction and muses:

> Are these books "science fiction"? I am often asked. Though sometimes I am not asked, but told: I am a silly nit or a snob or a genre traitor for dodging the term for these books are

> as much "science fiction" as *Nineteen Eighty-Four* is, whatever I might say. But is *Nineteen Eighty-Four* as much "science fiction" as *The Martian Chronicles?* I might reply. I would answer not, and therein lies the difference. (*In Other Worlds* 2)

Interestingly, Atwood applies the term of science fiction in a scaling mode: Apparently, works can be more or less "science fiction." As a point of reference, she mentions Ray Bradbury's work, which engages with the recurring motif of interstellar travel. Read in the context of this text and the novum it employs, Atwood indicates that her interest in the future (and the technological developments it might entail), does not necessarily classify her work as being equally science fiction.

Rather than classifying works engaged with societal change as science fiction, they are also often grouped as forms of dystopia. Dystopian writing has found increasing attention in the last years, particularly in young adult fiction[17] in series such as *The Hunger Games* by Suzanne Collins (2008–2010), or *Divergent* by Veronica Roth (2011–2013), which have reached best-selling status in the last decades. In some of these instances, the term "dystopia" has been applied in a comparably simplistic manner: apparently, a futuristic setting and an adolescent striving for self-fulfillment suffice for the label of dystopia and the market it draws. However, beyond such considerations, dystopian writing tends to focus on societal issues and serves as a distorting mirror of present societies. Tom Moylan argues: "Critical utopias can be read as metaphorical displacements arising out of current contradictions within the political unconscious" (213). Moylan not only underlines the political potential of critical utopia but further correlates its displacements with the visualization of ongoing processes. While it can be traced back to the 16th century, dystopia thus opts for more critical positions towards human progress than utopian writing. Edward James fittingly argues: "The genre of utopia, created unwittingly by Sir Thomas More when he published *Utopia* in 1516, died when idealism perished, a victim to twentieth-century pessimism and cynicism" (219). This relation is further underlined by Keith Booker who perceives dystopia as an "opposition to utopian thought and as a warning against the potential negative consequences of arrant utopianism" (3). Utopic thought, then, clearly holds political potential as Olaf Kaltmeier, Mirko Petersen, Wilfried Raussert and Julia Roth underline in their introduction to *Cherishing the Past, Envisioning the Future.* They explain that "[u]topia is at the base of national, transnational, Pan-American, and imperial visions" (2). Tying into this political significance, dystopia, it seems, is always positioned in relation to utopia. Fredric Jameson adds:

17 Also abbreviated to YA in the following.

> It has often been observed that we need to distinguish between the Utopian form and the Utopian wish: between the written text or genre and something like a Utopian impulse detectable in daily life and its practices by a specialized hermeneutic or interpretive method. (*Archaeologies of the Future* 1)

Rather than perceiving of utopia – and one might derive dystopia – as limited to the realm of fiction, Jameson thereby underlines its role as a specific approach or desire. As Atwood states: "The Dystopian bad design is the Utopian good design in reverse – that is, we the readers are supposed to deduce what a good society is by seeing, in detail, what it isn't" (*Writing with Intent* 93). Despite its relation to utopia, dystopia has thus developed independently and strives to reach beyond utopian idealism. At the same time, dystopian writing might also serve as a form of consolation, as Susan Louise Stewart suggests: "Dystopian fiction offers a vision of a future train wreck, but one that provides temporal safety: 'We haven't quite reached that point,' we say with relief" (159). The temporal framing of a suggested future forms an integral part of dystopian thought which simultaneously refers to possible outcomes of current trajectories and implies the possibility to make different choices.

In line with the multidimensional purpose of dystopia, assigning specific literary conventions appears highly difficult. Booker argues that "dystopian literature is not so much a specific genre as a particular kind of oppositional and critical energy or spirit" and therefore speaks of "dystopian energies" (3). Dystopian strategies, then, appear as a critical current presented in a variety of texts. Atwood also argues for a more flexible engagement with the term and introduces the concept of "ustopia": "Ustopia is a world I made up by combining utopia and dystopia – the imagined perfect society and its opposite – because, in my view, each contains a latent version of the other" ("Margaret Atwood: The Road to Ustopia"). Atwood, like Booker, perceives dystopia as an almost borderless mode, in which different conceptions mingle and in which dystopia and utopia remain somewhat inseparable. Dystopian writing can therefore not be solely perceived as the negative version of utopia, rather, it appears as a mode in which utopian thoughts are negotiated and interrelated with the struggles of their time.

As this brief discussion suggests, a variety of terms are applicable to writings of the future. Why, then, opt for speculative fiction as the chosen term? Firstly, the discussed novels of this project vary greatly and combine different aspects, some of which may be categorized as recurrent tropes of science fiction, such as the use of technology presented in Larry Niven's short story, others exhibit dystopian fiction's emphasis on totalitarian regimes, for instance, Neal Shusterman's *Unwind* dystology, some speculate about the regenerating human body as Fred Venturini's *The Heart Does Not Grow Back*. Speculative fiction serve as an overarching term,

referring to a loosely clustered structure of works and bringing these aspects into conversation. Gill's understanding that "[t]he tangles of speculative fiction naturally lend themselves to centred and fuzzy groupings based on underlying values or world views rather than to tight and traditional categories" (79), appears as an appropriate approach to the highly different styles and concepts discussed here. Secondly, the inclusion of "speculative" as part of the genre's denotation appears particularly fitting given that speculation as a shared occupation forms the basis for my interdisciplinary discussion.

Unsurprisingly, speculative fiction's musing about the future cannot be separated from the developments of their time. As a genre that emerged in a period of imperial expansion, science fiction[18] also bears traces of the colonial enterprise. Noah Berlatsky explains in an article for *The Atlantic:* "The link between colonialism and science-fiction is every bit as old as the link between science-fiction and the future" (Berlatsky). He continues to argue that colonial themes abound in different forms since H.G. Wells's influential writings. The colonial underpinning of science fiction has also been examined by John Rieder. In *Colonialism and the Emergence of Science Fiction* (2008) he traces the concurrence between colonial enterprises and the genre. He explains that as Europeans mapped and colonized the world, "they also developed a scientific discourse about culture and mankind" (2). Rieder concludes: "Its understanding of human evolution and the relation between culture and technology played a strong part in the works of Wells and his contemporaries that later came to be called science fiction" (2). Rieder not only stresses how the development of Western science influenced the genre but indicates that perceived connections between culture and technology were addressed in iconic science fiction texts. Ericka Hoagland and Reema Sawal, for instance, trace colonial modes in *Star Trek*'s alliance codes which present imperial desire in terms of free choice (7). These ties to colonial world views pose specific difficulties to speculative fiction, even though the genre offers valid opportunities to overcome colonial tropes.

Many of speculative fiction's recurring themes have been brought into connection with colonial worldviews as Greg Grewell's introduction of master-plot lines indicates. The "explorative" plot engages with the "'discovery' of inhospitable, alien wildernesses, and with the possibility of human contact with the often-unfriendly beings inhabiting these foreign worlds" (28). Grewell ties the explorative plot to Puritan concepts and the frontier myth (28) and thereby substantiates its

18 A brief comment on genre classification: the quoted texts primarily refer to science fiction in a comparatively broad sense, yet also allude to typical issues, such as encountering alien species. The addressed difficulties and opportunities discussed above also present valid insights for other examples of speculative writings about the future beyond genre definitions of science fiction.

relation to colonial worldviews. The emphasis on contact between different species is further developed by Roberts who perceives race as a key concern of science fiction: "It is not surprising that SF, a genre devoted to the encounter with difference, should have so often dramatized the various encounters with racial difference that have done so much to shape contemporary American culture . . ." (118). Roberts thereby additionally points to a dominance of American, Western perspectives in science fiction. Grewell's second master-plot engages with the "domesticative" and depicts the establishment of home in different forms of settlements (28). Grewell underlines that encounters with alien races tend to end deadly in these narratives. He concludes that both the first and the second master-plot share a common interest: "No matter the number, the ultimate goal tends to remain the same: to seek out and settle – that is, colonize – new worlds" (29). Here, imperialist perspectives on encountered life forms are presented as part of a science fiction narrative. As a last plot, Grewell introduces the "combative" and explains that "the impulse is usually whole-scale conflict, with one civilization battling it out with another for existence or sometimes for something less immediate such as territorial or trade rights" (29). Obviously, science fiction cannot be reduced to these plotlines, however, they reveal interesting aspects about encountering and interacting with foreign culture and suggest a predominance of Western perception of colonial practices.

Jessica Langer further develops Grewell's reading of how colonial perspectives have shaped plot developments in science fiction. She explains that understanding colonialism based on a center-periphery model also "seems largely to be the way in which empire conceived of itself" (172). At the same time, this notion also refers to representations of encounters with the unknown from a Western perspective. Hoagland and Sarwal emphasize the role of Othering in these encounters, as "the 'Other' consolidates difference as well as solidifies the norm" (10). This emphasis on perspective and practices of Othering is also central to Nalo Hopkinson's approach to common science fiction plotlines. In her introduction to *So Long Been Dreaming* (2004), an anthology of science fiction and fantasy short stories written by authors of color, she states:

> Arguably, one of the most familiar memes of science fiction is that of going to foreign countries and colonizing the natives . . . for many of us, that's not a thrilling adventure story; it's non-fiction, and we are on the wrong side of the strange-looking ship that appears out of nowhere. ("Introduction" 7)

Hopkinson not only addresses that science fiction has tended to focus solely on the perspective of the arriving group but also reveals this tendency's harmful, exclusionary potential. Her "being on the wrong side" underscores the fallibility that sci-

ence fiction has to focus primarily on Western (and male) outlooks on the world. Hopkinson furthermore emphasizes the genre's ties to colonial worldviews when stating: "To be a person of colour writing science fiction is to be under suspicion of having internalized one's colonization" ("Introduction" 7). The Caribbean-Canadian author thus underlines the conflict to develop engagements with a genre that has previously been tied to Western dominance and oppression. Reversing these tropes, however, posits problems of its own, as Berlatsky explains. He argues that the engagement with reverse colonialism and the depiction of the world being taken by alien races can- but does not necessarily develop anti-imperialist perspectives: "On the other hand, reverse colonial stories can erase those who are at the business end of imperial terror, positing white European colonizers as the threatened victims in a genocidal race war, thereby justifying any excess of violence" (Berlatsky). Berlatsky illustrates an important aspect of science fiction's ties to colonial practices: The genre presents an imaginative tool to question and undermine yet also to justify these very practices. Andy Sawyers explains that "[a] postcolonial sf criticism will also consider whether traditional concepts of genre are even worth holding on to in the light of revisioning of these ideas from writers whose connections with the traditional generic histories and structures of science fiction are second or third handed" (3). Sawyers thereby establishes a need to renegotiate tropes that are no longer congruent with the ever-changing field of science fiction and whose engagements with the genre have developed vastly from its beginnings.

The re-evaluation of existing tropes corresponds with a major interest in- and significant contributions to the field of speculative fiction from the Global South. Suparno Banerjee explains this interest by shared goals of science fiction and postcolonial writing:

> Although science fiction grew primarily out of the industrialized nations of the West, it exhibits a dialectical approach towards the tendencies of authority and subversion. This genre submits to the logics of rationality, yet radically undermines the notions of reality through its estranging devices, which makes this genre a device of potent subversion. (5)

Science fiction appears to yield to the rational thought of science, while simultaneously establishing a playful and thus necessarily subversive portrayal of its claims on absolute truth. Not only the employment of its themes, but science fiction's dominant language English can serve as a means of subversion as Mehan states in his "Final Thoughts" in *So Long Been Dreaming:*

> The narrators and characters in these stories make the language of the colonizer their own by reflecting it back but using it to speak unpleasant truths, by expanding its vocabulary and

> changing its syntax to better accommodate their different world-views, and by ironically appropriating its terms for themselves and their lives. ("Final Thoughts" 270)

Suparno Banerjee's and Mehan's understandings open science fiction language and -motifs to renegotiation. They exemplify that the genre offers ample opportunity to challenge patterns of dominance and disenfranchisement. By engaging with these critically and at times ironically, postcolonial examples of science fiction question and renegotiate dominant positions. Suparno Banerjee states: "Postcolonial science fiction mimics the techno-scientific metaphors of Western science fiction, yet uses those metaphors to question the primacy of Western civilization and charts out an independent future" (14). By subverting these tropes and by adding diverging perspectives, postcolonial science fiction introduces science fiction as a versatile tool, not of Western imagination, but of thinking about the future. Mehan fittingly claims: "If we do not imagine our futures, postcolonial peoples risk being condemned to be spoken about and for again" ("Final Thoughts" 270). Hoagland and Sarwal add:

> ... [T]he genre has found a natural home amongst Third World writers, who are using the genre to reimagine themselves and their world, to "set the record straight" by dismantling the stereotypes that science fiction in part has helped to support, and in essence "strike back" at the empire. (6)

The notion of "dismantling" proposed by Hoagland and Sarwal emphasizes the subversive use of science fiction motifs to highlight their constructedness. By writing science fiction, writers thus also claim their future and their right to speculate about it. The famous Octavia Butler concludes: "There isn't any subject you can't tackle by way of science fiction. And probably there isn't any subject that somebody hasn't tackled at one time or another. You don't have the formulas that you might have for a mystery, or even a romance. It's completely wide open" (Sanders). Perceiving science fiction as open also entails understanding the chances it offers to overcome colonial perspectives. Speculative fiction's potential to renegotiate Western perspectives also becomes apparent in publications of works and anthologies featuring writers of color and Indigenous authors. The already mentioned *So Long Been Dreaming* (2004), *Walking the Clouds* (2012), edited by Grace Dillon and *Love Beyond Body, Space & Time* (2016), edited by Hope Nicholson are mere examples for the ongoing expansion of the field.

How, then, can the field of speculative fiction and its engagement with the future be related to the medical realm – and more specifically to the developments of organ transplantation? I ultimately seek to trace the interconnections between medical realm and fictional discussion, opting for a reading that allows for the in-

clusion of their shared cultural situatedness. Thereby, my endeavor also ties into Gavin Miller and Anna MacFarlane's assertion that "the complex relationship between science fiction and medicine defies a simple division of labour between writer as cultural prophet and scientist as technological functionary" (213). They moreover argue for an awareness of

> . . . science fiction's critical relationship to the construction of "the future" in the present: the ways in which science fiction proposes concrete alternatives to hegemonic narratives of medical progress and fosters critical self-awareness of the contingent activity which gives "the future" substance in the here-and-now. (213)

The addressed inclusion of alternatives to metanarratives of "medical progress" presents a particularly fitting framework for speculative fiction's subversive potential, also in relation to colonial endeavors and their ties to medical practice. Speculative fiction gives voice to perspectives that deviate from a generalized reading of medicine-as-progress and emphasizes societal repercussions particularly prominently, the impact of socio-political disparities on individuals. This emphasis on medical practice as part of a complex societal structure also becomes apparent in Philipp Barrish's discussion of dystopian works on health care systems:

> I hope to suggest that we who study intersections of literature and medicine should devote more sustained attention to literary engagements with health care as a system: a complex, often fragmented set of financial models, institutions, government policies, and personnel whose roles range well beyond patient and care provider. (106)

Barrish's assessment further emphasizes the systemic embeddedness of patients in a given structure. The discussion of speculative fiction enables an understanding of organ transplantation as a cultural practice that functions within a specific societal framing and whose strategies – primarily that of speculation – are shared beyond the fictional realm.

Furthermore, speculative fiction has been known to offer complex engagements with the body and to neglect Cartesian readings of a body/self-opposition. Considerations of the posthuman body[19] emphasize the interconnectedness of concepts of the body and technological innovation, and wonder "[w]hat might be in store for the human body as it becomes increasingly vulnerable to technological intervention and transformation?" (Hollinger 268). The body, then, is positioned in complex interplay with its contexts – these contexts, it needs to be emphasized,

19 For an overview on critical contributions to posthumanism and cyborg theory see Hollinger: "Posthumanism and Cyborg Theory".

are also shaped by the fields of the life sciences and (bio)technology. Despite relating to the body in the framework of its transformability, the posthuman body also draws attention to its physical presence. Influential scholar N. Katherine Hayles explains in *How We Became Posthuman:*

> . . . [M]y dream is a version of the posthuman that embraces the possibilities of information technologies without being seduced by fantasies of unlimited power and disembodied immortality, that recognizes and celebrates finitude as a condition of human being, and that understands human life is embedded in a material world of great complexity, one on which we depend for our continued survival. (5)

Hayles's emphasis on the physical world and the material nature of the body strongly resonates with the discussion of organ transplantation in speculative fiction. Even though this project does not aim at conceptualizing the post-transplant body in terms of posthumanism, this discussion shows that speculative fiction renegotiates either/or opposition of body and mind, nature and culture or organic and technological.

3.2 Approaching Theory: The Medical Humanities, New Historicism and Cultural Ecology

Recent years have seen growing interest in the correlation between the humanities and medicine, with the medical humanities establishing a dialogue beyond disciplinary categorization. The supplementary potential of this inclusive approach is suggested by the shared origins of the disciplines as "[t]he ancients conceived medicine as a fundamental branch of philosophy. To Hippocrates, medicine is an art" (Kirklin and Richardson 1). What might today be perceived as an interdisciplinary approach, then, also derives its status from current formulations of disciplinary boundaries. Moreover, the emergence of the field can also be tied to developments in the conceptualization of body and self. In *Medical Humanities in American Studies: Life Writing, Narrative Medicine, and the Power of Autobiography*, Mita Banerjee explains that "overcoming the Cartesian split between body and mind may also require the emergence of a dialogue between life sciences and the humanities" (x). Shifts in readings of the body therefore also call for renegotiations of theoretical approaches to corporality and embodied personhood. The medical humanities perceive of interdisciplinary ties between approaches to the body and attempt to do justice to the complexities of lived experience.

The intersection of medicine and literature and the interdisciplinary approach offered by the medical humanities has been emphasized by a variety of developing research fields and educational programs. Since the 1960s and '70s, universities

have begun to include programs of medical humanities (Brody 1). Accordingly, the field is part of institutional shifts and reassessments of medical education as an increasing number of universities implement engagements with the arts in medical students' curricula (Wachtler et al. 1). Despite difficulties in definition, teaching practices have been summarized with reference to three aspects:

1. They use methods, concepts, and content from one or more of the humanities disciplines to investigate illness, pain, disability, suffering, healing, therapeutic relationships, and other aspects of medicine and health care practice.
2. They employ these methods, concepts, and content in teaching health professions students how to better understand and critically reflect on their professions with the intention of becoming more self-aware and humane practitioners.
3. Their activities are interdisciplinary in theory and practice and necessarily nurture collaboration among scholars, healers, and patients. (Shapiro et al. 192)

Here, the practice appears as an inclusive force, aimed at eroding boundaries between anyone invested in health care. At the same time, the implementation of frameworks derived from the humanities serves the goal of contributing to patient care and to allow for changed perspectives on individual suffering. As Johanna Shapiro et al. explain: "In this respect, medical humanities have a more applied function than the humanities as they are traditionally defined in the academy" (193). This "applied function," however, also runs the risk of degrading the humanities to an applicable tool for medical students, without implementing the structural or theoretical foundations education in the humanities would entail. Still, read in a wider framework, the increase of interest in the medical humanities suggests a shared focus of the life sciences and forms of artistic expression.

The medical humanities and their offered framework of bringing texts from different disciplines into conversation thus form the basis for my project. Within this overarching, interdisciplinary framework, I want to also draw from Emily Russell's concept of speculative medicine, which forms a key ingredient in this discussion. Russell presents a shared "imaginary entreprise" (268) of speculative fiction and physicians' meaning-making and emphasizes that surgery, too, is rooted in speculative thought. Therefore, the intersection of literary representation and medical developments appears as a basis for this endeavor which shares Mita Banerjee's predicament that "[c]ultural texts respond to and are shaped not just by historical conditions and legal parameters, but also by new developments in the life sciences" (xv). Following this assumption, I aim at emphasizing the correlation between different forms of textual production and their situatedness in specific cultural frameworks. In order to achieve this aim, this study draws from a variety of theoretical approaches and brings them into conversation: It is firstly inspired by a reading of medical humanities that allows for the convergence of

medical and artistic expressions and secondly draws from new historicism as a means to bring different texts into conversation. Lastly, it relates to cultural ecology to emphasize literature's reintegrative potential and surplus value.

Difficulties to define new historicism's theoretical frame are already emphasized by its founder, Shakespearean scholar Stephen Greenblatt: "My own work has always been done with a sense of just having to go about and do it, without establishing first exactly what my theoretical position is", he states in 1987 ("Towards a Poetics of Culture" 3). He furthermore explains that new historicism is "a practice rather than doctrine, since as far as I can tell (and I should be the one to know) it's no doctrine at all" ("Towards a Poetics of Culture" 3). This unwillingness to theoretically define his approach has been understood as contradictory by Anja Gerigk. Given the influence of poststructuralist theory, she claims that Greenblatt takes an "a-methodisch" stance, while simultaneously engaging in methodical reflection (274). Gerigk thereby establishes the difficulties inherent to placing Greenblatt's approach within the theoretical field of historicism. In accordance with his own understanding, I refer to Greenblatt's work as a practice, or as a specific approach to cultural history.

New historicism emerged as a critical position to previous practices of historical reconstruction. It particularly renegotiates the notion of approaching the past objectively, thus opposing what Jürgen Pieters explains about earlier forms of historicism that still held "a quasi-positivist belief in the objectivity and the unproblematic representability of the historical past" (21). Richard Freadman furthermore claims that "the assumption was that the critic-historian's activity was one of retrieval rather than interpretation" (94). New historicism positioned itself in opposition to these conceptions of an objectively representable past and of the historian as a non-influence of said reconstructed past. Rather than perceiving the past as "a stable point of reference" (Freadman 94), new historicists attempt to conceive of a given time as a combination of various, conflicting voices. In their perception, "society comprises a play of conflicting forces, interests and – crucially – visions" (Freadman 94). A new historicist understanding of the past is thus necessarily heterogeneous.

Accordingly, the employed sources for new historicist endeavors suspend notions of genre categorization or differentiations between "high" or "low" culture. Diverse texts are discussed in conversation since, as Graham Martin explains, "all texts, major and minor, are 'historical'" (151). While earlier historicists searched for, what Freadman calls, the "consistent, coherent and unproblematic social and political Gestalt" (94) of the past, new historicism also engages with minor, contradicting sources. These sources are employed to allow for a more diverse and multifaceted perception of the past. Rather than perceiving of given texts as "historical background", Greenblatt calls for a re-evaluation of relationships

among texts and argues that "history cannot simply be set against literary texts as either stable antithesis or stable background, and the protective isolation of those texts gives way to a sense of their interaction with other texts and hence of the permeability of their boundaries" (Greenblatt, *Shakespearean Negotiations* 95). Rather than opposing literary texts to other sources, Greenblatt perceives of "permeab[le] boundaries" and thereby emphasizes the shared cultural realm of their production. As an example, Greenblatt refers to letters and documents, which are usually perceived as non-fictional modes of writing. However, the publication in the form of a novel transfers the texts from one demarcated sphere – the non-literary – to another: the literary ("Towards a Poetics of Culture" 12). The distinction between both realms is presented as blurry and as hindering an open approach to the text. Even more, Freadman argues that distinctions between literary and non-literary realm are influenced by their current cultural framing. Therefore, "the traditional lines of demarcation between literary 'foreground' and social 'background'" are problematized (95). New historicism thus questions the traditional differentiation between literary analysis and historical background and employs different sources to illustrate a network of interrelated texts. Claire Colebrook concludes: "By demonstrating the complex relationship between the production of the categories of both literature and history, new historicism has contested the boundaries between traditional historiography and literary criticism" (2). The erosion of boundaries not only applies to the employed source material but also impacts theoretical approaches to a given past.

The criticism of objective approaches, the "*impossibility of objective analysis*" (Tyson 279, emphasis in original), also relates to the author of historical accounts who is positioned in their current cultural realm and needs to be perceived as a critical factor in historical reconstruction. The author's present, the moment of interpretation, is perceived as influential for the outcome of this very interpretation (Pieters 22). Approaching the cultural web of another time also calls for an awareness of one's own cultural setting, including the influence of society and the changing character of one's surroundings (Freadman 94). By bringing historicists themselves up for discussion, Greenblatt "proposes a fully dialogical practice: one which tries to take into account not only the fullness of the past in all its heterogeneity, but also the historicity of the historian" (Pieters 25). Pieters specifies that Greenblatt's approach is dialogical in two ways, since it "considers history in terms of a dialogue *within* the past . . . and . . . *with* the past" (25, emphasis in original). Reconstruction thereby always reflects upon contemporary cultural frameworks which need to be critically reflected in any engagement with the past. In the spirit of Greenblatt's understanding of the author as a construct of their time, my own European upbringing and focus on American literature needs to be addressed. As Uppinder Mehan explains: "The reader of sf from another culture has thoroughly

to understand the culture of the story because he/she now has to understand not only the culture but also the sometimes subtle deformations introduced into the culture through extrapolation" ("Domestication of Technology" 55). Being aware of these pitfalls, I try to do justice to the specific cultural backgrounds of each work by interrelating discussions of transplantation practice in different forms of publications. However, being brought up and taught in Western surroundings, I am inclined to only use English, German or translated texts, a fact that has also affected my sources, particularly the chosen newspaper articles.

To summarize a new historicist approach, H. Aram Veeser's assumptions as presented in his introduction to *The New Historicism* offer a fitting conclusion:

1. that every expressive act is embedded in a network of material practices;
2. that every act of unmasking, critique, and opposition uses the tools it condemns and risks falling prey to the practice it exposes;
3. that literary and non-literary "texts" circulate inseparably;
4. that no discourse, imaginative or archival, gives access to unchanging truths nor expresses inalterable human nature;
5. finally . . . that a critical method and language adequate to describe culture under capitalism participate in the economy they describe. (xi)

Veeser's summary emphasizes that new historicism functions as a specific approach to texts that is aware of its own relation to socio-political realities.

Given its insistence on literary text's situatedness in a network of non-literary texts, new historicism in and of itself may be understood as a necessarily interdisciplinary practice, however, this notion may also bring its limitations to the fore. Laurence Lerner explains: "The achievement of new historicism is regularly described (and praised) as eliminating the condescending concept of 'background' material, and treating *any* document as a text in own right. But to historians they have always been that" (278, emphasis in original). Historians, in other words, do not rely on new historicism to understand the past as a reconstruction from limited sources in which different kinds of texts interact and respond to contemporary developments. This limitation of new historicism to the discipline of literary studies is also suggested by Allen Dunn and Thomas F. Haddox who explain that "[l]iterary historicism inevitably addresses political, aesthetic, and ethical issues but seldom addresses the work that is currently being done in political theory, aesthetics, and moral philosophy" (xiv). It is thus argued that new historicism, while referring to tools and practices of adjacent disciplines, struggles to truly incorporate said disciplines' contributions and critical approaches. Moreover, new historicism, in its critical position to textual difference, also necessarily perceives of literary forms of writing as being of similar significance to other, non-artistic means of expression. However, different texts are also formed by different sets

of regulations and structures. The consideration of legal documents, for instance, presents an interesting contribution to engagements with a given past, yet their phrasing is shaped by the legal frameworks of their socio-political situatedness. Literary texts, while undoubtedly appearing in close interconnection with their times and while also being governed by discoursal rules, allow for deviant non-sanctioned perspectives on developments. Thereby, they might also offer diverging, contradictory and necessarily ambiguous readings of their time.

In order to do justice to the specific force presented by artistic contributions, Hubert Zapf's understanding of cultural ecology developed an approach that specifically presents literature as a reintegrative force. Zapf understands literature as "a textual form which breaks up ossified social structures and ideologies, symbolically empowers the marginalized, and reconnects what is culturally separated" ("Ecocriticism, Cultural Ecology, and Literary Studies" 138). He further develops a triadic model of literature as cultural ecology and argues for three functions of literary production: as a cultural-critical metadiscourse, an imaginative counter-discourse, and a reintegrative interdiscourse.

As Zapf notes, literature's first function as a cultural-critical metadiscourse resonates with new historicist approaches as "literary texts are not only externally but intrinsically related to the sociohistorical conditions from which they emerge and to which they respond" (*Literature as Cultural Ecology* 103). However, he also argues against a reading in which literature appears as merely one form of textual reference and explains that "literature responds to hegemonic discursive regimes by exposing petrifications, coercive pressures, and traumatizing effects of dominant civilizational reality-systems that are maintained and reinforced by those discursive regimes" (*Literature as Cultural Ecology* 104). Literature thereby reveals the pressures of discourses, "in which the normative becomes the 'normal' and in which prevailing conceptions of cultural identity are based on hierarchical binaries such as mind vs. body, intellect vs. emotion, inside vs. outside, self vs. other, human culture vs. nonhuman nature" (*Literature as Cultural Ecology* 104). Zapf's introduction of systems of binary opposition appears particularly fruitful for the discussion at hand given the body's pluripotent role as a natural artefact that is culturally produced and whose workings impact individual processes of meaning-making and of identity-formation.

Secondly, Zapf refers to literature's function as an imaginative counter-discourse. He explains that aside from drawing attention to repressive systems, literary texts "simultaneously build up a counter-discursive dynamic, which foregrounds and semiotically empowers the culturally excluded and marginalized as a source of imaginative energy" (*Literature as Cultural Ecology* 108). Hereby, works "stag[e] radical difference, alterity, and resistance" (*Literature as Cultural Ecology* 109) and, it may be derived, also establish their political quality in closed

systems. This insistence on the creative potential of marginalized voices appears particularly fitting in the framework of speculative fiction in which exclusion tends to form a critical point of reference. Roberts argues with reference to science fiction that "in societies such as ours where otherness is often demonized, SF can pierce the constraints of this ideology by circumventing the conventions of traditional fiction" (19). Roberts's emphasis on the breaking of tradition and the questioning of constructions of otherness relates to literature's function as an imaginative counter-discourse which erodes binary oppositions. Moreover, Roberts also emphasizes the significance of speculative fiction for post-colonial discussions as it may serve to emphasize the construction of otherness. Literature's capacity to shift perspectives and include the creative potential of marginalized voices thereby correlates both with Zapf's model and resonates with Gayatri Chakravorty Spivak's concept of the Other as an entity produced in colonial endeavors (247).

Lastly, literature is understood as following the function of a reintegrative interdiscourse in which "literature brings together the civilizational system and its exclusions in new, both conflictive and transformative ways, and thereby contributes to the constant renewal of the cultural center from its margins" (*Literature as Cultural Ecology* 114). Zapf goes on to argue:

> The alternative worlds of fiction derive their special cognitive, affective, and communicative intensity from the interaction of what is kept apart by convention and cultural practice—the different spheres of a society characterized by institutional and economic specialization and differentiation, public and private life, social roles and personal self, mind and body, the conscious and the unconscious, and, pervading them all, the basic ecological dimensions of culture and nature. (*Literature as Cultural Ecology* 114)

Rather than reiterating discoursal separation, literature is perceived as a transcending force that brings different realms into contact and conversation. Particularly interesting is the overall structuring of nature and culture that is also applied to "mind and body" as well as to "social roles and personal self." This reading offers a fruitful frame for engagements with organ transplantation, given that the practice, as demonstrated earlier, necessarily transgresses geographical, corporal and conceptual boundaries.

In the theoretical framing of this study, I thus draw from seemingly contradictory approaches to literature. The medical humanities emphasize a shared focus on meaning-making in both medicine and the humanities, a reading that can be related to new historicism's understanding of a textual network of voices, disciplines and discourses. While new historicism perceives of literary texts as merely one example of textual sources of a given past, an understanding of literature as a force of cultural ecology emphasizes the unique contribution of artistic expression and its critical and reintegrative potential. However, at the core of both new his-

toricism and cultural ecology, literature is perceived in close interconnection with its surrounding discourses, concepts and political realities that are expressed in a variety of textual references. Opting for an integrative perspective thereby allows a positioning of medical developments and speculative fiction at the intersection of various discussions and disciplines and the perception of speculation as an endeavor that transgresses disciplinary boundaries. Secondly, it enables an understanding of speculative fiction's unique contributions by emphasizing a reciprocal relationship between texts. Hereby, I present literature not only as navigating ethical, personal or societal dimensions of medical progress but frame fictional engagements as an active impact on said developments. At the same time, I want to show that the inclusion of narrative, be it in the form of life writing or fiction, provides irreplaceable surplus value for the discussion of the complex cultural practice of organ transplantation.

4 The 1960s: The Rise of Transplantation and Philipp K. Dick's *The Penultimate Truth*

Much has been said about the 1960s in U.S. America, which tend to epitomize the ultimate era of change. In fact, the '60s saw considerable developments in different areas of human experience: major technological advancement, the war in Vietnam, the anxiety created by the Cold War, Civil Rights movements and the assassinations of three political leaders are prime examples. The term "The Sixties" thus seems to relate to more than a mere decade and is tied into political and cultural developments. Tom Brokaw explains:

> Personally, as someone who lived through the Sixties – a time I count as beginning with the assassination of President John F. Kennedy in 1963 and ending with the resignation of President Richard M. Nixon in 1974 – I have many personal memories of that turbulent, exhilarating, depressing, moving, maddening time that simply do not come together in a tidy package of conclusions. (xvi–xvii)

Brokaw's assessment emphasizes both the public and the individual: He refers to "personal" experience yet frames the decade around Kennedy and Nixon. Brokaw illustrates that the '60s tend to be presented along two axes: as a representation of a feeling of change and as a time of intense political developments. Jameson concludes that "[t]he simplest yet most universal formulation surely remains the widely shared feeling that in the 60s, for a time, everything was possible: that this period, in other words, was a moment of a universal liberation, a global unbinding of energies" ("Periodizing the 60s" 207). Indeed, the Sixties have become an iconic time in American history as "[i]t is axiomatic to love or hate 'sixties' culture but it is much more of a problem to define a decade about which myths and images often masquerade as cultural history" (Monteith 1). Iconic images of the Sixties abound and form a prominent source of information on- and impressions of the time:

> Even those who came of age long after the 'sixties' share the collective memories: the grainy film footage of John F. Kennedy shot down in Dallas, Neil Armstrong stepping onto the moon, Martin Luther King Jr., telling the world about his dream of racial equality, a naked girl in Vietnam running, screaming, burning with napalm. (3)

American historian David Farber's statement presents the Sixties as an assembly of textbook moments of American history and emphasizes the importance of media, especially the television, in transmitting these events. Still, the television is only one example for the increasing importance of technology, and Farber

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stresses that "telephones, television, refrigerators, and the electricity to power them were accepted as an American birthright" (9). Technology not only played a central role in everyday life, but also in the national endeavor of the space race. Here, technological progress intersected with political interests, as William L. O'Neill argues with reference to American reactions to the launching of Sputnik in 1957: "It appeared that national self-confidence was based mainly on the assurance of technological superiority in every field. Demands for an expanded arms race multiplied. Russia had to be surpassed everywhere, especially in 'science'" (7). Technological progress, then, appears as a national undertaking pursued within the home, internationally, and even in outer space.

For the field of transplantation, the Sixties also presented ample ground for hope and uncertainty. In the beginning of the decade, virologist F.M Burnet wrote an article on "The New Approach to Immunology", in which he presents the future of organ transplantation rather pessimistically as "much thought has been given to ways by which tissues or organs not genetically and antigenically identical with the patient might be made to survive and function in the alien environment. On the whole, the present outlook is highly unfavorable to success " (qtd. in Starzl, "Small Iowa Town" 12). Burnet's prediction from January 1961 positions immunosuppression as the major obstacle to survival rates. In his autobiography *The Puzzle People*, surgeon Starzl explains that in 1961, "[t]ransplantation appeared to be going nowhere. Or so it seemed to the pessimists who were in the majority" (91) – this sense of ennui was about to be replaced by major momentum in the decade's following years. The first successful heart transplantation by Christiaan Barnard in 1967[19] appeared as "[t]he holy grail of transplant procedures" (Siemionow 17) and brought unprecedented media attention for transplant medicine. Clearly, Barnard's procedure cannot be separated from technological developments, prominently, the development of the heart-lung-machine. The ties between transplant practice and visions of the future come to the fore as the race to transplant a human heart was narratively linked to the space race.

Change was not only brought about by technology, the momentum of civil rights movements also shapes perceptions of the decade. Simon Hall explains that "[t]he years of 1960–1972 saw the emergence of two of the most significant social movements in American history – the African American freedom struggle and the movement to end the war in Vietnam" (1). As Hall emphasizes, these instances are interrelated (2), and remain only two examples of movements for social equality, among them the feminist movement and the movement for gay

19 Barnard's surgery on Louis Washkansky is commonly referred to as the first successful heart transplantation even though the patient died after eighteen days due to pneumonia.

rights.[20] Media focused on these developments, and two months before it would show a picture of surgeon Christiaan Barnard, the *Time* cover of October 27th, 1967 presented "Marchers at Lincoln Memorial" and featured a banner reading: "PROTEST! PROTEST! PROTEST! PROTEST A Week of Antiwar Demonstrations" (Rothman). Many were inspired by the developments, among them science fiction writer Philip K. Dick, whose works "responded to the climate of his time" (Link 9).

It was an important time for Dick, who wrote some of his best-known novels in the '60s. Many of his works from this decade have found increasing attention in recent years. *The Man in the High Castle,* first published in 1962, inspired a series created for Amazon Prime Video (2015–2019). His classic *Do Androids Dream of Electric Sheep?* (1968) forms the basis for the 1982 blockbuster *Blade Runner* by Ridley Scott and the sequel *Blade Runner 2049* (2017). While *The Penultimate Truth* was published in-between these famous works in 1964, it does not rank among Dick's renowned novels. The work focuses on the difference between upper and lower class and emphasizes knowledge and the lack thereof as a decisive factor in processes of differentiation. In Dick's future the lower-class lives below ground and believes the surface to be uninhabitable due to an ongoing war between the East and the West, fought between the Wes-Dem and the Pac-Peop. The so-called tankers are certain that the surface is toxic and only civilized by robots, "leadies", fighting the war for humanity. The upper class, on the other hand, knows that the war has been over for thirteen years and employs the media to keep the lower class in the dark and share the abundant space on the surface. A main component of this lie is President Talbot Yancy, a simulacrum controlled by the agency and its employees, the highly ambitious Yance-men and their leader, Stanton Brose. This future is filled with a variety of technological developments, such as murdering machines and time travel, yet the role of artificial organs is particularly noteworthy. Although some "artiforgs" still remain, their supply is dwindling, and the remains are claimed by the eighty-two-years-old leader Brose himself. The story begins when Nicholas St. James, inhabitant and president of the tank Tom Mix, begins his search for an artificial pancreas for Maury Souza, the tank's main technician. The novel follows Nick's journey aboveground and sheds light on an ever-increasing net of revelations and penultimate truths. The confusing plotlines appear as a main reason for the lack in critical attention.

Jameson groups the novel as part of "the trash and the hack work" (*Archaeologies of the Future* 363), and Zuzanna Gawronska explains: "Undoubtedly the fact that Dick was concurrently working on another novel . . . could influence the qual-

20 For an introduction to women's civil rights movement see Evans, pp. 3–23, for information on the historical background of the gay rights movement see Walzer, pp. 21–66

ity of his writing and result in some weaknesses in the construction of the novel" (49). Merrit Abrash adds that "[i]t ranks high in sheer SF inventiveness, but serious deficiencies include an excess of subplots, a confusing and unconvincing major character, and some convoluted and ultimately absurd time travel gimmickry" (157). Especially the novel's second part does offer a variety of characters and storylines, which seem to distract from – rather than contribute to – the development of the main plot. Yet Abrash's first comment also needs to be considered: the work does offer a variety of science fiction topoi, such as interstellar relations and simulacra and intricately interweaves them with considerations of social (in)equality and crime.

Still, so far, the novel's plot has found little attention and discussion has majorly focused on the setting and basic premise. Abrash constitutes that "one clue strongly suggests that the true substance of the novel is not at all the plot-actions and developments stemming from an initial situation – but the initial situation itself" (157). Thereby, Abrash introduces the novel's set-up, the differentiation between high and low and knowing and un-knowing, as its most important aspect. Several critics have noted the metaphorical quality of this spatial arrangement. Kim Stanley Robinson claims that Dick "is giving fictional reality to metaphors that already exist in our world" (68) and calls "The ruling class keeps the workers underfoot" the novel's primary metaphor. Robinson illustrates that the metaphor's literal employment contributes to the appreciation of its underlying patterns and shows that the metaphor deeply influences concepts of social structure (68). On a similar note, Patricia S. Warrick explains that "*The Penultimate Truth* creates one of the richest metaphors for political exploitation and ruthless use of power" and emphasizes Rosseau's impact (59). Abrash further analyzes these philosophical roots of the setting and suggests that "the guiding concept behind that situation is the concretization of abstractions and metaphors, both familiar and lesser known, in the writings of Jean-Jacques Rousseau" (157). While these readings offer insightful analyses of the ways that space and character development is employed to allude to societal practices, it seems a little shortsighted to neglect the novel's plot development altogether. My engagement with the depicted events brings another, previously overlooked aspect into focus: the search for an artificial organ and its social significance.

In fact, the basis for Nicholas St. James's journey aboveground and all following events is the failure of an organ. Maury Souza, the main technician, suffers from pancreatitis and needs an artificial pancreas. With the old man waiting in deep-freeze, Nick begins his travels. Hereby, the artificial organ serves as a link between Nick's personal, highly metaphorical journey to the surface, and the universal conspiracy of keeping the lower class in the dark. Reading the novel in the context of organ transplantation thereby offers new insights along different axes:

firstly, it illustrates Dick's engagement with medical innovations of his time, secondly, it establishes inequality in the novel as affecting not only lived reality, but physical integrity.

Given the significance of transplantation for the decade, it remains unsurprising that Dick was not the only author who discussed transplantation in the speculative realm. In his study on "Frankenstein to Futurism", Robert D. O'Neill summarizes transplantation's role in fiction:

> Science fiction/horror movies and novels were the dominant genre for stories of organ transplantation up to the late 1960s. Around that time, there was a shift in focus – a shift that coincided with the fact that organ transplantation was becoming, if not already in many instances, a reality. What was once able to shock was now becoming accepted. Although the horror genre remained, attention moved toward the implications and psychosocial consequences of this new emerging technology with new themes being expressed – particularly the procurement of organs, personal relationships, and the idea of cellular memory. (225)

O'Neill's emphasis on a shift "toward the implications and psychological consequences" correlates with, *The Penultimate Truth. The novel* was published as early as 1964, yet already refers to transplantation beyond the scope of horror and navigates its relations to economic realities. O'Neill's reading that "[w]hat was once able to shock was now becoming accepted," remains an interesting point of reference as this study also exemplifies an ongoing uncertainty concerning transplantation that is prominently expressed within speculative fiction but that also applies to transplantation's role as a cultural practice.

The following discussion draws from narratives of the 1960s and seeks to trace and intertwine conceptions of medical, media and fictional discourse. Other works of speculative fiction, such as Larry Niven's short stories, will form points of reference here, linking Dick to the science fiction of his time. Thereby, I will argue that *The Penultimate Truth* intricately correlates with its contexts, such as technological progress, the influence of media and anxieties concerning atomic fallout. Moreover, this analysis sheds light on the previously overlooked element of the artificial organ. Thereby, it contributes to a more thorough understanding of the text and exemplifies Dick's early engagement with the yet-to-come issue of organ shortage. Adding to an understanding of speculation as a shared tool, I discuss Christiaan Barnard's autobiography in conversation with works of speculative fiction. I thus emphasize that texts which are rooted in the openly fictional realm of speculative fiction and the supposedly factual realm of life writing, both relate organ transplantation to the future and muse about its possible outcomes. Hereby, I also exemplify the employment of speculative means in reports and examples of medical life writing and argue for the prominent role of speculative medicine.

4.1 Organ Transplantation: Your Fantastic Future?

On May 31st, 1961, the *Spokane Daily Chronicle* advertised a series of articles titled "Your Fantastic Future" by Victor Cohn which aimed at foreseeing the major changes of the coming decade. The preview predicts, for instance, that "[s]cience one day will 'engineer' and control weather, sunshine and atmosphere" ("Your Fantastic Future" 28). While more than sixty years later, weather- and climate change still present cause for concern, the forecast also mentions that "[m]an in the future can expect to live 100 years" ("Your Fantastic Future" 28), a notion that might rely on the prognosis that "[s]urgeons will save lives by transplanting human hearts and other organs, some of them grown in laboratories" ("Your Fantastic Future" 28). The combination of these upcoming articles is striking: while some prognoses prominently relate to everyday activities ("By 1970 housewives may do their housework in 10 minutes a day – by dialing directions into an electronic brain"), they reflect upon ever-increasing mechanization and a belief in a future shaped by technological development.

The close-up articles followed in the course of the next weeks, among them "Promise Seen in Human Organ Transplanting." The article opens with a fictional headline: "'May 1, 1970 – A surgeon today successfully transplanted a human heart from an auto-crash victim to a patient whose heart had been failing.' A news story like this is possible within the next 10 years" (V. Cohn, "Promise Seen in Human Organ Transplanting" 1). This opening positions heart transplantation in the foreseeable future and offers a stunningly detailed outlook of what was to follow only six and a half years later, when Louis Washkansky received the heart of Denise Darvall, who had in fact died in a car crash. It is no coincidence that the imagined transplantation involves a heart. While several kidneys had already been transplanted since 1954, transplanting a heart still belonged to the realm of the future. Cohn frames this future with a specific emphasis on mechanized concepts of the body and quotes a surgeon who explains that "[w]e could give you a new lung . . . just as we change a spare tire" ("Promise Seen in Human Organ Transplanting" 1). The lung was to be transplanted in the not too distanced future: James Hardy performed the first lung transplantation only two years later at the University of Mississippi (Couture 2). Similar to framing the heart as the body's motor, the lung is likened to a tire. Here, the car forms a compelling point of reference: once a mechanical object that belonged to the future, it had already become a basic amenity of the '60s as "by 1960, telephones, televisions, refrigerators, and the electricity to power them were accepted as an American birthright, and fast cars and cheap gas were markers of the American way of life" (Farber 9). The car not only serves to illustrate the routine quality transplantation is about to gain but suggests the acceptance and enjoyment of technological developments.

Apparently, the beginning of the 1960s had seen enough successful transplantation to believe in a future of heart and lung transfer. At the same time, the placement in the future also confines these transplantations to a removed realm and thereby distances problems inherent to the procedure from the present.

Future promise was not only seen in surgical interventions in the inner body but also with reference to outer space with the moon landing in particular presenting ample ground for speculation. Donna Haraway emphasizes the role of representation for both inner and outer space and underlines the constructedness of both spheres. In "The Biopolitics of Postmodern Bodies" she highlights that images of both realms are necessarily constructed and speaks of a perceived "equation of Outer Space and Inner Space, and of their conjoined discourses of extra-terrestrialism, ultimate frontiers, and high technology war" (222). Interestingly, Haraway connects both undertakings to the notion of the ultimate frontier. Not only did Kennedy himself speak of a policy of new frontiers of "opportunities and perils" (qtd. in Farber 26), the frontier myth also introduces the advancements in space and transplantation as a national interest, especially in Cold War times. This notion already became apparent in 1961 when John F. Kennedy addressed Congress and spoke about the space race and the importance of landing on the moon. He explains: "I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to Earth" ("John F. Kennedy 'Landing a Man on the Moon'" 2:29). As travelling to the moon needs to occur "before this decade is out," it is framed as an undertaking of the '60s – rather than relating to the distant future, landing on the moon is confined to the current decade.

The time frames of space travel and popular engagement with transplantation practice are strikingly similar: Both were to occur before the decade was over. Yet, the connection between both projects runs deeper as Donald McRae explains. In *Every Second Counts* (2006), McRae repeatedly emphasizes the ties between space travel and transplantation practice and ascertains that "[a]longside the glorious fantasy of space travel, the heady notion of transplanting a human heart had begun to take hold of America" (103). McRae grants the undertaking of space travel and transplantation a mysterious, almost otherworldly quality by referring to them as a "glorious fantasy". Even more, his statement frames both endeavors in terms of international races as the subtitle of his study, *The Extraordinary Race to Transplant the First Human Heart*, further highlights. By relating specific moments of the space race to developments in heart transplantation, McRae underlines their similar framing. One example is his description of the launch of Sputnik: "In contrast to the sputniks and rockets blasting into space, Shumway and Lower's course was stealthy. . . . America instead appeared gripped by the novelty of hurtling through that cold blackness the world still called outer space" (39).

Here, the developments of transplantation are contrasted with the advances in outer space: The prior is stealthy, the latter "blasting". Despite these differences, however, McRae relates the failure of Apollo 1 to the course of transplantation practice: "The space race had grown darker and more somber. In a similar way, the cardiac-transplant race would soon turn more fierce, and deadly" (166). The malfunctions of the space program are equaled to failures in surgical practice even though both developments have no causal relation. Rather, the analogy underscores the wish to relate the travel to outer space to the focus on the body's interior spaces. In the 21st century, space imagery still appears pervasive. For instance, cardiothoracic surgeon Magliato comments in 2010 on her ritual to first lightly touch a patient's heart during surgery:

> *I* opened the door to the secret chamber that houses the heart and *I* want to be the first to touch it. Neil Armstrong got to be the first one to touch the moon. Maybe that was prearranged by NASA. Or maybe, just maybe, he was simply the first one at the door. (25, emphasis in original)

Magliato's comment and her emphasis on the personal pronoun "I" suggest her individual role for the transplantation. Yet Armstrong's and – in extension – Magliato's own role are also part of speculation as the triple repetition of "maybe" suggests. Moreover, she immediately links the exclusivity of Armstrong's "small step" to the opening of the chest cavity. Again, the transgression of boundaries is implied: Just like Armstrong somehow became the first man on the moon, Magliato claims the heart by touching it first. Both inner and outer space are thus marked by human interference and are conceptually linked by the technological progress that allows for the surpassing of physical boundaries.

Strikingly, the link between space travel and transplantation also led to an intermingling of ideas and hopes formerly related to only one of both endeavors. On May 3rd, 1963, *Time* featured an article titled "Surgery: The Best Hope of All". The article presents an optimistic outlook on the future of surgery and clearly links the advancements in space to progress in medical practice:

> Man may strain ever farther into space, ever deeper into the heart of the atom, but there in the operating room all the results of the most improbable reaches of research, all the immense accumulation of medical knowledge are drawn upon in a determined drive toward the most awesome goal of all: the preservation of one human life. ("Surgery: The Best Hope of All")

Obviously, medical advancement and space travel are presented as basic human ventures, still, the first clearly follows a more noble goal than the latter. Comparable to McRae's analysis, the reference to outer space primarily emphasizes what is

supposed to be truly important: human lives. However, the article also evokes myths of space travel and extraterrestrial life and thus presents outer space as a realm of the ultimately unknown and fantastic. A prominent instance is the description of an operating room in which "[t]he grey-gowned figure in charge looks like a visitor from another planet. Between skull cap and mask, his head sprouts a startling pair of binocular spectacles" ("Surgery: The Best Hope of All"). The surgeon himself appears reminiscent of well-known tropes of alien forms of life and becomes, "a visitor from another planet", his body connected to the instruments he uses, with binoculars literally "sprout[ing]" from his head. The physician is framed as the ultimate unknown and is apt to go where no man has gone before and to tackle the mysteries of the human body. Hereby, science fiction imagery is used to create awe for the medical profession. Its workings might appear alien to the lay eye, still the surgeon follows a noble goal as "[his] hands move with confident precision and his even voice snaps with authority, but his very words seem part of an alien language – a communication designed solely for his colleagues" ("Surgery: The Best Hope of All"). The surgeon holds unquestioned authority and his foreign tongue can be understood only by fellow experts. Here, the portrayal of the surgeon oscillates between his task to save human lives, on the one, and his alien, futuristic behavior and command of technology, on the other hand. Despite the surgeon's appearance, he is presented in utter control and "[h]owever drastic the operation he undergoes, today's patient knows an intensity of care unheard of a few decades ago" ("Surgery: The Best Hope of All"). Being cared for by these surgeons means living in a future not even dreamed of by patients in the past. The received care and the performing surgeon are thus closely linked to ideas of the future, a notion that is transported by the employment of science fiction motifs.

While newspaper articles presented surgeons as visitors from outer space, speculative fiction further developed the role of technology in its imagined surgeries. In Niven's "The Jigsaw Man", first published in 1967, explanting organs is an undertaking entirely devoid of human physicians:

> The doctor was a line of machines with a conveyor belt running through them. When the organlegger's body temperature reached a certain point, the belt started. The first machine made a series of incisions in his chest. Skillfully and mechanically, the doctor performed a cardiectomy. ...
>
> The doctor took him apart with exquisite care, like disassembling a flexible, fragile, tremendously complex jigsaw puzzle. ("The Jigsaw Man" 69 – 70)

The depicted scenario intersects the expected and the unexpected as the operating entity remains a doctor but becomes a machine. The machine's intricate workings

appear reminiscent of human physicians, it is "skillful" and takes "exquisite care". The scene's brutal effect is not caused by a bloody or vile depiction of the operation but by the absence of emotion, the care that appears as a façade for automated processes. Accordingly, the doctor abides strict rules, it waits until the body has reached a certain temperature, a practice following transplant protocols. The machine-doctor also resonates with transplantation's depedence on machines. Given that heart transplantations became feasible because of the development of the heart-lung-machine, the short story also metaphorically renders the machine-reliant doctor: The machine becomes the doctor. Alongside the doctor, the treated body is reduced to its mechanic functions, an assembly of various parts, "a jigsaw puzzle". Thereby, the literally mechanical doctor also becomes a mirror of the metaphorically mechanical body. The close connections between technological progress and concepts of embodiment are underlined and the human body is devoured by the mechanized processes of transplantation practice.

This first look at media engagement, life writing and speculative fiction thus exemplifies that the 1960s closely intersect transplantation with the belief in a technologized future. In a decade in which controlled weather was part of a predicted future, heart transplantation too became imaginable for lay audiences. This future presents the opportunity for explorations of the inner and the outer space and metaphorically links both endeavors. As surgeons are presented as alien life forms, the speculative element of narrating medical procedures becomes undeniable. At the same time, science fiction employs medical developments and distorts the ongoing technologization to almost satiric effects. I therefore argue for a reciprocal relationship of the future, technology and transplantation in which each constituent is navigated in the form of speculation, and which allows for the intersection of seemingly factual and openly fictional narratives. It can be concluded that fiction participates in the medical realm and that vice versa, medicine shapes fiction.

4.2 Media and Reality

A compelling aspect of *The Penultimate Truth* is its title: If finding out about the tremendous scam that has held part of humanity belowground is merely penultimate, one cannot help but wonder what the ultimate truth might entail. Gawronska explains that "in terms of the action the novel can be said to be constructed as a book of revelations" (55). These revelations, however, always remain penultimate:

> But the problem of verisimilitude becomes central to the thematic plane of the text also because it seems that the narrative itself follows this pattern of *approximation to the truth* by

> unmasking illusion after illusion (falsification of ideas), leaving the final idea (or ideal) of the truth beyond the characters' and the readers' reach. (Gawronska 55, my emphasis)

In the novel, the truth can only be approached but never reached. Thereby, the unmasking of illusion becomes a central motif and is imagined in a variety of narrative strands. Accordingly, supposed truths are presented as fact until the main characters, mostly Nicholas St. James, unveil yet another layer of seeming facts. Even though reality is constantly changing, it is always presented with factual clarity: As truth becomes a relative concept, the power to persuade people of a given reality (e. g., that the outside world is toxic and caught in devastating warfare) appears almost absolute. As Umberto Rossi explains, "all the government tells people is just a lie, or better, an irredeemably penultimate truth" (122). The media form active agents in these strategies of reality-formation: By establishing the truths of their time they govern the citizens' belief-system. The media's impact is brought to satiric extremes when a man is murdered by a device mimicking a television. In the dead man's apartment a machine is found, which "in the darkness of the room, appeared externally to be an ordinary television receiver, as its wartime makers had intended" (*The Penultimate Truth* 146). In Dick's world, the television kills. The camouflaged device is not as harmless as it appears to be, just as broadcasted information presents merely penultimate truths, if any truth at all. Warrick argues that comparable to other novels by Dick, *The Penultimate Truth* "describes a world in which the master – those in power – use the media to distort reality so that the little people cannot comprehend the degree to which they are enslaved" (59). In the context of an ever-growing influence of mass media in 1960s U.S. America, the role of media and their influence on reality-construction are thereby exaggerated to satiric effects.

This focus on the impact of media also becomes apparent in Christiaan Barnard's autobiography *One Life* (1970) in which the surgeon offers insights into his perception of media interest. He remembers that after transplanting the first heart, he was "under constant barrage from the news media" and confesses that "[i]t was also flattering to be at the centre of such attention" (451). Louis Washkansky, who received the first transplanted heart, had to give a variety of interviews, too. On December 15th, 1967, Washkansky's picture was on the cover of *Life* magazine, subtitled with: "Gift of a Human Life: A Dying Man Lives with a Dead Girl's Heart". The article affirms the singular quality of the surgery "which, regardless of the ultimate outcome, is a historic achievement" (24 A). The prominent coverage of transplantation in newspapers also played a major role in educating the public. A study from 1969 with participating doctors shows that "[f]orty-seven per cent said they learned through the newspaper, 35 % through radio, 12 % through television and 6 % through another person. This is surprising

because the news was carried almost 24 hours on broadcast media before newspapers had it" (O'Keefe 239). The impact of the newspapers in offering information about medical innovation becomes apparent and can obviously not be reduced to medical professionals. The fact that transplantation presented major news also becomes apparent in Adrian Kantrowitz's account. Kantrowitz, who is commonly presented as another contester in the "race" for the first heart transplantation (McRae 25), recalls that he too received major media attention after he transplanted a heart shortly after Barnard. He explains that "a second transplantation so soon afterwards evoked frenzied interest" (248) and remembers that "before the surgery was over, more than 200 reporters, photographers and television people had gathered outside the hospital" (248). It thus appears unsurprising that Barnard as the first surgeon to perform the heart transplant became a famous man. In 1968, the German *Spiegel* reported on his tour of Europe and showed photographs of Barnard dancing with starlets (119). Barnard is quoted to "not think too highly of discussions in specialist journals" and to therefore take the liberty to "dispute about ethics and death in front of television cameras" ("Barnard-Reise: Nicht Väterchen" 119, my translation). Discussions about transplantation were deliberately brought to a wider audience and further contributed to Barnard's fame: The issue of transplantation had reached the living room of a lay audience, and the surgery became a spectacle beyond mere medical interest.

Yet even before the first heart transplantation became a major media event, transplantation practice received coverage and was presented as novel, unknown and shocking. A prominent example is a *Time* article from twelve years earlier – 1955 – which reported on Russian experiments concerned with transplanting a dog's head onto another living dog's neck. The report explains: "As the surgeons watched, the puppy's head bit the nearest white ear. The white head snarled" ("Science: Transplanted Head"). The article concludes that the surgery "was not a mere stunt. It was part of a long-range attempt to learn how damaged organs can be replaced, or how their functions can be performed by mechanical substitutes" ("Science: Transplanted Head"). However, the report's title "Transplanted Head", as well as the portrayal of both dogs' heads as antagonists now living within the same body, frame the experiment's potential to shock or frighten. In fact, Barnard had conducted a similar experiment shortly afterward and deliberately describes the surgery with ties to supernatural horror:

> We had grafted a second head on to a dog and made a film of it before going to a conference in Moscow – an experiment which had also been done in the Soviet Union. Professor Louw had heard about it and rushed to the laboratory, to find the dog lapping up milk with both heads.
> "What sort of monster will you create next?" he had asked.
> "We'll let you know when we do it," I had promised. (314)

Louw's reaction portrays the experiment's shocking potential even within the medical community and Barnard appears as a daring man. The unapologetic and proud surgeon is in utter autocratic control of his monstrous creations: He ascertains that he will inform his superior once he has created a new "monster," thus establishing his individual responsibility for his research. Both the *Time* article and Barnard's anecdote thereby focus on the non-medical aspects of the head transplantation. Moreover, I read Barnard's depiction and reference to the monstrous in a speculative frame as he likens himself to Doctor Moreau, H.G. Wells's (1896) secluded surgeon who self-sufficiently conducts his experiments and tells his superiors and the world about it once he has finished – and once results have been established.

Yet transplantation not only continued to trigger speculation in relation to the organic and monstrous but also in relation to technological developments. On June 3rd, 1966, the *Time* magazine reported on a woman who had received a "half heart," a ventricular assist device developed by Adrian Kantrowitz. The article portrays Louise Ceraso's struggle in compelling terms: "But she survived the heroic operation longer than any of her four predecessors, and the very fact that she was still alive at week's end, ten days after her operation, was a significant medical record" ("Surgery: An Implanted Half Heart"). Again, surgery is framed in terms of a race: Here, the woman's survival is compared to her "predecessors" and her longer survival. Strikingly, neither patient nor doctor are presented as the story's hero, it is the operation itself which is "heroic". Moreover, Ceraso's struggle, even her death, is reduced to "a significant medical record," she has become a measurable part of transplantation's story of progress. While this progress is governed by technology, it is important to note that the employment of "half heart" is misleading. The implanted device was supposed to assist the functioning of the patient's heart and relieve its effort by some fifty percent, yet it did not replace part of the organ. Still, the image of the "half heart" prevailed and several newspaper presented variations of the same image when reporting on Ceraso's passing between the 30th and 31st May, 1966. Many articles used contents based on AP research but featured different headings: *The Lawrence Journal World* article is titled "Widow with Special Heart Dies After a 12-Day Effort", *The Sumter Daily* titled "Heart Patient Dies" and *The Tuscaloosa News*' article read "Heart Device Fails to Save Widow's Life". *The Spokesman Review* even reports that "Woman with Artificial Heart Dies" and thereby portrays the device as an altogether different technological advancement. These examples indicate that interest in heart surgery was immense but also suggest that factual knowledge and accurate depiction of the events differed tremendously. At the same time, they underline that medical developments were cause for speculation in the public realm and emphasize the framing of the patient herself whose portrayal ranges from "heart patient" to "widow."

Even though *The Penultimate Truth* does not specifically employ media as a means to portray transplantation practice, it appears at the intersection of two major themes of its time: media and its monopole on distribution of information, on the one hand, and the rapid developments in transplantation medicine, especially in relation to technological devices, on the other. Farber states that "America in 1960 was a place in which competing 'truths' were on a collision course" (19), his reference to diverging lifestyles also forms a compelling summary of *The Penultimate Truth.* The novel's title remains its main premise: the absolute truth can never be reached, a notion that also applies to diverging news reports and unknowable transplantations.

4.3 The Artificial Organ

In *The Penultimate Truth*, the future hinges on the transplantation of an artificial pancreas, a machine that leads Nicholas St. James to leave the tank and that sets the story's multitude of plotlines into motion. This interest in artificial organs resonates with the role they played in news reports in the 1960s: They were perceived as a major upcoming technological achievement. *Time* magazine printed several articles concerning the issue, among them "The Ultimate Operation", published on December 15th, 1967, roughly a week after the first heart transplantation in Cape Town. Here, the presented developments are introduced as merely a steppingstone to the final aim of implanting artificial organs. The article quotes: "The National Institutes of Health also decided in 1963 that the eventual remedy for incurable heart disease must lie in a complete artificial heart, and set 1972 as the tentative target date for getting one to work" ("Surgery: The Ultimate Operation"). *Time* had already referred to surgeon Michael DeBakey two years earlier: "Now from his busy laboratories comes the confident prediction that surgical skills may soon be equal to the ultimate achievement—the implantation in a human of an artificial heart" ("Surgery: The Texas Tornado"). Once again, transplantation is described in superlatives and the transplantation of an artificial heart becomes the "ultimate achievement". The uncertain, speculative nature of the report appears obvious: It is based on a "confident prediction" which "may" lead to said achievement. At the same time, the development of an artificial heart also caused controversy: transplant surgeon Frist, for instance, explains in 1989 that "[f]rom the beginning, artificial hearts meant big trouble" (185) and also refers to the rivalry between surgeons Michael E. DeBakey and Denton A. Cooley, which was still discussed in *The New York Times* in 2007 (Altman).

In the Sixties, the artificial heart was thus perceived as an upcoming development of the near future as the establishment of the U.S. Artificial Heart Program in

1964 indicates. In 1963, "[p]rominent medical and other scientific researchers testify before Congress that it would be possible to develop an artificial heart if more funds, particularly for bioengineering, were available" (Hogness and VanAntwerp 205). Therefore, "[t]he National Heart Advisory Council recommends a long-range program of research to develop a permanently implantable artificial heart that could be used to replace a failing natural heart" (Hogness and VanAntwerp 205). The final aim was the permanent replacement of the heart with an artificial organ and to move further than, for instance, Kantrowitz's implantations of miniature pacemakers since the early '60s (Dressler et al. 325). While successful experiments with artificial organs like heart pumps, eyes and kidneys had taken place for at least thirty years,[21] the fully artificial heart remained part of an imagined, technological future. Despite these hopes, a fully functioning device could not be developed and in 1981 it was decided that the "use of total heart replacement can be justified only when massive and irreversible heart damage has occurred" (Hogness and VanAntwerp 208). Nevertheless, a year later, in 1982, a Total Artificial Heart (TAH), the Jarvik 7, was implanted into a patient, who lived for 112 days (Hogness and VanAntwerp 209). Today, artificial hearts are not perceived as optimal solutions for heart-failure. The website of the National Institute of Health, for instance, explains that one might receive an artificial heart "as a long-term solution if you have heart failure caused by ventricles that no longer pump blood well enough. In certain patients who are not able to be considered for a heart transplant, TAH surgery also may be a longer-term treatment option"("What Is a Total Artificial Heart?"). Currently, the artificial solution remains subordinated to the transplantation of human tissue.[22]

Moreover, the intricate ties between technology-driven body parts and the future not only become apparent with relation to the heart as Barnard's autobiography exemplifies. His rather moving account of amputating a boy's leg in which he perceives the "element of violence in surgery" clearly establishes his wishes for the future (140). Here, the cardiac surgeon describes his willingness to move beyond cutting off the leg:

> "But we should have some answer, other than cutting it off."
> "Like what?"
> "Like putting on another leg – something constructive."

21 For a timeline on the development of artificial organs see Bartlett and McKellar, pp. 17–25.
22 Nevertheless, research on Artifical Hearts is ongoing as, for instance, the EU-funded project ArtofHeart suggests. For further information, see Michael Allen in Horizon: The EU Research & Innovation Magazine.

> "Yes," he said. "In the year 2000."
> "Sooner," I said. "Sooner than that." (140 – 41)

Aside from contrasting Barnard's visionary outlook with the close-mindedness of his colleague, the conversation hints at how a constructed, functioning prosthetic leg was perceived before it became a medical possibility. In the year 2000, a year of a far-away future, a boy might walk again with the help of a "bionic leg." The new millennium, then, appears as an era of possibilities – a future Barnard wants to bring closer: according to him it will be "[s]ooner than that". As an example of speculative medicine, the physical destruction of the boy's body appears concrete, while the plan for a prosthetic leg remains abstract ("something constructive"). The technological development is clearly cause for speculation and needs to be positioned in a far-away timeframe. Even more, Barnard alludes to the science fiction trope of the cyborg and frames his hopes for the future in a narrative reminiscent of the genre. At the same time, however, the replacement of the leg can be referred to the myth of Cosmas and Damian. Barnard's anecdote thereby is both tied to mythical forerunners of transplantation practice and relates to speculative outlooks on the future. Obviously, Barnard's prophecy of prosthetic legs has long become part of lived experience – the once futuristic idea of high-functioning prostheses has been part of the lives of many. Barnard's speculation, then, also serves to present him as a capable surgeon who continuously wonders just how transplantation might benefit the world of tomorrow.

In the 1960s, reproducible and risk-free transplantation of artificial organs was thus still perceived as pertaining to a bright future. In *The Penultimate Truth*, a future of artificial organs has arrived, yet it is anything but bright. The dwindling supply of artiforgs is closely tied to a hierarchy of social strata and is primarily incorporated by Stanton Brose as will be shown in the following chapter. While these artiforgs are of vital importance in the novel, they are already remnants of the past, since the knowledge of their production has been lost after World War III. The remaining artiforgs are warehoused under the Estes Park Government, underscoring their status as relicts of the past. As Nicholas has to dig them up he appears reminiscent of an archeologist hunting for artefacts of a long-gone culture. The artificial organ is thereby positioned in an uncommon time frame: With reference to the novel's reader and the extradiegetic level, the artificial organ is positioned in the future; with reference to the novel's protagonists and the intradiegetic level, they are positioned in the past. The artificial organs are thereby comparable to the employment of nuclear war, which was perceived as a part of the future in the 1960s yet has already passed in the novel's 2025.

Given that in *The Penultimate Truth* fake information forms the basis for lived reality, the boundaries between the real and the fake become increasingly blurry, and truths can only remain valid for brief periods of time. Authenticity thus lies at the heart of Dick's novel and the presented artificial organs are exemplary for the author's use of simulacra. In his essay "Simulacra and Science Fiction", Jean Baudrillard argues for a distinction of three different kinds of simulacrum: natural simulacra, productive simulacra, and simulation simulacra ("Simulacra and Science Fiction" 309). In comparison to the first two, the third kind appears more difficult to define and Baudrillard ascertains that "[t]here is no real and no imaginary except at a certain distance" ("Simulacra and Science Fiction" 309). The main difference between simulacra lies in a decreasing discriminability between real and imaginary. The last case, Baudrillard argues, is the "implosive era of models", in which difference is completely diminished (310). In his answer to Baudrillard's essay, Jorge Martins Rosa summarizes:

> Hence the three orders – or periods – of the simulacra. At first the attempt to falsify what exists; then the reproduction of a functionality; and finally, when barely anything is left to emulate from the original reality, the generation of a new one from models where all combinatory possibilities are explored – even if later filtered by an artificial selection. The map becomes the territory, as there is no territory left to be mapped. (64)

The model which construes reality becomes indistinguishable from reality itself. As Rosa explains, Dick "rejects naïvely realist conceptions of 'Reality,' while insinuating that it may be nothing but an intersubjective agreement" (64). Reality, then, forms the theoretical basis of communication but can by no means be understood as non-negotiable. As Jameson ascertains, the idea of the simulacrum "convey[s] some specificity of a reproducible object world, not of copies or reproductions marked as such, but of a proliferation of trompe-l'oeil copies without originals" ("Periodizing the 60s" 195). Relations between simulacra and postmodernism become apparent as metanarratives of authenticity are suspended. In *The Penultimate Truth*, simulacra are used to question the nature of factuality itself. They enter the narrative in the form of constructed model cities built to be destroyed on camera (*The Penultimate Truth* 36) or in the form of Talbot Yancy, president of Wes-Dem and, as a machine, a literal puppet of media propaganda.

Read within the framework of Dick's interest in simulacra, artificial organs appear as yet another example, as they, too, are mechanically constructed objects designed to replace naturally grown ones and thus align with Jameson's assessment that the simulacrum "convey[s] some specificity of a reproducible object world" ("Periodizing the 60s" 165). In Dick's future, artificial organs have become the sole treatment for organ failure and, given their constructed nature, suggest reproducibility. Their status as reproducible objects, however, is challenged by their fac-

tually dwindling supply because pre-war knowledge about their construction has been lost (*The Penultimate Truth* 106). Still, Joseph Adams, a Yance-man who lives aboveground, thinks it might be possible to move towards the production of an artificial heart. He muses:

> Oh hell, we could produce a heart, here, he thought. But – it'd be a simulated heart; it would look like the real thing, beat like it ... but when you had it surgically installed it would turn out like everything we make turns out. And the patient wouldn't get much life out of *that.* Our products, he realized soberly, could not sustain life for even a second. (*The Penultimate Truth* 106, emphasis in original)

Adams's inner monologue emphasizes that a heart could be assembled like a machine, as the employment of "produce", "production" and "make" highlights. Adams might not have an active part in production, his estrangement from its processes and results becomes evident, nevertheless. Given that Dick has been read in relation to Marxist theory (Freedman 16), it appears fitting to refer Marx's assessment that "[i]n the estrangement of the object of labour is merely summarised the estrangement, the alienation, in the activity of labour itself" (39). A sense of estrangement is apparent in Adams's reading of the artificial heart which is incapable to sustain life, and which is bound to remain estranged from the human experience. He thereby suggests that the blood-pumping of an artificial heart – and the mechanistic reading of the body – is not enough. Accordingly, the heart simulacrum could function like a heart, yet it could never *be* a heart – it remains "simulated."

Transplant surgeon Christiaan Barnard offers a contradictory perspective on the power to sustain life offered by organ transplantation. In his autobiography *One Life*, he deliberately blurs the boundaries between transplanting tissue and life: "You're going to take life away from a man with the belief that you can sew it back" (393). In contrast to the novel, Barnard equals tissue with life: He will not merely "sew back" a new heart, he will "sew back" life itself, a reading that supersedes a purely mechanistic view or the body. In effect, his description presents the transplant surgeon with godlike, life-giving capacities. Clearly, Barnard's musings contrast with *The Penultimate Truth*, in which life cannot simply be sewn back and nature cannot be reconstructed. The differences in the conceptualization of the artificial heart and the recipient's body are based on divergent readings of transplantable tissue. While in Dick's imagined future the artificial heart remains a simulacrum and is therefore ultimately distanced from the recipient's body, Barnard insists that life is intrinsically tied to transferred tissue. Here, a differentiation between produced and grown organ can also be detected alongside the specific significance of the heart in matters of emotion. This separation between the natural and the technological is also expressed in an anecdote by car-

diothoracic surgeon Kathy Magliato. She quotes the wife of a recipient of an artificial heart in 1982:

> When the surgical team discussed the experimental surgery with his wife – that they would be removing his heart and replacing it with a machine – she asked one question of the team: "If you take out my husband's heart, will he still be able to love me?" Such is the strength of the association between love and the human heart. (173)

Magliato's reference, published almost thirty years after the event she recalls in her autobiography, emphasizes the differences between the natural and technological: The surgeon herself insists on the opposition between "heart" and "machine" and further underlines the organ's specific significance in conveying emotion. By imagining artificial organs as simulacra, Dick's novel can also be read in the context of such differentiations and facilitates complex readings of perceived differences between constructed and natural bodies. The employment of speculative elements thereby opens new readings of embodied selfhood, estrangement from a received organ and technological enhancement.

Given this focus on the artificial heart, it may appear surprising that an artificial pancreas plays the biggest role in *The Penultimate Truth*. Until today, the development of an artificial pancreas poses severe difficulties. In 2011, it was defined and "known as closed-loop control of blood glucose in diabetes, is a system combining a glucose sensor, a control algorithm, and an insulin infusion device" (Cobelli et al. 2672). The device has to fulfill the complex functions of measuring glucose and infusing an adequate amount of insulin. In 2006, Stephen R. Ash stated at the conference of ASAIO (the American Association for Artificial Internal Organs) that even though work on an artificial or bio-artificial pancreas had ensued for forty years, difficulties remain prominently "[c]reating an intricate relationship of cells and blood for diffusion to carry insulin (and glucagon) to blood", and "[p]roviding other hormonal functions of the pancreas" (Ash e7). He concludes that "[i]n general, how to rebuild rather than merely replace organs" (Ash e7) remains difficult. The specific location and physiology further complicate surgeries on the pancreas (Takaori and Tanigawa 535). Despite these ongoing proceedings, Arnold Kadish developed the first artificial pancreas, which "was the size and shape of a large backpack and not compatible with free-living" (Klonoff 77), in the same year as *The Penultimate Truth* was published, in 1964. On February 10th, 1964, *The New York Times* reported on the development of artificial insulin ("German Reports Major Advance For Making of Synthetic Insulin") and on July 1st, 1965, the *Schenectady Gazette* speaks of "a whole warehouse of artificial parts for the human body" and explains that someday in the future the artificial pancreas might control the insulin level for patients suffering from diabetes ("New Machines in Medicine"

28). Clearly, the artificial pancreas still presented ample ground for speculation, however, did not receive coverage comparable to the artificial heart, a tendency that ties into the heart's cultural significance.

In the novel, it might seem as an unusual choice to have technician Souza die of pancreatitis instead of a condition with more metaphorical weight, such as, for instance, heart failure. However, even though the pancreas, in contrast to other organs, might not tend to be subject to literary discussions, it plays a significant role in Dick's biography. This dominance becomes apparent in the "Author's Note" to *A Scanner Darkly*, first published in 1977, which states: "To Phil permanent pancreatic damage" (*A Scanner Darkly* 289). The affliction of the pancreas is also underlined by Tessa Dick, one of Dick's ex-wives, who explains that he was affected by chronic pancreatitis (Arnold 182) and states that the author had been hospitalized for renal failure and pancreatitis in 1969 (Arnold 181). I refrain from arguing for a biographical reading of Dick's novel, still, it is interesting to note the connection between Souza's illness of the pancreas and Dick's own illness. While the context of the 1960s would have suggested a focus on another organ, particularly the heart, Dick appears to have a specific relation to the failing pancreas. Embedding the novel in its textual network is thus extended to also embed it in the context of the author's singular lived experience.

In conclusion, artificial organs perform a dual role in *The Penultimate Truth:* They indicate still-existing differences between natural and constructed, while at the same time, they emphasize the need for- and reliance on specific simulacra. Thus, even though the text suggests the irreplaceability of human tissue, it nevertheless establishes human reliance on mechanical solutions. The ongoing relevance of this discussion becomes apparent in heart surgeon Magliato's autobiography. In 2010 she explains with reference to the implantation of artificial hearts: "As such, there are two competing elements in the operation – the human element and the mechanical element" (155). Magliato not only presents the separation between tissue and machine but emphasizes their "competing" natures. *The Penultimate Truth*, too, navigates the interplay of difference and sameness and presents the significance of artificial organs beyond biotechnological skepticism.

4.4 Organs and Status

The future of *The Penultimate Truth* is governed by difference in class. These differences are expressed via spatial arrangement but also medico-culturally as they determine access to medical care and artificial organs. Hereby, Dick's novel, as early as 1964, engages with organ transplantation as a problem of allocation, and even more, ties matters of allocation into social disparities. In the following,

I want to further investigate how the novel intersects inequality with organ transplantation and want to show that in Dick's novel access to organs and the impact of transplant practices cannot be separated from societal structures and thus from cultural readings of individual human bodies.

The relation between artificial organs and social position becomes exemplarily clear in the case of Stanton Brose. Stanton Brose is at the height of his power: He is 82 years old and – despite an impressive number of enemies – continues to remain in control. While at first glance his dominant position might work against readings of older age as being tied to social exclusion and inactivity, Brose's role is inseparably tied to the constant incorporation of artiforgs and to rejuvenation.

In fact, Brose's body appears in a constant state- and need of repair. On the one hand, the increasing reliance on artiforgs presents him as inorganic, as "tin-woodmanwise, a mere procession of Arti-Gan Corporation's plastic, complex, never-failing" (*The Penultimate Truth* 41). Here, the Agency's leader becomes the Tin Woodman, character of L. Frank Baum's iconic *The Wonderful Wizard of Oz*, first published in 1900. In Baum's story, the Tin Woodman has lost his body to an enchantment and sets out to ask the seemingly all-powerful wizard for a new heart. He explains that "the greatest loss I had known was the loss of my heart. While I was in love I was the happiest man on earth; but no one can love who has not a heart, and so I am resolved to ask Oz to give me one" (27). The reference to the Tin Woodman illustrates that like the tinman, Brose is able to replace missing – in his case failing – body parts with new, technically produced ones. Comparable to Baum's character, Brose is able to work and fulfill his duty. In contrast to the Tin Woodman, however, Brose's literal heartlessness is no cause for concern to him. The reference thereby illustrates the deliberate employment of an organ-driven metaphor, the literalization of emotional heartlessness and its subversion for the man, who willingly uses all remaining artiforgs for himself. As a *Time* article reminded its readers in 1963, "[t]he day may come when the Tin Woodman of Oz, who wanted someone to build him a working heart, may not seem like such a hopeless case after all" ("Surgery: The Best Hope of All"). Both Dick's work and the article illustrate the pervasiveness of Baum's fictional creation on discussions within and beyond the fictional realm. In the novel, Brose has received the functioning organs the article speculates about, however, as a result, has become "a mere procession" of artiforgs and distinctly non-human.

The reading of Brose's body as Other is further underlined by several protagonists, all of whom tend to describe it with reference to the non-human. As his body oscillates between technology and flesh and between living and dead, it becomes a "semi-dead organism" (*The Penultimate Truth* 41). The body thus appears in an eternal in-betweenness and defies expectations of its surroundings. Accordingly, it can no longer be conceptualized by mere human frameworks. To Foote,

Brose appears "spiderish" (*The Penultimate Truth* 138), Adams describes him as "a mound of rubber, blinking, flapping seal-like its pseudopodia" (*The Penultimate Truth* 42). In Foote's reference, Brose is positioned at the center of his own universe; to Adams, he resembles a seal, flapping its fins seemingly helplessly. Both Foote and Adams illustrate that Brose's body can be described only in comparisons to other, non-human entities. Interestingly, neither of these descriptions present him as robotic, technological, or artificial. Rather, his body is linked to decay, and is primarily met with disgust.

In fact, disgust is introduced as a common reaction towards Brose and is not only related to his actions but to his failing and obese body. Adams muses:

> Brose was old. What was it, eighty-two? And not lean. Not a stick, ribboned with the streamers of smoked, dried flesh; Brose at eighty-two weighed a ton, waddled and rolled, pitched, with his mouth drizzling and his nose as well … and yet the heart still beat, because of course it was an artiforg heart, and an artiforg spleen and an artiforg and so on. (*The Penultimate Truth* 39)

In contrast to the seemingly timeless technology that keeps Brose alive, his frame is described in organic terms, it "waddle[s]", "roll[s]", and is "drizzling". Again, Brose's body is caught between endlessly functioning technology and failing organic corporality. At the same time, Adams presents a normative reading of both age and weight, given that if Brose seemed healthier and was formed out of "dried flesh", his existence might not be as disturbing. Rather than mere chronological age, it is the body's state of decay and the loss of sovereignty over it that governs Adams's depiction. While Adams's assessment of Brose's body presents the aging body in a state of decay, it is the body's failing in particular that underlines his position in power: Brose has no need to keep himself healthy, he has enough power to escape death by technological means. The opposition between a sagging exterior and a technological interior hereby presents different layers of physical control: Although his skin may appear beyond his control, Brose commands the supply of artiforgs and, in effect, death itself.

The political overtones of Brose's access to artificial organs are obvious and are further substantiated by his deliberate decision to not replace a specific part: He voluntarily remains earless and cannot hear. "Brose [who] had greedily ingested artiforg after artiforg of the world's small and dwindling supply – was earless. Literally. Years ago, the organs of that sense had withered away. And Brose had declined artiforg replacements; he liked not to hear" (*The Penultimate Truth* 40). The choice of non-replacement clearly gains metaphorical significance as a man who decides not to listen to his surroundings becomes unable to hear them. Unsurprisingly, his earlessness also influences the way he communicates, and he has to face his conversational partner to understand what is being said.

Thereby, he forces specific behavioral patterns upon his surroundings and forces them to face his gaze. His deafness is employed as a means of control, which focuses attention on himself. Accordingly, when Adams and Foote use Brose's deafness for their own benefit and conspire in his presence, Brose constantly demands to be at the center of attention again (*The Penultimate Truth* 52). Talking without Brose's knowledge appears as a deviant action in and of itself, behavior that is immediately reproached. His missing ears rely upon his surroundings' fear and his controlling position of power; once they decide to ignore his requests, his deafness no longer constitutes a means to control the room.

These examples illustrate that Brose's body has become a site of reconstruction and appears in constant flux. At the same time, these changes, metaphorically render a central question of organ transplantation: If organs are replaced, where does the self reside? The novel presents a rather clear reading and opts for cerebrocentric approach to the body – it is explained that the brain remains "the one original organ, which was Brose" (*The Penultimate Truth* 41). Selfhood and the brain are equaled: Brose *is* his brain. In accordance, the brain becomes the sole unchangeable tissue of his body:

> But yet the authentic Brose remained. Because the brain was not artiforg; there was no such thing; to manufacture an artiforg brain – to have done so, when that firm, Arti-Gan Corporation of Phoenix, existed, back before the war – would have been to go into what Adams liked to think of as the "genuine simulated silver" business … his term for what he considered with its multiform spawned offspring: the universe of authentic fakes. (*The Penultimate Truth* 39 – 40)

The production of artiforg brains, Adams muses, would lead to the ultimate simulacrum, the absolute authentic fake. But in Adams's world, "there [is] no such thing" as an artiforg brain: the basic distinction between human and not human, between real and fake, very much relies on the brain as the governing organ. The brain, then, needs to remain the same for there to be an "authentic Brose", however complicated this notion may be. The novel thereby also ties into contemporary discussions on the brain. On October 4th, 1964, *The New York Times* featured an article by Dean E. Wooldridge, titled "How the Machine Called the Brain Feels and Thinks". The article engages with the brain as a physical object and wonders how this conception corresponds with framing consciousness. Wooldridge concludes:

> If future investigation continues to disclose consistent interrelationships between the physical conditions of the brain and the qualities of consciousness, it is hard to see how consciousness can escape ultimate acceptance as a property of certain organizations and states of matter. (Wooldridge)

Here, the brain in its objective nature is related to the workings of consciousness. In Dick's text, the brain cannot be replaced by a technological organ, for the result of this operation would no longer classify as human but belong to the realm of the fake. Both article and novel thereby engage with the question of how the physical quality of the brain interacts with the experience of (human) consciousness. The fact that artificial brains do not exist in Dick's future further underscores a cerebrocentric reading of transplant practices, in which Brose's status as human relies upon his brain not being a simulacrum.

Throughout the novel, this differentiation between Brose's body in parts on the one, and the deteriorating brain, on the other hand, is emphasized. The changes within the brain are underlined in Brose's struggle to remember facts: "He tried to recall; the eighty-two-year-old brain flagged" (*The Penultimate Truth* 48). Moreover, several other characters understand Brose' deteriorating brain function as a chance for his ultimate loss of control, Adams, for instance explains that "Brose himself will get more and more senile as that brain deteriorates" (*The Penultimate Truth* 189). Again, age is presented as a form of deterioration and senility becomes the one obstacle to Brose's position in power. Interestingly, Brose himself takes a similar approach: "Well, someday my brain will give out … arteriosclerosis or some such thing, a clot or a tumor, and then you can beat out every other Yance-man and replace me" (*The Penultimate Truth* 110). Despite the fact that he has access to artiforgs, Brose still relies upon the functioning of the single organ of the brain. Comparable to Adams, Brose frames his reliance on the organ as the ultimate reason for his downfall and apparently has already thought about the possible afflictions his brain may suffer.

This focus on the brain and its distanced positioned from the rest of the body appears particularly fitting in a time in which the establishment of brain death made heart transplantation possible. In *The Penultimate Truth,* Brose's downfall is made possible by an attack on his brain and St. James muses that it must have been a dart "[a]imed, of necessity, at the old brain itself, because that alone could not be replaced. When that organ was gone it was over. And it is over" (*The Penultimate Truth* 235). Following the basic assumption that Brose *is* the brain, the organ itself becomes the single governing and decisive unit. This emphasis resonates with Yang's assessment of cryonic medicine: "In this schema where true death is only brain death, technology can ameliorate an ailing body and where there is brain activity there is hope" (130). Yang argues that in Dick's *Ubik* "a critical voice emerges that is oriented not towards the future of 1992 that it depicts, but towards the particular technological optimism of 1969 that culminated in a brain-centered view of life that transcends the body" (105). Yang's reading also hold value for *The Penultimate Truth* in which the body can only be transcended by a privileged few.

As this discussion shows, Brose's body, his incorporation of artiforgs and the governing role of his brain are inseparable tied to the social inequality that forms the basis of Dick's text. As Warrick argues, in Dick's fiction, "[t]he males tend to fall into two categories: those who possess power – be it military, political, economic, or religious – and the little people who are without power but who are usually outstanding craftsmen and artisans" (19). Clearly, Brose falls under the first category and his employment of power is inseparably tied to artificial organs and the practices that allow for their implantation. In fact, his body is kept alive by both: the exploitation of people as well as of the dwindling supply of artiforgs. These ties to status intricately interweave transplant medicine and social standing and ultimately present medical practice as part of a given cultural milieu and as inseparably connected to socio-political realities.

The lived experience of affluence and control, personified by Stanton Brose, finds its mirror in the lower classes and St. James's search for an artificial organ. Nicholas St. James's life belowground, where he, shares a bathroom, drinks mediocre coffee substitute and showers even though water is rationed (*The Penultimate Truth* 9), contrasts Adams's luxurious and technologically advanced lifestyle aboveground. While Adams cannot deny the ethical implications of their treatment of the lower classes, addressing his regrets appears almost taboo, for "[h]ow can you face it, . . . how can you openly discuss the fact that those tankers down there are systematically deprived of what they're entitled to?" (*The Penultimate Truth* 69). This inequality – and the addressed question of which parts of society are "entitled" to what – appears particularly fitting in the context of the civil rights movements of Dick's time. Farber explains that social inequality not only factored into the growing number of social movements of the 1960s, but that "America's riches stood in sharp contrast to almost all of the rest of the world, and Americans knew it" (13). The recognition of an ever-growing divide between rich and poor is vital to *The Penultimate Truth*, in which prosperity and poverty are not only based on financial or physical means, but shape access to medical care.

This access becomes decisive when the tank's chief mechanic Maury Souza's health begins to deteriorate. To Nicholas, who still believes in the war and in the lies he has been fed, Souza's possible passing is fatal: "Souza is dying. What else matters? Because – how long can we last without that one grumpy old man?" (*The Penultimate Truth* 9). St. James's travel aboveground and his search for an artificial pancreas are tied into the structural misinformation he has experienced: believing in Souza's centrality to their task, he is forced to take any means necessary to find a pancreas. At the same time, Souza's life, as well as that of all tankers, is subordinated to the governing goal of production. Accordingly, and within the knowledge system of the lower class, Souza's role in the tank is decisive for society at large. St. James explains on the surface: "I came up here to get an artiforg

pancreas, so we can fulfill our quota of war work. An artiforg; you understand? For our chief mechanic. For the war effort" (*The Penultimate Truth* 100). St. James's effort equals the individual mechanic, the "grumpy old man" with the war effort, a war that is not being fought any more. Yet, read within the framework of transplantation and inequality, Nicholas also establishes the awareness that artiforgs are not simply up for anyone to use – therefore, he establishes Souza's relevance for issues beyond his individual life in the tank.

Access to artiforgs thus forms a prominent opposition between life above- and belowground. While Stanton Brose uses artiforgs to overcome the limits of his body, Souza does not have similar options. When Nicholas visits the old man, he finds him entirely transformed in the hospital bed, utterly shaped by his pancreatitis:

> In the wide white bed lay something flat, something so squashed that it could only gaze up, as if it were a reflection, something dimly seen in a pool that absorbed light rather than reflected it. The pool in which the old man lay was a consumer of energy of all kinds, Nicholas realized as he walked to the bed. This is only a husk left here; it has been drained as if a spider got to it; a world-spider or for us, rather, a subworld, underspider. But still a drinker of human existence. Even below this far. (*The Penultimate Truth* 10)

Souza has ceased to be an individual, he has become "something", an objectified status that is repeated three times. To Nicholas, Souza has transformed into an "it", something "flat", "squashed", and utterly powerless. His altered status is further emphasized by Souza's gaze: he stares upwards, incapable to communicate with his eyes – he has become an object to be looked at. In contrast to already mentioned accounts of experiences with brain-dead patients, Souza does not seem alive, but is suspended in an unnatural state of preservation. The passive position in the hospital bed is deliberately juxtaposed with the use of biotechnology aboveground. While Brose is "spiderish" (*The Penultimate Truth* 138), Souza is described as a drained husk. Brose is characterized as overweight, Souza has become "flat". Brose himself thereby becomes the metaphorical "drinker of human existence" that Nicholas perceives in the hospital room. Moreover, the encounter is shaped by the space it occurs in: Souza is contrasted with the "wide white" bed and the use of the almost homophone adjectives underlines the monotonous and deindividualized quality of his surroundings. As the room contributes to Nicholas's assessment of Souza's state, it also relates to Foucault's reading of the clinic:

> The clinic – constantly praised for its empiricism, the modesty of its attention, and the care with which it silently lets things surface to the observing gaze without disturbing them with discourse – owes its real importance to the fact that it is a reorganization in depth, not only of medical discourse, but of the very possibility of a discourse about disease. (xix)

Foucault's emphasis on surface appears particularly fitting in relation to Souza who himself has become a mere "reflection". Nicholas might not actively participate in discourse on Souza's condition in this passage, however, the hospital setting actively shapes his perception of the mechanic's illness and facilitates the observation of Souza's diagnosed disease. Nicholas' encounter with the patient Souza thus vastly differs from his perception of Souza as a healthy man and thereby also indicates the impact of well-being on embodied personhood.

Hereby, Souza also becomes an example for the precarious status of human beings without access to biotechnology as the comparison with Talbot Yancy underlines. Shortly after visiting Souza, St. James sees Yancy, the technological device and simulacrum of the country's leader, on screen and muses:

> Yancy continued in his low, late middle-age voice, that of a seasoned old warrior, ramrod in body, clear in mind; good for a few more years ... not like the husk, the dying thing in the clinic bed over which Carol watched. "– a terrible thing. Nothing is left of Detroit . . ." (*The Penultimate Truth* 17)

Yancy, who is still believed to be a person, is depicted as a prime example for masculinity: He is a well-travelled warrior, who appears indestructible for the foreseeable future. He is "ramrod in body" and stands opposed to Brose's sagging physical form. Most importantly, he is no mere husk, no "dying thing", like Souza. In a moment of desperation, the leader Yancy appears as the contrast to death and decay, a notion that rings strikingly true, given that he is, in fact, an unfailing machine. In the quoted passage, Yancy's speech intersects St. James inner monologue: the "terrible thing" he mentions refers to the destruction of Detroit. However, it is positioned to also form a fitting comment on Souza's dying. In death, Souza and his failing body also become a terrible, frightening thing. The mechanic is thereby contrasted to both Brose and Yancy, both of whom are related to concepts of technology and the simulacrum. Even though Souza is described as "something" when Nicholas visits him in the hospital, the opposition to Brose and Yancy also depicts him as ultimately human. Nicholas's fear of the dying man and his subsequent frantic search for the artificial organ thereby suggests his inability to deal with a dying human body in a world in which technologization has become an integral part of society.

Confirming Nicholas's concerns, Maury Souza dies and reveals his fragile and human nature. However, despite causing St. James's dismay, his death remains penultimate and is deeply impacted by technological possibility. Being asked whether the chief-mechanic has died, St. James replies: "Yes. But he's in quick-freeze so there's still hope" (*The Penultimate Truth* 19). Souza's doctor, Carol Tigh, elaborates: "I at once froze him; I was right there at the bed, so there was no time loss. Brain-

tissue won't have suffered. He just – went" (*The Penultimate Truth* 18). Both St. James and Tigh hint at the possibility of reversing the state of death, once a solution – the artificial organ – has been found. Furthermore, Carol mentions the damage of brain-tissue and establishes the governing role of the brain for the individual, thus resonating with Yang's assessment that "where there is brain activity there is hope" (130). Even though Souza has died, freezing him makes treatment – and therefore hope – possible.

This correlation between the cooled body and hope for survival is intricately tied to organ transplantation. In fact, freezing did, and still does, play a prominent role for transplant proceedings, for instance, for the transplantation of the liver and the heart, as well as for organ preservation (Watson and Dark i30, i34). In his autobiography, surgeon Christiaan Barnard also recalls that the discovery of the brain's reduced need for oxygen in lower temperatures "set off a frantic search in the medical world for the best way to achieve hypothermia" (218). The addressed significance of lowering patients' body temperatures also becomes apparent in news coverage. On October 2nd 1952, *The Sidney Morning Herald* proclaimed: "Girl Frozen for Heart Operation" (3). The article reports on doctors in Philadelphia using "a kitchen-type deep freeze . . . similar to those used by housewives for storing food" to stop an eleven-year old's heart for five minutes, allowing the physicians to close an opening in her heart (3). The reference to the employment of the non-medical "kitchen-type deep freeze" frames the procedure as a simple solution to a complex problem: It appears particularly inviting to relate to a surgery of advanced biomedical status in mundane and layman's terms. The significance of the cold is further underlined in the reference to an earlier case from Minnesota in which the injection of cold alcohol stopped a patient's heart from beating (3). This second example refers to what Lawrence H. Cohn calls "a few clinical experiments in 1952 with 'open' heart by deep hypothermic arrest by John Lewis at the University of Minnesota" (2168). Even though in hindsight these events can be reduced to a "few clinical experiments", they were publicly discussed in contemporary media of the 1950s. The Minneapolis experiment, for instance, was taken up by *The New York Times* reporting on September 30th, 1952: "'Deep Freeze' Heart Girl Making Rapid Recovery". *Time* magazine titled the report on both surgeries "Chilling Operation" and directly relates the cooling of the patient to the danger of brain damage: "At normal body temperature, the heart cannot be stopped more than three minutes without danger of severe damage to the brain" ("Chilling Operation"). *The Penultimate Truth* ties into these considerations and expands on them: Rather than perceiving of freezing as a means to keep a patient alive, freezing turns death into a treatable condition. Dick's novel hereby illustrates the significance of speculative fiction as a thought experiment and as a fictional case

study for biomedical developments, in this case, related to hypothermia and brain-damage.

At the same time, the fictional rendering of the technique emphasizes a brain-centered conception of the body and underlines the ways in which surgery stretched the boundaries between life and death, for Souza is resurrected with techniques reminiscent of those used by contemporary surgeons. Fittingly, Dick's novel can also be read in the framework of other works of speculative fiction, prominently in conversation with Niven's "Death by Ecstasy," which also links transplantation practices are also linked to the lowering of body temperature. In the story's dramatic finale, detective Gil Hamilton is captured and imagines his own dismemberment by organleggers: "I felt all the things I would never feel: the quart of Trastine in my blood to keep the water from freezing in my cells, the cold bath of half-frozen alcohol, the scalpels and the tiny, accurate surgical lasers. Most of all, the scalpels" ("Death by Ecstasy" 66). Gil's vision interrelates two seemingly contrasting notions: an anxiety of loss of consciousness, dying and non-existence, on the one hand, and the brutal, invasive, sensually experienced proceedings of organ retrieval, on the other. Here, the narrator addresses fears evoked by knowledge of medical procedures: the cooling of the body, the cutting of the flesh. The cooling underlines the body's status as a thing: it is distanced from the individual Gil, just as Souza's body hovers in a state between life and death. The transplantable body – about to receive an artiforg in the case of Souza, and about to become harvested in the case of Gil – turns cold as a corpse. Thereby, these speculative works suggest a suspension of temporal certainty: Souza is dead yet waits to be revived; Gil imagines himself as dead, yet his body is not allowed to decay. Both instances position the cooling of the body and the transplant proceedings it heralds as intersecting life and death, and object and subject body.

Yet transplantation is not only tied to specific biomedical developments of Dick's time, *The Penultimate Truth*, as the discussed cases of Stanton Brose and Maury Souza already suggest, interrelates transplantation and social disparity. The novel thus also positions transplantation in specific sociopolitical milieus. The ongoing significance of living conditions for organs transplantation becomes apparent not only in access to medical treatment but most prominently in practices of organ marketing.[23] Yet even before transplantation became a repeatable practice and a global organ trade came into existence, problems of organ allocation were discussed. Prominently, Belding H. Scribner, who majorly contributed

23 For further information on the practice of organ trafficking and organ tourism see Budiani and Delmonico, Merion et al.'s report on patients removed from the U.S. waiting list, and Scheper-Hughes's *The Last Commodity.*

to the development of kidney dialysis, titled his 1964 presidential address to the American Society for Artificial Internal Organs "Ethical Problems of Using Artificial Organs to Sustain Human Life." In his speech, he engages with terminating treatment, dying with dignity and patient selection. Referring to his treatment of patients with what he calls an "artificial kidney", Scribner explains:

> I believe that the specific problems I am about to relate to you will recur again and again as other new, complicated, expensive, life-saving techniques are developed. Hence, these matters, even though presented as special problems of the present, may become general problems of the future. (209)

Scribner underlines that new technologies inevitably lead to new ethical questions and, possibly, problems. As an example of speculative medicine, his statement indicates that the medical and technological developments of the '60s appeared drastic enough to be projected into the future. What is special now, he claims, will become ordinary soon. Scribner concludes that: "In this age of overpopulation, atomic war, space travel and artificial organs it is becoming increasingly clear that the moral and ethical guidelines handed down to us through the centuries are becoming more and more inadequate to govern our behavior" (211). Scribner parallels artificial organs with the major developments of the '60s, most of them linked to technological progress. Artificial organs, then, appear as a decisive factor of change: what seemed adequate earlier needs to be renegotiated according to new premises. Scribner's own time thereby becomes a steppingstone into a future of new bioethical challenges. *The Penultimate Truth* offers irrefutable surplus value for the discussion of Scribner's speech, given that the novel literalizes uncertainties concerning patient selection in the context of social disparities with satirical clarity.

Here, the spatial separation Dick imagines or the time travels that ensue should not take away from the core of the text: The correlation between access to medical aid – transplants in particular – and social standing. It is fitting that William L. O'Neill reflects in *Coming Apart: An Informal History of America in the 1960s* that "health costs soared. Between 1957 and 1967 three times as fast as the general price level" (356). The high costs of medical care already link medical treatment to socio-political structures. O'Neill furthermore argues that the American Medical Association "became largely concerned with protecting the physician's income. The medical profession operated like a classic monopoly, restricting output so as to raise prices" (356). The assessment of the medical profession in terms of capitalist trading policies further ties caregiving to the market. O'Neill's work was published in 1971, two years after protesting physicians took the stage at the general meeting of the AMA (356). O'Neill's account of the tumult resonates

with *The Penultimate Truth* not because of its its specific topic, but because of its its focus on injustice in the medical system and the relation between status and medical treatment. As an example of speculative fiction, Dick's novel thus draws from its contexts yet uses speculation as an integral tool to discuss a reciprocal relation between transplantation and class.

Drawing from these findings, it is interesting to consider that *The Penultimate Truth* relates to two of Dick's earlier works – *The Defenders* and "The Unreconstructed M"[24] – however, neither of these earlier works focuses on organ shortage. Yet shortly after its publication, Dick's *Now Wait for Last Year* (1966) was released and introduces Dr. Sweetscent, a transplant doctor as a protagonist. Even though the work mainly engages with live-altering drug experiences and time-travel, artiforgs do play a role. Sweetscent is told:

> You're the artiforg man, aren't you? The top org-trans surgeon ... I read about you in *Time*, I think. Don't you think that *Time* is a highly informative magazine in all fields? I read it from cover to cover each week, especially the medical and scientific sections. (*Now Wait for Last Year* 100)

Here, *Now Wait for Last Year* creates similar connections between media coverage, information and transplantation marketing as *The Penultimate Truth.* Additionally, the comment on the *Time* Magazine appears as a fitting link to the magazine's upcoming cover of Barnard. Reading *The Penultimate Truth* within this framework, I want to suggest that the 1960s brought forth Dick's interest in transplantation and want to establish the thematic ties between the novel and its contemporary discourses. While the previous short stories exhibit similar interests in time travel, social injustice and employment of technology, *The Penultimate Truth* links these interests to the medical developments of its time and foreshadows ongoing discussions on transplantation.

In this chapter I have shown that the 1960s relate organ transplantation to the realm of the future in a variety of texts, ranging from newspaper articles to Barnard's autobiography to Dick's speculative fiction. While Barnard's account of the world's first heart transplantation and various newspaper articles prominently focus on whether- and which transplantations might be possible, Dick adds to this discussion by already alluding to the practice's ethical repercussions and addressing difficulties that are still of vital importance today. As Niven's work follows a similar pattern, both authors critically navigate ethical aspects of organ alloca-

24 Thereby, the novel ties into two examples of Dick's prior shorter fiction, namely *The Defenders* (1953) and "The Unreconstructed M" (1957). Link explains that *The Defenders* served as a basis for *The Penultimate Truth* and presents it as a "fictional rendering of cold war fears" (80).

tion in the framework of social inequality. Hereby, these openly fictional considerations add another perspective to what is presented in physicians' life writing. While the former majorly uses speculation as a means to establish how transplantation could benefit the progress of mankind, the latter abandons this global perspective and takes the cultural constructedness of each individual body into consideration. These texts do not neglect the positive impact of transplant practices – in the end Dick's character does survive because of a transplanted organ. Rather they present tissue as culturally produced and as inseparably tied to social frameworks.

5 The 1970s and 1980s, Declining Interest and Short Fiction

"Most Americans regard the Seventies as an eminently forgettable decade – an era of bad clothes, bad hair, and bad music impossible to take seriously" (Schulman xi). Comparable to Bruce J. Schulman's assessment, historian J. David Hoeveler summarizes: "The 1970s seem to lie in American memory as a nondescript interlude. Caught between the sixties of infamy and the eighties of ill repute, it bears that most banal of descriptions, a 'transitional era'" (xiii). Hoeveler's summary indicates that the Seventies are often positioned in relation to the preceding and following decades, a reading he counters with an insistence on the '70s impact. Hoeveler explains that in terms of political developments, the decade started with a leftist presidential candidate, George McGovern, and ended with the conservative impact of Ronald Reagan (xiii). Aside from these political and cultural developments, Hoeveler perceives an economic shift from industrial production to service orientation and emphasizes the impact of post-industrialism on U.S. American society (2). Given such immense developments, Schulman explains that "[t]he Seventies transformed American economic and cultural life as much as, if not more than, the revolutions in manners and morals of the 1920s and 1960s" (xii). Apparently, similar notions also hold true for the following decade and journalist Haynes Johnson argues for the far-reaching effects of the '80s: "In their impact on social, economic, political/governmental life, and on the attitudes and personal values of Americans, the eighties were the most important years since World War II" (*Sleepwalking through History* 13). The insistence on a decade's importance – or lack thereof – forms an interesting point of reference for studies focusing on decades, yet specifically relates to the memorialization of a specific time frame rather than to lived experience.

As was already pointed out, I intend to approach works in their contexts and this study is structured accordingly. However, instead of perceiving a clear-cut separation between the 1970s and 1980, this chapter will engage with the 1970s and the following decade in close conversation. Such a reading fits into an understanding of "the long 1970s" as "fifteen malaise- and mayhem filled years, from 1969 to 1984, the United States experienced a remarkable makeover. Its economic outlook, political ideology cultural assumptions, and fundamental social arrangements changed" (Schulman xvi). As a tendency, authors primarily engaged with one decade are – unsurprisingly – convinced that the decade of their investigation vastly impacted U.S. American society. Yet, this statement also intricately links the '70s and the '80s and therefore further validates this chapter's overarching discussion. Graham Thompson further observes underlying political ties between both de-

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cades and argues for a shift from the more liberal ideas of the Sixties to more conservative leanings in the Seventies and Eighties (9). Moreover, Haynes Johnson links both decades by emphasizing the cause and effects of economic decline:

> The myth of the eighties was that the United States of America, the greatest power the world has known, economically and militarily, a society favored with material riches beyond measure and a political system whose freedoms made it the envy of every nation on earth, had fallen into a state of disintegration and with Ronald Reagan recaptured what it had lost: optimism; strength; entreprise; inventiveness. Most of all America wanted to believe it had recaptured a sense of success. (*Sleepwalking through History* 13)

Both Johnson and Thompson relate these decades causally, with the Eighties appearing as a result of- and reaction to the experiences of the Seventies. Thus, and in an effort to follow these causal ties, this chapter discusses both decades in conversation.

In hindsight, several iconic moments of U.S. American and global history stand out in the Seventies and Eighties, moments that have become reference points, such as the Fall of the Berlin Wall in 1989, or the Watergate affair which would lead to Nixon's – and thus the first and sole – resignation of an American President in 1974. A sense of disillusionment and loss of belief in presidential authority can also be related to the end of the war in Vietnam in 1975. Both the end of the war and the Watergate scandal have been perceived as paranoia-inducing and Paul Cobley explains that "[i]f Watergate and Vietnam had not made paranoia an abundantly plausible response, then smaller agencies such as police departments could reinforce such views" (163–64). Paranoia, as a specific form of distrust or skepticism also offers ample speculative potential. Thompson speaks of "a sense of malaise and decline which followed Vietnam, the political scandal of Watergate and waning economic prowess" (8). Cobley's perception of "paranoia" and Thompson's use of "malaise" indicate a certain distrust shaped by the erosion of authorities in the discussed decades that might also suggest a more skeptical approach to envisioning the future. Fittingly, Schulman speaks of a loss of authority also pertaining to the scientific realm as "[a]cademe, the legal and medical professions, and professional athletes all lost credibility and public trust. Even science, the triumphant force that had landed a man on the moon, seemed increasingly suspect" (xvi). These shifts have to be taken into account when considering the framing of future developments in these decades: In fact, distrust in science appears as a recurrent motif in speculations about possible medical futures.

A sense of uncertainty can also be related to economical shifts, prominent instances being the oil crisis of 1973,[24] and the development of stagflation given that "for the first time in the postwar period, the US was hit by a combination of rising inflation and economic stagnation that saw unemployment shoot up" (Thompson 7). Economic progress ceased to be a predictable part of the American future and Thompson speaks of a "decade of economic uncertainty" (7). The very landscape of the U.S. was shaped in accordance with economic and industrial developments. In the mid 1960s, California had surpassed New York as the most populous state. In the 1970s, the Sun Belt boomed, while the decline of previous industrial centers in the Rust Belt continued. Johnson quotes J. Hugh Liedtke, employee of Pennzoil: "I used to live in Pittsburgh, and God, we went through some of those recessions up there. People in the alleys, you know. Burning stuff in the barrel. You came down here to Houston – hell, they didn't know it was happening" (*Sleepwalking through History* 125). The stark differences between the developing and the collapsing industrial regions illustrate the shift in U.S. American economy and its impact on disparate lived realities within the country.

It appears fitting that in a time of waning economic certainties and major political changes, the future became uncertain and, in effect, caused interest. Prominently, the publication of Alvin Toffler's *Future Shock* in 1970 underlines the role of the future for discussions of the present. He clarifies that instead of focusing on the past to explain the present, one ought to refer to the future:

> I have turned the time-mirror around, convinced that a coherent image of the future can also shower us with valuable insights today. We shall find it increasingly difficult to understand our personal and public problems without making use of the future as an intellectual tool. (5 – 6)

Here, the future becomes a "tool" to understand the present and the familiar trope of learning from the past is reversed. Societal change plays an important role in Toffler's concepts: By turning to the future, the reader might adapt to the "personal and public problems" of the present. Thereby, imagining the future becomes a coping mechanism, a means to navigate present challenges. Toffler's engagement with the future thus appears comparable to speculative fiction, particularly to u/dystopian fictions. Jessica Langer explains that dystopia, rather than excluding critical elements, "imagines a world in which those same aspects are overgrown and run amok, displacing them into an alternate universe where life is defined by them" (Langer 171). Toffler, on the other hand, does not perceive of the future as a means to raise awareness to present difficulties, but rather develops future sce-

24 For further reference on the energy crisis see Lifset.

narios in order to adjust to specific changes. In fact, speculation appears as one of *Future Shock*'s prime concerns, as "[t]he degree to which the reader, after finishing the book, finds himself thinking about, speculating about, or trying to anticipate the future events, will provide one measure of its effectiveness" (6). The work's aim, then, is not merely the depiction of future events, but the encouragement of further speculation. This perception of the future relates to the presented economic and social changes, which threatened to leave citizens in a state of "future shock" – an ailment that, according to Toffler, could be cured by speculation. Toffler's understanding of speculation as a coping mechanism, a means to prepare for future uncertainties, is so compelling because the outcome of such speculations, reveals contemporary fears and anxieties. In the decades of interest for this chapter, a growing awareness of finite resources proves to be particularly prevalent in public outlooks on the future. Rather than perceiving Alvin Toffler as a single instance, his work can be related to a group of theorists engaged with the future: futurists. Haynes Johnson explains: "By the eighties the ideas of the futurists about America's facing a 'limits to growth' problem had become increasingly influential" (128). Johnson's assessment indicates a shift in perceptions of the future: In a world of finite resources, the future could no longer present potential limitlessness and called for an altered approach.

While the rise of futurists already establishes the significance of the future, its political appeal is revealed in Reagan's inaugural address. Here, he positions present actions in relation to a fragile future: "For decades we have piled deficit upon deficit, mortgaging our future and our children's future for the temporary convenience of the present" (Reagan). Reagan presents a future at risk of being destroyed by the present. Hereby, the future is turned into a realm that is worth protecting and that needs to be saved from the recklessness of today: The future has become a responsibility of the present. It is vital to note that this sense of responsibility also presents cause for action: "We must act today in order to preserve tomorrow. And let there be no misunderstanding: We are going to begin to act, beginning today" (Reagan). The inaugural speech frames Reagan's presidency as a fresh start – fittingly, "begin" is repeated – and as a break from previous, more careless approaches to the future. The future, then, ceased to be certain in a time when economic growth ceased to be a given, too. The political potential of Reagan's references appears obvious: Once the future needs "preserv[ing]", it is at stake and calls for a more considerate approach to the present. The examples of Toffler's *Future Shock* and Reagan's inaugural address establish the impact – but also the employment – of the future for different disciplines, genres and for different purposes. At the same time, they illustrate that the future becomes a space for contested hopes and political ambitions. It seems that when the present is perceived as

uncertain, the "number of roads lead[ing] away to 'the future'" (*In Other Worlds* 4), to use Atwood's metaphor, tend to be discussed particularly intensely.

This interest in the future can also be detected in public conversation about organ transplantation, even though the practice faced major obstacles. Rather than focusing on the success of transplant surgery as the successful transfer of tissue, the Seventies had to face harsh realities of low survival rates following the procedure. In public, science tended to be perceived less optimistically than in the preceding decade and the Royal Society speaks of "an erosion of public appreciation of science in the early 1970s" in the U.S. (14). Moreover, transplantation practice in particular found less attention in the early 1970s (Hamilton 359). In fact, difficulties to control rejection prevailed and challenged the future of the practice. Thomas E. Starzl, famous surgeon and contributor to the development of immunosuppression, recalls in his autobiography *The Puzzle People:* "A deadly inertia set in which would last for a decade in transplantation, as if the reservoir of creative ideas had been exhausted during the frenetic 1960s. What could be done next? All that seemed to remain were loose ends" (*The Puzzle People* 177). Here, Starzl speaks of the year 1970, when cyclosporine was yet to come and when hopes for transplantation did not quite match its results. Starzl depicts medical practice as a realm of creativity, in which original, possibly even unconventional ideas are needed. Wondering what could be done next, he opens medicine to speculation: As creative minds cannot develop the next step, all promising approaches appear as "loose ends." Hereby, Starzl depicts the early 1970s as a time of uncertainty when transplantation no longer appears as the practice of the future, but as a promising technique that might yield to severe challenges. Starzl further underlines this in-betweenness in a short recollection of his experiences:

> If it had not been for the 1960s, transplantation would have remained a fancy, and if it were not for the 1980s, it would have remained a starveling. In between was the time for those thousands of details to be clarified which had been skipped in the rush to the finish line; a time to explain why the beachhead known as transplantation had become a slowly eroding revetment; and a time to look for something better. ("My Thirty-Five Year View of Organ Transplantation" 169)

Aside from introducing the '70s as a transitional phase, Starzl also perceives the decade as a moment of stagnation, caught between the developments of the 1980s and the enthusiasm of the 1960s. At the same time, Starzl depicts the decade as "a time to look for something better," a notion that is underlined by heart surgeon and later politician William H. Frist who explains: "Most surgeons who had jumped on the transplant bandwagon abandoned the procedure" (63). To Starzl, transplantation appears as a beachhead, a hope for the future that might have to be abandoned, to Frist it is a bandwagon, a shining enterprise that no longer

draws too much attention. Both instances emphasize the role of the future for surgeons' considerations of transplantation's present and both illustrate that the practice could no longer be positioned in the future as confidently as was the case in the 1960s.

Countering such outlooks, major developments occurred in 1976, when publications specified the biological structure of cyclosporine (Heusler and Pletscher 300). Experiments with cyclosporine for immunosuppression positively impacted patient survival rates in the late 1970s, as the Swiss pharmaceutical company Sandoz discovered a way to suppress T-helper cells.[25] After major findings in the 1970s, cyclosporine was released for routine use in 1983.[26] Leonard L. Bailey, who gained attention for transplanting a baboon heart into a human infant in 1984, ascertains that the "[i]ntroduction of this drug into clinical transplantation transformed the 1980s into a halcyon decade of organ transplantation with increasing numbers of transplants and markedly improved results" (27). Thereby, the early '80s present a shift in perception from the preceding years: The drug influenced both, the success of transplantation and its public perception. Fittingly, steps were taken to help facilitate organ allocation. In 1984, Congress passed the National Organ Transplantation Act and the Organ Procurement and Transplantation Network (OPTN) was founded. With UNOS as its managing non-profit organization, these developments stood for a centralized way to allocate and coordinate transplants in the U.S. ("History of UNOS").

Moreover, new possibilities of immunosuppression not only included better chances of survival but also made donor selection less complicated. Lawrence Cohen states that "[c]yclosporine *globalizes*" and thereby emphasizes the drug's effect on global transplantation practice ("The Other Kidney" 11, emphasis in original). An undesired external effect of easier transplantation among individuals was a growing market in human organs. Shital Pravinchandra Laxmidas explains that given immunosuppression, rejection ceased to be a main concern: "Much more worrying is the chronic shortage of transplantable organs for the ever-increasing number of people whose physical condition could be improved with a 'foreign' organ that is ever less likely to be immunologically rejected" (17). Her statement suggests that the progress in immunosuppression also impacted a perceived "organ shortage." In *Tissue Economies*, sociologist and biomedical scholar Catherine Waldby and literary scholar Robert Mitchell call the development of cyclosporine a major contributing factor to the development of organ markets. They state

25 For further reference on the development of cyclosporine at Sandoz see Heusler and Pletscher's "The Controversial History of Ciclosporin".

26 For further information on the developments leading up to the release of cyclosporine see Hamilton, Chapter 18 "The Arrival of Cyclosporine".

that the immunosuppressive drug changed the perception of human tissue as "[o]rgans became more standardized and less entangled in the qualitative specificity of donors and recipients, so that surgeons could treat them as interchangeable parts rather than as recalcitrant objects with nearly unique histio-profiles" (171). Waldby and Mitchell's phrasing indicates the technological aspects of the drug: the body is now "standardized", its organs are "interchangeable parts". In conclusion, the release of cyclosporine not only led to a reconceptualization of transplantable organs but shaped the commodification of bodies, particularly of poorer ones.

In the '80s, transplantation had thus begun to take clearer form, both with regard to long-term therapy and to organ allocation, nevertheless, the practice was still perceived as new, possibly even as alien. The novelty of transplantation is underlined in an article from 1988 written by transplant surgeon Starzl, who remarks: "How new this field really is, and how unexpected" ("Small Iowa Town" 12). Starzl's use of "unexpected" introduces the practice as a surprise, as an unforeseen development. Referring to the same year of Starzl's article, transplant surgeon Frist's autobiography further underlines the reading of transplantation as novel:

> Transplantation involved a complicated notion of medical care, a *new* notion. It was *unfamiliar and threatening* beyond the Frankensteinian fears of the early days . . . And because transplantation was a *new and unique* kind of treatment, it called upon the transplant surgeon to take steps outside the traditional surgeon's role. The transplant surgeon did things that other surgeons found odd. (226, my emphasis)

Similar to Starzl, Frist highlights the novel quality of transplantation – while also relating it to the speculative frame of Frankenstein. Even more, Frist ties the practice's status as "new" to it being "unfamiliar", "unique" and "threatening". This framing indicates that twenty years after the first heart transplantation and the following low survival rates, the practice still lacked cultural implementation. The understanding of transplantation as "unfamiliar" is further underlined when Frist describes a post-operative scene. Rather than choosing the doctor's perspective, he opts for the patient's and describes the scenario in deeply alienating terms: "When he woke up from surgery there was this huge face peering at him. Weird looking face. With little goggles or lights or something" (220). Frist's depiction of the surgeon likens the hospital to a spaceship, in which a weird, cyborg-like face peers at the patient. Rather than appearing as a caregiver, the surgeon is presented as an unknown species. Thereby, the physician is not only removed from the patient but transplantation is presented as part of the speculative realm. Employing a similar narrative framing, surgeon Bud Shaw comments on a conversation with Starzl in 1983 in which the latter explains with regard to transplant practice: "You're riding a rocket ship to the stars, you know. The sky's the limit. Shit, the

limit's beyond the sky" (170). The boldness of transplantation is presented in terms of unlimited, unprecedented and ultimately unpredictable technological progress. Both Starzl's and Frist's depiction of transplantation illustrate the practice's novel and uncertain appeal that is expressed with reference to outer space and alien life. Hereby, the surgeons clearly establish the impact of speculative thought on their own processes of meaning-making.

Ties between technological progress and conceptions of personhood were not only negotiated in the realm of transplantation but also played a significant role in speculative writing of the Seventies and Eighties. In fact, several noteworthy works discussed the human being in its corporal state and its relation to an ever-growing impact of technology. In 1984, American Canadian writer William Gibson published *Neuromancer* and established the basis for the matrix, the computer program that would become the foundation of the film trilogy of the same name 15 years later. Often perceived as the first cyberpunk novel, Gibson renegotiates the body in a hyper-technological age, by allowing his protagonists to lose their corporality in cyberspace. While the text paid attention to how technology affects readings of the body, *Star Trek* brought transplantation and technology to a wider public. As Allan Weiss explains, "during the 1970s, science fiction left the 'genre' ghetto and became part of the mainstream, due in large part to the *Star Wars* movies and the cult following and later versions of *Star Trek*" (8). In "Medical Ethics Through a *Star Trek* Lens" James J. Hughes and John Lantos discuss the vast impact of the show since its first airing in 1966. They argue for its "explicitly humanistic ethos" and its engagement with medical ethics, which also leads them to use *Star Trek* episodes as part of their medical ethics class (27). Unsurprisingly, *Star Trek* also engaged with matters of transplantation and several episodes in *The Next Generation* and *Deep Space 9* focused on the scarcity of organs and transplant ethics. Among others, transplantation is investigated in relation to the show's multiethnic premise, for instance when a crew member needs a lung transplant, but no one can donate because "no one aboard is a compatible match for a Telaxian" ("Phage" 12:50). The basic predicament of individuality and organ transplantation comes to the fore and is navigated in the speculative realm–linked here to fictional race. As these examples indicate, the body and technology remained an ongoing concern for speculative engagements.

Drawing from speculative engagements with transplantation, this chapter begins with a discussion of Larry Niven's "The Defenseless Dead" (1973), which is part of his Gil Hamilton Stories and which serves to illustrate the correlation between jurisdiction and embodied personhood as navigated in speculative fiction. *Coma* by Robin Cook, on the other hand, reached vaster audiences and is most commonly referenced for its depiction of patient bodies suspended in mid-air. Even though not qualifying as speculative fiction in a narrow sense, Cook's novel offers an in-

teresting addition as the medical thriller presents a conspiracy in a hospital that clearly speculates about its role as a possibly deindividualizing space. Lastly, the short story "Where am I?" by Daniel C. Dennett offers fascinating insight into the relationship between body and brain. By physically distancing both entities, the story navigates the limits and snares of a body-brain divide. These U.S. American texts will be read in conversation with autobiographies of two famous and influential transplant surgeons, Thomas Starzl and William H. Frist. Naturally, the selected issues neither present the sole topics for discussions on transplantation nor were they only discussed in the works presented here. Rather, I chose these texts deliberately to emphasize the variety of fields touched by transplantation and to thereby argue for speculation as a shared endeavor among disciplines.

5.1 Transplantation and Jurisdiction: "The Defenseless Dead" by Larry Niven

Obviously, transplantation is a surgical intervention. Yet, I have also attempted to show that it pertains to disciplines beyond medicine and developed in- and is tied to specific cultural contexts. A prominent part of these contexts is the governing instance of jurisdiction. Whether transplantation can occur is bound to legal frameworks, prominently, the donor's status as was already made apparent in case of the Uniform Determination of Death Act in 1981 (see Chapter 2.2). This significance of legal frameworks also illustrates the geographical specificity of organ transplantation. Fittingly, Barnard being the first to transplant a human heart cannot be separated from the legal framework of South Africa, given that "[i]n that era, the law in South Africa simply stated that a patient was considered dead when he/she was declared dead by a physician" (Cooper 6). The jurisdictional framework of transplantation in the U.S. also remained blurry as the lawsuit "Tucker versus Lower" (1972) illustrates. The lawsuit was based on allegations of wrongful death and was filed by the brother of a donor. The suit referred to organ retrieval from Bruce O. Tucker and focused on the question whether death had occurred at the time that his heart was transplanted.[27] Among the defendants were David Hume and Richard Lower, who *The New York Times* called "two respected pioneers in heart transplantation" in their coverage of the suit

27 Ronald Converse indicates that the transplantation might also have occurred without consent, as Bruce O. Tucker's brother was not informed, and that the standard holding time for unclaimed bodies of 24 hours was not met given that the transplant occurred only four hours after death had been declared. These allegations were not part of the lawsuit, and I will not discuss them in more detail, for further reference see Converse, p. 427.

(Schmeck). The case did not pass trial court and was closed in favor of the defendants yet remains significant, as Ronald Converse explains in a comment in the *San Diego Law Review* in 1975, because the jury "in effect, found that death occurs when the brain dies, not when circulation and respiration cease, thereby exonerating the four physicians who had been accused of removing the heart of a living donor for a transplant" (424). In other words, at the time the transplantation occurred, the legal certainty of brain death did not exist, and transplant surgeons were at risk of being trialed for wrongful death. Here, the significance of legal frameworks comes to the fore, and Converse explains: "Neither the dying patient nor the practicing physician or attorney should have to wait for future *Tucker* cases to resolve this dilemma. The solution lies in the hands of the legislatures" (435). Converse's plea for legal clarity further underlines that jurisdictional indecision impacts transplant practices: As long as brain death is not legally secured, the practice also poses severe threats to those who are operating. Fittingly, Christiaan Barnard explains in a later autobiographical work, *The Second Life* (1993): "I had the legal system of the United States to thank for the honor of being the first surgeon in the world to have done a heart transplant" (108). Barnard underlines that him being the first to transplant a heart cannot be separated from the jurisdictional frameworks of the hospital he was working in.

Whereas it thus becomes clear that transplant history is shaped by the law, jurisdiction is also impacted by surgical possibility. In his autobiography from 1992, transplant surgeon Thomas E. Starzl notes with regard to the legal establishment of brain death that "[t]ransplantation had changed the face of the law" (*The Puzzle People* 149). Here, Starzl emphasizes that transplantation called for legal adjustments to facilitate the removal of organs without causing the patient's death. The relation between transplantation and the legal system appears reciprocal: transplantation can only occur under specific legal conditions, yet these laws are simultaneously affected by medical progress. These close ties, however, are not self-evident, as a quote by Warren Burger at a medical ethics conference in 1967 illustrates: "It is not the role and function of the law to keep pace with science … the law does not make discoveries as you do; the law evolves and evolves slowly. It responds rather than it anticipates" (qtd. in *The Puzzle People* 149). The relation between medical practice and the law is presented as monodirectional: medicine explores – anticipates, even – , the law reacts. However, as both Barnard's and Starzl's previous statements indicate, jurisdiction and transplantation are reciprocally related.

This reciprocal relationship not only becomes apparent in lawsuits and legal adjustments but is also fictionally discussed in the realm of speculative fiction with Larry Niven's *Flatlander* series forming a compelling example. The story I want to discuss follows detective Gil Hamilton and relates to transplantation in

two significant ways. First, Gil himself has received a transplant: his arm is a graft, attached after the loss of his limb in an accident. More important for Gil, however, is his "imaginary arm", a cognitive ability he developed while waiting for his transplant. The arm appears as a positive form of phantom pain: As long as the brain believes in its existence, the arm holds power. Second, Hamilton is part of the ARM, the police force whose main function is the destruction of organlegging gangs. Organlegging – a future version of organ theft – is a severe issue in Niven's future given that the development of organ tanks allows for the storage of bodily tissues for later use and has turned transplantation into a basic amenity. The rise in demand, however, leads to an increase in abductions and illegal sales of body parts. Again, these crimes are tied into the development of transplantation practice, starting with the discovery of blood types and the possibility of blood transfusion ("Death by Ecstasy" 28). The protagonist fittingly dubbed Gil "The Arm" Hamilton, is thus intrinsically tied to transplantation, as his own story, abilities and occupation are all related to the practice.

Niven's stories are invested in navigating the social changes brought forth by medical developments. As Hamilton states: "New technologies create new customs, new laws, new ethics, new crimes" ("Death by Ecstasy" 28) and several of Gil's stories discuss the interrelation between transplant practices and jurisdiction. For instance, in "Patchwork Girl" from 1980, Niven already discusses the use of tissues from executed prisoners, a topic that remains of importance in relation to allegations against China.[28] In the following, I want to specifically focus on "The Defenseless Dead" (1973): By first establishing and subsequently questioning fictional legal frameworks, the story illustrates jurisdiction's effects on the medical practice of transplantation. To emphasize connections between medical discussion and speculative fiction, Starzl's autobiography *The Puzzle People: Memoirs of a Transplant Surgeon* from 1992 will be included in this discussion. Starzl performed the first liver transplantation (1963) and the first successful liver transplantation (1967) at the University of Colorado, and was also majorly invested in immunology and the development of cyclosporine. Even though his memoir was published shortly after the period depicted in this chapter, it strongly engages with the '70s and '80 and presents a compelling point of reference for the developments of this time.

"The Defenseless Dead" looks back to the end of the 20th century and reimagines it as a time when the rich froze themselves in hope for better medical treatment and living conditions in the future. In the meantime – and in Gil's own time – their bodies could be used as a resource for transplantable organs. The story

28 For further reference on the allegations against China, see David Matas and David Kilgour's "Report into Allegations of Organ Harvesting of Falun Gong Practitioners in China" (2006).

traces the ethical repercussions and dilemmas of a proposed change in jurisdiction which would declare the frozen (which are morbidly referred to as "corpsicles") brain-dead. This so-called second Freezer Bill follows a first decision that has already declared patients with insufficient financial funding brain-dead. In Gil's world, organs can be stored, and transplantation practice is flourishing. This progress in transplantation practice has also led to a constant demand for organs. Declaring patients dead mainly serves two interests: firstly, they can potentially be declared organ donors, secondly, they could bequeath their money. Thereby, the hope for transplantable organs and the hope to inherit money are interrelated and are brought into conversation with legal considerations.

The hope for a better future lies at the core of "The Defenseless Dead": It is the belief in improved medical conditions that leads people to freeze themselves. The patients' decision is majorly motivated by faith in medical development and progress, which introduces the future as a room for confident speculation, enabling people to have "themselves frozen so they could wake up in a brave new world" ("The Defenseless Dead" 73). This belief in the future as a realm in which medical progress has come to full fruition appears as a prime incentive in transplant medicine and is prominently exhibited in the life writing of transplant surgeons. That transplant surgery should benefit a patient's well-being and thus contribute to a more positive outlook on the future is by no means surprising but rather forms the very basis of surgery. Canadian lung surgeon Todd argues in 2007 that when deciding for transplantation "[y]ou have with those words of acceptance consciously decided to risk your life on a chance where no chance has existed before" (113). Todd's understanding of transplant receival is based on the newness of the practice: it offers a possibility where none had existed before. At the same time, his perception indicates the comparably uncertain outcome of the practice as the patients "risk" their lives for a "chance" of a better future. These examples of the "imaginary entreprise" of speculative medicine (Russell 268) thus present transplantation as the factor distancing the past from the present and as contributing to a better future. A similar belief is shared by Thomas Starzl who remembers his talk at the annual session of the American College of Physicians in 1967 in which he argued:

> Virtually all practices in cardiac as well as in transplantation surgery have been transferred, almost without change, from the laboratory to the clinical ward or operating room.
> Not infrequently the transition has been made with haste and with an air of urgency that, the generous may concede, was fed by the needs and wishes of desperate patients who had the misfortune of not becoming ill *at a later and more convenient time.* (*The Puzzle People* 164, my emphasis)

Referring to the developments in the field of liver transplantation, the surgeon not only underlines the experimental status of the practice but emphasizes the impact of patients' needs on the rushed execution of procedures. Even more prominent, however, is his final remark, in which he introduces the patients' disadvantage of not having fallen sick at a later – a "more convenient" – point in time. By engaging in speculative medicine, the future is framed as a time when the steady progress of transplantation has already led to increased survival rates. By speaking of a more "convenient time", Starzl speculates of what is yet to come – a time in which patients will not have to suffer from experimental procedures and in which currently fatal sickness can be healed. Rather than perceiving of a sickness' impact as absolute, Starzl perceives it as relative, as always relying on its medical and thus temporal contexts. Starzl's concept of the future thereby hosts similar hopes and tropes than the frozen patients' of Niven's story. The main difference lies in the claim to shape the future: Starzl desires to actively form it, while Niven's corpsicles wait for a better future to arrive and become victims of the interests of the present.

This perception of the future as a realm for hope and speculation is also introduced by Starzl's reference to the deaths and suffering he has already experienced. He remembers his colleague's child, a "beautiful daughter, who died in childhood of a disease that would not have been fatal if it had come a few years later" (*The Puzzle People* 183). Starzl again illustrates the relative character of a "fatal illness", a concept that always relies on the available medical treatment. He suggests that the introduction of transplantation changed the existing status quo and brought forth a severely altered future. This notion is further underlined in his article "In a Small Iowa Town." In this contribution to *Transplantation Proceedings*, published in 1988, Starzl emphasizes the importance of time:

> To many physicians, thoughts turned back to what might have been. How much more complete might the world have been if Mozart had been treated with renal transplantation instead of dying of glomerulonephritis at the age of 34. Or, closer to home, what might have become of that little girl so mourned by Father O'Toole 50 years ago in a small town in Iowa. The people who could be most helped by transplantation were those with the greatest potential, often at a young age, who had been doomed by failure of a single organ system but with all other organ systems intact. Now, they could be saved. It was like a miracle. ("Small Iowa Town" 12)

Starzl depicts transplantation as a turning point and as a break from previous medical practice: A previously fatal affliction has become treatable. Interestingly, Starzl emphasizes the "greatest potential" of transplant patients and emphasizes their possible future accomplishments: The world, Starzl assumes, would be more "complete" if they had survived. Hereby, transplant patients are not merely

exceptional because of the surgery they have undergone, they are presented as exceptional even before that. In the lives of these patients with the "greatest potential" time becomes a tragic element, separating the present patient from the medical possibilities of the future. In unleashing these patients' potential, then, transplantation appears as a measure contributing to the benefit of a world of tomorrow. Most prominently, by speculating "what might have been", Starzl presents musing about future developments as a motivation for transplant surgeons to develop the practice. Similarly, in speculative fiction wondering "what might have been" often investigates the repercussions of a specific development. To both Starzl and Niven's corpiscles the future becomes a realm in which medical progress has triumphed over the hardships of today.

This tendency to believe in a better future shaped by transplantation remains a quality shared by transplant surgeons as I want to demonstrate with reference to more current autobiographies. Similar to Starzl, face-transplanting surgeon Maria Siemionow explains in 2009:

> Chopin died of consumption, otherwise known as pulmonary tuberculosis, ten years after that winter sojourn. The disease is eminently curable today, and it's worth wondering how much more great music he might have given the world had the intervention of modern medicine been possible (42).

Here, speculations about how medical progress might affect the future are encouraged: As Siemionow explains, "it's worth wondering." This speculative approach is shared by heart surgeon Kathy Magliato who contemplates in 2010:

> One donor can change – no make that *save* – the world. What if the recipient of that lung goes on to find the cure for cancer? What if the recipient of that kidney goes on to develop the alternative clean energy source that can power all forms of transportation? What if the liver recipient achieves world peace? (176, emphasis in original)

The dominance of "what if?" clearly positions Magliato's musings in the speculative realm. This speculative realm, comparable to Starzl's emphasis on "greatest potential", hosts exceptional individuals: Chopin, Mozart or a cancer-curing lung-recipient. Apparently, these patients appear as valid contributors to the better future imagined by the surgeon. Rather than speaking of transplant recipients' individual lives, the surgeons' endeavors are thus tied to universal progress in the arts or life sciences. Here, the potential addressed by Starzl is further developed as individuals are granted significance based on the contribution they may offer in a brighter future. Niven, in contrast, does not imagine those with the "greatest potential," rather, he speculates about those who might be deemed insignificant and thus become expendable in a changing political climate.

Fittingly, and in contrast to Starzl and his colleagues' speculations, Niven's protagonists are experiencing a dominant sense of disillusionment brought forth by the progress of transplantation practice and its repercussions. This disenchantment is firstly suggested by the fact that in Gil's own time, freezing oneself has become an endeavor of the past. In the past, people believed in- and relied on future developments of the medical profession, in the present, however, the risk to be harvested for organs has put an end to such hopes. The notion that faith in the future is a remnant of the past becomes apparent when Gil visits the facility that stores the frozen patients, and a medical professional explains:

> Nobody has himself frozen these days. He might wake up one piece at a time! . . . Ten years ago we were thinking about digging new vaults. All those crazy kids, perfectly healthy, getting themselves frozen so they could wake up to a brave new world. I had to watch while the ambulances came and carted them away for spare parts! We're a good third empty now since the Freezer Law passed! ("The Defenseless Dead" 73)

Clearly, times have changed, and skepticism has surpassed optimism in the future. Apparently, people's willingness alter the legal basis of brain death for financial gain has interfered with the belief in a bright future. While Starzl's anecdotes present transplantation medicine as a facilitator for a better world, Gil's experiences introduce it as a disillusioning phenomenon. Thereby, Gil's rather bleak reality also resonates with a sense of fatigue and impasse in the transplantation sector. Despite his optimism, Starzl comments with regard to the unsuccessful attempts to transplant pancreas and intestine: "When the rush of enthusiasm was replaced by reality, only a few diehards were left" (*The Puzzle People* 169). Starzl highlights the change in attitude at the end of the 1960s: After the severe danger of rejection became apparent and the first attempts at transplantation yielded poor results, a sense of disillusionment developed. With reference to the war in Vietnam, the Watergate scandal and the decline in American economic superiority, the surgeon perceives of the 1970s as "an era of national humiliation and introspection" (The Puzzle People 173). The perceived fading of economic grandeur and faith in the political system appears as a fitting framework for "The Defenseless Dead", in which previous beliefs in a future have been superseded by the disheartening events of a recent past.

The story's interrelation with matters of its time can also be traced in connection with contemporary discussion on a legal definition of brain death. The work already underlines the influence of legislature on matters of life and death when the patients' status is defined by legal uncertainty: "Were they in frozen sleep or frozen death? In law there had always been that point of indecision," Gil remarks ("The Defenseless Dead" 74). Given legal uncertainties, "corpsicles" are introduced in an in-between position and are neither alive nor dead – and thereby defy

human existence. The utter uncertainty presented by the patients reverberates with the story's publication prior to the Uniform Determination of Death Act. In the 1970s, discussion about brain death was ongoing, as the Ad Hoc Committee of the Harvard Medical School had developed a consensus on brain death in 1968, and states began to include brain death in their statutes, still, no conclusive solution had been found.[29] The Uniform Determination of Death Act was recommended to be enacted in all states in 1980 and further underlines that the state of uncertainty called for a uniform approach: "In 1979, the American Medical Association (AMA) created its own Model Determination of Death statute. In the meantime, some twenty-five state legislatures adopted statutes based on one or another of the existing models" (*Uniform Determination of Death Act* 1). This phrasing illustrates the lack of an overarching definition and legal framework for brain death, which was provided when the Act was approved in 1981. Niven's story resonates with these uncertainties and emphasizes the impact of jurisdictional decision on the lives of individuals, especially those he deems "defenseless."

The relativity of death addressed in the short story is also navigated in the presentation of divergent and individual readings of the corpsicles' status. The shift from universal to individual concepts of their status is prominently displayed when Gil is told: "The law can't seem to decide if they're alive or dead. Think of them any way you like" ("The Defenseless Dead" 74). This dismissive advice stresses the impact of legal decisions for personal processes of meaning-making: As long as the law is indecisive, each individual is free to decide for themselves. By implication, this understanding suggests that legal consensus offers the authoritative basis for the patients' status and frames how they are perceived by their surroundings. In other words: As long as the law remains indecisive, the individual can *decide*, once the law has been passed, the individual will *know*. Therefore, it is not a specific physical condition that differentiates between being alive and dead or human and object, but a given jurisdiction. Moreover, the short comment indicates the uncertainty surrounding the passing of a law and presents existing legal frameworks as merely one possible reading of complex ethical questions. The law is thus not only introduced as a major impact on medical decision-making practice but also as a decisive force within personal processes of meaning-making.

Even though the second Freezer Bill appears to be about a medical decision, its impact reaches beyond the medical realm, at the same time, its discussion, too, is informed by non-medical motivations. Based on their mental health, the Bill aims at declaring a group of about 300,000 frozen patients brain-dead. Their mental

29 For further reference on the acceptance of brain death in state legislatures see Sandra Johnson's "Death State by State"; and Burkle et al., p. 1466.

health, supporters claim, makes them unfit for a life in the future they once dreamed about. While the bill is supported by a number of people, Gil is not one of them, and he explains that "[a] perturbingly large number of citizens" were in favor of the Bill's passing ("The Defenseless Dead" 75). Rather than focusing on their arguments, Gil is certain that the patients' health does not play a crucial role in the planned bill:

> They never mentioned that said corpses might someday be recovered whole and living. They often mentioned that said corpses could not be recovered *now,* and they could prove it with experts, and they had a thousand experts waiting their turns to testify.
> They never mentioned biochemical cures for insanity. They spoke of the lack of a worldwide need for mental patients and insanity-carrying genes.
> They hammered constantly on the need for organ transplant materials. ("The Defenseless Dead" 75, emphasis in original)

Gil's logic follows the patients' initial reasoning: he suggests that a recovery "someday" remains plausible. Even though he is aware that this future remains speculative, as the use of "might" indicates, Gil laments that the possibility is not included in the supporters' argument. The emphasis on "*now*", further underscores the supporters' insistence on the present, which opposes Gil's and the patients' focus on the future. Moreover, he also addresses the roles of experts in the pending decision and his exaggeration of "thousands" waiting to testify stresses the use of seemingly objective knowledge to advocate a certain case. By referring to what has been omitted from the discussion, he indicates that the conversation has been deliberately shaped. By speculating about possible developments, Gil underlines that the discussion about the second Freezer Bill is shaped by considerations ranging beyond the medical realm.

Predominantly, Gil emphasizes the impact of organ shortage on the planned changes in jurisdiction. Organ shortage as a possible motivation for passing laws is already introduced when Gil learns about the plans for a second Freezer Bill and comments: "A second Freezer Bill. Naming a different group. The communal organ banks must be empty again" ("The Defenseless Dead" 74). Gil's observation illustrates that a lack in organs motivates the passing of the law, and by using "again", he indicates that the first Freezer Bill was passed for comparable reasons. Interestingly, the first law was passed to declare patients with insufficient financial means brain-dead and thereby relied on an utterly non-medical marker. The claim that a different group has been "named" depicts the decision as random and the need for organs, rather than the patients' condition, appears as the decisive factor. Accordingly, supporters "hammered constantly on the need for organ transplant materials" ("The Defenseless Dead" 75) and thus turn the frozen body into a possibly commodifiable asset. Thereby, declaration of death relies on external motiva-

tions – the need for tissues – rather than the patients' condition. Gil's reading stands opposed to the broadcasted information about the Freezer Bill which focuses on the cause's noble nature. The protesters in favor highlight the good the frozen organs could serve and carry banners claiming: "SAVE THE LIVING, NOT THE DEAD" ("The Defenseless Dead" 109). Here, the frozen patients are declared dead, not frozen. In death, their bodies have become a communal good, a resource for society to use. In other words: the jurisdictional decision pertaining to a specific individual is discussed with reference to how this individual's death could benefit society. The passing of the law, then, is tied to an external desire for organs, rather than to the individual state of the patient.

The fact that supporters of the law call for the declaration of brain death based on a need for organs also relates to an economic perception of the body. As was already mentioned earlier (see Chapter 2), studies indicate that until today fears of prematurely declared brain death prevail (Morgan, Harrison, et al. 677). Brain death, transplantation and the notion of organ shortage are interrelated: As transplantation practice thrived, brain death was established – at the same time, a need for organs developed. John Portmann explains that "[b]efore we acquired the technology to transplant organs, there was no shortage of organs" (297). As transplantation became possible, living human tissue began to be understood in terms of supply and demand and the body was conceptualized in economic terms. The employment of the economized body in Niven's story appears particularly pointed when read in the context of economic stagnation and uncertainty. In 1983, George J. Annas fittingly speaks of "an era of scarce resources" (187) and comments that "the issue of rationing on a massive scale has been credibly raised for the first time in United States medical care" (187). The medical sector is entwined with economic considerations and organs, too, become a "scarce resource" that, accordingly, needs to be allocated responsibly. Reading the body in economic terms – with its tissues presenting a resource in high demand – forms the basis not only for organ trading but also for the term "organ shortage".

The scarcity of organs and the complexities of allocation become exemplarily clear with the establishment of the waiting list for transplants in 1984. The waiting list can also be tied to economic considerations since "[b]rain death as the primary vector of bioavailability created the new moral economy of the waiting list" (Cohen, "Bioavailability" 84). Waiting lists interrelate ethical and medical considerations, since, among other factors, they take a patient's age, health and geographical location into account ("Transplant Waiting List"). It is vital for the processes of the waiting list to be perceived as objective and fair – deviations from its standardized workings present ample ground for uncertainty and mistrust. Real-life occurrences of manipulations in the waiting list, prominently the "Organ Transplant

Scandal" ("Organ Transplant Scandal Shocks Germany") in Germany from 2012,[30] play into uncertainty concerning patient selection.

An imaginative rendering of these interrelations between economy, marketability and the human body form the basis for the thought experiment presented in Niven's story. Prominently, organlegging, as a future version of organ trading, relies on the marketability of human tissues. The ties between illegal organ marketing and a dwindling supply in organs appears undeniable: "Organlegging shouldn't be a problem by now, but legitimate transplants released by the Freezer Law were running out and people had started to disappear" ("The Defenseless Dead" 89). As the frozen supply decreases, illegally retrieved organs begin to fill the demand. Here, the proposed Bill aims at supplying new tissues – tissues from the hopeful people who had themselves frozen in the past – to meet the demand and to thereby make black markets obsolete. To Gil, however, this reasoning appears flawed: "The first Freezer Law was supposed to stop organlegging, but it didn't. Maybe the citizens will vote this one down" ("The Defenseless Dead" 75). The practice of releasing organs to stop organ-related crime is presented as non-sustainable: it merely serves as a short-term solution to a problem that will necessarily return. For those invested in the organ trade, the organ shortage presents a financial opportunity as the dwindling supply also leads to an increase in price.

The interrelation between the exchange of tissues and financial gain not only becomes apparent in the case of organlegging, it is also depicted as the main incentive for those hoping to inherit from the still-frozen patients: the so-called "corpsicle heirs". The frozen patients' wealth can be assumed as the first Freezer Law already "declared any person in frozen sleep who could not support himself should society choose to reawaken him to be dead in law" ("The Defenseless Dead" 74). Anyone without financial means has thus already been declared brain-dead. Here, marginalization is intricately tied to the declaration of death and to transplant practices: Only those deemed rich enough are still alive and keep their organs. Now, they may contribute to the future not only by "donating" their tissues but by inheriting to their next of kin – who they have never met. Here, tissues and finances are further entangled: Not only are tissues granted specific economic value, but a lack in financial means also indicates that the best way these frozen persons can contribute to society is by becoming a resource for organs. Obviously, the first Freezer Law thereby strongly resonates with fears of premature declaration of brain death and concerns about possible corruption in the medical system (Moloney and Walker, "Talking about Transplants" 310). The signif-

30 For further reference on investigation of possible manipulations of the waiting list see Pohlmann.

icance granted to financial means is also illustrated in the life writing of Frist, who underlines that receiving a transplant presents an immense financial strain on the patient. The surgeon wonders: "Why save someone's life physically, while wrecking it economically and psychologically?" (224). Here, a life worth saving is a life lived with financial means, without them, Frist's comment suggests, it might not be worth saving in the first place. Niven's story takes Frist's question a step further and wonders: Why keep someone alive if they cannot finance themselves?

To conclude, "The Defenseless Dead" introduces a complex fictional reading of the connections between transplantation practice, brain death and jurisdiction. By negotiating how different interests might affect the passing of the law, jurisdiction is presented as severely affected by political matters and individual desire. Even more, the story's thought experiment frames tissues in economic terms and suggests that the individual body cannot be separated from its situatedness in specific cultural – and temporal – contexts. With reference to the representation of transplantation in speculative fiction, two aspects prove vital for this analysis: Firstly, the story positions the question of patient rights and autonomy at its center. While the corpsicles could be devoured by society like the popsicles they allude to, Niven's story offers a more complex engagement with the unconscious patient. The frozen patients appear as a disenfranchised group, whose voices are excluded from the conversation, as "[i]t's hard to defend yourself when you're dead" ("The Defenseless Dead" 78) – or frozen for that matter. Rather than measuring the success of transplant practices by the contributions patients may offer in the future, as the speculations in surgeons' life writing tends to, Niven focuses on individuals without a prominent voice or financial means. As Brittany Anne Chozinski notes: "The body, in Niven's work, is presented as that which runs risk of conquering, particularly along colonial lines of domination" (60). Thereby, Niven's story manages to be both: a reminder of the scarcity of organs and a critical negotiation of patient rights. Secondly, the text introduces different means to meet the organ shortage and elaborates on their challenges: the reasons for un-freezing the patients are presented as ethically questionable, yet the shortage of organs in a society accustomed to receiving transplants also benefits practices of organlegging. Jurisdiction appears as the central agent in these considerations, as it establishes the individual status of each patient and thereby also shapes individual patient rights and public welfare. My emphasis on literary texts' contribution to the discussion of organ transplantation is thus substantiated by Niven's story which continuously emphasizes the interrelations between individual rights, criminal activity and transplant laws, underlining that transplantation is positioned in-between various discourses and is necessarily shaped by a variety of disciplines and interests.

5.2 The Dehumanized Patient: *Coma* by Robin Cook

Published after Niven's "The Defenseless Dead", Robin Cook's bestselling novel *Coma* was released in 1977 and was adapted into a successful film by Michael Crichton in 1978 and a miniseries in 2012. The work is firmly rooted in the 1970s as Catherine Belling explains: "*Coma* reflects the period in which it originated: in the 1970s, popular fiction commonly played on collective anxieties about powerful institutions" (448). In the novel, Boston-based medical student Susan Wheeler uncovers that at her workplace patients are put into a coma and are subsequently killed to sell their organs. In her investigation of the horrendous plot, the hospital is presented as an emotionless sphere, in which the patient is deindividualized. As Susan unravels the conspiracy, the reader is well-aware that her suspicions are justified, while Susan is constantly portrayed as paranoid by her co-workers. Language and media scholar Paul Cobley links the significance of paranoia to the novel's contexts: "There can be little doubt that the paranoid thriller in film and print fiction is overwhelmingly associated with the 1970s" (163). Cobley furthermore argues that "[p]aranoia is hence part of the thriller mindset" (163) and thereby underlines the role of paranoia for the genre *Coma* helped to create: the medical thriller.

As a medical thriller, *Coma* does not align with the genre conventions of specualitve fiction, nevertheless, speculation itself plays a key role in Cook's writing, as Lorena Laura Stookey emphasizes:

> Serving as cautionary tales, the novels in which Cook speculates about the future directions of medical research envision worst-case scenarios that reflect the writer's characteristic wariness about any kind of science that is driven more by economic considerations than by a concern for the public good. In speculating about the future, Cook himself performs a special kind of public service: he informs a general reading audience about developments within the field of medicine that, if not exactly professional secrets, are nonetheless not always readily accessible to laypersons. (18–19)

Stookey grants significance to Cook's speculations about the future because of his medical background: As a physician, he appears in a teaching role, making knowledge available to the lay public. This knowledge, Stookey illustrates, is bound to him "speculat[ing] about the future" and, in this "futuristic turn" also intersects with science fiction (18). Speculation, then, forms a key concern of the novel and the "Could it happen?" -aspect of his work appears central to Stookey (42). Cook himself clearly states in his "Author's Note" that *Coma* is "not science fiction" and that "[i]ts implications are scary because they are possible, perhaps even probable" ("Author's Note" 382). Both Stookey and Cook are thus invested in emphasizing the novel's speculative engagement with possible future events, while Cook

aims at distinguishing his work from the genre of science fiction. In contrast, I intend to emphasize the speculative nature of *Coma* and hereby pay specific attention to the ways that fictional technology shapes patient care in Cook's novel. Hereby, I want to exemplify the narrative's impact on conceptions of organ transplantation and a recurring, anxiety-inducing motif: the structural dehumanization of patients.

Since its publication, the novel has become a key text for the medical thriller genre. Cook himself is referred to as the "[m]edical thrill-master" (Spillman 762), and, as Cook reminds his readers in "A Letter from Robin Cook to his Fans", published as part of the 25th anniversary edition, "*Coma* essentially created a popular new genre: the medical/biotech mystery thriller". The medical thriller engages with matters of medical and bioethical significance while employing a suspenseful plot. The setting in the medical realm forms a key component and Stookey highlights that it clearly distinguishes Cook's from other contributions to the field of suspense fiction (16) and further underlines that the medical setting greatly contributes to the novel's thrills. She concludes that "setting and theme are thus intrinsic to the suspenseful effect Cook achieves within his work" (16). The combination of the medical setting and anxiety-inducing conspiracies thus appears as a trademark of Cook's fiction and as an important aspect of medical thrillers, which tend to be "a mixed bag of medical facts, technical and ethical issues, and suspense" (Charpy 427). Medical thrillers, then, aim to navigate ethical questions in the fictional realm as Belling notes: "Medical thrillers are about imagined events, outside the strictly factual and realist criteria for most medical ethics scenarios" (440). Despite focusing on fictional events, they are inherently tied to the rise of bioethics, given that "[b]oth bioethics and medical suspense fiction were responses to the radical epistemological and moral instability caused by biotechnology's new abilities to modify human life and death" (Belling 440). Belling presents Cook's novel as an immediate reaction to developments in the medical realm and as a means to navigate emerging ethical questions. Interestingly, Cook's novel does not merely discuss these matters as a mere case study for bioethical considerations, but rather follows them in the scope of a detective, sometimes even, horror story. Cook's novel thus oscillates between different poles, a notion that Belling underlines by arguing: "To understand its overt agenda, one must read *Coma* as a kind of hypothetical bioethics case; to understand its actual impact on health care, we must also read it as a horror story" (443). This divergence indicates that while it is Cook self-proclaimed aim to raise awareness for the shortage in transplantable organs, the novel's (and film's) impact on public perception of healthcare deviate greatly, as will be shown.

As has already become clear, Cook, the author, is deliberately aligned with Cook, the physician. Prominently, Cook's author's picture presents him in a white coat, tie and stethoscope, holding a patient's file. The author's presentation

already roots the fictional tale in the medical realm and Belling even argues that the informed physician serves as the narrator of the novel:

> Despite the unidentified third-person narrator, *Coma* is told by a physician (he wears white coat and stethoscope in the jacket photograph to remind us), and stories about medicine told by doctors seldom escape the assumption that the text reflects a medical reality the doctor knows firsthand. (444)

Belling's reading of Cook as an implied narrator indicates that the knowledge on the author's profession grants him authority: His speculations, readers are invited to believe, are particularly relevant when discussing matters of bioethical significance. Robin Cook fittingly comments: "I think of myself more as a doctor who writes, rather than a writer who happens to be a doctor" ("Robin Cook"). This insistence on the author's expertise and medical insiderdom presents a recurring technique in the marketing of medical thrillers, as Jean-Pierre Charpy emphasizes: "The credibility of the novels [medical thrillers] rests on the professional experience of the authors and – as it were – its injection into the narrative and discursive bloodstream of the novels" (427). The insistence on the author's status as a medical professional contributes to medical thrillers' claim on knowledgeability and marks their speculation – however ludicrous it may be – as more reasonable than, say, a science fiction writer's.

While suspense may drive medical thrillers, knowledge and experience in the medical field are constantly suggested, for instance, by the use of medical lingo (427). Tying into his double role as medical insider and author, Robin Cook does not merely aim to entertain, but also to spread information. He confidently explains that the thriller genre gives him "an opportunity to get the public interested in things about medicine they didn't seem to know about. I believe my books are actually teaching people" (BookBrowse). With *Coma*, he ascertains, he attempts to draw attention to organ shortage. The author explains: "Since I had done some transplant surgery myself, it was my dream that an entertaining novel and a subsequent movie could influence public policy to nip the developing problem in the bud" (Cook, "A Letter from Robin Cook to His Fans"). Further emphasizing the change he wants to inspire, Cook opens his "Author's Note" with quotes from a newspaper advertisement of a man willing to sell his organs and argues that there were "[e]ven specific offers of the hearts of living people!", yet fails to offer specific references ("Author's Note" 382). He explains that while bodies could go to the "noble use" of transplantation, they were more often "delivered to the worms or to the fires of the crematorium because of legal mumbo jumbo whose origins lie in the dark ages of English Law" ("Author's Note" 383). Here, the complexities of transplantation, such as the acceptance of brain death or con-

cepts of sanctity of the body, are reduced to mere "legal mumbo jumbo." Moreover, the dismissal of non-donor bodies as "waste" appears technocratic and dismissive of individual decision-making. Even though Cook clearly attempts to make a case for donation, his musings appear anxiety-inducing, as they frame the deceased body as a communal good and in a completely objectified manner.

In fact, and in contrast to Cook's aim to draw awareness to organ shortage, the public response to the novel tends to focus on its potential to induce fear of the medical system. As the novel progresses into the horror genre and patients are dehumanized and exploited in the hospital, Susan Wheeler's experiences lend themselves as narrative blue prints for the anxieties induced by new medical technology. Here, Cook's persona as a doctor and his presumed knowledge on medical proceedings present the work's events as believable – this credibility, however, is also assigned to the horrors described in abundant detail. Accordingly, Stookey underlines that "[t]he extraordinary authenticity with which he realizes the details of his settings cannot but contribute to the jarring effect his novels produce on readers who are necessarily horrified by the scenarios offered in his plots" (16); while Belling summarizes: "Fiction is a way of knowing the factual, and Cook's credibility reinforced anxiety more than it inspired public engagement" (449). Cook being a physician, then, further invites people to give credit to the speculative conspiracy theories he roots in modern medicine. The novel's impact also becomes apparent in Morgan et al.'s study, in which an interviewee summarizes the events of a book they have read and clearly alludes to the events of *Coma.* Even though they perceive of the text as a work of fiction, it affects their concept of organ transplantation:

> Person 1: Do you think it really happens that way?
> Person 2: I guess if you have enough to buy it with.
> Person 1: For real?
> Person 2: Yes, it's against the law here, but a lot of things go on here. If you have the money and know how, you can buy anything you want. But, I would hear it on television. I don't recall where. I remember hearing about it two times. ("Family Discussions" 678)

The conversation reveals the speakers' uncertainty: Person 2 is asked twice whether they believe stories such as Cook's to be true and their final reference to television reports remains vague. Apparently, *Coma* triggers discussion on the workings of the medical system yet tends to inspire skepticism rather than a willingness to donate tissue. This tendency can also be observed in reactions to *BBC*'s "Panorama: Are the Donors Really Dead?" from 1980. In a response to the show, a *Time* article immediately links the possibility of living donors to Cook's novel: "If a recent television program in Britain were to be believed, *Coma* is not so far off the mark" ("Are Some Patients Being Done In?"). These examples sug-

gest that the text is primarily used as a reference for conspiracies lurking in the hospital and the brutal exploitation of powerless patients, rather than a call to become an organ donor.

It can be derived that the novel's effect – the horror it instills of the medical system in general and transplant practices in particular – thus greatly deviates from the author's expressed intentions. As Stookey argues, in Cook's novels, "characters place their lives and well-being in the hands of doctors who then violate that trust" (40). This sense of violation appears particularly prominent in *Coma*'s reception and shapes readers' perception of the practice. This notion is also strongly suggested in the life writing of medical professionals, for instance, surgeon Frist explains how organ coordinators had to "f[i]ght fears spawned by movies like *Coma* and assured relatives that absolutely everything that could be done for the potential donor had been done" (55). Frist's reference already indicates that the fictional and speculative storyline of Cook's novel shaped approaches to organ transplantation and triggered skepticism towards donations. Whereas Frist's comment emphasizes the story's impact as a pop cultural reference in the seventies and eighties, *Coma*'s horrors are impactful beyond their time. The work's long-term effect becomes apparent in heart surgeon Kathy Magliato's autobiography from 2010 in which she describes the anatomy laboratory:

> Picture in your mind the scene from the 1978 movie *Coma* (directed by Michael Crichton) when Geneviève Bujold walks into the room in the Jefferson Institution where all of the comatose patients are hanging suspended from the ceiling by cables embedded in their bones. The anatomy lab had that same sense of serenity and horror. (132)

Magliato's comment uses the film's most iconic scene as a shared reference with her reader: By letting her audience "picture" the suspended patients, she introduces their "serenity and horror" to her non-fictional surroundings and in effect opens her place of work to the conspiracy theories of Cook's fictional case. *Coma* thus becomes an epitome of the uncanny hospitals that lingers some thirty years after the film's release. Similar to *Frankenstein*, the narrative has become a short-cut to create horror and a sense of unease beyond the specific events it depicts.

The significance of the suspended patient, and its lingering effect on audiences are further underlined given that today, some forty years after the publication of the novel, reviewers on *Amazon* express that the work shaped their perception of the healthcare system. In 2017, GR comments: "Enough to give shivers and make one thoughtful about surgery and medical procedure" (GR). Elizabeth Azzam wonders in 2014: "Robin Cook is a very gifted science fiction writer – I wonder if this cold be happening somewhere in the world to someone" [sic] (Azzam). Anne ex-

presses: "It makes you forever weary of ever having anesthesia again!" (Anne). I do not aim at presenting quantifiable data on *Coma*'s reception, rather, these examples illustrate the story's lasting effect on readers and the sense of uncertainty about the medical system it inspires beyond the realm of transplant practices. Commenting on *Coma* and other medical thrillers, anthropologist Campion-Vincent states: "Firmly set within the medical universe, this 'medical thriller' genre is more explicit than the legend in its critique of modern medicine, freely airing fears generated by the power to cure, kill, or maim" ("Medical and Social Critique" 36). It becomes clear that instead of criticizing a lack of organs, the novel's lasting impact lies in the critique of dehumanizing medical practices and the skepticism in medical authority it instills. Belling underlines this notion when stating that "Cook wanted to alert readers to their responsibility to prevent illegitimate organ procurement by joining the bioethics conversation. Instead he fed existing fears, and created a new bestselling villain: the health care industry" (446).

It may be due to this public response that *Coma*'s 25th anniversary edition includes a letter from the author in which he addresses the fears he may have kindled. Cook explains: "Unfortunately things didn't turn out the way I'd hoped. Although I succeeded in scaring people away from operating room 8, which certainly wasn't my goal, the larger issue was not solved" ("A Letter from Robin Cook to His Fans"). The author appears aware that he managed to scare people away – arguably not only from a fictional operating room 8. Even though Cook thus emphasizes that the public response was not the "goal" he was pursuing, his official website explains:

> This novel created the genre of the medical thriller, and changed the public's perception as well as the media's portrayal of medicine. Prior to *Coma*, medicine was on the proverbial pedestal (e.g. Dr. Ben Casey and Marcus Welby, M.D.); post *Coma*, there were questions, meaning bad doctors and bad hospitals exist and should be avoided. ("Robin Cook")

This depiction of the novel's legacy is particularly striking as it clearly deviates from the previous characterization of the work as a means to create awareness for organ shortage. Here, another aspect of *Coma* is highlighted, namely its non-idealistic portrayal of medical practice. In Cook's novel, there are criminal doctors, willing to use their patients for financial gain – a notion that clearly separates them from the doctors of prime-time drama mentioned in comparison only. The most interesting aspect, however, is the framing of the novel as raising awareness to the informed patient by indicating that there are "bad" doctors and hospitals, which need to be "avoided". How to "avoid" them, particularly when medical aid tends to be not a matter of choice but of availability, remains unclear. The comment hereby suggests a shift in the publisher's perception of the work: rather than

being a cautionary tale of organ shortage, it is framed as a cautionary tale against malpractice.

It has become clear that *Coma* inspires horror and a sense of uncertainty concerning the medical system and organ transplantation in particular, in the following, I want to further outline how these sensations are created by focusing on two aspects, namely the depiction of the hospital as an emotionless space and the introduction of the comatose patient as a non-person. Hereby, I show that these aspects lead to the most troubling notion of all: the dehumanization of the patient.

In *Coma*, the hospital is a place devoid of emotion – in fact, emotions appear as clearly out of place. Accordingly, the hospital itself is described as unhomely and foreign and when visiting the ICU, the protagonist Susan Wheeler is "struck by the purely mechanical appearance, the lack of human voices, even the lack of movement save for the fluorescent blips tracing their incessant patterns" (*Coma* 75). The description of the ICU emphasizes a governance of technology (it is "purely mechanical") and an absence of human presence. In his autobiography, cardio surgeon Frist chooses similar words to describe an operating room:

> The room was supermarket bright and totally without character – pictureless beige walls, stainless-steel tables draped in pale blue-green, an assortment of odd-looking instruments carefully laid out like alien tableware, so clean and hushed that normal sounds and street dress seemed not just out of place, but sinful. (36)

While referring to the well-known space of the super-market, Frist's depiction still introduces the OR as an alien world, a space in which conduct and dress differ from the outside world. Like Susan, he highlights a lack of noise and emphasizes the sterile atmosphere of the room, which is devoid of human presence, and "totally without character." Ultimately, both *Coma* and Frist's account introduce the hospital as lifeless, a reading that stands at odds with the stucture's purpose to save lifes. This notion is further stressed when Susan visits the pathology and is confronted with a cupboard filled with specimens:

> Looking more closely, Susan realized that the amorphous colorless mass in the large jar closest to her was an entire human head cut neatly in half, sagitally. Just behind the halved tongue in the wall of the throat was a granular mass. The label on the glass simply said, "Pharyngeal carcinoma, #304-A6 1932." Susan shuddered and tried to keep herself from glancing at other equally gruesome specimens. (*Coma* 165)

The introduction of the jars is particularly striking: It is only after focusing that Susan – a medical professional in training – realizes that she is encountering a human head. Even more, the face, the part of the body most closely associated with individual personality, is "neatly" split and completely estranged. Susan's re-

alization and her physical reaction indicate not only her lack of familiarity with hospital surroundings but illustrate that the dissected head has been turned into a strange, objectified entity, no longer immediately recognizable as an integral part of the human body. Moreover, the attached sign reveals that the specimen shows signs of cancer and reduces the entire head to the cancerous cells. In effect, the body part is reduced in a fashion reminiscent of medical pars per toto: The complete head – and arguably the entire person – has been reduced to a "Pharyngeal carcinoma." The Boston Memorial Hospital is thereby introduced as a depersonalized sphere, and it is already suggested that it merely focuses on afflicted parts and perceives of patients in terms of their illness.

This reduction is mirrored in the presented physicians who are incapable to perceive of their patients as human. Fittingly, Emily Russell explains with reference to *Coma:* "The metonymic substitution in which 'the hospital' becomes a nexus for holding together diverse players, actions, and technologies overwhelms humanizing portraits of surgeons to focus on vulnerable patients" (221). The hospital's distanced surroundings are thus interrelated with its residents who are devoid of emotions and personally uninvolved in their patients' developments. For instance, surgeon Mark Bellows "did not want Nancy Greenly to die while she was on his service because if she did, it would reflect on the kind of care he was capable of providing . . . It wasn't that Bellows didn't care about the human element, it was just that he didn't have time for it" (*Coma* 55). Bellows's treatment of Nancy Greenly appears as an exaggerated form of disregard of human life: her passing his reduced to a mere inconvenience to the physician, an occurrence that could reflect poorly upon himself. Even more, this neglect is presented as part of the doctor's perception of efficiency, he simply does not have time to think of Greenly as an individual human being. In fact, Bellows appears incapable of engaging empathetically with Greenly, a notion that is underlined when Susan asked how such "a horrible thing" could have happened to Nancy and Bellows answers: "'What horrible thing?' asked Bellows nervously, while he mentally checked the I.V., the respirator, and the monitor. 'Oh, you mean the fact that she never woke up. Well …'" (*Coma* 57). Here, Susan assigns individual meaning and judgement to Nancy's situation, while Bellows appears incapable to even understand her comment. While the reader might not be in the know about the medical procedures the doctor has in mind, Bellows himself appears unable to understand Greenly's situation beyond his medical gaze. Thereby, Bellows is introduced as a clichéd doctor, who remains distanced from his patients and who perceives of his patients as cases, rather than as people. Given that Bellows is unaware of the conspiracy, he "comes to learn a hard lesson about the cost of depersonalizing the patients that he serves" as Stookey explains (45). Bellows's detached treatment of- and com-

ments on his patients thus mirror the sterile environment of the hospital, while his disinterest hinders him from perceiving the harm done in the institution.

The patterns established by Wheeler's colleagues are not presented as an individual choice, but rather appear intrinsic to the hospital setting and as part of professional medical conduct. This notion is underlined with reference to Susan herself, who attempts to overcome her interest in the coma cases. The narrator comments: "Her responsibility was to become a doctor; that should take precedence over everything. The Bermans and the Greenlys were not her concern" (*Coma* 240). Obviously, Susan choses a different path and remains determined to solve the conspiracy, yet it is interesting to note the use of the plural here, indicating that her kind of engagement with the individual patient runs beyond her tasks as a doctor. The idea of not-caring thereby appears as conscious choice and as part of medical training, a notion that is further underlined in a description of Bellows, who does not "remember the emotional susceptibility associated with an individual's initial clinical experiences in the hospital environment" (55). The narrator indicates that Susan's reactions need to be understood within the framework of her inexperience in the hospital setting. Thereby, Bellows's detachment is presented as part of the years spent in the hospital and his experience as a doctor and, presumably, with dying patients. Susan's empathy, on the other hand, becomes a trait of the inexperienced doctor and consequently, a reaction bound to diminish with her experience in the medical profession.

The sterile, depersonalized hospital setting is further characterized in its opposition to Susan who is prominently depicted as a beautiful and overly feminized character. Stookey perceives of Wheeler as one of Cook's "many strong, resourceful women characters" (23) and thereby alludes to Susan's medical training and her entering the predominantly male sphere of the medical profession of the 1970s. Yet even though Susan is depicted as resourceful, as will become clear later on, her body is heavily objectified, not only by her colleagues, but also by the narrator. A prime example is the narrator's insistence on the protagonist's sexualized body in scenarios in which her nakedness is insubstantial to the novel's proceedings. When Wheeler wakes up in the morning, the cold makes her "nipples rise up from the summits of her shapely breasts. Goose pimples appeared from nowhere along the insides of her naked thighs" (*Coma* 19). Here, the reader's gaze trails Susan's body, lingering on her naked form and the insides of her thighs. The introduction of Susan's beauty becomes involuntarily comical as she is about to enter the bathroom, stands naked in front of the mirror and, upon looking at her naked body, wonders whether she should have become a dancer instead of a doctor (*Coma* 21). The narrator underlines that she "need[s] a vocation which would constantly exercise her brain" (*Coma* 21), yet clearly positions her naked body in opposition to this notion. This focus on Susan's form appears disturbing when she is

violently attacked in her own bathroom but has already taken her shirt off. Her nakedness is prominently featured in the ensuing struggle, as "[a] trickle of blood ran down from the corner of her mouth and dropped onto a pale breast" (*Coma* 264). While the attacker gazes at Susan, caught up in thoughts of rape, the narrator depicts her violation in a sexualized, objectifying manner. These obvious cases of objectification of Susan's young body are mirrored by her co-workers, especially by her later love-interest Bellows who "conjure[s] up sudden romantic pursuits with Susan as the object" (*Coma* 119) and who explains that it is the other doctors' sexual interest that make them react in a specific way to Wheeler, since: "Sex exists, my child. You'd better learn to face that" (*Coma* 314). Bellows's paternal tone further underlines Susan's role as an object of desire. Hereby, the hospital, and the narrative itself, reveals yet another layer of objectification with Wheeler, the female doctor, being commonly reduced to her physical form.

Susan's difference is further underlined by her reactions to the coma cases, which are related to her gendered identity, and which clearly separate her from an economized perspective on medicine. Susan herself explains that her reactions might be unprofessional and immediately ties them to the perception of herself as a woman: "I failed. I wasn't detached or professional. You might even say I acted like a schoolgirl" (*Coma* 115). Wheeler's assessment of the situation illustrates that her emotional, empathic reaction is perceived as out of place in the hospital setting, even by herself. As a doctor should not behave like her, Susan frames herself not only as a female, but even more, as a child. Charpy explains that in medical thrillers, young members of the medical profession are often used as a counterpoint to the well-established medical system: "Young interns, fresh from medical school (for instance, Susan Wheeler in Cook's *Coma*), are also portrayed; their wide-eyed innocence usually enables them to cast a critical eye on the medical environment in which they work" (427). It is not only the interest in her patients, but specifically the crossing of the professional line that presents Susan as infantile. The connection between being a woman and being a child is emphasized later on, when Susan throws her notebook down the stairs in an act of frustration:

> Perhaps being a medical student so early in training, she was not the right person to investigate such a serious clinical problem. And perhaps her emotionalism was a built-in handicap. Would a male have reacted in the same way to Harris's reaction? Was she more emotional than her male counterparts? (*Coma* 187)

In a moment of self-doubt Susan predominantly thinks about two aspects: that she might be too young and that her gendered identity influences her perception of the patients. The notion of a "built-in handicap" thereby not only relates to her "emotionalism", but also to her being a woman in a male-governed work environment.

Her analysis is clearly footed in well-known clichés of femininity: Susan, as a woman, is emotionally invested, while her somber, male colleagues remain detached. Susan's emotional reaction could serve as a means to discredit her, yet it is important to note that it is the young doctor's personal investment that allows her to reveal the conspiracy. While her colleagues remain blind to what is happening around them, Susan perceives what is hidden behind the hospital's front. Ada Sharpe therefore argues that her perceived difference leads Susan to unravel the hospital's mysteriesas "[i]n novel and film, Susan's acute self-awareness of her gendered professional body – of her *difference* as a woman physician – is what leads her to detect the corruption and murder" (223, emphasis in original). This reading emphasizes that Susan's relation to the patients motivates her to investigate their cases and to unravel a scheme of larger proportions. Her emotions thereby serve two goals: on the one hand, they introduce her as a woman-doctor, constructed to fight battles seemingly unbeknown to her male colleagues, on the other hand, they allow her to perceive what they cannot and to reveal what lies beyond the façade.

What lies beyond the façade, in fact, is an organ harvesting conspiracy. In the shadows of the hospital, carbon monoxide is administered to anesthetized patients who, after lacking oxygen during surgery, do not wake up. Susan discovers that the Jefferson Institute, which poses as a health care facility, is a front for an organ harvesting ring and Doctor Stark, chief of surgery at Boston Memorial, provides them with comatose patients. Here, comatose patients – the people Susan Wheeler encountered earlier – are turned into a valuable resource, their tissues are objectified and their bodies become commodifiable.

This commodification of the patient body relies on its objectification and the loss of control commonly associated with surgery. Here, anesthesia appears as a temporary loss of control in which the patient takes on the objectified form of a body to be operated upon. Resonating with the novel, the unconscious state of the patient also impacts how medical professionals engage with them as an example of life writing on *Quora* authored by scrub nurse Wendy Sheep illustrates:

> As soon as they are asleep, the conversation goes down hill. Once the surgery has started, they aren't a person, they are the part we are operating on. Most we wouldn't recognise if we ran into them on the street. It's not because we don't care, it's that we see so many people each day, you can't remember them all. (Sheep)

This passage taken from an answer to "How Do the Surgeons Preserve a Patient's Dignity During Surgery" from 2017 presents surgery as a moment of estrangement: The anaesthetized patient is removed from their initial state of personhood while medical professionals distance themselves from the multitude of opened bodies

they encounter every day. Sheep also suggests a fragmentation of the patient's body, which becomes "the part" that is operated on. The person walking the streets later on, is introduced as someone else, someone who has been in closest contact with their body would not even recognize. The anesthetized body as an objectivized body is further underlined in *Coma* when Mark Bellows operates: "Once he got going and felt the strange sense of responsibility which the knife afforded, he didn't really care where he was working, stomach or hand, mouth or asshole" (*Coma* 196). Notions of shame, pride or privacy no longer apply once the surgeon works upon the patient's body, whose specific parts are of minor significance to him. The use of colloquial language is significant here: it is not medical lingo that reduces the patient, it is the use of derogatory terms that dismisses the sanctity of individual bodies. Even though Bellows is driven by a "strange sense of responsibility" for what might be derived to be the patient's life, the body on the operating table is distanced from the individual undergoing surgery. The state of anesthesia, then, separates the operable body from the individual and, it can be derived, from being human. Fittingly, heart surgeon Magliato comments when a patient comes off life support: "She appeared human again" (17). The perception of the anesthetized patient in terms of an objectified body also lends itself to introduce horror to the surgical ward: even though the surgeries may be necessary, or even lifesaving, it illustrates a loss of control, possibly even of self, during surgery.

The objectification of unconscious patients is further developed with reference to comatose patients who are ultimately presented as non-persons. The loss of personhood in case of coma is powerfully introduced in the case of Nancy Greenly, whom coma has turned into a "vegetable" (*Coma* 59) as Mark Bellows explains in passing. Even though Mark does not want Nancy to die on his watch ("If she croaks, my ass is grass" (*Coma* 100)), he already perceives a possible benefit of her new status as a "vegetable": "If her squash is gone, I mean wiped out, then we might as well get the kidneys for someone else, provided of course, we can talk the family into it" (58). Here, Bellows further develops the vegetable metaphor and Nancy's brain becomes a squash, thus establishing that even though she has not been declared dead, her current state of existence is of less importance than a conscious mind. The text suggests that to the surgeon, the patient's status – albeit still alive – first and foremost presents the opportunity to transplant organs. Bellows's nonchalant comment of "talk[ing] the family into" donating kidneys casts the possible donation in a highly unfavorable light as arguments in favor of donation become a means to an end. Even more, his hope that her family could be swayed to donate her organs appears particularly troubling as he admits later on that "'[s]ome of them wake up . . . but most don't when they have a flat EEG" (*Coma* 58). The comment is specifically troubling because Bellows has already

presented organ donation as an option: By admitting that Nancy might indeed still wake up, his previous hope for organ donation appears in stark violation to her patient's rights. Read in a wider framework, Bellows's understanding of Greenly as a non-person also ties into discussions on brain death. Belling explains that *Coma* was used in a *BBC* documentary on brain death and concludes: "Cook's novel does not deal with brain death criteria explicitly, but the media use the story's familiarity as a switch to reactivate public suspicion about medical conflicts of interest" (445). In fact, these "medical conflicts of interest" are quite forcefully delivered by Bellows, who has obviously lost any hope in Nancy's recovery and merely perceives her as a possible organ donor. The state of coma threatens Nancy's personhood: While Bellows has to admit that she might still wake up, she is no longer an active agent in any processes of decision-making. The comatose patient at Boston Memorial, exemplarily introduced in the case of Nancy Greenly, thus further substantiates strategies of depersonalization already introduced in the case of the anesthetized patient.

While the Boston Memorial may already infringe the patient's personhood, depersonalization reaches its climax once they leave the hospital and enter the Jefferson Institute, the high-tech care facility constructed to host hundreds of unconscious patients. Since its first introduction, the Institute is portrayed as a highly automated and impregnable fortress of technology:

> The building was set back about fifteen feet from the street. It was a strikingly modern structure surfaced with a white terrazzo conglomerate polished to a high gloss. The walls slanted inward at an angle of eighty degrees, rising in a first story of some twenty-five feet. Then there was a narrow horizontal ledge before the wall soared another twenty-five feet at the same angle. Except for the front entrance, there were no windows or doors along the entire length of the facade on the ground floor. (*Coma* 327)

The Jefferson Institute is distanced from the street, removed from direct access. The building itself appears "strikingly modern" and is introduced with technical detail. Thereby, of the Institute's exteriors mirrors the care administered inside: The structure's walls appear glossy and suggest that the Jefferson Institute is untouchable by its surroundings, as nothing sticks to its Teflon surfaces. The expansive exterior thereby also appears clean, reliable and utterly impregnable. This notion is further underlined by the lack of any windows, which already grant a prison-like quality to the health care-facility. As Susan approaches the building, she realizes that the front door is "[m]ade of bronzed steel, it had no knobs, no openings of any kind" (*Coma* 328). The Institute appears impenetrable, and it is interesting to note that the door is made of bronzed steel, a material made to look like another. Thereby, the door, the threshold to the uncanny inside, forms a fitting reference to the Institute's proceedings of make-believe patientcare and actual

organ-harvesting. The Institute's exterior suggests that certain elements in medicine remain hidden and unknowable to lay patients, a notion that surgeon Magliato illustrates in her autobiography: "Like some ghastly magician's vanishing act, we hide the body from the audience and simply wheel the dead patient right through the hallway" (241). Cook's novel draws from the divergence between shiny exteriors and dying patients by indicating that the glossy surface – the lifeless technology and impregnable medical authority – allow for the true horror: The depersonification of human beings and their reframing as a resource of tissues.

The reframing of the clinic as a site of horror and its correlation to the use of technology is most prominently presented in *Coma*'s iconic image: The storage facilities, consisting of rows of motionless patients, suspended above ground, held up by wires attached to their bones in a perfectly adjusted room. The suspended patient has become the signature image of *Coma* and was not only featured on the cover of various book editions but became the poster for the 1978 film by Michael Crichton and the A&E miniseries from 2012. In the state of suspension, the patient loses all agency or right to privacy, they are accessible by- and cared for by a computer. Stookey comments: "Few people who have seen the film will ever forget the stark horror of its representation of patient facilities at the Jefferson Institute: there row after row of comatose bodies hang eerily suspended in midair" (33). Stookey's use of "eerily" alludes to the patients' ghostlike quality, as they hover between life and death. Clearly, the suspended patient serves as the most shocking continuation of their portrayal as vulnerable, powerless and utterly reliant on technology.

The reliance on technologically advanced health care further emphasizes the novel's speculative potential, which is prominently introduced by Michelle, the nurse leading Wheeler through rows of unconscious patients. In a matter-of-fact tone she lays out the clinic's functions and ascertains: "You see, everything is automated" (*Coma* 335). While Wheeler was at odds with patient care at Boston Memorial, she is utterly opposed to what she encounters at the Jefferson Institute. Nurse Michelle explains that a team of four professionals tends to the needs of 131 patients (*Coma* 334) – the emphasis on a quantifiable approach to care is deliberately juxtaposed with Susan's patient orientation:

> "It's like some science fiction setting. A machine taking care of a host of mindless people. It's almost as if these patients aren't people."
> "They aren't people."
> "I beg your pardon?" Susan looked up from the patient toward Michelle.
> "They were people; now they're brain stem preparations. Modern medicine and medical technology have advanced to the point where these organisms can be kept alive, sometimes indefinitely. The result was a cost-effectiveness crisis. . . . Technology had to advance to

> deal with the problem realistically. And it has. This hospital has the potential to handle up to a thousand such cases at a time." (*Coma* 335)

Michelle redefines the patients' status as human, which Wheeler clearly upholds, to "brain stem preparations": The shift from person to object could not be any clearer. Here, technology plays a decisive role, specifically considering that the patients' family visit their loved ones in another room, a room built to resemble the well-known surroundings of a hospital. Belling explains: "In this paternalistic deception, Cook plays on the anxiety of his reader, who knows he is a medical insider, hinting that perhaps hospitals really do deceive families like this" (337). The clinic as a site of horror, a space that consists of an exterior, a façade that is presented to the families and an interior, in which patient rights are abandoned in favor of biotechnological progress is thus further established. The vulnerability of the patient, their nakedness and incapacity to move, is met by a nurse who is factually a technician and looks after row upon row of "preparations" that are, naturally, given numbers instead of names (337). The Jefferson Institute thereby reframes "caregiving" in a technologized space and creates horror specifically from the absence of the human element in both those administering- and those receiving said care.

While the exact workings of the illicit organ marketing remain undisclosed, the procedure of organ removal is prominently introduced when Susan finds her former patient Berman at the Jefferson Institute. As Susan investigates the grounds, she stumbles upon an unlocked door:

> Then she began to see the upper part of a stainless steel dissecting table. A corpse lay naked on it. Susan heard some voices and a laugh, followed by the sound of a scale.
> "So much for the lungs. How much should we say the heart weighed?" said one of the voices.
> "Your turn to guess," laughed the other.
> Nudging the door an inch more, Susan could just glimpse the head of the corpse. She squinted, then felt weak. It was Berman. (341)

Susan's encounter with Berman's body appears reminiscent of her approach to the suspended patients: To her, the body "[i]s Berman" and the ties between self and body remain intact – fittingly, she sees only the corpse's head and thus encounters the body part most closely entwined with individuality. Those operating enter the narrative as bodiless voices and verbally – as well as surgically – separate Berman into "the lung" and "the heart". Here, it becomes apparent that *Coma*'s horror relies on the depersonification of the unconscious patient that is commonly associated with medical practice, as was suggested with reference to the anesthetized patient, and deliberately draws from what can be expected of surgical intervention.

This reading of medical conduct is further underlined when Susan encounters another instance of organ removal: "She saw two surgeons, gowned and gloved in

the usual fashion, bending over a patient. But she could see no anesthesiologist. There was no operating table. The patient was still strung up in a frame" (*Coma* 345). The suspended patient has reached their full potential for horror: They are being operated on while strung up in the contraption that keeps their organs alive for future use. The reading of organ retrieval as "harvest" is deliberately employed when the surgeons explain that a second kidney will only be sold after the heart has been bought (*Coma* 346). Apparently, the patient will be returned to the ward until other organs may be needed, and Stookey's reading of the Institute as a "storage warehouse" (35) is underlined. In fact, it is the suspended patients themselves who appear as storage facilities, kept alive in order to keep valuable organs intact. Thereby, the patient, as a resource for organs, is positioned in-between life and death. As Susan explains: "The victim's upper brain is destroyed. He's a living corpse, but his organs are alive and warm and happy until they can be taken out by the butchers at the Institute" (*Coma* 365). Susan conceptualized the patient body as a "living corpse," a dual role that resonates with Kalitzkus's reading of family members encountering brain-dead loved ones (see Chapter 2.2). The patients are suspended in midair, just as their status of being alive or dead appears negotiable and dependent on the demand for organs. In her assessment, Susan underlines the brutal aspect of surgery as the medical professionals, previously referred to as surgeons and as part of the profession she aims to pursue, become butchers. These "butchers" are granted a particularly horrifying effect because they are mere exaggerations of how *Coma* characterizes law-abiding surgeons at Boston Memorial: incapable of perceiving the patients they operate on as human.

At the core of these brutal processes – laughing about people being killed for their organs, keeping comatose patients as human storage facilities – lies the possibility of organ transplantation and the conceptualization of human tissue as a valuable resource. Fittingly, the Jefferson Institute is oriented towards efficiency and those invested in the practice of organ replacement are presented as primarily interested in financial gain. This notion is forcefully underlined when Susan witnesses the removal of the unknown patient's kidney and listens to the medical professionals' conversation on Berman's heart they have just removed:

> "I think it's only bringing seventy-five thousand dollars. It was a poor match, only two out of four, but it was a rush order."
> "Can't win 'em all," said the first surgeon, "but this kidney is a four-tissue match, and I understand it's going for almost two hundred thousand. Besides, they might want the other one in a few days."
> "Well, we don't let it go until we find a market for the heart," added the other, tying another rapid knot.
> "The real problem is finding a tissue match for Dallas. The offer is a million dollars for a four-match. The kid's father is in oil."

> The second surgeon whistled. "Any luck so far?"
> "We found a three-tissue match scheduled for a T&A at the Memorial next Friday and ..." (*Coma* 346)

The surgeons' conversation depicts them as salespeople, remarking solely on the logistics of the organ sales, there even is a "rush order," as may the case in other forms of economic exchange. However, their considerations of financial gain and logistics are accompanied by the specifics of transplantation, particularly by references to tissue matching. The intermingling of these aspects clearly shows that the person's individual characteristics, the immunological marker of their organs, are tied to their market-value. Not only does this statement tie into Susan's previous observations that the patients in a coma had been tissue-typed before operation, but it also illustrates that living patients are monitored, regarded as potential assets and treated accordingly during surgery. Individual gain thereby undercuts hospital care, which Stookey reads as a critique of transformations in the health care system "into a form of business entreprise [that] leaves it vulnerable to the manipulations of people too strongly motivated by economic considerations" (25). Thereby, *Coma* draws from suspicions concerning the medical system, specifically because "[h]ealth care was fundamentally scary, and increased access to its workings did not reassure the 1970s public" Belling (448). Transplantation is used as a facilitator for personal gain and is inseparably tied to the corrupt proceedings within the health care system.

Aside from financial gain, it is only Doctor Stark who expresses his personal motivation for participating in the organ market. Stark offers another explanation for his involvement and offers arguments that are strongly reminiscent of Victor Frankenstein and the mad scientist trope:

> We are about to crack the mystery of the immunological mechanisms. Soon we'll be able to transplant all human organs at will. The fear of most cancer will become a thing of the past. Degenerative disease, trauma ... the scope is infinite.
> But such breakthroughs do not come easy, not without hard work and sacrifice. Not without a price. We need first-rate institutions, like the Memorial and its facilities. Next we need people like myself, indeed like Leonardo Da Vinci, willing to step beyond restrictive laws in order to ensure progress. (373)

Stark primarily refers to the chances of transplantation and the ongoing struggle of immunology of the 1970s. His insistence on a greater good for the wide public ties into Robert O'Neill's discussion of tales of illicit organ procurement, which tend to depict debates between a young, idealistic doctor and an older physician. O'Neill claims: "The debate usually centers on the question of maximizing the good or the greatest benefit versus individual rights and liberty" (225). The conversation be-

tween Susan and Doctor Stark follows a similar pattern. What remains utterly unclear, however, is why Stark should be interested in actually killing people to be used as organ "donors." If he was merely interested in surpassing "a public policy handicap" (*Coma* 374) in order to help a wider public, it would explain why he is explanting organs from brain-dead patients. However, as the doctor's victims are solely chosen because of their compatibility with paying recipients, his interest in the "greater good" aspect of his deeds appears utterly vague. Even though Stark's monologue integrates the conspiracy into debates on scientific progress, his arguments lack footing in his actions. However incoherent it may be, his line of argumentation, in which the individual has to succumb to an apparent greater good of society, fits the perception of the hospital as a lifeless, dehumanizing sphere, in which the individual is at risk of seizing to exist.

In conclusion, this chapter has established that *Coma* presents organ transplantation in the context of technologized, depersonalized and objectified patient-care. As a student and a woman, Susan appears at the outskirts of the medical profession and sheds light on the detached stance of her colleagues. While they are willing to reduce their patients to their bodies, Wheeler grants significance to the individual person. Strategies of depersonalization are language-based, primarily by speaking of the patients either as non-human entities, for instance "vegetable", or by relating to them solely in terms of their disease. The organ marketing conspiracy Susan reveals prominently features speculative elements and is rooted in an alternate reading of the "care" administered in the hospital. The lasting horror of *Coma*, then, is created by its speculation about a powerful, corrupt health care system which turns patients into numbers and treats them like objects – their parts may be alive, their person, however, has ceased to be of any significance. Despite his self-proclaimed aim of wanting to educate his readers and lead them towards organ donation, Cook's novel triggers uncertainties concerning transplant practice. Here, the act of speculation becomes particularly noteworthy given Cook's self-representation as a physician. To the reader, he deliberately positions himself in the role of the expert and thereby further contributes to a mingling of the openly fictional and seemingly factual realm.

5.3 The Distant Brain: "Where Am I?" by Daniel C. Dennett

The significance of the brain for transplant practices has been repeatedly emphasized in the course of the study: Ranging from brain death to *Coma*'s "brain stem preparations" (*Coma* 335), the governing role of the brain is vital for post-mortem organ transplantation. In the '70s and '80s, the brain was discussed with reference to technology in a variety of speculative engagements. Relating human conscious-

ness to non-human form, the young adult novel *Eva* by Peter Dickinson (1988) is the first-person account of a girl whose brain patterns have been transplanted into a chimpanzee. An even more intricate examination of brain and personality is *Ghost in the Shell*, a milestone of science fiction's engagement with corporality. The Japanese manga was published in 1989 and follows Major Matoko Kusanagi, a cyborg. *Ghost in the Shell* engages with the mind-body divide, as the cyborgs are driven by human brain cells, while their bodies are repaired and improved as machines in the course of the series. These examples indicate a prevalence of the body/mind divide in speculative discussions, while also alluding to the discussion's interdisciplinary overlaps, with fields such as xenotransplantation or digital technology. Thereby, a basis for transplantation, namely a cerebrocentric perspective, is navigated and brought up to scrutiny.

Daniel C. Dennett's short story "Where Am I?" from 1981 resonates with texts that discuss the intermingling of a cerebrocentric reading of the human body with advanced technology. The story is an oftenoverlooked text and has not been discussed with reference to organ transplantation so far. I want to close that gap because the short story – which only comprises a couple of pages and does not portray the transplantation of an organ in a narrow sense – presents a compelling contribution to this study's corpus. The text's engagement and intersection with scientific discourse already becomes apparent in its publication as part of Dennett's *Brainstorms: Philosophical Essays on Mind and Psychology.* In the collection, Dennett attempts to "express a theory of the mind" (xi) with the short story forming "dessert" (xxii). Despite its publication as part of the collection, the story is still removed from the other chapters and appears as a fictional wrap-up to the theoretical considerations. In the story, the first-person narrator Daniel Dennett participates in an experiment in which his brain is removed from his body and suspended in fluid: Even though the brain is positioned outside of his body, it still controls its movements and actions. By using a tongue-in-cheek tone, the story hyperbolizes complications of reducing personhood to the brain.

"Where Am I?" is firmly positioned within the realm of speculative fiction, while still referring to the time of its production. The story opens with a reference to juridical proceedings and the narrator explains that "[n]ow that I've won my suit under the Freedom of Information Act, I am at liberty to reveal for the first time a curious episode in my life" (310). Dennett begins his anecdote with a reference to the secret nature of his mission and thereby already alludes to a basic premise of medical experimentation in speculative fiction: its secretive nature. The wording appears humoristic: Clearly, experiencing the removal of one's brain could qualify as more severe than merely a "curious episode." Dennett narrates that he learned that the Department of Defense was planning a tunnel through the earth's core to deliver war heads. In an early experiment, a radioactive

war head got stuck and Dennett is approached to retrieve it. This retrieval also relies upon the removal of his brain, as it would be damaged by specific radioactive components. The tunnel is intended to deliver warheads directly into the Russian missile silo and the removal of the narrator's brain is closely tied to purposes of war. Medical experimentation in the Cold War era serves as a backdrop to the story's experiment of the mind which satirically alludes to the escalating arms race. The opening of the story, then, already forms the basis of what is to follow: a playful engagement with tropes of science fiction's representation of medicine. At the same time, it also opens the stage for the story's central interest: the connection between brain and personhood.

When Dennett awakes after his brain has been removed, the role of the organ as the sole governing instance is playfully approached. The brain is removed in surgery which is not part of the account given that Dennett was "anesthetized and remember[s] nothing of the operation itself" (311). This ellipsis presents individual consciousness as the major focus of the story: Dennett cannot remember the surgery, therefore, it is irrelevant. Instead of relating to what the doctors might have explained or filling the gap with other accounts, the reader is left with a blank – just like the narrator himself. Immediately after the operation, Dennett awakes and asks "the traditional, the lamentably hackneyed post-operative question: 'Where am I?'" (311). Dennett introduces the question as utterly conventional, yet, obviously, it is granted unique significance because Dennett, the person, and Dennett, the body, have been separated. After the nurse replies that he is in Houston, Dennett muses "that this still had a good chance of being the truth, one way or another" (311). The simple question gains complexity because of the narrator's specific constitution and suddenly allows for multiple answers. The separation of body and self complicates basic assumptions of a person's spatio-temporal existence. It appears important to refer back to the introductory discussion on personhood and Harré's statement that "[t]o be one and the same person one must, at least, have a unique spatio-temporal location" (7). Dennett's awakening challenges this supposition, as he allows contradicting answers to his current location and appears uncertain as to where "he" truly is.

As the brain is removed from the body, it is also distanced from the rest of the body and is granted unique significance and a governing role. Fittingly, in a *Time* article from 1974, the brain was introduced as the most important part of the human body and appears as utterly different than the rest of the body:

> The brain is the most *important* of the body's organs. The heart, after all, is merely a pump; the lungs are an oxygenation system. But the brain is the *master control*, the guiding force behind all of man's actions. It is the seat of *all* human thought and consciousness, the source of the in genuity [sic] that made it possible for man's ancestors to survive and eventually to

> dominate their physically more powerful adversaries and evolve into the planet's highest form of life. Everything that man has ever been, everything he will be, is the product of his brain. It is the brain that enabled the first humanoid to use tools and that gives his genetic successors the ability to build spacecraft, explore the universe and analyze their discoveries. It is the brain that *makes man man.* ("Exploring the Frontiers", my emphasis)

Here, the brain is framed as the governing instance behind human actions and is thus presented not only as different from the rest of the body but as the most "important" of all organs. This difference is metaphorically expressed: By employing body-as-machine-imagery – the heart is "merely a pump" – the brain becomes the "master control" behind this machine. Lastly, the article equals the brain with the self, a relation that is repeatedly emphasized not only on the individual, but also on a societal level. The brain is where "all human thought and consciousness" resides and it is what "makes man man." In its emphasis on the brain, the article neglects any form of embodiment as a contributing factor to the human experience.

Dennett's short story ties into these considerations, and prominently emphasizes the narrator's belief in the brain as the governing organ, at the same time, it also underlines the difficulties in aligning his lived experience with these theoretical considerations. When encountering the removed brain, the narrator Daniel remarks upon his difficulties to understand the brain as himself:

> "Here am I, Daniel Dennett, suspended in a bubbling fluid, being stared at by my own eyes." No, it just didn't work. Most puzzling and confusing. Being a philosopher of firm physicalist conviction, I believed unswervingly that the tokening of my thoughts was occurring somewhere in my brain: yet, when I thought "Here I am," where the thought occurred to me was here, outside the vat, where I, Dennett, was standing staring at my brain. (312)

Daniel, the narrator of the story, is torn between his convictions and his lived experience: he is certain that his ability to form conscious thoughts resides in his brain, yet the visceral experience of seeing the organ complicates his reasoning. His difficulties may appear unsurprising, after all, it can be assumed that people tend to encounter themselves via the image of their face, rather than the appearance of their brain. It may also be challenging because the body is always on display, constantly seen and exhibited, while the brain is supposed to be well-hidden that Dennett is forced to reconsider his clear-cut differentiations. Even though Western thought tends to assign the brain a governing role, it still insists that the person is presented to their surroundings via their face, while their brain remains hidden from view. It is interesting to note the conflicting use of the personal pronoun here: "I" is supposed to be positioned in the fluid, yet Daniel is incapable of embracing this reading, he remains the "I" standing in front of the tank. This "I"

looks at the brain, which belongs to him, as it is "my" brain, yet *is* not him. Thereby, the brain appears part of – and possessed by – Daniel, the "I" standing in front of it. The short quote thereby also illustrates a questioning of the brain as the sole source of meaning and personal integrity as introduced in the *Time* article. It is also noteworthy that Daniel is "staring" at the brain and thus relates to the sensual experience of seeing. This looking presents the direct intermingling of the eye (as part of the subordinated body) and the brain (as the meaning-creating agent). As Dennett looks at his brain, he is also transgressing the boundaries of the removed brain and underlines the impact of the body on processes of meaning-making. The encounter with the removed brain thereby brings the divergences between theoretical considerations and visceral experience to the fore.

The physical distance has brought forth a renegotiation of his body and the role of his brain, a notion that is underlined by the naming of his different parts. "'Yorick,' I said aloud to my brain, 'you are my brain. The rest of my body, seated in this chair, I dub 'Hamlet.'' So here we all are: Yorick's my brain, Hamlet's my body, and I am Dennett. *Now*, where am I?" (313, emphasis in original). While in the previous example, Dennett attempted to position the "I" inside either the body in front of the tank or the brain in the water, he has found a new means to engage with his situation. The "I" still remains, yet its position appears unknown. The names he chooses are also significant, as his brain is called after Hamlet's famous skull, while his body is named after the title-giving prince himself. The ties between individuality and body are thus already highlighted via terminology, as Yorick's skull also brings Hamlet to muse about the fleetingness of human existence and physical form. Moreover, the skull appears as a relic of the jester Hamlet used to know – by likening Dennett's brain to Yorick, it is framed as a remnant of a bygone past, presumably his simple, embodied state. Lastly, the skull is uncovered from both earth and flesh and is introduced as an abstract reminder of both a specific person and mortality as such. On a similar note, the brain is removed from Dennett's body and is supposed to present him, as a person, yet also challenges presupposed concepts of body and self on a grander scale. Hamlet, the musing individual, on the other hand, appears as the rest of Dennett's body. As Dennett names the parts, he also imbues them with fictional meaning. It seems that within the realm of this fictionality, he is able to discuss his difficulties: the new physical form, namely the separation between body and brain, has called for new terms and means of discussion. The emphasis on "now" underlines this notion, as he is able to engage with the matter at hand in a different manner after employing Shakespearean motifs.

Before the mission starts, Dennett has thus considered several approaches to his situation and develops some form of closure. He concludes that: "Where was I? In two places, clearly: both inside the vat and outside it. Just as one can stand with

one foot in Connecticut and the other in Rhode Island, I was in two places at once" (316). Previously, Dennett insisted on a dichotomous understanding of his position, now he conceptualizes himself as being simultaneousy inside and outside of the vat. Moreover, the chosen example of state lines introduces the seemingly inseperable ties between personhood and physical integrity as man-made in the first place. By abandoning previous ideas of either/or, the individual perceives himself as "scattered" and is able to frame his extraordinary existence in quite ordinary terms.

Yet, just as Dennett is beginning to find a new way of conceptualizing his new state of being, difficulties in the mission lead to another form of body-mind separation. While completing the mission, technical failure forces him to face new problems: his body Hamlet fails. After a year of comatose sleep, his brain Yorick is paired with a new body, which, in line with his *Hamlet*-imagery, he immediately calls Fortinbras. This change of body, however, does not present similar problems to Dennett as the previous removal of his brain:

> As many philosophers unfamiliar with my ordeal have more recently speculated, the acquisition of a new body leaves one's *person* intact. And after a period of adjustment to a new voice, new muscular strengths and weaknesses, and so forth, one's *personality* is by and large also preserved. More dramatic changes in personality have been routinely observed in people who have undergone extensive plastic surgery, to say nothing of sex change operations, and I think no one contests the survival of the person in such cases. (319, emphasis in original)

The paragraph's nonchalant tone is striking and dismisses Dennett's previous struggles with regard to spatial location and personhood. While the simple question of "Where am I?" used to be unanswerable to the individual, the body appears in an inferior position here and does not impact Dennett's sense of selfhood. Dennett's musings concerning bodily change strongly resonate with transplantation practice and Fredrik Svenaeus's statement on personal identity. As was already mentioned, Svenaeus explains that even though the individual and their environment believe them to be the same person, changes in identity have taken place, "since important self-traits have been changed" ("Organ Transplantation and Personal Identity" 141). Dennett's statement, however, emphasizes the perseverance of a sense of self. The new body thereby adds another layer to the body-mind separation, as the body itself and its specific abilities are denied importance for processes of identity-formation. Thereby, the body appears in an inferior position, reminiscent of machine-imagery.

While Dennett no longer appears insecure concerning his status as an embodied being, he is unsettled by the introduction by yet another layer of the experiment. As Dennett walks Fortinbras to visit his brain, he is soon told that a comput-

er duplicate of his brain has been constructed, a working imitation of his brain's functions. This program, "for reasons obscure to [him]" (319), is called Hubert. Dennett's comment on the program's name appears particularly interesting, as it emphasizes his need to find names with purpose for the different parts he has so far identified as belonging to him. The name Hubert in itself, however, also carries significance in this context as the name can be traced back to "Continental Germanic *Hugibert*, composed of elements meaning 'mind' and 'bright'" (Hanks et al. 1346, emphasis in original). While the names Dennett has chosen for himself relate to specific fictional characters, Hubert appears open to interpretation and is introduced as unknown and unknowable by the narrator. Thereby, the machine's "bright mind" ranges beyond the narrator's knowledge and even more – control. It is the sole part he does not name for himself and the part that appears most troubling.

The introduction of Hubert presents Dennett with a conundrum: the possible existence of a second body governed by either Hubert or Yorick, or the existence of a disembodied brain. Dennett's first worry concerns the possibility of attaching either Hubert or Yorick to another body:

> The one truly unsettling aspect of this new development was the prospect, which was not long in dawning on me, of someone detaching the spare – Hubert or Yorick, as the case might be – from Fortinbras and hitching it to yet another body . . . If there were two bodies, one under the control of Hubert and the other being controlled by Yorick, then which would the world recognize as the true Dennett? And whatever the rest of the world decided, which one would be *me?* (320 – 321, emphasis in original)

The quote emphasizes how far Dennett has come in his relativization of embodied personhood, as only a singular "truly unsettling aspect" to the discovery of the digital brain is left. While the narrator was able to perceive of himself as being both within and outside the vat, the imagined second body challenges this reading. Rather, it becomes a rival to Dennett's life, who also notes that he does not care for someone else competing "for the affections of [his] wife" (321). However silly Dennett's remarks may appear, they still refer to the haunting presence of a Gothic *doppelganger*, challenging an individual's singularity. Dennett's fear of this second self is also tied to the world's appreciation of the other as himself and his status as an individual is related to his social standing as an individual being. The more terrifying thought, however, refers back to his most basic question: if two bodies exist, where would "he" actually reside? His difficulties with Hubert are further underlined in his second concern, namely that "the spare, Hubert or Yorick, as the case might be, would be detached" (321). This detachment, too, would create two Dennetts, one "embodied in Fortinbras, and the other sadly, miserably disembodied" (321). The fear of the disembodied brain (or artificial brain in this context), appears

particularly relevant, as the machine contains Dennett's neural functions and becomes indistinguishable from the original brain.[31] Thereby, the function of the brain is no longer tied to physical matter and the relativization of embodied personhood is developed even further. Dennett's difficulties with Hubert, then, add another layer to the importance of singularity in relation to personhood. While the removal of the brain attacks the singularity of spatio-temporal location, the second self appears even more invasive because it suggests a doubling of the existing person, Dennett.

In the end, Hubert and Yorick do develop independently and Yorick loses its claim on the current body, Fortinbras. As the reader discovers, both the digital brain Hubert and the original brain Yorick have developed slightly differently and can both control the body. However, the phases of disembodiment, at times when the other brain is controlling the body, appear particularly frightening, as a temporarily abandoned brain explains: "You'd scratch our itches, but not the way I would have, and you kept me awake, with your tossing and turning" (323). The detached brain's musing about loss of control over bodily functions further suggests the brain's governing role. It is particularly striking that the distinction between Hubert and Yorick is abandoned, since both present a sense of self that has developed independently. Given that they can both control the body, a singular connection between self and body is neglected and a reading of unique embodied personhood is denied. In the story's final phase, the body appears merely as a means of expression of *a* brain, which in itself is introduced as exchangeable. Thereby, "Where am I?" not only wonders where the individual resides but attacks the very notion of individuality based on the existence of two Dennetts, who are the same individual, yet who have also developed independently from each other. In the end, the individual has ceased to exist, as technology has made a doubling possible that counteracts human conceptions of individuality. Hereby, the story abandons narrow definitions of body and self and instead opts for a more inclusive and liberating approach of posthumanism.

In conclusion, this chapter establishes the fruitfulness of Daniel C. Dennett's short story for discussions of organ transplantation, particularly because it engages with a variety of motifs still of importance to present-day conversations on the body and technology. In the story's beginning, the treatment of embodiment indicates the limits of perceiving the brain as the seat of the person. As Dennett's body stands in front of the vat holding his brain, he struggles to perceive himself as the detached brain and needs to come to terms with a notion of self that somehow in-

31 For further reference on "mind-uploading", see Keith Wiley's *A Taxonomy and Metaphysics of Mind-Uploading.*

cludes both locations. These difficulties, however, are overcome when he receives the new body, Fortinbras, which he accepts without any further issues. In the end, Dennett reinterprets individuality as he now exists in a duplicated form: while in the story's beginning, his body was fragmented, yet his sense of self untouched, in the end, this fragmentation has also brought forth two strands of personality. The story thereby engages with embodied personhood in highly complex ways, as it simultaneously draws attention to how the fragmentation of the body challenges perceptions of the brain as the seat of the person, while also emphasizing how technology may rearrange such ties. The story thereby also satirizes technological developments in medical practice and the body is turned into a machine once more – albeit one that might be governed by another machine. The fact that this discussion occurs between different Shakespeare-inspired body parts further presents these bodily protagonists as being in a state of play. Even though the story does depict organ removal and modification in a rather abstract fashion, Dennett's developments appear noteworthy in this context. In the process of bodily changes, Dennett has to adapt his processes of meaning-making, he can no longer simply accept his brain as himself, thus mirroring transplant patients' experiences who suddenly have to engage with an altered body. Moreover, the story also relates to relatives of brain-dead patients who, even though believing in brain death, have difficulties to accept death when being faced with the seemingly living body. Dennett's story, then, engages with basic matters of embodiment in a technologized age and forces his reader to truly ponder upon its limits – or maybe even, its limitlessness. The speculative nature of Dennett's undertaking is inseparably tied to these considerations and further substantiates the surplus value of fictional texts for discussions on organ transplantation.

Bringing "Where Am I?" into conversation with the two other texts discussed in this chapter, "The Defenseless Dead" and *Coma*, it becomes apparent that the Seventies and Eighties position organ transplantation as part of ongoing cultural negotiations. Although these works differ vastly in form, theme and aim, I also point towards interesting similarities and considerations. First the discussed examples share an interest in the brain and its ties to individual personhood. In different ways, they all hinge upon a clear differentiation between the brain and the rest of the body and thereby suggest engagement with brain-centered approaches to the transplantable body that are also expressed in the Uniform Brain Death Act (1978). Second, the discussed texts navigate the relation between subject body and object body and characterize the unconscious body as vulnerable to exploitative practices. The texts illustrate that the employment of tissue, its possible economic use and significance for fellow members of society also calls for the negotiation of how tissue's objectified value could impact readings of the subject body.

Bringing these texts into conversation with life writing of medical professionals, it not only becomes apparent that topics cross genre-boundaries but that the very act of speculation occurs across genres and takes on different forms and aims. Prominently, the life writing of surgeons Starzl and Magliato wonders about the unique contribution of transplant patients, their "greatest potential" ("Small Iowa Town" 12). The fictional texts share a similar interest in "What if?" yet also take the voices of those at the margins of society into consideration and wonder how belief in universal benefit might shift significance from the subject- to the object body, thus alluding to a function of an "early warning system" (Lawler 3). Yet the questions asked by these examples of speculative fiction and those invested in the life sciences are strikingly similar and even their imaged futures are comparable. Speculative fiction, however, shifts perspectives and gives voice to overlooked perspectives – the unconscious patient, the patient without financial means – and imagines the future from their perspective. The relevance of speculative fiction for discussions of global inequality appears obvious: within the thought experiments presented by these texts, structural differences are satirized, circumvented and presented for further scrutiny.

6 The 1990s, Transplantation as a Repeatable Practice and Transnational Speculative Fiction

The 1990s are the final decade before the new millennium – and arguably, the future. In fact, science and technology played a major role for the conceptualization of the new millennium. Haynes Johnson remembers his interview with J. Craig Venter, the scientist who planned to map the entire human genetic code, and recalls: "He smiled. Eye-brows arched. 'I'm constantly asked to predict the future,' he continued, eyebrows arching again, brow furrowing. 'It's actually getting harder to do that'" (*Best of Times* 83). Here, Venter clearly establishes his investment in speculation: apparently, he is constantly asked to speculate upon what is to come. It appears only fitting that a scientist vastly invested in technological progress is asked to foresee the future – even more fitting are his difficulties to do so, as the '90s brought immense technological change. The computer, which introduced unheard-of technological possibilities, plays an obvious role in these developments. Johnson reflects upon the moment a chess computer won against the chess champion Garry Kasparov in 1997 and portrays the instance as a paradigm shift (*Best of Times* 13). The rise of the computer had, of course, started earlier: Already in 1983, *Time* magazine had named it the "machine of the year" and featured a special section about it. Among these articles, Roger Rosenblatt's "A New World Dawns" was published, in which he comments: "There's a New World coming again, looming on the desktop. Oh, say, can you see it? Major credit cards accepted". The connection between an American future and the computer is ironically exaggerated: the national anthem praises the vision shown in the machine. By tying the computer to financial gain, the new "dawn" is driven both by technology and by money, two categories that have found vast engagement in speculative writing.

The computer and the internet became part of the everyday lives of most of the American population and affected almost all of its aspects. Communication was revolutionized via mail and MSN, while the launch of amazon.com in 1995 began to change shopping habits as "[t]he online store seemed to erase all limitations and restrictions on what consumers could access and purchase with a click of the mouse" (Serriane 124). Moreover, the internet brought unforeseen global changes: "The rise of the Internet in the mid-Nineties, along with that of its twin, the World Wide Web, initiated the most dramatic phase of the technological revolution that created the long boom. Instantly, life around the globe began to change" (H. Johnson, *Best of Times* 17). Hereby, the internet also renegotiated national boundaries as Nina Esperanza Serriane argues:

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> After the fall of the Berlin Wall and the collapse of the Soviet Union, the world appeared to become smaller as new borders were shaped or at times became indefinable. This was in part due to changes in technology and science. In the 1990s, the international community was living the technology revolution. (124)

By speaking of an "international community" Serriane perceives of the internet as a connecting force. Still, as Johnson remarks, it is important to bear in mind that technological advancements did not lead to greater equality. He explains that two groups developed: the "white and prosperous" parts of the population, who could get access to the internet; and people who could not, who tended to be people of color and people with low income (*Best of Times* 41). For the latter, the internet presented a tool they did not have access to and that, in effect, led to greater disadvantages, for instance, when competing for entry level jobs. Johnson explains that by the end of the century, this inequality was called the "digital divide" (*Best of Times* 41). The age of the "technology revolution" thus brought forth tremendous changes to everyday lives, yet it cannot be reduced to being an equalizing force only.

The changes in digital technologies were also accompanied by vast developments in the life sciences. Harrison explains:

> New forms of communication and information processing were matched by advances in genetics, biotechnology and surgery, which together raised fundamental questions about the nature of the self, the relation between human beings and human bodies, and the blurring boundaries between humans and machines. (191)

Harrison exemplifies that changes in technology raise new questions and cultural concerns, for instance with regard to genetic mapping, most prominently represented by the Human Genome Project initiated in 1990.[32] He concludes that "the quest for knowledge of the human body had the paradoxical effect of producing, rather than resolving, uncertainties about the human being" (191). This uncertainty

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32 The National Human Genome Research Institute speaks of the Human Genome Project (HGP) as "one of the great feats of exploration in history – an inward voyage of discovery rather than an outward exploration of the planet or the cosmos; an international research effort to sequence and map all of the genes – together known as the genome – of members of our species, *Homo sapiens*" ("All About The Human Genome Project (HGP)"). Harrison emphasizes that the 3 billion dollar project's aim of "identifying the type and position of the thousands of genes populating the twenty-three strands of DNA inside each cell of the human body" was in fact quite controversial, as many perceived connections to eugenic practices and saw their privacy rights endangered (194). For further information on the race to decode the human genome between the government funded HGP and the scientist J. Craig Venter's Celera Genomics, see Johnson, Chapter 4.

also relates to the ties between J. Craig Venter's research on the human genome and the future. Johnson quotes in his interview: "It's truly the start of the Renaissance period. Yet it's based on almost no knowledge. So imagine the future when we actually have the knowledge" (*Best of Times* 84). Conceptualizing the future as a Renaissance without footing in the past presents the goal of generating information as the basic task of the time – hereby, the '90s become the stepping stone into a new age.

This futuristic potential of genetic research and its popular appeal becomes exemplary clear with the birth of clone sheep Dolly. The animal was born in 1996 and brought forth major media attention and triggered fears of human cloning (Serriane 136). An extreme example of medially disseminated fears brought forth by the practice of cloning is a *Time* article from 1998, in which Charles Krauthammer reports the creation of headless mice in "two obscure labs, at the University of Texas and at the University of Bath" (Krauthammer). In the course of his article, Krauthammer uses several references to works of speculative fiction, such as "Brave New World Imagery", or "Frankenstein wattage" (Krauthammer). In answer to the question why anyone should create headless mice, the author explains: "But you don't have to be a genius to see the true utility of manufacturing headless creatures: for their organs – fully formed, perfectly useful, ripe for plundering. Why should you be panicked? Because humans are next" (Krauthammer). Here, the anxiety-inducing potential of medical possibilities comes to the fore: the ability to create (and control) new forms of life and the possibility to transplant organs and to reduce humans to a resource for the practice. The perceived connections between these practices indicates that even though a substantial number of transplantations had been conducted and the practice was already quite reliable, the cloning debate also underpinned distrust in unrelated developments within the life sciences.

Following the successes of immunosuppressant drugs in the 1980s, transplantation presented a much more reliable procedure in the 1990s than in previous decade. Surgeon Bailey perceives transplantation as a success story and states in 1990: "Like open heart surgery and biomechanical devices, organ transplantation is here to stay" (25). He thereby establishes a relatively novel certainty in transplantation's future, as he compares transplantation to other, previously cutting-edge but now well-established medical procedures. In effect, ongoing developments are projected into the future and by establishing transplantation as a certain part of the future, the practice is also granted further dependability in the present. Hereby, present and imagined future are reciprocally related. As the future of transplantation is established as a reliable certainty, it also seemingly ranges beyond speculation. Still, as Barbara A. Koenig and Linda F. Hogle explain in 1995: "Yet there is little doubt that the 'demand' for transplant is created by the commer-

cially attractive promise of yet another technique for pushing back the boundary between life and death" (396). Transplantation practice was still discussed alongside questions of financial gain and individual empowerment. Nevertheless, in the course of the decade, an increasing number of transplantations was performed. The Organ Procurement and Transplantation Network lists 11,222 national transplants from deceased patients in 1989 and 17,010 in 1999 ("National Data"). Since the 1960s, transplantation had become a repeatable, yet still controversial practice.

In the following, I want to further trace the role of speculation in discussions of technological and digital developments and how they intersect with organ transplantation. This analysis of the Nineties ties into the previous chapters given that organ allocation and an ongoing technologization of medicine still play a prominent role. Yet this chapter also presents a shift in geo-political setting and the incorporation of another field that, like speculative fiction itself, tends to be overlooked: fiction for young adults. By bringing texts from India, the U.K. and Canada into conversation, I illustrate striking similarities among works published in vastly different cultural-geographical contexts. I read these texts in conversation with speculation in other, seemingly non-fictional texts, such as life writing – for instance, R.J. Todd's *Breathless* – legal documents and oral storytelling tradition, thus emphasizing the genre-crossing potential of speculation. In my discussion of Manjula Padmanabhan's *Harvest*, Nalo Hopkinson's *Brown Girl in the Ring* and Rachel Anderson's *The Scavenger's Tale*, I show that fictional engagements with transplantation engage with the transplantable body in its specific social situatedness and suggest that social standing impacts the reading of individual bodies and their tissues. As protagonists are disenfranchized based on class, race and dis/ability, I show that their bodily tissues are not exempt from strategies of Othering and cannot be separated from their cultural production.

6.1 *Harvest* by Manjula Padmanabhan

In 1997, the Onassis Cultural Competition for Theatre in Greece called for new plays engaging with "The challenges facing humanity in the next century"; Manjula Padmanabhan's *Harvest* won. Padmanabhan's success constitutes the "first time that an Indian English dramatist has won an international competition abroad" (Sunita 167). Padmanabhan's success appears particularly noteworthy because of its international significance, since "Manjula Padmanabhan has done for the Indian play in English what Arundhati Roy has done for the novel this year" (Sethi). Moreover, the play's uncommon employment of science fiction imagery was read as "a successful attempt at a science fiction on stage for the first time in India" (21). In Pad-

manabhan's play, elements of science fiction are used to highlight technology's role in attempts of subordination. Hereby, "the play also shows how the financially strong groups/agents use the modern electronic technology to control and govern the financially weak sections of society" (Bedre and Giram 21). This emphasis on disenfranchised groups also makes the play relevant beyond India and the organ trade; for instance, Pravinchandra Laxmidas reads it in the context of bio-colonialism and the medical employment of tissues of indigenous people (13). At the same time, the play forges an uncommon connection between science fiction and drama.

The audience is introduced to Padmanabhan's technologized future via the one-room-apartment of the Prakash family. The family consists of Om, his wife Jaya, mother Ma and brother Jeetu, all of whom share the small space. The story begins after Om has entered a contract with InterPlanta Services, a company that will harvest his organs once his contractual partner has fallen ill and needs them. Each member of the family reacts differently to Om's contract with InterPlanta. While Ma is delighted that her son has found a job that will make them rich, Jaya is shocked. Jeetu, who is also Jaya's lover, does not approve either: as a sex worker, he claims ownership of his body and its functions. While the family believes the receiver to be the young American woman Ginni, the image they encounter on the freshly installed Contact Module is merely a front for Virgil, an elderly man who has received several transplants in the past years. In the end, the story takes an unexpected twist, as Virgil reveals his plan to use Jeetu's body to impregnate Jaya. In a final act of defiance, Jaya calls for Virgil to either take a risk and travel to her location or leave her alone.

As a contribution to the prompt "the challenges facing humanity in the next century", the play introduces transplantation as a matter of future interest, this emphasis also correlates with major changes in transplantation technology in India: The Transplantation of Human Organ Act (THO) was passed in 1994 and the first successful human heart was transplanted in the same year. Both events are inseperably connected, as the former served as the basis for the latter. Panangipalli Venugopal was the leading surgeon in the transplantation at the AIIMS at New Delhi. In his report, published in the *National Medical Journal of India*, he explains:

> Cardiac transplantation in India was not possible till June 1994 because the law did not recognize brain death. However, after the passing of the Transplantation of Human Organs Bill, this major hurdle was removed and the first successful cardiac transplant in India became possible. (213)

Here, Venugpoal underlines the close ties between legal framework and medical progress, a connection that was already emphasized in the case of Barnard's first transplantation of a heart (see Chapter 4) and the fictional example of "The Defenseless Dead" by Niven (see Chapter 5). In 1994, *India Today's* A.N. Sengupta comments opinionatedly: "As a feat of surgery, it was years overdue, but thanks to outdated laws, Indian doctors couldn't have pulled it off earlier" (Sengupta). Even though transplantations, most prominently of the kidney, were already performed in India at the time, the heart transplantation presented news in the 1990s. Venugopal remembers: "This surgery put India on the world transplant map and opened this facility and possibility for India" (Singh). The interrelation between the passing of the THO and the heart transplantation also resonates with *Harvest*, in which ownership over one's body has become a matter of law, rather than an inherent right.

The play's relation to transplant proceedings and bioethical considerations of its time is further emphasized by its focus on organ trading. Padmanabhan herself states in a brief comment preceding her play: "The inspiration for *Harvest* was the flourishing illegal trade in human organs in India" (4). Journalist Anupam Goswami explains in 1995:

> A large proportion of transplant patients are from the upper and middle classes, and there is no shortage of money to keep a nexus of agents and health professionals raking it in. Profits are stupendous because most donors, driven to the act by poverty, sell cheap and without bargaining. (Goswami)

Similar to Padmanabhan's play, Recipient and Donor[33] are introduced as belonging to two different, clearly distanced groups in which money serves as the connecting element. In the play, financial inequality serves as the basis for exploitation and Helen Gilbert, for instance, states that the text's "futuristic plot stresses the potential of global capital to strengthen already profound divisions between first and third world subjects" ("Global Technoscapes" 124). Hereby, Gilbert suggests that the play portrays the global movement of tissues across the globe not merely as an expression of social inequalities but as playing an active part in such divisions.

Clearly, the text contributes to discussions on legalizing the organ trade, a topic that has also found attention in U.S. American contexts.[34] Waldby and Mitch-

33 Following the capitalization in Padmanabhan's play, I employ Donor to relate to Om's position in the contract without aiming to draw premature conclusions about the (in)voluntariness of his part in the contract.

34 Those arguing for the legalization tend to relate to the number of people dying on the wait list, for instance, Anthony Gregory's "Why Legalizing Organ Sales Would Help to Save Lives, End Vio-

ell explain that "[s]ince the mid-1980s a rather bewildering array of organ market models has been developed" (168). Fittingly, Iran established a legal organ market in 1988.[35] The ongoing discussion on legalizing organ marketing seems to roughly follow three lines of argument: patients die on the waiting list (Houser), the liberty over one's body (Gregory), and legalizing would end the violence of illegal trafficking (Stossel). The fact that legalizing organ trading remains a current debate underlines the ongoing significance of *Harvest*'s speculative future. Hereby, the discussion of the play in its contexts also emphasizes the role of speculation: By speculating about individual choice in the Prakashs' living room, the play not only shifts perspectives from those receiving organs (as presented by the majority of pro-organ sales arguments) to those selling them but highlights its influence on familial structures, decision-making and sense of embodiment.

However, the play does not aim at commenting solely on the specific contexts of India and the organ market as the preceding instruction by the author illustrates:

> For the sake of coherence this play is set in Bombay, the Donors are Indian and the Receivers, North American. Ideally, however, the Donors and Receivers should take on the racial identities, names, costumes and accents most suited to the location of the production. (6)

This instruction, however, has been majorly neglected as Gilbert observes. She comments that the play's "curriculum vitae to date suggests the currency (among Western audiences particularly) of the original Indian location as a ready index to the abject horrors of the illegal organ trade" ("Global Technoscapes" 124). The play's performance thereby indicates that the author's nationality and India's role in organ markets overshadow Padmanabhan's attempt to globalize the issue and to comment upon structural inequality on a grander scale. Therefore, it is important to note the play's use of cognitive estrangement in which viewers are geared to associate with the Donor family. Pravinchandra Laxmidas fittingly argues: "We can thereby anticipate that if we are to be cognitively estranged, it will be, like the Donor characters themselves, from the Receivers of the first-world" (56). Science fiction's potential to cognitively estrange is thus used to offer a perspective on the organ trade in which the Recipient's body is technolog-

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lence" for *The Atlantic*, whereas those against it have emphasized not only the difficulty to establish informed consent but also that the vendor's financial situation would not be changed for the better, see Kate Greasley's "A Legal Market in Organs: The Problem of Exploitation" for further reference.

35 For further reference on the workings and ethical concerns raised by legalized organ trading in Iran see Larijani et al's "Ethical and Legal Aspects of Organ Transplantation in Iran".

ically estranged, while the Donor body remains familiar and knowable. While the play thus resonates with specific Indian developments, such as advancements in transplant practice and organ trading, Padmanabhan's insistence to adapt the play to the site of its performance illustrates that it also functions as "essentially a modern morality play" (Sethi) that deliberately refrains from limiting itself to specific geo-political realities.

I opt for three aspects in the discussion of *Harvest*'s engagement with transplantation. First, I elucidate the idea of choosing a Donor, or becoming a Donor, second, the watching of the Donor and the corruptive influence of this gaze are discussed and third the taking of the Donor is examined. In the course of these three steps, I establish that aside from employing transplantation in a metaphorical manner, the play also insists on transplantation as a material process in which bodily tissues transgress boundaries between individuals and cultural realms. The chosen chapter headings aim to illustrate the double perspective introduced throughout the play as it constantly negotiates the cause and effect of human interaction.

6.1.1 Choosing the Donor – Becoming *a* Donor

The title of this chapter – and its emphasis on donorship – might be slightly misleading as the concept of free choice is critically reflected in the play. Om becoming an organ donor shapes the family dynamics, a notion already established by the fact that the whole family is listed as "Donors" in the character list (Padmanabhan 5). The question of whether Om consciously chooses to become a donor and actually gives informed consent is of central importance to the following developments.

The process of getting a contract with InterPlanta, as framed by Om, presents him in a subordinated, powerless position:

> And the line went on and on ... not just on one floor, but slanting up, forever. All in iron bars and grilles. It was like being in a cage shaped like a tunnel. All around, up, down, sideways there were men . . .
> Slowly moving ... all the time. I couldn't understand it ... Somewhere there must be a place to stop? To write a form ... answer questions ... But no. Just – forward, forward, forward. (11)

Om depicts the process in a highly de-individualized and dehumanized manner as the men waiting in line become as a resource, ripe for the taking. The choicelessness is emphasized with the repetition of "forward", "all" and "on," underlining the never-ending, infinite quality of the picking process, which is seemingly devoid of deliberate choice and in which there is no stopping, no time to consider. Fittingly, there is only one question mark in a passage depicting a fundamental decision.

Bedre and Giram comment on the de-humanized process: "Then there begins the play of machines and machine-like men (representatives of the machine world) instructing, commanding, interfering and grabbing the human lives" (24). The human representatives of InterPlanta appear as part of a lifeless machinery, subordinating the individual into passivity. Om's passive stance when being chosen is further underlined as he states: "They told us we had been selected" (12). "They" constitutes the first depiction of human involvement in the picking process, before, only signs are used as a means of instruction (12). Om's depiction of the selection process oscillates between pride for being selected – while others were not – and absolute powerlessness, prominently, there is no account of him giving consent. Om is neither offered orientation nor instruction but merely receives a pamphlet telling him "to be relaxed and to do whatever [they] were told" (13). Om's choice for InterPlanta is presumed because he participates in the picking process. Beyond his arrival at the site there is no time to pause, ask questions or come to a deliberate decision. Clearly, the notion of informed consent – emphasis on informed – is under attack.

Moreover, the picking process bears strong resemblance to the "harvest" addressed in the play's title. As Om and his fellow men are caged and steadily moved, they resemble cattle in factory farming. The result of the picking process might remain hazy to Om, to the reader, however, the slaughtering of cattle is clearly suggested. Even more, images of fruit or vegetable, moved on a band-conveyor and picked by low-paid workers come to mind. These references are emphasized as the potential donors are washed and prepared before being picked (12). Thereby, the picking process likens the individual body to a reproducible crop harvested with the help of technology. The rather overt agricultural references have brought forth several critical comments concerning the play's title. Pravinchandra states: "The extractable human body part is accordingly assimilated to the yield or crop; this is the commodity with genuine use-value, the part that it is profitable to detach from the whole" (13). Jodi Kim draws an even closer connection to cattle and explains that Ginni, the receiver, "will consume him [Om] as she would a piece of chicken for dinner" (225). This reading also alludes to the fact that Ginni "cares" for Om and his family merely to generate output – namely a healthy organ.

The references to agricultural produce are repeated in the course of the play, particularly by Jaya, who insists on the perpetuation of free will. Accordingly, she makes a point of reminding Om of their value as individual, irreplaceable beings, a status that clearly contrasts their treatment as commodities. She employs agricultural metaphors to illustrate the subordinating and harmful potential of Ginni's treatment of their family. This notion is repeatedly underlined. When Ma mentions her hopes of Om marrying Ginni, Jaya comments: "An angel who shares her bed with her dinner? Now that would be a miracle!" (48). Jaya establishes that Om can never become a possible candidate for marriage, since he is othered into a con-

sumable entity, raised for Ginni's benefit. While Ma hopes that the contract turns Ginni and Om into equals, Jaya insists on the different roles established in their agreement. Rather than following Ma's understanding of Ginni as an angel, Jaya presents her as a cannibalizing force. Thereby, Jaya also reveals an underlying sense of inequality and difference inherent to the contract and alludes to the imbalanced nature of contracts on organ selling.

This reframing of Om, the passive Donor, as a form of produce clearly complicates his ability to give informed consent. Speaking on the history of informed consent, moral philosopher Tom L. Beauchamp explains: "The 1970s framers of the rules wanted genuine informed consent, but that goal has been more difficult to achieve than was the impressive body of rules, court decisions, and books on informed consent that soon followed the early history" (517). Beauchamp furthermore explains that "[i]f one uses overly demanding criteria of informed consent – such as full disclosure and complete understanding – then an informed consent can hardly ever be obtained" (517). On the other hand, "if underdemanding criteria such as a signed consent form are used, an informed consent becomes too easy to obtain, and the term loses its moral significance" (517). Beauchamp thereby implies that informed consent is fallible to both: an insistence on specialized knowledge and an overtly loose application of its criteria. Without focusing too much on the concept's history, it becomes clear that informed consent remains a contested field – even though it still constitutes an important basis for medical procedures. Moreover, Beauchamp's statements indicate that "informed consent" contains a variety of readings and criteria. He develops two main meanings of the term, "an autonomous authorization by individual patients or subjects" and "in terms of institutional and policy rules of consent that collectively form the social practice of informed consent" (517). The differentiation between two distinct meanings illustrates that informed consent is situated in both realms: the personal and the institutional. Thereby, the term is granted an allusive quality and appears context-sensitive. The distinction can also be fruitfully applied to Padmanabhan's play, as the divergence between perceived consent (Om) and given consent (InterPlanta) differ vastly. Moreover, the play further complicates concepts of informed consent by negotiating the impact of living conditions on understandings of choice.

In a review of *Harvest*, Madhu Jain depicts the structural lack of choice as a distortion of present conditions: "And the future is used as a magnifying lens to look at a greedy and dead-end present – a soulless world without exits" (Jain). Jain's understanding highlights the play's dystopian potential and depicts Om's situation as governed by his lack of choice. As Om explains, it is this lack, rather than an active decision for the program that leads to the signing of the contract:

OM Wanting ... not wanting ... what meaning do these words have? Was it my choice that I signed up for this program?

JAYA Who forced you? You went of your own accord!

OM I went because I lost my job in the company. And why did I lose it? Because I am a clerk and nobody needs clerks any more! There are no new jobs now ... there's nothing left for people like us! Don't you know that? There's us and the street gangs and the rich. (62)

Om relativizes the notion of free will by insisting on its irrelevance. Jaya and her husband take opposing positions: while Jaya insists that Om decided for the program and thereby underlines his personal agency, Om denies responsibility by emphasizing his lack of choice. Thereby, Om presents society in a state of fragmentation, as deeply split into different groups. The Prakash family appears to be positioned in-between the extremes of the rich and the street gangs, forced to act in order to gain new perspectives. These "street gangs" appear as a warning, a fear-inducing image of the loss of status the family might have to endure should Om fail to find work. Clearly, Om establishes the family's future as part of his personal struggle and his decision needs to be read within the framework of individual responsibility for the family's financial stability. Moreover, Om insists that "nobody needs clerks" – instead of his labor, his body and its biovalue (Waldby and Mitchell 33) becomes his most valuable asset. His biovalue is further positioned in a precarious economic situation in which future demands seem to surpass what the family had planned in the past. This shift is underlined by his insistence that there is "nothing left for people like us". The emphasis on "left" underpins a perceived moment of transition – as the present is presented as a deviation from the past and the goods it once offered. Om's emphasis on his familial responsbility and his lack of options thereby inseperably tie his choice to the lived experience of social inequality.

The direct link between the contract with InterPlanta and finances is already suggested by Ginni's constant mispronunciation of Prakash as "Prayacash," almost homophone to "pay cash", a fitting reference for Virgil's plans to sway the family's resolve. Even though money does not remain the family's sole motivation, the lack of financial means is an important influence on Om's actions and further signifies the different foundations on which the contract partners base their decision. Gilbert relates Om's consent to global inequality, specifically pertaining to the Global South when asserting:

> In particular, the play highlights the ways in which poverty can limit moral options and degrade human lives, and it also demonstrates that a modern trade in body parts can be understood only within the contexts of gross material inequities between first and third worlds. ("Manjula Padmanabhan: *Harvest*" 215)

Gilbert emphasizes that employing the notion of free will to further the legalization of the organ trade fails to acknowledge the vast differences between the seller's and the receiver's lived reality. Sagnika Chanda fittingly argues with reference to Om: "His dilemma and anxiety regarding the signing of the contract reflects the interminable web of hope, despair and illusions that control and drive the choices of the ensnared Third World donor" (123). The word "donor" appears in stark contradiction to the "ensnared" individual. Pravinchandra Laxmidas fittingly speaks of the "thorny question of choice" (64) in *Harvest* and underlines the complexities of negotiating consent with reference to organ-selling. By introducing both Om's despair and Jaya's remaining insistence on choice, *Harvest* thus also controversially discusses the influence of living conditions on free choice and thereby questions the basis of legal organ marketing.

However, as Jaya's position already suggests, the play does not fully commit itself to a reading of the contract as the result of utter choicelessness, rather it presents different forms of resistance and emphasis on free choice. Prominently, Jeetu, Om's brother, leaves the apartment to live on the streets and presents another point of resistance. Comparable to Jaya's, Jeetu's opposition to the technologized apartment is linked to his dismissal of Om's contract. As a sex worker, Jeetu navigates questions of ownership and the body. His approach, however, clearly distinguishes between his occupation and his brother's agreement with InterPlanta. He states: "I don't mind being bought. But I won't be owned!" (31). By explaining that "[c]ows, pigs, horses, [he]'ll service them all! For a price" (31), Jeetu emphasizes his willingness to commodify his body for financial benefit. At the same time, he establishes his insistence on- and capacity for individual choice, as he "decide[s] which part of [him] goes into where and whom" (33). While both Jeetu's occupation and Om's contract promise the crossing of corporal boundaries, Jeetu insists that it is not decisive how one's body is used, but who decides upon said commodification. At the same time, temporal framing separates both occupations as Pravinchandra Laxmidas explains:

> Jeetu's clients buy from him the sexual favours that Jeetu chooses to place at their disposal in the form of a temporary, alienable service that he performs; his brother's client, by contrast, permanently owns the entirety of Om's physical body along with Om's rights over it. (65)

Laxmidas's comment focuses on temporality as an important factor in Jeetu's perception of ownership. According to Jeetu, he sells his body's work, while Om sells his body. Ramachandran fittingly argues that Jeetu alludes to the "difference between the ownership of bodies and the purchase of labor, that is, the difference between slavery and employment" (167). Accordingly, Jeetu remains in control, he remains the owner of his own body.

The matter of ownership is presented in its most extreme form when Jeetu decides to leave the technological bliss of the Prakashs' apartment and to live on the streets. His freedom to let his body decay becomes the ultimate proof of his independence. He has taken the "[f]reedom to lie in the filth of the open road and to drink from the open sewer! . . . Ah, such freedom as you newly-rich people never know!" (44). Jeetu's right to let his body fail, to let it become part of a festering urban organism stands opposed to the technological cleanliness of the family's apartment. While the surveilled family eats according to Ginni's schedule, Jeetu starving himself appears as the most extreme form of freedom. At the same time, establishing his abysmal state as a form of free choice also entails perceiving the rest of the family as trapped. Jeetu's insistence on choice turns his body into a political force: "His corporeality is a site of resistance against the imperialistic order and pervasive reach of technoglobal gadgetry that aims to obliterate all impediments to its rule and diktat", as Chanda notes (118). Fallible body and impeccable technology appear as antitheses, as the freedom to let his body sicken stands opposed to Western technology's standardization of the ultimately bought and commodified body. Thereby, Jeetu also positions his body in a supposedly safe opposition to InterPlanta since the ailing body appears as an undesirable produce.

Harvest thus contributes to the discussion on the controversial relation between choice and organ-selling. In "Bodies in Pieces", literary scholar John Frow states that "the problem is that of the effects on bodies of market forces in a world where market power is unequally distributed" (50). Frow also underlines that these inequalities "do not fit neatly into a pattern of exploitation of the Third World by the first, nor of the periphery by the centre. Much of the exploitation that takes place in the trade in organs of the Third-World poor by the Third-World rich" (50). Frow's statement illustrates that organ markets work along different lines of demarcation and do not merely respond to geographical location. This understanding resonates with Padmanabhan's wish to adjust the actors of Donors and Receivers according to location. At the same time, the impact of geo-political location and the difficulty to establish free choice in different contexts is further stressed by Scheper-Hughes:

> Bio-ethical arguments supporting the right to sell an organ are based on Euro-American notions of contract and individual "choice". But the social and economic contexts make the "choice" to sell a kidney in an urban slum of Calcutta, or in a Brazilian favela or Philippine shantytown, anything but a "free" and "autonomous" one. (*The Last Commodity* 41)

Here, Scheper-Hughes illustrates the difficulties intrinsic to establishing informed consent in a structurally diverse, economically driven and unequal world. She concludes that "[p]utting a market price on body parts – even a fair one – exploits the

desperation of the poor, turning suffering into an opportunity" (*The Last Commodity* 41). Scheper-Hughes's statement indicates that organ-selling is necessarily based on despair and indicates that "free will" does not encompass the suffering on which the organ trade is based. Structural inequality, then, calls for a renegotiation of the concept of free will in specific contexts. Padmanabhan's play may be set in the future yet clearly negotiates current economic systems as Pravinchandra Laxmidas explains that in the play, "the economic structures of late capitalism remain much the same as they are today" (64). I derive that the play does not truly depict "transformed ethical values" (64) but merely satirizes the effects of commodity-based organ sales models, while problematizing the effect of living conditions on matters of informed consent.

Padmanabhan's speculative play, then, offers a multileveled discussion of free choice and bodily integrity. Rather than suggesting that the Prakash family is robbed of their agency, *Harvest* illustrates individual purpose, particularly by introducing the character Jaya who denies a subordinated position. Thereby, the play denies simplistic readings of good-versus-evil and instead subverts the effects of structural social inequalities and their ties to access to technology. Following the significance of speculation, it is vital to consider what the chosen mode of writing – that of science fiction – adds to the discussion of choice: As a play, *Harvest* displays the bodily presence of the actors and makes the infringement of their bodies palpable. At the same time, speculation allows for a shift in perspective in which the audience is cognitively estranged from the Receiver who only appears on-screen. The Donor family, on the other hand, is not presented as merely passively reacting to the organ trade but, in the case of Jaya, actively opposes the inequality they experience. Rather than presenting Donors as a faceless, choiceless mass, it is the Receivers who remain ultimately unknown and hidden by the technology they yield.

6.1.2 Making the Donor – Playing the Donor

Even though Om's organs will only be harvested once the recipient has fallen ill, the contract with InterPlanta already establishes close contact to Ginni, the young, white, blond American he believes to be his contract partner. Ginni herself begins to forcefully enter the Prakashs' quarters as a digital vision and severely effects the family's relationships, thus turning their life into a performance under her supervision. Particularly prominent is the play's intersection of Ginni's watching presence and the family's performance as Donors.

Prominently, Ginni enters the one-room apartment of the Prakash family via the Contact Module that is installed after Om has decided to become a Donor

and that allows for communication between both parties. The Contact Module is not only installed to let the family see the receiver, but also to grant Virgil insights into the Donor's life. As he communicates with the family via his creation Ginni, he not only rigorously watches over them, but finds entertainment in this occupation. Ginni explains that: "Even if I didn't need transplants . . . I'd get the kick of my life from these conversations! It's like … I dunno. Human goldfish bowls, you know? I mean, I just look in on you folks every now and then and it just like – blows my mind. Better than TV" (41). Aside from alluding to entertainment television's tendency to thrive on the misfortune of others, Ginni introduces the Contact Module as a means to gain access to another world. Moreover, the Donor family is likened to a pet and presented as another species – they exist to entertain the recipient.

The Prakashs' living room becomes a menagerie for the wealthy Virgil to watch and enjoy. Pravinchandra Laximas therefore convincingly claims that the Module "puts the audience on a par with the Receiver who, like them, gazes at the only physical bodies on stage: the Donors'" (74). Here, gazing is introduced as an important element in the play and the audience, alongside Virgil, become voyeurs to the family's transforming relationships. Chanda fittingly argues that "[t]he Contact Module in the play carries the dual symbolism of the notion of globalization and a deliberately distant and voyeuristic relationship between the donor Om and the Prakash family and the First World receiver Virgil masquerading as Ginni" (125). As this voyeurism is conducted from a safe distance, the term "Contact Module" also reveals its satiric potential, given that communication among equals is neither achieved nor intended. Pravinchandra Laxmidas states:

> In no moment of the play do we witness an actual, physical encounter between Donors and Receivers. Padmanabhan's novum, the Contact Module, thus emerges as an ironic set of signifiers, for its actual purpose is to guarantee that no physical contact whatsoever occurs between first and third world environments. (71)

Instead of representing a means to enable international and -cultural communication, the Contact Module creates distance by neglecting the need for actual, physical interaction. Moreover, as Pravinchandra Laxmidas underlines, the command of technology gains significance and becomes a differentiating asset between first and third world. As an instance of posthumanism, Virgil and the Contact Module become inseparable, thus indicating that "[i]n the posthuman, there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals" (Hayles 3). It can be derived that technology not only illustrates the differences in lived experience between Virgil and the Prakash family but forms an active element in the distancing of both worlds. Technology, then, is presented as a

seductive force, as is also prominently suggested in Ma's escape into the VideoCouch, in effect leaving her family and the stage behind. The Prakashs' life is thus "hijacked by the machines" (Bedre and Giram 25), and the novum in the play is not only the Contact Module or the VideoCouch, but the contact with technology and the seductive possibility of self-evasion it offers.

How, then, does the significance of technology correlate with the matter of organ transplantation? Obviously, the possibility to transplant tissue forms the basis for Virgil's involvement in the family dynamics and thereby appears as an intrusive force that is linked to the technological, rather than to the human. The fact that technology plays such an important role in the coercion of the Prakash family also resonates with technology's ties to Western culture. Scheper-Hughes argues: "In many third-world countries today, human tissue is exchanged with first-world countries for medical technology or expertise" ("Neo-Cannibalism" 82). While Scheper-Hughes refers to arrangements between African hospitals and German and Austrian medical centers about the transfer of human tissue, her statement also holds value in this context. *Harvest* pinpoints the role of technology in a market driven by inequality and also suggests that one contractual partner prominently relies on the employment of technology, while the other is exploited based on their marketable bodies.

So far, this subchapter has thus established that technology, predominantly in the form of the Contact Module, affects the Donor family and needs to be understood within the framework of status and Western influence that the Prakashs cannot escape. Soon, they adjust to Virgil's wishes and even reconsider their familial ties based on the lies Om submitted when entering the program. As Virgil's effect on the family begins to grow, the boundaries between the receiver's expectations and the Donor's needs begin to blur. As was just addressed, Virgil appears as the Prakashs' keeper, and he continuously supervises the surroundings of the acquired organs. However, being the "host" for the organs soon becomes an undertaking that involves the whole family. Ginni explains:

> The Most Important Thing is to keep Auwm smiling. Coz if Auwm's smiling, it means his body's smiling and if his body's smiling, it means his organs are smiling. And that's the kind of organs that'll survive a transplant best – smiling organs – I mean, Gad forbid that it should ever come to that, right? But after all, we can't let ourselves forget what this program is about! I mean, If I'm going to need a transplant, then by Gad, let's make it the best damn transplant that we can manage! Are you with me? (38)

Ginni still mispronounces Om's name and establishes her ignorance towards the family she is contacting. Rather, she presents a dogmatic principle – fittingly, "The Most Important Thing" is capitalized – that needs to be followed. There is a strict differentiation between the involved individuals: there is "Auwm", who

merely needs to be happy (and clean) so that his organs will function after transplantation. There is his family, who should facilitate his well-being. Lastly, Ginni speaks of herself, who might need the transplant someday. These different individuals are included in the "we" pronoun and now pursue a shared undertaking, a goal they all work together to achieve. Her phrasing, then, seems to neglect differences in hierarchy, yet needs to be read as nothing more than a direct order. The final phrase "Are you with me?", underscores the sense of a united mission and is reminiscent of militant battle jargon.

By framing her survival as a shared goal, Om's life and his living conditions are tied to the image of Ginni: in the course of the play he begins to feel increasingly obliged to meet her every need. Soon, Om and his mother develop a sense of devotion to her. Om declares to Ginni: "I live only for your benefit. You know that" (40) and thereby expresses that not only are his organs contracted to the receiver, but his very life is pledged to her. Fittingly, he internalizes Ginni's fears and phobias, especially when it comes to his health, and the boundaries between Ginni's and Om's physical well-being begin to blur. When Ginni is afraid of Om catching a cold, he explains: "Ginni, believe me. I will never risk your health" (40). For Ginni, having a cold is like "having the plague" (40), fears that are soon internalized by Om. He is no longer able to speak of his own health but perceives of his physical well-being only in relation to Ginni's. Om's body has in fact become Ginni's: Om appears as a tenant, while Ginni is the owner. These examples indicate how Virgil's gaze influences the Prakash family, as he alters their relations and changes Om's perspective on his own body. While the preparation for the transplantation presents Om and Ginni with a shared goal, their communication is inseparably tied to power structures. Ginni's stance towards the family puts them in an Othered position. This notion of creating distance and difference is prominently introduced by Ginni speaking of the family as "you folks" (41), or "you people" (40) and emphasizes that "they" do not use facial expression "like us" (40). The differentiation between an "us" and a "they" is repeatedly underlined, thereby showing that for Virgil the transplantation establishes, rather than questions, existing boundaries. Clearly, even though Om attempts to meet Ginni's every need and even perceives of his body as hers, Ginni does not exhibit a similar sense of allegiance.

Obviously, Virgil's watching and controlling solely serves the preservation of organs. The already mentioned relation between the raising of cattle or vegetables and the buying of organs is repeatedly emphasized in the course of the play. While Ma imagines a future in which Om might become Ginni's husband, Jaya insists on him being cannibalized:

JAYA Huh! An angel who shares her bed with her dinner? Now that would be a miracle!
OM Would she spend so much money on me, then? If I'm just … a … a chicken to her? Answer me that! Do you know how much she's spent on us?
JAYA Never mind chicken – have you seen how their beef cattle live? Air-conditioned! Individual potties! Music from loudspeakers – why, they even have their own psychiatrists! All the ensure that their meat, when it finally gets to Ginni's table, will be the freshest, purest, sanest, *happiest*… (48, emphasis in original)

Jaya reads Om and Ginni's relationship vastly differently than Ma, who perceives of them as equals and even potential sexual partners ("If my son's kidneys are good enough for her why not his –"(48)). Jaya understands their connection in terms of consumer and consumed and thereby establishes Ginni's suppressive role. By introducing Om as Ginni's dinner, Jaya presents the impossibility of ever developing an equal relationship between Donor and Recipient. Moreover, it is no coincidence that her depiction of well-bred cattle appears very similar to the technologization of their apartment. The family has had a toilet installed, while the cattle have "individual potties", the Prakashs' TV is always on, and the cows listen to music. Especially prominent is the outcome of this enterprise, which leaves the cattle happy, a reminiscence to Om's smiling organs. Thereby, the divergence between the family's superficial pampering and the sole regard for their organs is further emphasized.

Given these repeated references to the family in terms of agricultural produce, many critics have commented on references to cannibalism in the play, similar to how transplantation practices have been read on a global scale. Om appears as "the proverbial lamb before slaughter" (Jain), while *Harvest* has been perceived as a "cannibalist future" (Sethi). Pravinchandra links the play's references to cannibalization to current practices of global production, given that the body on stage "challenges the supposed remoteness of the labouring and now cannibalised body, the very body that capitalist production in the era of globalisation has displaced into the remote third-world" (11). Clearly, the term "cannibalised" gains metaphorical quality, as the body's use as food is replaced by its exploitation for cheap manufacturing. Similarities between organ markets and cannibalism have been drawn by Scheper-Hughes, who speaks of "neo-cannibalism" in this context ("Neo-Cannibalism" 79). She explains that the selling of organs follows well-known divisions:

> The rapid growth of 'medical tourism' for transplant surgery and for other advanced bio-medical and surgical procedures has exacerbated older divisions between North and South, core and periphery, haves and have-nots, spawning a grotesque niche market for sold organs, tissues, and other body parts ("Neo-Cannibalism" 81).

As the term "tourism" might already indicate, the market for organs is based on a unilateral interaction in which property, as Scheper-Hughes emphasizes, is distributed unequally. Moreover, the trade occurs between previously demarcated areas. Pravinchandra Laxmidas suggests with reference to Paul Gilroy that transplantation has the potential to move beyond racial and gendered tropes, since "what could illustrate the obsoleteness of race and the vogue of genetically codified information more vividly than the unproblematic incorporation of an organ purchased from the radically other?" (Pravinchandra Laxmidas 20). Pravinchandra Laxmidas thereby also refers to transplantation's ability to transcend bodily boundaries and to help conceive of the human body beyond its racial construction. Organ markets can serve as a prime example for her notion, as giver and receiver remain unknown, originate from distant geographical locations, and live in vastly different socio-economic realities. Instead of presenting transplantation as a transcending experience, however, the motif of cannibalism illustrates the unilateral, imbalanced quality of the exchange.

In conclusion, Virgil watching the family via Ginni further underlines the imbalanced nature of their relationship. While their interaction might be based on the market's basic premise of exchange, because the Prakashs receive compensation in goods, the play also depicts the family's loss of control and autonomy. As the family is damaged and dissolved by the contract, the play not only questions the family's motives, but engages with technology's ties to Western affluence. The fact that Virgil remains in the active position – he decides when Ginni visits the family – further underlines the difficulties to escape the impact of technologically transmitted cultural ideals. Moreover, the play indicates that the processes of surveillance actively influence the Prakashs' perception of themselves, their roles in the family and their conceptions of their bodies. This analysis of Padmanabhan's play therefore adds to discussions on organ transplantation because it introduces the body as a negotiable entity which is treated not only according to self-worth, but according to the worth it is assigned in a given (speculative) system.

6.1.3 Taking the Donor – Becoming *the* Donor

This study follows three integral developments in Padmanabhan's speculative engagement with organ transplantation. After being chosen as a Donor and after being conditioned to be a good one, the last step is to actually become *the* Donor – the individual to be taken away and harvested for organs. It has become clear that the possibility of transplantation deeply impacts the family – their now technological surroundings, their form of nutrition and even their relational ties – in the last step, the transplant proceedings are presented as a deindividualizing

force. On a physical level, transplantation is presented as the movement of tissues between individuals, in a more metaphorical reading, the processes of transplantation in *Harvest* turn Om and Jeetu into exchangeable, deindividualized bodies whose tissues are not exempt from Ginni's creation of Donors.

Jeetu's body has already been introduced as a site of resistance (Chanda 118), however, in the course of the play, he also falls prey to the contract between Om and Virgil. When the Guards take Jeetu – seemingly believing him to be Om – he insists on not being the Donor. To the Guards, however, the brothers are interchangeable and one of them mockingly remarks: "Not me! Not me! It's my brother you want! My uncle! My son!" (58). Here, the corruptive impact of InterPlanta is further substantiated: Apparently, it is common for family member to turn each other in. At the same time, differences between both brothers, with Jeetu being "handsome . . . wiry and conscious of his body", while Om is "nervy and thin" (5), as well as the different stances they take on choice, are annihilated. Their bodies are non-individualized and become interchangeable, Ayesha Ramachandran fittingly speaks of "body-swapping" in the play (167). After Jeetu is taken against his will, he returns from InterPlanta as a changed man. This change is prominently established by goggles implanted in his face. This invasive form of technology allows Virgil to decide what Jeetu "sees" as he streams his visions directly into Jeetu's brain. The blind Jeetu is delighted to receive visual stimulation and is immediately affected by Ginni's appearance, and her affluent surroundings: "It's a palace . . . I can't help but like it!" (69). The intruding Virgil has attacked the most intimate of all organs: the brain. Hereby, Jeetu's seduction is presented as a forced entry, in which the affected individual is caught in utter surprise. Bedre and Giram argue that Jeetu's vision "shows the western gimmick of addicting their culture in the minds of the third world and then monitoring them like druggists" (28). The Prakashs are addicted to the façade that is Ginni and Jeetu's body has been taken over both in body as the fixtures in his head underline and in mind since he pledges to follow Ginni's wishes: "Anything you want is fine, Ginni" (71). Jeetu's addiction, of course, relies on an illusion, a fake reality that Jeetu cannot escape given that it merely exists within his brain. Hereby transplantation, alongside Virgil, is shrouded in mystery and becomes part of the alienable and unapproachable tools of the distanced Receiver.

In the end, Jeetu's body has become a commodity to be consumed and technologized according to Virgil's wishes. Chanda understands Jeetu as "a posthuman body that is first disembodied and then re-embodied enabling his transition into another consumer body" (121). Jeetu's body, then, is part of a double consumption: he consumes Ginni's image and in turn is consumed by Virgil's wish for a young body. Thereby, the relation to market structures comes to the fore. Chanda explains that Jeetu's seduction appears as "almost a mockery of the physical form and its

locational limitations" (121). Yet the global organ market attacks these limitations since body parts are no longer geographically bound. Jeetu's seduction by Virgil is also presented within this imagined meeting space, where trade is possible, where communication may occur, and where physical and corporeal boundaries can be crossed. As Jeetu looks into the white light of the Contact Module (70) he does not want to be called "Jeetu" anymore: he has become Om, not only because he is about to lose his body, but because of his willingness to do so.

While in the end, both brothers thus align in their wish to serve Ginni, at first, it is only Om who welcomes the Receiver into the family's life. In his willingness to cater to her needs, Chanda also perceives a shedding of the physical hardships of bodies living in poverty and she observes that "[t]he instinctive desire . . . to be rid of these bodies is palpable" (117). However, as the Guards appear at the apartment, it is revealed that Om's wish to transcend his body does not align with his physical, horrified reaction. Hereby, the digital, removed and seemingly theoretical possibility of becoming a Donor is juxtaposed with the sensual experience of hearing the Guards at the family's door. The relentless knocking at the door presents the sudden collision of inside and outside world which also forces familial tensions to the fore. Om warns his mother: "And if you move even one muscle, I'll kill you with my bare hands" (51). Om emphasizes his physical presence and individual personhood: He will use his bare hands, no mediator, no technology. He exhibits the potential for physical violence in the instance the theoretical threat of the contract becomes a physical one: Even though no organs have been taken yet, the fear of organ harvesting leads a son to threaten his mother. His verbal attack also underlines his denial to accept the Guards' arrival as a consequence of the contract he has signed. This notion is further emphasized when Om states: "Whoever opens that door is my murderer, my assassin" (51). Rather than the theoretical, future-oriented signing of his contract, it is the physical act of opening the door that decides his fate. Clearly, Om reassigns responsibility and suggests the triumph of the physical over the theoretical. The willingness to fight, however, is soon lost and when Om is finally supposed to be taken, he escapes. As the Guards knock on the door, Om "*attempt*[s] *to crawl towards the toilet-cubicle*" (56, emphasis in original). Om's struggling body stands opposed to his promise to provide healthy tissue, instead, he neglects Ginni's doctrine of smiling organs. Like Jeetu's voluntary life on the streets, Om's physical decay is thus linked to his resistance against Ginni's intrusions.

In the end, Om and Jeetu's resistance remains futile and Om, too, deliberately presents himself as a Donor after encountering Ginni again. Musing that Jeetu's organs might be harmful, while his tissue was prepared for the donations (65), he presents the impending retrieval as an accomplishment, a special purpose his body has been prepared for. Rather than hiding from the Guards, he now cries: "No! No – This is me! I'm here! Here!" (68). The emphasis on "me" and the spatial

signifier "here" underlines Om's attempts to escape the "body-swapping" (Ramachandran 167) and to insist on his individual identity that is also bound to a specific location. Hereby, transplantation is presented from two diverging perspectives: on the one hand, Ginni treats the brothers as mere bodies, as seemingly either one can serve her purpose. On the other hand, the brothers reframe the transplantation as a recognition of their individual worth. The changes within Om thus illustrate Ginni's crucial role for the contract, given that her involvement presents future transplantation as an interaction between two unique individuals, rather than a mere acquisition of human tissue. Hereby, the body is read as both subject and object and is assigned both market- and individual value.

Read in conversation with the two previous steps – the choosing of the Donor and the making of the Donor – this final step presents transplantation as an ultimately unknowable practice that is granted almost mythical quality. With the Contact Modul appearing as a crystal ball that "comes to life" (22) and with Ginni being a front for Virgil whose motivations are never revealed to Om or Jeetu, transplant practices are rendered more abstract than their roots in medical practice may suggest. Specifically, *Harvest* presents the individual being at stake when encountering what is framed as the cannibalizing force of Western (medical) technologies. However, the play clearly distances itself from a mere victimization of the Donors it presents: Not only are Om and Jeetu presented as being seduced by the overtly sexualized Ginni, it also focuses on Jaya's agency when denying Virgil's approaches and refusing to have her body impregnated and used for childbearing.

Harvest, then, interrelates biotechnological interventions and organ transplantation with the structural inequalities of a globalized world, in which the receiving party may appear close but is ultimately distant. Here, the significance of speculation comes to the fore: By intersecting transplantation with the powerful yielding of technology, it is imagined as part of a future that allows affluence to some bodies only. The play thereby also satirizes the interplay of closeness and distance present in organ trading: By incorporating body parts, two bodies of vastly different living conditions come into contact and are entwined. While this possibility might present transplantation as a means to overcome differences along the lines of race or class, Padmanhabhan's text insists on the prevailing difference between Receiver and Donor because both remain unable to step out of their assigned roles in a system of marketable bodies. Hereby, the play suggests that tissues – even though they may function in different bodies, transgress corporeal boundaries and geographical distance – are not mere biomatter but are culturally produced.

6.2 *Brown Girl in the Ring* by Nalo Hopkinson

By the time Jamaican-Canadian author Nalo Hopkinson published *Brown Girl in the Ring* in 1998, transplantation had become an ongoing practice in Canada. Major advances had been made, including the first heart transplantation in 1968 and the transplantation of a liver in 1970. Both the world's first single lung (1983) and double-lung (1986) transplantation were performed in Toronto.[36] In his autobiography *Breathless: A Transplant Surgeon's Journey,* lung-transplantation surgeon Todd emphasizes the distinctly Canadian impact on the field and calls the first successful lung transplant a "uniquely Canadian accomplishment" (vii).

This medical progress also called for education of the public and triggered attempts to increase willingness to donate. In 1999, the "Government Response to the Standing Committee on Health, Organ Tissue Donation and Transplantation: A Canadian Approach" referred to difficulties in organ procurement in Canada in the 1990s: "The federal government recognizes the importance of increasing organ and tissue donation rates in Canada. Efforts across the country throughout the 1990s have been fragmented, and rates in Canada are still the lowest among developed countries". The Government Response presents a series of measures, among them plans to work on a national transplantation network.

In order to meet the demand of tissue in a time in which a growing number of organs became transplantable, several strategies were advanced to raise public awareness. A result of these efforts was the establishment of the National Organ Donor Week in 1997 which aims at informing the public:

> WHEREAS the importance of providing more public education and awareness on organ donation across Canada is recognized;
> AND WHEREAS it is desirable to encourage all Canadians to pledge to organ donation;
> NOW, THEREFORE, Her Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows . . . (Minister of Justice)

Encouraging future organ donors becomes a governmental issue and is embraced on a national scale, thereby, raising donations evolvesfrom a medical concern into a matter of political interest. The establishment of the Organ Donor Week presents a means to reach a broader public and to make the topic of organ donation more approachable. These goals also become apparent in different forms of engagement, in 2017, for instance, BC Transplant featured the special event #48in48, aiming "to reach 4,800 registrations for organ donation in 48 hours!" ("National Organ & Tissue Donation Awareness Week (NOTDAW)"). Here, donorship is turned into a spec-

36 For a timeline on the history of organ transplantation see Baltzan.

tacle: Its ties to death are moved into the background, and it is framed as a playful competition. These attempts to raise awareness indicate that transplantation had become a matter of public interest in the 1990s and that Canada was officially working towards increasing donor numbers.

The demand for organs also resonated beyond the medical and political realm as the publication of Nalo Hopkinson's *Brown Girl in the Ring*[37] to major critical acclaim indicates. The novel received the Locus Award for Best First Novel and the John W. Campbell Award for Best New Writer in 1999. As the narrative follows the young mother Ti-Jeanne through a decaying future Toronto, it also emphasizes the role of social interaction and interlinks its outlook to the future with Caribbean tradition. In the novel, transplantation is given a central position: The sick Premier is looking for a heart and sets off a chain reaction that leads to the brutal murder of the protagonist Ti-Jeanne's grandmother, Gros-Jeanne. The following heart transplantation is presented from two distinct perspectives: as a means to further disenfranchise the city center's inhabitants and as a subversive force within the Premier's own body. Hopkinson's text neglects stereotypical white, male protagonists familiar from earlier examples of science fiction and introduces an uncommon hero for a story of young adult fiction: a young Black single mother.

The novel intersects dystopian tropes, science fiction imagery and Caribbean folklore and has been aligned with different genre conventions. Prominently, *Brown Girl* was marketed as a work of young adult fiction and presents shared interests with the field, specifically by focusing on the processes of a young protagonist's identity-formation. Jonathan Stephens explains that "the label 'Young Adult' refers to a story that tackles the *difficult*, and oftentimes *adult*, issues that arise during an adolescent's journey toward identity, a journey told through a distinctly teen voice that holds the same potential for literary value as its 'Grownup' peers" (40, my emphasis). Without running the risk of essentializing the ever-growing and heterogeneous field of young adult fiction, the tendency to focus on matters of identity-formation, also with regard to gendered or sexual identity also comes to the fore in other examples from the field discussed in this study (prominently in Shusterman's *Unwind* Dystology). *Brown Girl* specifically navigates Ti-Jeanne's intersecting roles as a young single mother and as carrier of her family's magical heritage while deliberately intersecting different genres in its portrayal of her development. In the text, sprits feature as prominently as the run-down urban space of a post-apocalyptic Toronto and are positioned as equal to the text's fictional science. The novel seems to defy genre-classification and while Lee Skallerup traces elements of magical realism in the text (69), Langer understands the work as sci-

37 In the following abbreviated to *Brown Girl*.

ence fiction and argues for "the logical rigor of her [Hopkinson's] world-building" (174), Rob Latham takes a comparable stance (338). According to Langer, the spirits are presented in "structurally rigorous" systems and the presence of the supernatural does not distance the text from a science fiction approach (174). As these diverging readings indicate, *Brown Girl* deliberately interacts with- and intersects traditional boundaries between genres. Laura Salvini explains: "Like magic realism, science fiction has its own conventions and to blur the line between these two genres may simply eclipse the ontological implications of magic realism and the epistemological power of science fiction, penalizing the originality of both" (188). *Brown Girl* reveals the genres' underlying assumptions and premises only to exemplify their connections and thereby questions their status as unique or exclusive. Conclusively, I refrain from a reading that conceptualizes and thus limits Hopkinson's novel to the realm of science fiction. Her mode of writing – and particularly the inclusion of the spiritual – deliberately blends science fiction imagery and folklore. My understanding of the text as an example of speculative fiction allows for the appreciation of these elements as beneficiary rather than as contradictory.

Brown Girl is "rich with references to the Caribbean tradition" (Salvini 184) and both plot and narrative structure allude to folklore. Structurally, the novel is shaped by repeated allusions to traditions of Caribbean storytelling as its title, an allusion to a children's song, already suggests. The song "There's a Brown Girl in the Ring" is accompanied by a game: A group of children form a ring for one child to dance in. The child in the circle becomes name-giving for the song, as this "brown girl in the ring" is addressed and looks for a dancing partner. (Lomax et al. 7). The phrase "show me your motion," which prompts the girl to perform a special dance move, was read as a fitting phrase for Hopkinson's protagonist Ti-Jeanne, who "steps bravely in the ring" (Michlitsch 25). The title, however, is not the only example for references to songs, as each chapter is preceded by lyrics. The ties to Caribbean storytelling are further underlined in the main characters' names which refer to Derek Walcott's play *Ti-Jean and His Brothers*, in which three brothers are challenged by the devil. Lastly, as Salvini points out, *Brown Girl* ends with "Wire bend, story end!" (*Brown Girl* 247) and thus features a "conventional folk-tale ending" (Salvini 184). Linguistically, the novel uses dialects and loan words to portray the future urban landscape and thereby offers what Allan Weiss has proposed for the fantastic in Canada: "[T]he fantastic in Canada exhibits the sort of linguistic and cultural diversity that characterizes the country itself – a kind of aesthetic multiculturalism" (3).

Beyond these references, Caribbean knowledge[38] also shapes the narrative in form of medical practice: Gros-Jeanne's rituals are presented as valid forms of healing and ultimately save her granddaughter. Hereby, the novel abandons a Western-centric perspective of medicine and the boundaries between what is perceived as science and witchcraft are blurred as McCormack emphasizes: "Hopkinson firmly situates Mami Gros-Jeanne's role as a carer in a Caribbean tradition that colonial rule deemed witchcraft, unscientific and dangerous" ("Living with Others inside the Self" 253). By inscribing the validity of Gros-Jeanne's healing into the landscape of dystopian Toronto, traditional knowledge and future decay are brought into conversation. This combination of dystopian elements and Caribbean tradition exemplifies speculative fiction's potential for post-colonial discussion. Skallerup fittingly summarizes that the novel "incorporates aspects of dystopia, utopia, magic realism, postcolonialsm, Canadian history along with Caribbean history and spirituality" (71).

In this chapter, I want to tie into these readings of the novel as a boundary-crossing endeavor by discussing the presented heart transplantation as a connective element and as a boundary-crossing force. In fact, the search for a human heart frames transplantation as a matter of political interest and further establishes the line of demarcation between Toronto's city center and its surroundings. The analysis establishes that the brutal slaughter of Ti-Jeanne's grandmother and the use of her body as an objectified resource ties transplantation to practices of disenfranchisement. As the heart is received, the narrative introduces a counter-discourse in which the seemingly controlled and objectivized organ gains control and affects the Prime Minister's future actions. Hereby, the chapter presents the novel as a complex reading of organ exchange in which a heart transplantation simultaneously becomes a means of subjugation and is subversively imagined as an opportunity to overcome strategies of disenfranchisement. By positioning these aspects in the discussion of the text's time, the study emphasizes not only the novel's significance for genre-crossing conversations but also establishes the specific contributions of young adult fiction. Moreover, I claim that the work's speculative elements majorly contribute to this complex representation as they also metaphorically render the boundary-crossing potential of transplantation.

38 The author deliberately blends different regions in her writing and Alondra Nelson explains: "Drawing on Caribbean culture, especially that of Trinidad and Jamaica, her writing has introduced unique themes and archetypes into the generic conventions of science fiction" (Hopkinson and Nelson 97).

6.2.1 Taking the Heart

The involuntary harvesting of Gros-Jeanne's heart is inseparably tied to the urban landscape of Hopkinson's future. This version of Toronto deliberately distorts well-known tourist sites and is rooted in the city's contemporary layout. Accordingly, Ti-Jeanne lives with her grandmother Gros-Jeanne in the Riverdale Farm, wanders Yonge Street and finally fights her antagonist Rudy on top of the CN Tower. Despite these specific references to a Toronto familiar to the reader, Hopkinson's version is also deliberately estranged:

> Imagine a cartwheel half-mired in muddy water, its hub just clearing the surface. The spokes are the satellite cities that form Metropolitan Toronto . . . The Toronto city core is the hub. The mud itself is vast Lake Ontario, which cuts Toronto off at its southern border . . . Now imagine the hub of that wheel as being rusted through and through. (3)

Due to economic collapse, the wealthy have left the city center and have barricaded the streets leading into the suburbs. The core has become a lawless space, a vacuum which has been claimed by Rudy, the ruthless leader of a drug-dealing posse, and, as is revealed later on, Ti-Jeanne's own grandfather. The image of the cart-wheel serves as a metaphor of "modernity, progress and economic development" (Martín-Lucas 71) and is deliberately distorted into a sign of decay. The muddy water not only hints at the city's roots as Muddy York (Martín-Lucas 71), but also introduces the center as drowning, as sinking into oblivion. This structural exclusion and demarcation of the city center creates a microcosm that shapes the characters' lives and their decisions.

The city center, however, is not only characterized by Rudy's posse but is also home to a multi-cultural society, whose population has returned to a state of free trade and personal cooperation. Scholar of Indigenous studies Grace L. Dillon summarizes that as "*Brown Girl in the Ring* depicts a pseudo-apocalyptic futuristic Toronto . . . left without the comforts of western technologies, the remnants return to traditional indigenous farming and husbandry in order to survive" (31). As Dillon's employment of "pseudo-apocalyptic" might already indicate, the city center also allows for the inclusion of utopian elements, prominently presented in the form of inter-cultural exchange. As Ti-Jeanne walks the city, she refers to its inhabitants by name and knows what and how they trade, just as she witnesses a pastor helping a woman (*Brown Girl* 14–15). The abandonment of the city has led to a social rearrangement of its core and to the formation of communal ties ranging beyond previously established hierarchical markers. Thereby, difference in class is renegotiated, and the couple selling skinned squirrels used to work as university lecturers (*Brown Girl* 14), while Toronto's most influential citizen is the drug-dealing Rudy.

The remodeled urban space thereby intersects utopian and dystopian imagery and illustrates the interconnectedness of both concepts.

The city center is presented as a form of microcosm, a unique cultural sphere whose borders are suddenly crossed when Premier Catherine Uttley desires a heart. In fact, Uttley's employee Baines solely transgresses into the city center for the purpose of finding a transplantable organ: "As soon as he entered the room, Baines blurted out, 'We want you to find us a viable human heart, fast'" (1). As the novel's prologue opens with Baines's demand, the search for an organ is immediately tied to the crossing of existing boundaries. Just as Baines enters Rudy's workplace, he enters the culturally demarcated zone of the city center. Clearly, Baines does not belong into this part of town, "[h]e looked foolish, and he looked like he knew it" (1). Baines is in foreign territory – territory only entered to precure a heart. The depiction of criminal organ marketing, then, presents the planned transplantation as the novel's nexus which not only forces characters to meet but which also brings the demarcated zone of Toronto into contact with its affluent surroundings. As Langer explains, "[t]he driving force of the plot is a heart" (180). The heart thus functions as a catalyst for contact between characters, a notion that becomes apparent in the discussion of four entangled agents: Premier Uttley, Rudy, Tony and the Vultures.

Premier Uttley's insistence on a human heart triggers the story's developments. Strikingly, her search for human tissue is based on voters' opinions, rather than on organ shortage. Facing an election, Uttley's policy advisor Constantine explains that her impending heart failure "is an opportunity . . . not a setback" (*Brown Girl* 38). The political significance of the heart is tied to technological progress: In Hopkinson's future, human organ donation has been replaced by xenotransplantation, the use of tissues of another species, typically animals, for transplant purposes. Constantine, however, reports a decline in voters' trust in animal-based transplantation and apprehends a chance in bringing back human organ donation:

> "Make a statement to the press that you're convinced that this is the safe, moral way to go: 'People Helping People,' you're going to call it. Tell them you're so determined that you'll back your words with your life; you've demanded the medical system find you a compatible human heart, and you're imploring the public to sign the voluntary organ donor cards you're going to distribute in all the local papers. Tell them you'll refuse the operation unless it's a human heart. Voters'll eat it up."
> Uttley smiled. "You son of a bitch. I'm going to dazzle them with my moral courage!" (40)

Uttley's insistence on her "moral courage" stands in stark contrast with the chosen criminal means to secure a heart and ironically subverts presentations of transplantation as an altruistic practice. This divergence is further emphasized by Con-

stantine's suggestions of meaningless but highly suggestive slogans, which reverberate with already mentioned campaigns for donor awareness. As Uttley's suffering is turned into a sign of her "determin[ation]", the seemingly noble cause is exposed as a charade. This gap between intent and presentation is further substantiated when Constantine convinces Uttley that a pig heart always remains a viable alternative (40). Here, altruism becomes the false premise of Uttley's endeavor, and an alternate reality is constructed for the public: The presentation of a "moral" solution, seemingly based in a desire for human interaction, is confounded by the reader's awareness of Uttley's utterly egotistic considerations.

Even though the Premier demands a human heart, the novel thus presents an alternative: xenotransplantation, an approach that found prominent attention in the times of the novel's publication. The obvious advantages of employing animal tissues were presented in a governmental survey from 1999 which presents xenotransplantation as a possible solution to the problem of donor shortage ("Survey on Xenotransplantation" 1). Health Canada's survey further explains that while xenotransplantation was not medical practice yet, controlled trials were taking place in hospitals in other countries (1), but that "[t]o date, Health Canada has not received or approved any proposals for clinical trials involving xenografts (3). The "possibility" offered by xenotransplantation is thus positioned in a comparatively distant future, a future based on progress too uncertain to justify medical trials. Their study discusses the relation between the distribution of information and donor awareness and shows that while awareness of xenotransplantation ran high at about three-quarters of the participants (1), knowledge of possible risks, such as infection, reached only 45% (2). About half of the respondents would consider xenotransplantation for themselves or their family if no human organ was available (2). It can be derived that animal tissues are perceived as structurally inferior to human ones and are understood as as a less preferable option. This notion of inferiority is also suggested in Uttley's choice which returns to the portrayal of donation as an altruistic act between consenting humans.

In relation to *Brown Girl*, the troubling potential of xenotransplantation in particular gains importance. The Health Canada survey concludes that at this point in time further information needed to be presented to the public to facilitate an informed decision:

> It would therefore be necessary to provide the public with information on the risks and benefits of the procedure, as well as the conditions under which xenotransplantation could occur, in order for an informed discussion to take place. (4)

The statement's orientation towards the future becomes apparent in the repeated use of the conditional. This speculative potential is further elaborated in Hopkin-

son's text, in which the survey's call to allow for informed discussion and particularly its insistence on public knowledge is ironically subverted in Uttley's scheme. In *Brown Girl*, the Premier uses public fear of xenotransplants to further her brutal endeavors:

> "The latest polls. Support for porcine organ farms since VE made its appearance." The disease that had jumped from pigs to humans through the an-antigenic porcine farms was so new that the scientists had only named it "Virus Epsilon." The acronym had stuck. (*Brown Girl* 39)

The virus appears as an unknown and frightening force that creates skepticism in the broader public. It is described as "new" and is characterized as a current development whose name is as elusive as its workings. This fear of the unknown is employed by Uttley who neglects Health Canada's proposition "that providing background information enables a more thoughtful and informed answer and leads to a higher rate of acceptance" ("Survey on Xenotransplantation" 4). Instead, public wariness of xenotransplantation is abused to benefit Uttley's seemingly moral stance. Embedding Uttley's fictional scheme in the contexts of discussions on xenotransplantation thus reveals how the text links transplant discourse to power and knowledge. Informing the public on chosen aspects only emphasizes how the corrupt Uttley employs fears of safety to further disenfranchise the distant bodies of Toronto's city center. It becomes clear that both governmental engagement with xenotransplantation and Uttley's planned campaign share a focus on public awareness. However, I want to underline that the novel shifts perspectives to wonder just who might be interested in shaping public awareness on xenotransplantation and how they might be informed by existing power structures.

The presented correlation between the heart "donation" and personal gain is further substantiated in Uttley's employment of Rudy as her middleman. Like Uttley, Rudy is a person in power and is separated from his crumbling surroundings. As the rest of the city struggles to survive, the posse leader wears a "tailor-fitted wool suit" (*Brown Girl* 1). Furthermore, while the remainder of Toronto is secluded, Rudy keeps in touch with its affluent surroundings. He emerges as a point of contact between both worlds and Langer explains that "he is the only one who can pass through the boundary of the dystopian downtown Toronto and effectively function in both worlds" (177). This ability to surpass Toronto's isolation emphasizes that the preposition to transgress ethical boundaries connects city center and suburbs – or Uttley and Rudy.

Interestingly, Rudy not only serves as the lynchpin between inside and outside but he also presents a meeting point for two forces in the novel, namely the spiritual and the technological. By using his spiritual powers, Rudy establishes his

power and creates zombified servants, who unwillingly follow his orders. Coleman derives that "Rudy perpetuates his evil domain of the city by a destructive manipulation of his knowledge of African-derived religions" (8). As Rudy suppresses people of color, "[t]he strict black versus white, Caribbean versus European struggle of earlier independence and black nationalist movements no longer applies to Hopkinson's futuristic Canadian landscape" (Anatol). The depiction of Rudy's policies intricately interweaves colonial practice and structural disenfranchisement with futuristic developments and thereby creates a complex outlook on racial relations.

Rudy's magical abilities are accompanied by his command of machines and technology. His reliance on technical remnant becomes apparent in his grey Bentley which appears as a foreign object on the streets of future Toronto and commonly appears as "the only car on the street" (*Brown Girl* 178). In the future, streets have been repurposed to be used by pedestrians, Rudy's insistence on the street's previous role separates him from future Toronto's reliance on personal contact and trade. Moreover, the vehicle's occupants are hidden in its interior, and the remnants of a past technology shield Rudy from his surroundings. The Bentley also underlines Rudy's ties to the outside world in which, Ti-Jeanne fears, "cars [are] zipping by too fast to see who was in them" (*Brown Girl* 111). The car, and in extension technology, forms Rudy's "sinister camouflage" (*Brown Girl* 178) and creates a secluded space within the city's microcosm. The same holds true for Rudy's dwelling in the CN Tower, high above the city, he escapes its maze and opts for a removed position. In the 1990s, the CN Tower was still the world's highest building and, as Romdhani asserts, "a symbol of power" (79). As a TV and radio communication tower, it still follows a technological purpose today and is closely tied to "commercial tourism", as Newman-Stille notes (152). The ironic subversion created by the alignment of Rudy's criminal activities with a Western tourist attraction appears obvious and suggests a shift in purpose but also in power and "has a postcolonial undertone to it" as Bustamente notes (23). In the end, the tower becomes both: a remnant of technology and a nexus of contact between spiritual and dystopian world: "And she understood what it was: 1,815 feet of the tallest centre pole in the world" (*Brown Girl* 221). The CN Tower as a site of contact thereby inscribes Caribbean spirituality into future Toronto's urban landscape and becomes an example for the synchrony of the novel's reinterpretation of the building as a center pole and its contemporary purpose of technology or commercialism.

How, then, does Rudy's command of spirituality and technology tie into the depiction of transplantation? Firstly, his abuse of magic separates him from Ti-Jeanne and her grandmother who primarily use their abilities for communal advantage. The same holds true for his employment of technology which clearly separates him from Gros-Jeanne's living off the land. This distance, also physically expressed

in the tower's removed position, allows for Rudy to exploit the fellow inhabitants of Toronto. Moreover, the use of technology links Rudy to the outside world and to corruptible medical practice, since only one other group still yields technology: The so-called Vultures, employees of the hospital, as will become clear later on. As an organ broker, Rudy has access to both worlds and benefits from Uttley's transplant-scheme. Yet, just like Uttley enters the city center via her proxy Baines, Rudy does not personally "find" the heart the Premier desires, rather, he forces Tony to do his bidding.

Tony is presented in a disenfranchised position and is torn between converging desires: He wants to leave Toronto with Ti-Jeanne and their child but is bound to Rudy's demand. Tony's desire to leave the city thereby presents a deviating reading of the North as a site for migration as "[h]is desire to escape reverses the role of the city of Toronto as a land for immigration, and, by extension, of Canada as the end of the Underground Railroad that took slaves away from the US in the nineteenth century" (Bustamente 21). The reversal of the North's connotation reinterprets the future Canadian landscape beyond its past role and navigates processes of disenfranchisement at play. Tony's inability to deny Rudy's request despite his better judgement also introduces the matter of choice(lessness) to the novel. Tony is clearly shocked by the request to procure a transplantable heart: "Appalled, Tony could only stare. Rudy was asking him to commit murder" but still feels inclined to follow the command as "[h]e had no choice but to do what Rudy told him" (*Brown Girl* 30). This choicelessness is based on Tony's previous meddling in the posse leader's distribution of drugs and his own addiction. His final surrender to Rudy's will underlines the rippling effect of Uttley's demand and portrays the suburban impact and Rudy's support as a cannibalizing force, estranging the city center's inhabitants from each other and forcing them to contribute to the de-individualized practices they unwillingly serve.

Any form of resistance Tony may consider, however, is cut short after he witnesses Rudy's brutality first hand: As Rudy flays Melba, his zombified servant, in front of Tony, the gang leader's power is presented as absolute:

> Tony whimpered as he stared transfixed at the living anatomy lesson that Melba had become. Insanely, he remembered a lecturer at college informing them, "The average human has about twenty square feet of skin weighing about six pounds." Tony's medically trained mind persisted in identifying the structures that Rudy had exposed with his knife . . . (*Brown Girl* 136)

Tony's recollection of textbook knowledge brings the clash between object- and subject body to the fore. His mind "persists" in returning to what is known, rather than engaging with the inconceivable horror in front of him. Tony realizes that both his reading of the object body and Melba's subject body exist simultaneously:

By Rudy's dissection, Melba has become an "anatomy lesson." This objectified treatment of Melba not only establishes Rudy's control but premonitions that Tony is supposed to treat Gros-Jeanne like mere material. Langer therefore concludes that "in stripping her [Melba] of her skin, Rudy strips her of her humanity" (181) – Melba has become literally faceless. Melba's flaying serves as moment of epiphany that triggers Tony's servitude: "Two days ago he'd been a whole man. Now he felt as though his protective skin had been removed along with Melba's. He would never feel so sure of himself again" (*Brown Girl* 139). Tony's internal state is expressed in a comparison to Melba's physical one: The recognotion of Rudy's absolute power has rendered him without protection, he has lost his metaphorical skin. The flaying of Melba thereby underlines that Rudy's powerful position is based on the structural exploitation of bodies and emphasizes the material – and objectifiable – nature of the body that serves as the basis for Tony's task.

The engagement with Uttley, Rudy and Tony has shown that the impact of the planned heart transplantation crosses the city's borders and involves several individuals with unique perspectives and varying degrees of individual agency, the last and fourth group presents the role of institutions in the transplant scheme: the Vultures. The Vultures are employees of Toronto's hospital and are presumably named after the "shattertite beak" of their uniform (*Brown Girl* 8). Despite their role as caregivers, the Vultures are not portrayed as healing figures but are related to death and decay.

Their appearance and naming already introduce them in removed, non-human terms. Even though they wear uniforms of the Angel of Mercy Hospital, they are known as "Vultures", rather than as "Angels," a denomination that also relates to their steep prices: "The price for established medical care was so high that only the desperately ill would call for help. If you saw a Vulture making a house call, it meant that someone was near death" (*Brown Girl* 8). Rather than relating to life, health care is related to death. The metaphorical rendition of hospital employees as carrion eaters appears as a brutal allusion to post-mortem transplantation in which the deceased body can be turned into a valuable resource. Despite their supposed role as medical professionals, skepticism towards the Vultures is already introduced when Baines enters Rudy's office dressed in their uniform. His camouflage as a hospital employee occurs particularly disconcerting as he asks Rudy for a human heart and thus blurs the layers of organ procurement and health care.

At the same time, Hopkinson's fictional rendering of the vulture motif in transplant practices resonates with its employment in life writing. Kathy Caredeo, working in a critical care unit in New Hampshire, explains in a letter to the editor that she struggled to approach patients' families about organ donation before her son's liver transplantation in 1994. She thought: "That poor family; here they are

dealing with the unexpected death of a loved one and I am asking them to donate organs. I am like a vulture waiting for its prey to die" (Caredeo). The notion of taking advantage, possibly of hoping for another's passing, is opposed to the loved ones' loss and is expressed in the image of the vulture. Using the term "vulture" to signify a lack of empathy by medical personnel is also employed by an interviewee in a 1997 study on consent. They explain that they decided against donating their son's organs: "It was definitely the way it was handled…they were circling over his body like a bunch of vultures" (Weiss et al. 1899). The interviewee depicts the professionals as omens of death: waiting for transplantable organs to be released, disregarding the family's suffering. As Gurch Randhawa, director of the British Organ Donor and Transplant Research Centre, explains in 1995 with reference to a lack in donor numbers in the U.K., "[r]eports of reversals of brain death and the portrayal of transplant surgeons as organ vultures have not helped to enhance this confidence" (Randhawa 247). As these examples suggest, the vulture gains particular relevance in the context of post-mortem organ donation and also serves as a possibly unwelcome reminder of the body's use after the individual's passing. It is interesting to note that transplant doctors are not presented in relation to care and nursing back to life – as might be common for physicians – rather they are likened to scavengers, carrion eaters that are related to corpses rather than to living organisms.

Read in conversation with Hopkinson's text, the fictional rendering of the medical profession, the Vultures, also connects with a technological and deindividualizing approach to the body. When the Vultures arrive after Tony has injured Gros-Jeanne, the narrator explains: "They were Vultures. All were wearing hooded, floor-length bulletproofs in Angel of Mercy black. Two of the men had Glocks. One more was carrying a telescoping stretcher" (*Brown Girl* 151). The Vultures' entrance is deliberately distanced from that of caregiving personnel, their black uniforms opposed to the white or pastels common to hospitals. Their equipment appears militant, rather than life-sustaining: In their hooded black cloaks they enter as executioners, rather than as hospital employees. Even when Ti-Jeanne attempts to interact, the Vulture's voice sounds inhuman: "The small speaker grid in the beak of his bulletproof magnified and distorted his voice" (*Brown Girl* 151). The uniform functions as a disguise, hiding its wearer and distorting their voice. The individual has ceased to exist behind the Vulture's image. Here, technology adds to Ti-Jeanne's estrangement and further distances the Vultures from the spiritually inclined habitants of the house.

The Vultures' limitation to the physical world is further underlined in their engagement with Gros-Jeanne's body. While Ti-Jeanne experiences her grandmother's subject body, the Vultures relate to her solely in terms of an object:

> The body on the floor was recognizable only by its small frame in its patched black housedress. Mami's necklace of beads had broken. The brown and red beads were scattered over the floor and her body. Tony's funny square knapsack lay beside her, open. A machine of some sort hummed inside it, fat red tubes extended like claws into Mami's neck, arms, chest, thigh.
> Her head was the wrong shape. Someone had smashed the back of her head in. In the room above her head, Baby's screaming reached a crescendo.
> Two of the Vultures knelt at Mami's side, began checking the machine's connections.
> "Looks good", one of them said, checking the readout in his hand from the hand he was running over Mami's chest. "BP falling a bit. Kurt, step up the dopamine some, will you? And Jamie buzz the hospital. Tell 'em to meet us at the airlift out front. We'll fly the heart straight to Ottawa General." (153)

The quote is separated into two sections: In the first part, the reader follows Ti-Jeanne's focus and Gros-Jeanne is solely referred to as "Mami." The protagonist's shock is expressed primarily in her inability to understand what has happened – her grandmother's body has become distorted, recognizable only by Gros-Jeanne's personal objects with the broken necklace and scattered beads already alluding to the future dismemberment of her body. Tony's backpack and machine, on the other hand, are different in form and appear "funny", or out of place. The medical instrument seems predatory, an unknown "machine of some sort," which has its "claws" hooked into Gros-Jeanne. The scene is thus described as otherworldly and Ti-Jeanne's grandmother, her Mami, becomes the prey of an alien force. Ti-Jeanne's realization that "[h]er head was the wrong shape" further expresses a deep-seated uncertainty in which meaning cannot be created beyond the awareness of her grandmother's hurt body. These highly personal impressions follow Ti-Jeanne's limited understanding and emphasize the moment's life-changing impact.

Ti-Jeanne's personal impressions, however, stand in stark contrast with the Vultures' conduct. While the quote's first part focuses on objects with individual meaning, jewelry and clothes, the second part introduces the machine's workings. While Ti-Jeanne still focuses on broken beads and hears her child screaming, the Vulture ruptures the scarring scene: "Looks good," he explains. His contentment in face of Ti-Jeanne's personal tragedy establishes the opposing perspectives of trained personnel and family members. This divergence is further emphasized in the different perceptions of the body – as Ti-Jeanne insists on the head's "wrongness," the Vultures focus on the manageable blood pressure. Thereby, Ti-Jeanne's and the Vultures' perspectives are deliberately contrasted: While Ti-Jeanne is unable to make sense of the technological instruments, the Vultures do not appreciate Gros-Jeanne as a person. To Ti-Jeanne, the Vultures arrive as a faceless group, they are deindividualized members of the medical realm. Within the group, however,

they are addressed by first names, while Gros-Jeanne remains "Mami." The passage thereby indicates the divergence between roles played – that of Mami, that of Vulture – and the individual's significance beyond them. The Vultures' behavior is not assigned to their individual disinterest, but rather to a professional stance that prevents them from perceiving the body they are dealing with as part of a person. This notion is underlined in the last sentence: They want "the heart" to be flown to Ottawa. The organ has ceased to be part of the body and is no longer related to Mami. Thereby, the distinction between subject and object body comes to the fore: The treatment of the body as an object by the Vultures stands opposed to Ti-Jeanne's perception of it as Gros-Jeanne's subject body.

The Vultures' detached treatment of Gros-Jeanne thereby appears as a speculative distortion of well-known tropes of health care personnel's removed stance from their patients. Such notions can also be traced in forms of life writing and Canadian lung surgeon Todd describes in his autobiography:

> By 1996 things were different. Then we arrive in the operating room to do a transplant often never having seen the recipient before. He/she is purely "medical information." A condition lies there on the table possessing a series of data points that I need to comprehend to ensure proper donor selection and to perform the procedure correctly. These recipients could be anybody. (viii–ix)

While Todd's statement refers to organ recipients, as opposed to Gros-Jeanne's role as a future organ "donor", it adds to the portrayal of the Vultures. Todd perceives a shift in the '90s and outlines his perception of the patient purely in terms of an object: The patient's health is not *described* via medical information, they themselves *are* medical information. Accordingly, it is not a patient who lies on the table, it is merely "a condition." Comparable to the Vultures, Todd does not perceive of a complex body but focuses only on numbers relevant for his undertaking. The patient's anesthetized, incapacitated condition seems to further impact this understanding. The deindividualizing force of the medical gaze is self-confidently established, as the recipients are robbed of their status as individuals, they "could be anybody." Here, this framing of individuals subordinates individual patient welfare to the grander scheme and hopes of transplantation. Later on, when Todd fears losing a patient, he explains: "The program could be ruined by another failure" (78). The framing of the patient's death solely in relation to its impact on the transplant program appears technocratic at best. Naturally, I do not aim to suggest that Todd's technocratic musings about patients are in any way representative of how physicians treat their patients. Rather, they serve as an extreme example for a tendency that is rendered in Hopkinson's speculative realm and which emphasize different perspectives on the human body that are also shaped by individual relationship and professional background.

This chapter has positioned the brutal slaughter of Gros-Jeanne and the involuntary organ retrieval at the intersection of the official (Uttley) and the criminal (Rudy), the powerful and the powerless (Tony), the city center and its affluent surroundings. The discussion of characters affected by the heart scheme thus emphasizes the highly individual nature of organ transplantation and its ties to lived experiences. At the same time and despite this focus on the individual, the forced removal also comments on organ-harvesting in a global context. Uttley as a white powerful agent appears in a distant position and uses her exploitative practices to further her own career. Rudy is depicted as reminiscent of an organ broker who networks beyond national borders and benefits from dealing with the organs of his community. Their roles as powerful agents, one within and one beyond the city's borders, are based on their violent exploitation of human bodies. The Vultures representing the health care system remain on the sidelines, unknowing participants in a scheme they did not develop, yet cannot grasp – let alone stop. Commenting on this blindness, McCormack concludes: "The novel shows that black, poor people can be murdered to save the lives of white, rich people, and that the system of transplantation fails to register such deaths as anything other than altruistic donation" ("Living with Others inside the Self" 255). The fact that the brutal slaughter of an individual and removal of an organ relies on so many participants not only alludes to the ignorance still surrounding illicit organ trading, but also emphasizes its complex mechanisms and international connections.

Hereby, the speculative future of transplantation is intrinsically linked to colonial endeavors and McCormack explains that "this novel exposes how organ donation is intimately tied to colonial and neocolonial medical practices" ("Living with Others inside the Self" 255). The taking of the heart in *Brown Girl* and the horror it unleashes upon Ti-Jeanne and the reader mirror the structural exploitation of humans for their tissue. In her study on organ stealing rumors, Scheper-Hughes derives: "As in Brazil, individuals in Cape Town squatter camps referred to the directionality of the exchanges: organs moving from poor and black bodies . . . for transplantation into more affluent white bodies" ("Theft of Life" 10). This monodirectional movement already became apparent in the discussion of *Harvest* and is also prominently featured in Hopkinson's work. Comparable to Ginni in Padmanabhan's play, Uttley's body is geographically distanced and only intervenes via proxy. Despite this distance, however, their impact on the works' protagonists is unambiguously portrayed in Jeetu's and Tony's actions. The exploitable bodies are characterized by their disenfranchised position, in *Brown Girl* they are literally cut off from their affluent surroundings. Fittingly, Tony, when first asked to find a heart, decides to look in Toronto's poor quarters, trying to find "people who looked healthy, but maybe like no one would miss them? Street people, shit like that" (*Brown Girl* 56). The novel thereby also underlines the hierarchical framing

of bodies: While Uttley looks at the city center, Tony looks at specific streets within this microcosm. The exploitation of bodies is thus not limited to a specific group or geographic location, rather it is part of a hierarchical structure in which human tissues are culturally produced based on their value within an unequal system.

6.2.2 Receiving the Heart

The previous subchapter has exemplified that *Brown Girl* employs the forced transplantation of a heart to intricately tie the value of individual tissues to processes of disenfranchisement. Yet, in contrast to *Harvest*, the novel deliberately refers to one specific organ that is needed by Uttley and that is metaphorically charged: the heart. Drawing from the cultural significance of the organ, I want to relate to another text of life writing from the 1990s, Claire Sylvia's *A Change of Heart* (1997). As the title already suggests, Sylvia emphasizes the correlation between her receival of a heart-lung-transplant and the organ's narrative rendering: "Pure heart, aching heart, soft heart, valiant heart, noble heart, tender heart, understanding heart – the list goes on" (6). Sylvia's assessment of idiomatic framings underlines the heart's narratively produced relation to emotion. Fittingly, Sylvia, who perceives of changes to her character after transplantation, tends to relate these developments to her donor's heart, rather than to the received lungs and explains: "My new heart did seem to be affecting my personality" (131). Positioning the heart at the center of individual transformations ties into Western perceptions of the heart as the seat of emotions (Sharifian et al. 5). *Brown Girl* resonates with the connection of the heart and processes of identity-formation, given that after Gros-Jeanne's heart is transplanted into Uttley's chest, it begins to impact the prime minister and remains anything but docile. Hereby, the power granted to the transplanted organ subverts the grandmother's role as a disenfranchised "donor." In the following, I want to show that the speculated implantation of the heart presents a paradigm shift that facilitates a double perspective on transplantation as a medical procedure and as a supernatural occurrence.

At first, Hopkinson's novel focuses on a medicalized reading of the heart's perceived rejection. When Uttley's health deteriorates after transplantation, it is framed as a known complication of organ receival, namely as rejection. Feeling certain of the diagnosis, Dr. Wright immediately initiates adequate procedures:

> "Get her on an immunosuppressant drip, fast. OKT5 should do it." That was like detonating a bomb to kill a fly, but it looked as though they had no other choice.
> Fang gave the order, then said, "The reaction's so extreme. It's like that heart can't wait to get out of there." (*Brown Girl* 235)

The medical personnel establish the problem's biochemical origin. Even though the encountered complications are described as particularly intense, they seem familiar and trigger a specific protocol. At the same time and despite the use of medical lingo, the seemingly medical problem is also described in metaphorical terms and the chosen treatment is like "detonating a bomb." Furthermore, the heart's role as personified participant is substantiated, it "can't wait to get out of there" and becomes an active agent in the implantation process. As the heart is introduced as desiring to leave the recipient's body, Uttley's deteriorating health is only superficially positioned within the medical realm.

This external, medical diagnosis is opposed to Uttley's internal considerations on the experience of implantation. While Dr. Wright and her team are mostly concerned with "attacking" cells, Uttley feels like her "unconscious mind had been conducting a battle of its own" (*Brown Girl* 235). It is vital to note that even though the transplant was performed on a corporeal level, the battle is fought in the mind: Transplantation is presented as affecting both body and self. This introduction of transplantation on a metaphysical level is further underlined in a dreamlike sequence in which Uttley seems to welcome the new organ. She attempts to gain control over the heart beating against her ribs: "Stop that. You're here to help me. Just settle down and do your job" (*Brown Girl* 235). While the one-sided conversation with her new organ grants agency to the heart, the mode of address also seems fitting for Uttley, a high-ranking politician prone to have her employees follow her demands. However, the heart resists Uttley's commands, a numbness spreads over her body and the Premier begins to lose control:

> The heart was taking it [the body] over. Uttley became alarmed, had tried talking to the alien organ. "Please," she said. "This is my body. You can't take it away from me." But the creeping numbness spread up her neck. She was now completely paralyzed. All she could do was wait for it to reach her brain. She had known that when that happened, she would no longer be herself. Unable to move, unable to save herself, she had felt her brain cells being given up one by one. Then blackness. Nothing. (*Brown Girl* 237, emphasis in original)

Alongside Uttley's loss of control, the mode of address has changed, rather than spitting orders, Uttley begins to plead. Yet the heart resists and instead seizes control: Even though the brain is depicted as the decisive organ for constituting a sense of self, it is "taken over" by the "alien organ". Significantly, this decisive shift occurs internally and cannot be witnessed by the attending physicians – even though the heart's presence in the Premier's body is based on surgical intervention, the novel thus positions this critical development in the speculative realm. Hereby, the employment of speculative elements allows for the neglect of monocausal understandings of the body.

After the internal conflict has been fought and the numbness has reached her brain, Uttley awakes, yet a significant change seems to have occurred. Upon waking, she shakes the memory of her internal battle:

> And then she was aware again. Her dream body and brain were hers once more, but with a difference. The heart – her heart – was dancing joyfully between her ribs. When she looked down at herself, she could see the blood moving through her body to its beat. In every artery, every vein, every capillary: two distinct streams, intertwined. She had worried for nothing. She was healed, a new woman now. "Stupidness," she said, chiding herself for her unnecessary fears. (*Brown Girl* 237)

As Uttley regains consciousness, both her body and her brain have become her own again and she no longer differentiates between governed brain and ungoverned body. Her new-found connection with her body also includes the heart, which is deliberately moved from "the heart" to "her heart." The organ's omnipresence is emphasized in the triple repetition of "every", while her blood consists of two streams, representing "donor" and recipient. Accordingly, the recipient Uttley awakes as "a new woman": Her altered body has impacted her as a person, and she has undergone a change of character, alongside her change of heart. This shift is introduced by her muttering "stupidness," an expression well-known to the reader and deeply associated with Gros-Jeanne. Uttley's transition is thereby also introduced via language and the narrative framing of heart transplantation might come to mind again.

In the following, Uttley, the new woman, will reconsider her treatment of the city and the transplantation of the heart will lead to a shift in public policy. The incorporation of the organ thereby unleashes a subversive power: Rather than falling prey to the Premier's desire for dominance, Gros-Jeanne's heart takes over. The change in character also resonates with patients explaining changes of a sense of self after transplantation,[39] and Sharp understands the engagement with the donor as a part of the post-transplant experience. She explains that "recipients draw from a private and imagined portrait of their donors and integrate this portrait into a newly constructed sense of self" (371). To the recipient, speculation presents a vital tool in coping with the transplanted organ. As Sharp's employment of "imagined" indicates, the recipient creates the donor and adjusts their developing post-transplant-self accordingly. At times, this speculation also refers to what is known of the donor. Todd remembers that a patient humorously commented on his French-speaking heart donor when stating: "Well, now I am officially bilingual!" (129). The impact of the donated tissue is alluded to beyond the physical

39 See Chapter 2.4 "Implantation" for further reference.

realm and impacts the recipient's skills. Clearly, the recipient does not truly believe to have acquired his donor's language skills, rather the statement humorously expresses a sense of intimacy with the unknown donor. This notion is also underlined in Sylvia's memoir *A Change of Heart*, in which she expresses the impact of her received heart and lungs: "I had dreams and experienced changes that seemed to suggest that some aspects of my donor's spirit and personality now existed within me" (6). While to Sylvia the relation to her donor becomes an enriching experience, perceived ties between donor and organ may also present ground for concern. If one's kidney donor is still alive, for instance, how could the speculated incorporation of their traits affect both donor's and the recipient's sense of self? *Brown Girl* metaphorically employs these post-transplant experiences and draws attention to their socio-political significance.

This metaphorical employment also Relates Brown Girl to narrative tropes of the horror genre. narrative engagments with ties between implanted organs and their donors' personalities. Robert O'Neill states:

> The idea of the rebellious body embodies much more than recent pronouncements of cellular memory. With rebellious bodies, the transplanted organ (again usually an external limb) effectively takes control of the recipient's body; of their identity; of their personality; and of their behavior. (224)

Here, the received tissue appears as an intruder: It invades the recipient's body and takes over their very selves. O'Neill emphasizes that such readings were particularly prominent in works of science fiction of the 1950s and '60s. This thematic dominance in the early decades of transplantation appears particularly fitting because the practice's impact remained vastly unknown. Despite the developments within the medical field, however, the rebellios body trope remains impactful. For instance, in David Moreau and Xavier Palud's *The Eye* (2008), a remake of a film by the Pang Brothers of the same name from 2002, an eye recipient is haunted by the clairvoyant abilities of her corneas' donor. *Brown Girl* clearly neglects the horrifying potential of such narratives and presents the heart's impact as a desired transformation because it is Gros-Jeanne who gains control of Toronto's future. The horror trope of organs impacting their recipients is subversively rendered as the novel sides with the removed heart, rather than with the recipient's body. Thereby, this subchapter illustrates that the transplanted body serves to underline a shift in perspective in which the reader's horror is directed towards the undeserving recipient's body rather than towards the stolen heart.

Hereby, and as several critics have pointed out, the transplantation of Gros-Jeanne's heart and her impact on Uttley's identity becomes particularly relevant in its postcolonial contexts. McCormack understands the organ as "symbolic of

an anticolonial and antiracist resistance to sociopolitical institutions of segregation" ("Living with Others inside the Self" 255). The heart, then, is presented as surpassing constructed boundaries between individuals and in effect, the hierarchies that made the transplantation possible in the first place. As Neal Baker states, "the heart of a black, Caribbean immigrant revives the health of a white, birthright Canadian. . . Both literally and figuratively, the body of the Canadian nation-state is fortified by the transplant (220). The reversal of xenophobic approaches to migration appears obvious: As the novel invites the reader to side with the heart, it also positions Caribbean culture as a beating heart in the body of the country's representative. Hereby, hybridity is lived not only by Ti-Jeanne, but by Uttley herself, as Skallerup notes (81), and becomes the basis for Toronto's better future.

This analysis of *Brown Girl in the Ring* has emphasized that the incorporation of Gros-Jeanne's heart unleashes a subversive force: While Uttley and her disciples abuse their power and disenfranchise the bodies of Toronto's inhabitants, the transplantation reverts hierarchical difference. Uttley's initial understanding of the heart as Other and her attempts of suppressing its power indicate a cultural framing of the heart as closely associated with individuality. Thereby, the organ serves to underline the renegotiable quality of corporal, gendered and racial boundaries. In relation to postcolonialism, this reversal illustrates a reconfiguration of center and periphery that is negotiated in Uttley's transplanted body. Read in the framework of organ transplantation, the brutally stolen heart thereby activates a speculative counter-narrative in which the organ reinscribes the neglected experience of Gros-Jeanne and her community into future Canadian politics. *Brown Girl* thus gives voice to the repressed and integrates their perspectives both within the fictional world of the novel and on the market for young adult fiction, which was – and still tends to be – majorly engaged with the white middle class.[40]

6.3 *The Scavenger's Tale* by Rachel Anderson

"I reckon we're dead lucky to live at the centre of the civilized world" (Anderson 14), states Bedford, the adolescent narrator of Rachel Anderson's British novel *The*

40 An *Atlantic* article pointed out in 2012 that the vast majority of protagonists in the three most successful young adult fiction series today – *Twilight*, *Harry Potter* and *The Hunger Games* – are white (Doll). Moreover, Mary J. Couzelis argues in "The Future Is Pale" that depictions of the future for young adults often lack the issue of racial tensions. She explains that "[a]uthors of science fiction who seek to highlight contemporary fears, especially in young adult dystopian novels, do not always realize that ideologies about race are present in the narratives" (131).

Scavenger's Tale from 1998. Despite this assertion, Bedford's life might appear distinctly unlucky, as he roams the streets of a run-down version of present-day's London, keeping himself and his family alive by looking through trash, his title-giving "scavvys." The decaying urban space of Bedford's 2015 is mirrored in the novel's linguistic form which features not only futuristic vocabulary unknown to the reader but is composed of short and reduced sentences. The text is told in the brief, colloquial tone of Bedford's teenage voice and, by focusing on the moral dilemma he faces, can be positioned in the field of young adult fiction. In the novel, the possibility to transplant organs appears as a corruptive force and results in the uncompromising disenfranchisement of specific groups of society and the brutal theft of organs. So far, the text has received almost no critical attention and I aim at closing that gap by establishing its contribution to discussions on transplantation and its fictional metabolization of organ theft narratives. Hereby, I also want to draw attention to the novel's use of dis/ability as a culturally produced category that is intersected with transplant practices.

The novel's engagement with transplant practices appears particularly fitting as the United Kingdom had endeavored in a variety of successful transplantations by the end of the 1990s, for instance the first liver and the first lung transplantation in 1995. One year earlier, in 1994, a donor register was founded and NHS Blood and Transfusion summarizes: "Following a five year campaign, the NHS Organ Donor Register is set up to co-ordinate supply and demand" (NHS). The installment of a donor register is framed in economic terms and indicates the growing need for donated organs. People dying on the waiting list had become an issue of a lack in organs and was thereby framed not only as a result of the patient's illness but implicitly, as relying on a lack in donor numbers. Director of the British Organ Donor and Transplant Research Centre Gurch Randhawa states in 1995: "The problem facing the transplant community can therefore be simply stated: there are not enough organs to meet demand, and the situation is getting worse" (241). The current lack in donor numbers is projected into the future: Finding donors, then, appears as a matter of future importance. Attempts to increase donor numbers[41] were accompanied by considerations on how organs might be obtained. British transplant surgeon Roy Calne remarks in 1991: "How can we avoid commercial trade or even organized crime being involved in this shortage of the most valuable gift that can be offered to a patient?" (238). Calne's open-ended question presents a speculative approach to transplantation's future developments. Fittingly, the '90s also saw a rise in organ theft narratives as a global phenomenon. These stories employed different tropes and also gained significance in North America and the Unit-

41 For further reference on governmental attempts to raise donor numbers see Randhawa.

ed Kingdom. Such narratives of victimized bodies are a fitting framework for *The Scavenger Tale*'s depiction of future London's brutal disenfranchisement of expandable bodies.

Similar to the novel's narrator, the reader remains unaware of what has led to London's division according to location, income and dis/ability. Bedford and his family live in the poorest quarter, Sector 1, references to well-known tourist sites such as Covent Garden and the National Gallery locate the region at the Northern site of the Thames. Space and status are thus intersected and Naarah Sawers explains: "In this novel London is separated into Sectors, thereby establishing a caste system" (173). Similar to *Brown Girl in the Ring*, the inner city forms the urban center's poorest part, a geographical shift that is granted further significance in relation to London as the heart of the Commonwealth. As Roy Porter explains in *London: A Social History*, "[t]he key to the Capital is the British Empire" (2). Even though the reader might recognize its streets and sites, "[t]he centre of the civilized world" presented by Bedford thus offers a distorting perspective aimed at renegotiating readings of center and periphery.

Within this dangerous landscape, Bedford alongside several other parentless children has found a home with Ma Peddle. The family shares an "Unapproved Temporary Dwelling Place" and lives in poverty and uncertain conditions. Their survival is based on shared goods, for instance, they get water from a standpipe in the street, use food coupons and share a bedroom infested with bugs. Despite these conditions, Bedford perceives of his home as "Peddle's Palace" (45) and emphasizes its distanced position from the rest of London. The dwelling is also a place to share stories, most prominently Ma's "Tale-Times" in which she tells stories partly based on the bible. As Margaret Aitken, Clare Bradford and Geraldine Massey explain, "[t]he authorities have no capacity to control the private dissemination of these narratives" (23), and the household is introduced as a microcosm and a distinct cultural realm. Nevertheless, each family member is also tied to their surroundings, as everyone is named after the place they were found. Bedford is "called Bedfordsbury after the back alley where [he] was found" (24), his sister Pica's name is short for Piccadilly and his favorite sister Dee was found on Devonshire Place (10). Their names underline their connection to the city: The characters are living fragments of the devastated London. Yet even though Bedford recognizes Ma Peddle and his adopted siblings as his family, he perceives of himself as different, a differentiation that is based on his intellect: "I may be classified as Low-Caste, but I'm not one of the defectively-abled. I'm High Intelligence Quotient" (8). Alongside the spatial separation, London's population is "classified." Bedford's assessment as High Intelligence sets him apart from the rest of his family: His siblings are called "Dysfuncs" or "Abs" and carry an accompanying passport. Each member impacts the family in their own way and their disabilities are presented

as unique traits. Within the family, Bedford takes on many responsibilities and, in contrast to his siblings, runs the city by himself.

The repercussions of transplantation practice and the existence of grand scale organ theft in London begin to surface when a new character enters the family. It is the outsider Rah's Man, a stranger found by Bedford and his siblings on one of their scavenger hunts, who forces Bedford to pay attention to what is happening in his city. He explains:

> Since you do not know it, I must tell. This your city organ transplant centre. This now is one trade to flourish. Your agriculture? It fail. Livestock? It disease. Automobile industry, armaments industry, all finish. Medical expertise. Yes, A1. Donor transplants. But donation, this means freely to give. Not to pluck from the vulnerable. (62)

Rah's Man's introductory emphasis on knowledge is significant: Until the outsider arrives, Bedford is unaware that transplantation and forced organ retrieval are the missing link between poor London and affluent surroundings. Now, Bedford's London is reframed as a center for organ trade, with tissues from its disenfranchised inhabitants feeding the new branch of economy. These involuntary organ retrievals are deliberately distanced from donation, as organs are "pluck[ed] from the vulnerable". The novel's focus on tourists arriving to obtain tissues resonates with organ theft narratives of its time: Organ theft is positioned at the meeting point of two cultures and is tied to economic difference. Sawers emphasizes this connection as Anderson's London "has also become a tourist destination for transplant surgery that chimes with health tourism as an emerging phenomenon in the real-world of the implied reading audience" (173). Soon, the whole family is affected by the demand for organs and their trade as Bedford's siblings are abducted by the CHAWMs (Community Health and Welfare Monitors), medical personnel who procure tissue in London's poor quarters. Even though their disappearances are undoubtedly linked to the trade, transplantation is never expressly shown – aside from Rah's Man's scar no body is presented as physically hurt by organ retrieval in *The Scavenger's Tale.*

Rah's Man's experience gains particular relevance when read in the framework of organ theft rumors that gained international attention in the 1990s. Scheper-Hughes traces the occurrence of organ theft narratives in Brazil and underlines their significance beyond geographical borders. Here, she heard stories "of the abduction and mutilation of children and youths who, it was said, were eyed greedily as fodder for an international trade in organs for wealthy transplant patients in the First World" ("Theft of Life" 3). These stories rely on structural inequality and the commodification of bodies, in which the country's youth are narratively framed as "fodder". The rumor of children stolen for transplant purposes reached

"global dimensions" and was told in different forms in a variety of countries ("Theft of Life" 3). Scheper-Hughes positions the narrative in exploitative examples of medical practice, for instance the non-consential use of corpses for anatomy lessons and relates them to illegal adoptions ("Theft of Life" 4). In a similar vein, *The Washington Post* adds in 1994 that the abduction of children for organs was inaccurate, "[b]ut this does not mean the theft and disappearance of children in Guatemala is untrue. The Guatemalan Public Ministry reports that on average six children go missing each day" (Booth). These numbers suggest that rumors surrounding organ theft might be embedded in structural exploitation beyond the scope of tissue transfer. Campion-Vincent speaks of "symbolic truths" ("Organ Theft Narratives" 32) to highlight how the tales navigate power relations and global injustices. I also want to draw attention to the speculative nature of such narratives: By giving speculative form to lived experience, these stories reveal underlying structures and perceived inequality.

In the 1990s, one narrative of organ theft gained particular importance and was passed on via Internet platforms and chain mails: Often believed to be factual, the kidney heist received attention in a variety of discussions. The impact of the story becomes apparent in a disclaimer posted by the New Orleans Police Department in 1997:

> Over the past six months the New Orleans Police Department has received numerous inquiries from corporations and organizations around the United States warning travelers about a well organized crime ring operating in New Orleans. This information alleges that this ring steals kidneys from travelers, after they have been provided alcohol to the point of unconsciousness.
> After an investigation into these allegations, the New Orleans Police Department has found them to be **COMPLETELY WITHOUT MERIT AND WITHOUT FOUNDATION. The warnings that are being disseminated through the Internet are FICTITIOUS and may in violation of criminal statutes concerning the issuance of erroneous and misleading information. ("Official Statement from New Orleans Police Department", emphasis in original)**

The fact that the police report actively engages with organ theft rumors appears noteworthy in its own right and suggests the permeability of fictional and factual realms: As the police report needs to emphasize the fictitious nature of these rumors, and does so in capital letters, the importance of banning the narrative to the fictional realm is emphasized. At the same time, the report underlines the pervasive nature of these stories which seems to have led to significant public involvement as well as to police investigations. The report also alludes to specific tropes of narratives of kidney theft, which tend to focus on an unknowing person awaking in the morning to find their kidney missing. Often, these stories portray an individual in foreign territory, a notion that is also presented in the police report which

particularly refers to "travelers." The narrated organ theft can take place both while visiting another city or country and victims are often depicted as tourists or weary businessmen.[42]

As the police report already suggests, organ theft triggered ongoing discussions in North America and permeated a variety of fictional and factual formats. The airing of a *Law and Order* episode in 1991 inspired by kidney theft narratives was followed by articles in *The Washington Post* and *Daily News*, as well as in Swedish newspapers (Brunvand 151–52). The prominence of the narrative was further highlighted when Todd Leventhal of the United States Information Agency was commissioned to write a report on the matter of organ theft rumors in 1994. He explains that "[s]ince January 1987, rumors that children are being kidnapped so that they can be used as unwilling donors in organ transplants have been rampant in the world media" (Leventhal). Leventhal summarizes the repeated depiction of such "rampant" stories in the Western World and underlines their inaccuracy:

> Despite the impossibility of such practices occurring, and the fact that no credible evidence has ever been produced to substantiate rumors of such activities, the child organ trafficking myth has attained unprecedented credibility during the past year. It was given credence in British/Canadian and French television documentaries, a book published in Spain, a paper by the director of the World Organization Against Torture, a resolution by the European Parliament, numerous press articles, and the January 14, 1994 report of the U.N. Special Rapporteur on the Sale of Children, Child Prostitution, and Child Pornography.

Leventhal's understanding of the tales as modern urban legends is thus emphasized, even though his summary suggests the prominent position of organ theft tales in a variety of contexts. Organ theft is linked to different forms of exploitation, prominently to the sexual abuse of children. Furthermore, he speaks of "unprecedented credibility" and thereby also stresses the narrative's significance beyond the fictional realm. The sheer number of references used in the report further underlines the pervasiveness of the speculative mode of organ theft narratives. Positioning the novel in the discussion on organ theft of the 1990s allows for the perception of a shared speculative element in these engagements and enables a shift in perspective. Particularly interesting is the change in geographical location as Bedford's "centre of the civilized world" (Anderson 14) appears as a parodic version of the heart of the Commonwealth.

In this chapter, I want to argue for the subversive potential of *The Scavenger's Tale* by analyzing its depiction of bodies as bioresource among two main axes,

42 Brunvand explains that the narrative is often concerned with "a group of young men who went to New York City for a weekend of fun" (149).

namely class and dis/ability. Both are used to strategically differentiate between people and to ultimately Other those that are made expendable as a resource for organs. By interrelating these readings of the human body with the work's depiction of the medical practice as a deindividualized and deindividualizing force, I conclude that structural Othering of groups functions alongside markers of sector, income, and dis/ability which allows for the reconceptualization of their tissues as transplantable.

6.3.1 Transplantation and Class

As part of London's poor population, Bedford and his family's value for society is defined by their bodies, rather than by their labor. Sawers claims: "The economic worth of the organs of many of the inhabitants of Sector One exceeds their potential labour and consumer value" (176). Given the family's impoverished situation, they cannot participate in the consumer market, instead their bodies are commodified. Aitken et al. note: "The Sector's most valuable assets are its citizens, or more accurately its impoverished and powerless inhabitants, whose bodies can be harvested for parts for the wealthy and unwell citizens of other Sectors and nations" (23). The donor body, as is the case in Padmanabhan's *Harvest* and Hopkinson's *Brown Girl in the Ring*, is geographically and politically distanced from the recipient's body and reduced to its objectivized, mechanized functions.

Comparable to previous examples, medical care is tied to class and status in Bedford's future. Interestingly, the classification is not presented as merely an external factor, rather, Bedford has internalized the hierarchical structuring and does not question the fact that neither he nor his family qualify for medical care. Ma Peddle, however, is aware of the city's transplant proceedings and expresses a certain ignorance towards its ties to class and disenfranchisement:

> 'Course I know about them transplantations. Nothing new. They been doing them darn things long before any Great Conflagration. And a great benefit to mankind too. I wouldn't say no to a couple of peepers myself. And a nice new ticker for Dee. I'm proud of our Sector for what it done for the sick. But we ain't none of us surgeons so there ain't no sense in meddling in medical things that don't concern us. (66)

Ma's statement oscillates between the horror that transplantation represents for the people of her social standing and those benefitting from the practice. On the one hand, she refers to the surgeries as "darn things," on the other hand, they are "a great benefit to mankind." Yet both Ma and Bedford are aware of the impossibility of them actually benefitting from the practice, hereby, they are somewhat exempt from the universal reading of "mankind" Ma employs. Organs hereby

establish difference between social classes and Sawers argues that "access to organs has become a moral right for the wealthy" (171). The poor, as Ma Peddle illustrates, have come to believe in the righteousness of this separation. Aitken et al. therefore argue that "[t]hrough a combination of state education and state-administered deterrents, he [Bedford] has been thoroughly conditioned to adhere to the rules of appropriate conduct" (23). The classifications, then, not only present an individual's status, but are decisive for their self-conception.

Yet transplantation is not only tied to matters of class via the lower class' non-qualification for the procedure as the case of Mr. Winkins, a janitor at Bedford's school, underlines. After Mr. Winkins passes away, Bedford learns that his organs have been given up for transplantation. In an address to the students, the school's director emphasizes that Mr. Winkins's organs have been distributed and that they benefit society with "[t]he two corneas from his eyes, so that two sightless citizens of worth will shortly be enabled to view afresh our wondrous world" (26–27). While Bedford longs for new eyes for Ma Peddle, Mr. Winkins's corneas are transplanted to "citizens of worth", a phrase that clearly underlines socio-political difference. The director explains that the janitor's organs saved members of Council who suffer from renal failure. He constantly underscores the janitor's lower-class status and describes him as a man of "unstinting generosity even though he was from one of the Sector's lower Castes" (26) and speaks of "a noble gesture of our humble janitor" (27). The employed language establishes difference by characterizing and reducing individuals to their occupation. Thus, the death of a janitor becomes an opportunity for a councilmember. This discrepancy is further emphasized when Bedford overhears his teachers talking about the janitor's passing: "And with seven councillors benefiting, it's a blessing in disguise. These simple-minded Low-Castes are a bit like animals. They know when their time's come" (28). Difference between humans is reframed as difference between species and extensive structural brutality is legitimatized. Mr. Winkins's passing underlines that the lower class is stripped of their humanity and is victimized through a reductionist gaze that limits their worth to how they might benefit those deemed worthy by society.

Moreover, Mr. Winkins's "donation" (the upcoming developments of the novel clearly indicate that Winkins's death is part of the commercial treatment of lower-class bodies) exemplifies that Bedford himself has been influenced to perceive of bodies as structurally entangled in class relations. Bedford, while learning where Mr. Winkins's organs have gone, wonders what might have become of the janitor's skin: "That's what we've been taught to think. Waste not, want not. Wastefulness is the Action of the Selfish" (27). Bedford himself is aware that he has been "taught to think" in a particular way and that his approach to deceased bodies has been impacted by his surroundings. Aitken et al. use the Foucauldian term "docile

bodies" and explain that in the novel education is used to form "individuals so thoroughly subjected to state ideologies that they are powerless against social engineering, control and manipulation" (22). The body becomes societal property: To Bedford the possibility to decide against donation appears inherently selfish, a waste in the eyes of society. By dying, the subject body becomes a communal good whose rightful owner is society.

Despite what he has "been taught to think," however, Bedford feels unable to utterly separate the deceased janitor from his body. The struggle to distance the individual Mr. Winkins from his tissues is exemplarily emphasized in Bedford's musings about the janitor's face: "I found myself laughing. That worn-out face would look so funny fitted to a young person. The laugh turned to a choke" (27). Face-transplantation marks a turning point: The fact that Mr. Winkins's aged face, a face that is affected by the years this specific human has lived, could signify someone else emphasizes the uncertainty created by transplantation and its impact on the construction of individual bodies. With the distribution of his face and Bedford's laughter turning into choking, Mr. Winkins has been wiped from the earth. This framing of donation as an obliterating force is further underlined when Bedford explains: "Yesterday, he'd been somebody. Now he was nothing" (28). Clearly, Bedford laments the janitor's passing, however, his insistence on "nothing" gains further significance in the framework of organ harvesting and his musing about Mr. Winkins's face. It seems that transplantation practice, by impacting the janitor's physical integrity, shapes Bedford's mourning and complicates notions of the subject body.

The complex entanglements of Mr. Winkins's organ donation are further discussed in relation to ownership of the body. When Bedford is forced to explain what has happened to Mr. Winkins to his brother Rah and his sister Dee, Rah alternately chants "dead" and "mine" (30). Bedford clarifies:

> "Yes, Rah, Mr Winkins is dead. But no, he isn't yours. He doesn't belong to anyone."
> Though perhaps he did belong to someone? By now, the seven donated parts of him were already functioning away inside seven powerful councillors. (30)

The seemingly inseperable tie between individuals and their bodies is renegotiated when Bedford wonders whether the council members who have incorporated Mr. Winkins's organs have also claimed ownership of himself. Even though Bedford openly insists on Mr. Winkins's freedom as an individual, he internally questions just how the distribution of the janitor's organs might affect claims on his body. It is particularly noteworthy that he mentions the recipients' occupations in this context and refers to them as "powerful." Thereby, the difference in status between the donor and the recipient is emphasized – a distinction that grants particular

relevance to questions of ownership and control. Moreover, Bedford relates to the body parts from a mechanized point of view, as they "function away" in other individuals. Even though Bedford has internalized a mechanistic view on the body and even though he expresses that the individual Mr. Winkins has passed, considering the janitor's fragmented body complicates this perspective.

The interconnections between transplant practices, power structures and disenfranchised bodies are further navigated in the case of Rah's Man, who forces Bedford to pay attention to the illegal transplantations happening in his city. When Bedford, Dee and Rah discover an almost dead man near the Thames, Bedford soon realizes the source of the man's sickness: He has only one kidney and a vicious red scar on his side. Bedford reacts rather brutally to the discovery: "I was angry. 'You sold it, didn't you? You're disgusting! Worse than filth. I hate creeps like you. I wish we'd never brought you here!' I couldn't stop myself from kicking him hard" (45). Bedford's intense reaction underlines his naïve stance: He believes that Rah's Man has deliberately sold his kidney and denies the possibility of organ theft. At the same time, his emotional backlash indicates the unquestioned worth he assigns to physical integrity, Bedford might hunt through trash but selling an organ remains unthinkable. Hereby, he establishes his certainty that "all people, including Rah's Man, have self-ownership over their bodies, a liberal notion of self-possession and autonomy which includes dignity" (177). Encountering Rah's Man, then, forces him to reconceptualize London as a place "where citizens are forced to serve the tourists' demands for organs, regardless of life or death" as Sawers explains (176). The difference between selling and stealing is highlighted: Selling the organ appears disgusting to Bedford, yet it still relies on the basis of personal ownership. Accepting organ theft in his own city, however, redefines the bodies of himself and his family as an objectifiable resoure.

As Bedford attempts to deny Rah's Man's claims of organ theft, he tries to hold on to his version of London and his concepts of ownership of his body. Rah's Man attempts to establish that his organ was stolen from him: "'No!' he said. 'I did not sell. This part was stolen by thieves in clean uniform. I am not a fool. I am *victim.*'" (45, my emphasis). Rah's Man underscores the differentiation between selling organs and having them stolen: While the prior would make him a "fool" the latter makes him a "victim." Commodification of the body is thereby described as a well-known practice, a practice both Bedford and the stranger are aware of. Both of them express their rejection of the trade yet present different stances: To Bedford, it appears disgusting, to Rah's Man, it is foolish. Here, Rah's Man also introduces medical professionals to the narrative, they are "thieves in clean uniform," set apart from their grimy surroundings, their uniform camouflage their actual occupation. Given his insistence on organ theft, and his waking up without knowledge of what has happened, Rah's Man's tale resonates with kidney heist narratives. Fit-

tingly, Campion-Vincent argues that the medical profession tends to play an important role in these narratives: "Often the elegantly sutured scar on the victim's back testifies to the intervention by highly trained physicians" ("Organ Theft Narratives" 3). The novel's – and organ theft narratives' – unsettling potential, then, also derives from this opposition between medical professionalism and organ theft, a connection that resonates with both *Brown Girl in the Ring* and *Harvest.*

6.3.2 Transplantation and Disability

Bedford's (false) sense of security already introduces a decisive difference between himself and his family: While he is rated as High Intelligence Quotient, his family have disabilities and are situated in a more liminal position. In the novel's beginning, Bedford establishes Dee's vulnerability: "She [Ma Peddle] wasn't to know that, for a girl like Dee, there wasn't any place that was safe from harm, not in City Sector One, anyhow" (3). While Bedford himself roams the streets, he perceives of his sister as being unsafe in London, ultimately, she is inhabiting a different space than her brother. As Sawers argues: "When Bedford asserts his physical and intellectual normality and implied superiority, he also assumes that he is protected from the kind of injustices that his siblings are exposed to" (176). The culturally produced category of disability, then, is linked to vulnerability and creates difference between Bedford and his siblings. Bedford is well-aware that his brothers and sisters' difference relies on societal framing and production. When the school is turned into an IYSRAC, an "Infant and Youth Special Re-Assessment Centre", Bedford remarks in hindsight: "That word 'special' I should've watched out for. Anything special's bound to start smelling bad before long" (48). "Special" becomes a denominator for difference, for a status as Other and the renaming of the school indicates the impact of terminology on processes of meaning-making. As Irving Kenneth Zola, prominent scholar in the field of disability studies, remarks, "[b]ecause someone has been labelled ill, all their activity and beliefs – past, present and future – become related to and explainable in terms of their illness" (168). The reduction of individuals to what they have been diagnosed with or labelled as, Zola argues, mutes them in social interactions: "Once this occurs, society can deny the validity of anything which they might say, do, or stand for" (168). With regard to Bedford's future, the discursive marker "special" allows for the assigned group's later exploitation as biomaterial: It is the framing of "Dysfunc" that facilitates their structural disenfranchisement.

Here, engaging with organ transplantation in the novel is inseperably tied to ist depiction and construction of its characters' dis/abilities. In 1987, and around the time that disability studies were emerging as a field of scholarly interest, Paul Ab-

berley argues that engaging with "the social origin of impairment . . . does not deny the significance of germs, genes, and trauma, but rather points out that their effects are only ever apparent in a real social and historical context, whose nature is determined by a complex interaction of material and non-material factors" (12). Gareth Williams thus summarizes that "there are multiple ontologies of disability" (129) and presents disability as pertaining to both the individual and their social contexts. Opening *The Routledge Handbook of Disability Arts, Culture and Media*, Bree Hadley and Donna McDonald emphasize how artistic engagement impacts understandings of disability:

> The way we see, speak, and think about disability – in real life, and in fictionalised representations of real life in the arts, the media, and popular entertainment – defines disabled identities, which in turn defines disabled people's access to agency, authority, and power in society. (1)

Hadley and McDonald underscore that formative narratives shape the lives of people with disabilities. The connection to *The Scavenger's Tale* appears obvious: Bedford's future is governed by the sector-system and framing people with disabilities as Other allows for their dehumanized treatment. The social construction of these markers is repeatedly emphasized and the label "Dysfunc" is inseperably tied to structural disenfranchisement and the production of expendable bodies.

The segmentation of citizens and the production of an expendable group is presented as a means to cater market-needs and to financially benefit specific participants of the economy. The possibility to transplant and the related opportunity to sell tissue appears as a corruptive force, as the case of Bedford's acquaintance Callam, who has six toes, suggests. To his father, the sixth toe and the entailed label of "Dsyfunc" turns his son into commodifiable asset: "Dad said why should any Sector get the benefit when he was the one who'd worked his back of rearing me . . . So mean he wouldn't sell even a square centimeter of skin till he'd found a bidder for the lot. All at once. Worth more" (94). The external process of tagging and tissue-matching transforms Callam's role: It is not the existence of Callam's toe, since the father knew of its existence, but the state's reading of it that turns Callam into biomaterial. As Sawers explains, "the identities of the donors in the dystopian settings of the novels have been discursively managed so that they can be conceptualised as less-than-human, or other-than-human" (172). Strikingly, Callam himself cannot help but frame his body in commodifiable terms and speaks of "skin," "the lot" and "all at once" without referencing his personal claim on said tissue. The example of Callam establishes the creation of different classes, classes that are perceived as Other and *less*, which forms the basis for the brutal practices of abduction and organ trade presented in the novel.

In contrast to Callam's shame, Dee, Bedford's sister, is proud of who she is, despite being labeled as "Dysfunc". After Bedford asks her whether she would like to change anything about herself, she answers: 'Nope. ' She was beginning to giggle. She crinkled up her slanty eyes. 'You silly-billy Bedford boy. I me. I like me. I Dee Peddle' (54). Rather than relating to her social status, she employs her name and identifies herself beyond any degrading label. Bedford follows this reading and describes his favorite sister in a loving way that juxtaposes medical depictions: "Her slanting piggy eyes were peeking out, shiny bright, beneath the heavy folds of the upper lids. They're epicanthal. It says so on her ID, under 'distinguishing features'" (7). Bedford's perception of his sister deviates from the technical language used in her passport. He knows that his sister is witty, and he perceives of her eyes as "bright", rather than reducing them to a symptom of her Down's syndrome. By developing his own vocabulary, he forms an opposing narrative to official depictions. He further explains: "Her fleshy drooping lips lifted in a pleading smile. She looks like a short elf, and I really rate her. I'll do anything for her" (7). To Bedford, Dee looks like an elf, a magical creature defying and surpassing any norms of human beauty or aesthetics. Thereby, markers that Bedford's society might relate to her status as "Dysfunc" are portrayed as assets and present integral and valuable aspects of her person. For the first part of the novel, Bedford follows his doctrine of "do[ing] anything for her" and serves as her guardian and parent-surrogate in the outside world. Sawers concludes that "[b]esides physically caring for her, what he experiences with Dee contradicts how dominant discourses define her" (177). This opposition between medical explanation and personal lived experience underlines the deindividualizing force of medical practice in the novel and introduces a person's value beyond state-sanctioned categories.

Bedford and Dee's relationship thus promises to circumvent official discourse and presents hope against the brutalizing forces at play in London. However, this hope is annihilated when Bedford uses Dee as a distraction to flee from the CHAWMs and leaves his sister to be harvested for organs. When the siblings are caught by the medical personnel, Bedford finds himself in an utterly powerless situation: "I was a little louse with six broken legs wriggling on a comb" (78). Bedford has become the insect he used to remove from his sister's hair: His role as Dee's guardian and caregiver is diminished by the Monitors' presence. Facing the Monitors and their unyielding, friendly violence, he rashly decides to sacrifice his sister:

> I pushed Dee towards them. May her name be glorified forever.
> She seemed to be rooted to the spot. I had to grab her round her middle and, as though she was the human cannonball and I was the dynamite, I flung her with all my force, right at them.
> They're not expecting it. All three fall into a thrashing tangle.
> I turn. Heart in mouth, I flee. (79)

As Bedford flees "heart in mouth," the displacement of organs is metaphorically employed and expresses not only his terror but seals his final understanding of what is happening in London. The ironic remark that Dee will have "her name glorified forever" refers to the CHAWM's promise to Bedford to do just that by organ donation. Yet after Bedford abandons his sister, he never speaks her name again and thereby subverts the CHAWM's promise. The scene is characterized by physical brutality: Bedford becomes "dynamite," while Dee has no choice but to become his passive "cannonball." Bedford's fear turns Dee from his beloved sister into an object, a means to an end. Bedford thereby appropriates similar strategies of Othering as the governmental structures of Dysfuncs and High Quotients: Dee is no longer human and has ceased to deserve human treatment. Like the CHAWMs, who do not anticipate Bedford's rash action, the reader is surprised by his sudden choice. Fear, induced by those in power, brings Bedford to let go of his most-valued personal relation. The epiphanic quality of his decision is underlined in the shift in tense: Moving from past to present tense, the following hunt by the CHAWMs is narrated with utter immediacy. Thereby, the events might conjure estrangement between narrator and his audience, the mode of telling this story, however, enforces their intimacy.

Bedford's brutal abandonment of Dee clearly opposes the tendency of young adult fiction to end on a positive note and denies the reader their "kernel of hope" (Belbin 137). Rather than changing societal structures for the better, the narrator becomes part of a suppressive system, thus complicating young readers' identification with Bedford. Aitken et al. fittingly argue that his behavior and utterances "disrup[t] the narrative's strategy of positioning readers to align themselves with Bedford and achiev[e] a distancing effect, inviting reflection on the ethical implications of the episode and on the social and political forces which intersect in the struggle" (24). The emphasis on social and political impact on individual behavior questions individual decision-making in moments of extreme terror. The scene also reminisces George Orwell's *1984* (1949) when Winston, fearing the rats, gives up the fight for his subversive relationship with Julia. Bedford's betrayal establishes the end of childhood's faith in safety and exceptionalism and constitutes the irrevocable disruption of his family.

The betrayal of Dee thus presents a turning point and also shapes the ways that Bedford speaks about his sister, prominently, he reverts to deindividualized and deprecating language that is tied to medical practice. Even before pushing her towards the CHAWMs, he does not use Dee's name anymore and adopts a more distanced and diminishing vocabulary, he calls her a "pathetic creature" and a "dappy mongol" (79). The individualizing impact of referring to her by her name, a name she previously proudly claimed herself, becomes impossible once he has decided to treat her according to society's deindividualizing structures. Aitk-

en et al. state: "The use of the terms 'Dysfunc' and 'dappy Mongol' as signifiers for 'Dee' enforce the idea that 'Dysfunc', 'dappy Mongol' and 'little DJLDS' are equally ugly manifestations of the principle that because of her extra chromosome Dee is rendered abnormal and hence expendable" (24). Drawing from this reading, it is noteworthy that Bedford denies to use Dee's name after he abandons her and even opts to refer to her by her assigned number: "4590BN7888MNS349/B was never like these boys. She was High Grade. She could speak, follow instructions, sing, dress herself, tell shaggy dog stories" (96). Bedford's attempts to repress memories of Dee become undeniable: While using the sequence reduces Dee to external and harmful standards and serves as a means to create distance, it also emphasizes that he knows it by heart, that it was him who took care of her official business. In order for Bedford to cope with abandoning his sister, Dee needs to become both: a specific number and an unspecified "Dysfunc."

How, then, does the portrayal of people with disability and the marginalization they experience correspond with transplantation practices in the novel? Comparable to the use of class, disability becomes a decisive factor in the creation of expandable individuals, members of society who are believed to be more beneficial as biomatter than as persons. The impact of social structures, particularly presented via language, is repeatedly emphasized as Bedford has to neglect the framing of Dee as an individual in order to sacrifice her to the medical profession. *The Scavenger's Tale* does not portray hospital scenes or the dismemberment of any of its protagonists, instead it focuses on the effects of a lucrative organ trade beyond medical settings. In a future London in which resources are scarce, tissue not only becomes a valuable commodity, the possibility to transplant also becomes a corruptive force. The novel thereby introduces (linguistic) strategies of Othering and ties them into the creation of a class that is perceived as less, ultimately facilitating the structural reconceptualization of their bodily tissues. Once Callam has been reduced to his sixth toe, his father merely perceives of him as an expendable commodity, once Bedford has abandoned his sister, he needs to frame her as a representative of a faceless group. Thereby, I derive that transplantation practice remains an unknowable force throughout the narrative and can only be experienced in its effect on social structures and individual relationships.

6.3.3 Transplantation and the Medical Profession

The previous subchapters have underlined that transplantation majorly effects the commodifiablility of the disenfranchised body and has depicted the possibility to sell organs as an estranging force that relies on the creation of difference – along the lines of income and dis/ability – within London's society. Transplantation

itself, however, remains in the shadows: Its workings are never revealed nor are the structures of medical industry further explored. This ultimately unknowable nature of transplant medicine is further underlined in its personnel: the CHAWMs (short for Community Health and Welfare Monitors). To Bedford, these medical representatives, also referred to as Monitors, all look and act alike. The importance of uniforms in this speculative example ties into their role for group affiliation since "[i]n the National Health Service (NHS), uniforms are the most visible symbolic manifestation of a professional or occupational group, as well as being a way of delineating professional boundaries and demonstrating occupational hierarchies" (Timmons and East 1035). The novel engages heavily in the denominating quality of uniforms, however, it does not distinguish between different hierarchical structures among the CHAWMs, who are presented as a single homogenous group without individual rank or capacity. Thereby, the CHAWMs are linked to de-individualization both by their indistinguishable persona and by their behavior towards those they are abducting and reducing to biomatter.

The CHAWMs' cleanliness in the grime of London and their seeming care for its inhabitants thus sets them apart from their surroundings and hide their true occupation. To Bedford, the Monitors seem untouchable by their surroundings: "CHAW Monitors manage to keep so clean, even when they're out on the streets seeing to old drunks in the gutter" (51). The professional unaffectedness also recurs to the ideal of the detached physician, since "in many Western countries, there is a tendency to favour the technically skilful, rational, and emotionally detached physician rather than that of the compassionate or empathetic doctor" (Kerasidou and Horn 2). The CHAWMs tie into this ideal of detachment, at the same time, they present themselves as harmless, a façade that soon begins to erode. Before Rah is abducted, Bedford narrates:

> I was thinking it was time to push off home when a CHAW Monitor turned up in her neat little car. Rah was squirting water all over the place. I thought she'd call a Warden to stop. But instead she joined in. 'Splendid fun!' She said with a cheery smile as Rah drenched her uniform. (71)

While previously Bedford commented on their cleanliness in places of decay, the CHAWM surprisingly interacts with her surroundings. As her uniform is drenched, the Monitor seemingly abandons her official role. Bedford's exaggerated references to her harmlessness, such as "her neat little car" and her "cheery smile," underline the staged nature of the encounter and already allude to the fact that Bedford has grown to be wary of the CHAWMs' innocuous appearance. The knowledge passed on by Rah's Man and his awareness of organ harvesting have shifted his approach. He asserts: "More fool me for thinking I knew better than Dee what

donor-seekers looked like. Of course they aren't wicked men with mean evil eyes. They can just as easily look like kindly welfare workers with sky-coloured eyes and soft silky manners" (71). Bedford frames the CHAWMs as "donor-seekers" and thereby clearly circumvents the voluntary act integral to donation. His coming-of-age is accompanied by the brutal realization that "evil" cannot be linked to specific appearance or gender. Thereby, the CHAWMs also circumvent male dominance in the medical practice: The majority of their representatives appear as docile, blue-eyed young women. The image of professionalism and a benign nature mask their brutality – a realization that turns Bedford into a critical observer of medical practice. Similar to other examples of speculative fiction examined in this study, the novel adds to the discussion by suggesting the corruptibility of the authoritative practice of medicine since markers of medical professionalism – uniform, cleanliness and kind address – become a means of disguise. The CHAWMs' real occupation (finding suitable, albeit unwilling donors) is hidden behind these signifiers. While their actions are thus tied to death, their self-presentation is tied to care. Thereby, the CHAWMs are situated in-between death and function care and as an almost satiric mirror of post-mortem transplantation's complex interrelation with life and death.

The CHAWMs disguise, however, is increasingly abandoned in the course of the novel. After losing his brother Rah to the Monitor, Bedford returns home only to find a CHAWM about to abduct his sister Netta. In interacting with the unyielding Ma Peddle, the Monitor soon abandons her pretenses and forcefully removes the child from her mother's embrace. The physical brutality of this encounter vastly deviates from the previous pattern of performed politeness. As encounters with the CHAWMs escalate, hardly any effort is made to hide the exploitation of people with disabilities. This transition into open hostility is most intensely presented when the Monitors take Dee. At first, the CHAWM is presented as an interchangeable representative of her profession as she calls out: "'Hi there, my dears.' The voice was light and unthreatening" (77). The Monitor appears in the disguise of a caring medical professional. First, she "held out a gentle hand to her [Dee]. It was pale, smooth and hairless. She had her latex gloves on" (77). At first glance, Bedford perceives of the gloves' surface as the Monitor's hairless skin – she has merged with her medical tools. The inability to separate between the CHAWM and her uniform is further underlined: "When someone's wearing a mask to prevent the spread of disease, you can't see their lips, but you can still see the shape of the mouth moving" (77). Yet another layer is added to the disguise of professionalism which literally becomes a mask. Bedford, however, whose experiences have taught him not to trust appearances, sees behind it: He can see her mouth moving and knows that something is hiding behind the professional appeal. Still, despite his awareness of the Monitor's intent, Bedford still tries to reason

with her when she attempts to take him with her. He shies away from the hand on his shoulder, placed there "with friendly authority" and declares: "My family's opted out" (78), even though he has just witnessed how his sister Netta was taken. His insistence on choice ties into contemporary discussions on donation, since "[i]n the USA and the U.K. at present [1995], public policy is tipped towards voluntarism, recognising the legal status of donor cards, and rights of the next of kin to make decisions on behalf of deceased relatives" (Randhawa 247). Bedford's insistence on the voluntary nature of donation furthermore reveals his utter disbelief in the possibility of his abduction. Again, he has to learn that he is not exempt from the CHAWMs' treatment and that neither his intelligence nor his lack in consent can stop the Monitors. The medical personnel are thus granted absolute power and govern not only the abuse of marginalized people but the utter abandonment of previously established rules of medical conduct.

The skepticism toward medical professionals in general and transplant practices in particular also resonates with the Alder Hey organ scandal in which organs of deceased children were retained without establishing the parents' consent. The case was uncovered in 1999 in the context of an inquiry into an increase in children's deaths at the Infirmary in Bristol. The investigation was led by Ian Kennedy, who concluded that:

> All of these flaws, taken together, led to around one-third of all the children who underwent open-heart surgery receiving less than adequate care. More children died than might have been expected in a typical PCS unit. In the period from 1991 to 1995 between 30 and 35 more children under 1 died after open-heart surgery in the Bristol Unit than might be expected had the Unit been typical of other PCS units in England at the time. (2)

Unsurprisingly, the case of increased mortality in Bristol also received major public attention, and *The Guardian* explains in 2002 with reference to Kennedy's report: "It lifted the lid on an 'old boy's' culture among doctors; patients being left in the dark about their treatment; a lax approach to clinical safety; low priority given to children's services; secrecy about doctor's performance, and a lack of external monitoring of NHS performance" (Butler). This first scandal, then, is related to a gap in knowledge and an accompanying neglect of supervision. When the retaining of organs at Alder Hey Hospital in Liverpool came to light in the course of the inquiry in the Bristol case, a comparable narrative of unknowing patients developed. The events were investigated in *The Royal Liverpool Children's Inquiry Report* which ties into previous practices of retaining organs of deceased children in the U.K. The report explains: "In some cases consent has not been obtained at all, in others consent forms have been signed but without the relatives fully understanding what was involved" (Redfern 4). This lack in consent and the vanishing body parts of deceased children triggered media engagement, *The Economist* titled

an article "The Return of the Bodysnatchers" and thus relates back to practices also commonly linked to Shelley's major contribution to the speculative field, *Frankenstein* (Marshall 57). The combination of children's bodies unknowingly vanishing in British hospitals and the Victorian practice of bodysnatching grant an uncanny tone to the Alder Hey scandal and emphasize its speculative potential. The *Archives of Disease in Childhood* summarize that "Alder Hey represents the culmination and, perhaps, the final demise of what we have thought of as benign medical paternalism, intended to protect patients and relatives from distressing details" (D. Hall 455). The statement frames the scandal as the final point of a general trend, namely of keeping patients uninformed for their own benefit.

By positioning Anderson's novels within this framework of aloof medical practice, the speculative potential of understanding medicine as ultimately unknowable is revealed. Given that the scandal revealed a tendency to deliberately keep patients unknowing, it can also be perceived as benefitting speculative approaches to medicine It opened blank spaces to be filled with narrative and meaning. I argue for the realm of the unknown as a basis for speculative engagements as it offers a feeding ground for wondering "what if …?". This notion also applies to *The Scavenger's Tale* in which the medical profession is depicted as utterly unknowable and in which hospitals or other spaces of medical treatment remain absent from the narrative. Even though Anderson's text, the inquiry into an increased mortality rate in Bristol and the Alder Hey organ scandal differ vastly in setting and occurred events, they reveal common elements of speculative engagement and public representations. In these cases, both fictional and devastingly non-fictional, the vanishing of children's bodies is prominently related to power structures based on knowledge. Anderson's text navigates these ties and further questions whether the bodies of those missing can be disentangled from their social status. Hereby, the text draws from the "symbolic truth" that organ theft narratives examine (Campion-Vincent, "Organ Theft Narratives" 32) as well as from the tissue-related scandals of its time and presents the cultural production of tissue – its inseparable ties to London's disenfranchised individuals – as an underlying force in transplant proceedings.

This analysis of *The Scavenger's Tale* thus shows that the novel manages to present the possibility of organ transplantation as a corruptive force without portraying a single surgery. Rather than focusing on bloody depictions of transplanted organs, the horror created in the novel is rooted in a medical practice which might remain ultimately unknown, yet which is powerful enough to structurally disenfranchise and Other London's inhabitants. Fittingly, it is not Rah's Man's wound that terrifies Bedford, it is the revelation that his organ was stolen that remains deeply upsetting. Even though Bedford's siblings disappear from the narrative after their abduction, the system's ruthless exploitation of their young bodies is

established by their absence. The fact that this exploitation takes place in London, Bedford's "centre of the civilized world," gains particular significance: Rather than reiterating contemporary realities of economic disparities between Global South and Global North, the novel uses speculative techniques to suggest their existence in British readers' lived experience. Like Bedford, the young British audience are invited to look for hidden strategies of exploitation at place in their own version of London.

In conclusion, this chapter on *Harvest*, *Brown Girl in the Ring* and *The Scavenger's Tale* has shown that speculation in the fictional realm, be it in the form of the discussed novels or in organ theft narratives, reads organ transplantation in relation to possible disenfranchisement. Hereby, I understand these texts as producing counternarratives to a story of organ transplantation as solely benefitting global benefit and progress. Rather, by highlighting different lines of demarcation, they present bodily tissues as intricately tied to social standing. This chapter therefore concludes that the three discussed works correlate socio-economic position, geographical location and the exploitability of (racialized) bodies. These texts differ vastly in place of production and genre and a new historicist approach has helped to position them in a network of other texts and narratives. Read in these frameworks, the texts exemplify skepticism towards transplantation's claim on overcoming external signifiers such as race, dis/ability or gender, instead presenting the entanglements of tissues and structural disenfranchisement. Each work portrays the creation of a specific group destined for organ donation and reduced to biomatter and thus imagines how marginalized groups are constructed and exploited to serve what is believed to be a greater social good. Hereby, these speculative examples also subvert the metanarrative of the 1990s as a decade in which the Internet and digital communication unified the world and insist on structural difference still impacting individual lives and bodies.

7 Stepping into the 21st Century and the Mass Market of Young Adult Fiction

The year 2000 is the epitome of "future." In 2015, a *Wired* article summarizes: "You have a computer in your pocket. Soon, you'll be able to buy your own jet pack. And you're already part owner of a trillion-dollar space agency that sends robots to far-away worlds. In short, you live in the future" (Stockton). The future is equated with the technological achievements that have made their way into everyday life in a post-millennial world. It is certainly no coincidence that *Star War*'s smuggler Han Solo and his co-pilot Chewbacca first appeared to fans in 1977 travelling the galaxy in the *Millennium Falcon*, thus tying the futuristic sounding "millennium" to the franchise's focus on fantasy and fairytale motifs. Fittingly, generations have speculated about a future that might follow the fateful year 2000. In 1968, Stanley Kubrick's space opera *2001: A Space Odyssey* sets its journey merely one year after the millennium, while Deckard hunts replicants in Ridley Scott's *Blade Runner* in 2019. The ties between the new millennium and technology become palpable: The 21st century becomes a realm that enables both dreams of technological progress – such as *Back to the Future II*'s (1989) depiction of flying skateboards in its imagined 2015 – as well as anxieties concerning the failing of said technology.[44] In the following, I want to further investigate the role of speculation in the first two decades of the 21st century[45] and trace the role that transplantation, now a well-established practice, may play in considering the future.

Technological development also majorly impacts everyday post-millennium culture and economy, a notion that becomes particularly clear in the case of entertainment media. The rise of online streaming, which allows for the uninterrupted consumption of content, decisively shaped the expansion of the serial format and "inspired widespread marathon-viewing sessions for the eighteen-to-thirty-four age demographic and among the younger audiences of Netflix" (Matrix 119). A shift from '90 television culture is obvious as online streaming often relies on

44 Particularly noteworthy are pre-millennial fears of grand-scale computer failures triggered by the so-called "Y2K Bug," which would lead to, "in more apocalyptic accounts, The End of The World As We Know It" (Quiggin 46).

45 Even though they have become part of present and past, my approach to the last two decades poses specific risks from a scholarly perspective because they have shaped my own upbringing. I am bearing in mind new historicism's assertion that "individual identity and its cultural milieu inhabit, reflect and define each other" (Tyson 280) and will attempt to overcome this obstacle by opting for a process similar to the previous chapters', while being aware of my own entanglements in the discussed timeframe.

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membership – similar to Ma's unhindered media-consumption in Padmanabhan's *Harvest* (see chapter 6.1.2). In an article titled "What is the Netflix Effect" *Forbes*'s Blake Morgan summarizes: "In 2018, the number of people who cut the cord increased by nearly 33 %, to 33 million people. At the same time, Netflix users are increasing" (B. Morgan). Yet tying declining audiences of cable TV to one single provider may seem short-sighted, since "[i]t is also impossible to pinpoint a specific organisation that drove this change: YouTube, the BBC, Hulu, iTunes, Netflix, as well as others, played a part" (Jenner 2). The example of on-demand streaming illustrates that technological progress, much like the development of televised culture itself, has reached the living room and actively impacts media consumption. The internet as an underlying framework has become intertwined with watching habits as smart TVs are commonly used to access online entertainment media.

These examples illustrate that the last two decades have been depicted as a technological utopia, however, following the millennium and humanity's arguable leap into the future, the attacks on the World Trade Center and the Pentagon in 2001 present a rupture and forced a renegotiation of American values and outlooks to the future. The attacks also brought diverging, conflicting traditions to the fore and triggered discussions about "what it means to be an American" (Schildkraut 512). In the U.S. and the Western world, the millennium thus started with a deeply unsettling, contingent event that also kindled anxieties about the future. Two months after the attacks, the *Scientific American* states: "On September 11th, American life changed. But most of us are still not sure what it changed into. As our definition of normal continues to evolve, though, one thing is clear: Americans are more anxious than ever" (Graham). The depicted uncertainty of "what it changed into," what the U.S. has become after the attacks, further underlines their impact on national identity. Furthermore, the future becomes a realm of uncertainty: As contingency has been experienced, certainty about the future can hardly be reached.

However, 9/11 would not remain the only major political development impacting readings of the future in the first decades of the 21st century. The presidency (2009 – 2017) of the first Black president, Barack Obama, also tied into a digitalization of politics, as his campaign prominently employed social media to reach younger voters.[46] This tendency was further developed by his predecessor Donald Trump, whose relationship with-and employment of the media have been much discussed.[47] Moreover, the economic crises of 2007 and 2008 impacted the U.S. par-

46 For further reference see James E. Katz, Michael Barris and Anshul Jain's *The Social Media President: Barack Obama and the Politics of Digital Engagement.*

47 For further reference see Pablo J. Boczkowski and Zizi Papacharissi's *Trump and the Media.*

ticularly in relation to planning for the future as "families and businesses across the United States looked at the crisis and stopped spending" (Swagel 8).

The significance of the future also becomes apparent in a heightened focus on environmental issues in which the exploitation of scarce resources has come under further scrutiny. As "Fridays for Future" already indicates, discussions about climate change are prominently directed towards days yet to come, suggesting that said future is at stake and that actions need to be taken now. In fact, the future-orientation of discussions on climate change is obvious and necessary: It is the actions' impact on the future, the way they might decelerate global warming in upcoming years that decides on their effectiveness. It becomes apparent that "[r]esponding to climate change is about adjusting to risks, either in reaction to or in anticipation of changes arising from changing weather and climate" (Adger et al. 112). Any reaction towards climate change, then, relates to both what has been experienced and what can only be anticipated. It seems that orientation towards the future proves inevitable in decades governed by uncertainties of possible ecological fallout.

Whereas the omnispresence of climate change may trigger anxious perspectives on the future, those invested in transplant practices tend to approach it confidently. Physicians had tended to argue for the practice's non-experimental status even earlier, consider Barnard claiming in 1969: "I'm not experimenting. I know what I can do. We've proved we can transplant a heart and make it work" (393). This certainty and faith gains further significance in the new millennium which looks back on an array of successful transplantations. Now, physicians establish the practice as non-experimental by distancing current research from previous endeavors. Black et al. explain in 2018: "Solid organ transplantation (SOT) has emerged from an *experimental* approach in the 20th century to now being an *established* and *practical* definitive treatment option for patients with end-organ dysfunction" (1, my emphasis). I perceive the shift from "experimental" to "established" as indicative of the practice's mature quality and accepted status. Thus, Black et al. conclude that "[t]he 21st century has ushered in a world of reliable and effective SOT as well as unconventional transplantation of other tissue such as upper extremity, uterus, larynx, and face" (3). As the 21st century "ushers" in a new world, it is presented as a threshold, boldly building on the previous century's foundations since "[t]oday, almost every organ can be transplanted" (Zuber et al. 26). These comments confidently frame the status quo and underscore the already established skill sets of transplantation in the medical realm.

In the realm of life writing, face-transplanting surgeon Maria Siemionow also argues for transplantation's accomplishments and its reliable quality. She explains in in her autobiography from 2009: "The technical and biological challenges have been met. Both may be improved as we move ahead, but at this moment in the

history of medicine, our technical skill and biological ability are more than sufficient" (101). Siemionow is aware that improvement might still be needed and alludes to possible future developments, yet, skills "are more than sufficient" and thus actually supersede the posed challenges. By that, Siemionow demonstrates the change from previous, more experimental approaches in transplant medicine. Further commenting on changes to medical practice and relating to unethical medical experiments of the 20th century, she writes: "There's to be no more: 'Let's try this and see what happens.' The days of conducting experiments simply to acquire knowledge that might or might not be practical are gone, and good riddance to them" (155). Siemionow's statement refers to medicine's ethical responsibilities both within and beyond the realm of organ transplantation. Experiments, she argues, can no longer be based on sheer speculation now but need to be based on studies anticipating their contribution. Siemionow illustrates a shifting perspective on medical experiments: Even though they are necessarily based on prognoses, their outcome needs to be "practical" rather than catering to the search for knowledge. Images of the 21st century as a break, a future in which the mistakes of the past have been sought to be corrected, then, are also featured in the medical realm. Furthermore, these examples position transplantation beyond the realm of experiments and add to a narrative of progress in which current medicine has developed beyond the need to speculate.

However, despite these assertions of transplantation passing the threshold, the practice still faces familiar obstacles in the new century. In fact, a study from 2018 suggests stagnation rather than a clear positive trend in long term survival rates (Rana and Godfrey 75). This trend opposes a supposed increase in survival rates, which predominantly bases on developments in short term survival rates (Rana and Godfrey 75). At the same time, transplantation still faces difficulties with respect to available organs and problems of immunosuppression. Black et al. conclude that "increasing donor demand with supply shortage, shifting eligibility and transplantation protocols, long-term graft survival, and immunosuppression-related complications are of major concern in the future of SOT" (9). Even though transplantation has supposedly left its experimental stages behind, concerns are still voiced about the practice's future. Particularly the aspect of "supply shortage" remains a recurring issue and has been framed as part of "major organ shortage crises" (Abouna 34). Given the number of waiting patients, strategies to overcome the shortage have been employed in the medical field and beyond. Morgan et al. speak of an "immediate need for increased numbers of people to declare a willingness to donate organs" ("Public Communication" 219), which also triggers campaigns and events, such as declaring April "National Donate Life Month" or the U.S. Transplant Games in July ("National Donation Events"). Legal changes to donor regulations have been investigated – for instance, a shift from opt-in to

opt-out was discussed in Germany in 2020.[48] In the biotechnological field, xeno-transplantation has received some coverage as has the creation of animal-human chimera. These considerations are also directed towards the future since "[i]f transplantation is to remain an effective treatment option, long-term management methods and approaches must continue to improve" (Rana and Godfrey 76). These findings still place transplantation's flawless functioning in the future and establish that it "must continue to improve", a stance that somewhat opposes Siemionow's assessment of the practice as a dependable form of treatment in the present. Whereas this need to improve still relies on the future as a space of development, Siemionow denies such a need: It thus becomes apparent that the future holds an ambiguous role for considering transplant practices as the implication of further improvement may also suggest a lack in dependability in the present.

Even more, as the need for donors might already suggest, transplantation's framing as non-experimental does not correspond with a perception of the practice as delivering standard procedures. Despite comments that speak to the reliable status of transplantation in the 21st century, the practice still tends to be perceived on the forefront of medical progress. As cardio surgeon Kathy Magliato explains in her 2010 autobiography:

> And although the first liver transplant was done in 1963, the first successful kidney transplant was in 1954, and the first pancreas was transplanted in 1966, it all felt brand-new to me. I guess I was just a wide-eyed junior resident caught up in the romance of transplantation. (65)

Magliato's reminiscence brings the divergence between personal account and medical history to the fore: Even though she is aware of the big "firsts" in the field, it remains new to her. At the same time, she emphasizes the special status of transplantation, its lure and the "romance" of it. Here, transplantation remains secluded from other fields of medicine: an almost mythical presence enchanting those dabbling in its still-developing procedures.

In the realm of openly speculative fiction, organ transplantation inspired a variety of texts in the last twenty years. Prominently, in 2005, Nobel-Prize winning author Kazuo Ishiguro's *Never Let Me Go* interrelates the bioethical discussions on cloning and transplantation and considers questions of autonomy in structurally disenfranchised positions. On a somewhat similar note, Swedish author Ninni Holmqvist describes the spatial segregation of single and childless adults above a certain age in *The Unit* (2006). In the YA publication *Stronger, Faster,*

48 For further reference on changes to legislature concerning organ donation in Germany, see "Gesetz zur Stärkung der Entscheidungsbereitschaft bei der Organspende" by the Bundesministerium für Gesundheit.

and More Beautiful (2018) Arwen Elys Dayton sketches a future which illustrates the long-lasting impact of biotechnological development and presents body modification as a long-term slippery slope. Also located in the field of YA, Métis-Canadian Cherie Dimaline's *The Marrow Thieves* won the Kirkus Prize after its publication in 2017 and navigates colonial practices in intersection with medical exploitation of minorities. As these examples illustrate, the first decades of the 21st century have brought forth an array of speculative engagements with transplantation, ranging from the pop cultural realm of YA fiction to laureate Kazuo Ishiguro.

In this final chapter of my analysis, I engage with the 21st century as the epitome of future which has seen a variety of developments – within the realm of technology, on the YA market and in the field of transplantation practice. Fittingly, a rich discussion of transplantation continued in the speculative realm and beyond. In the following, three works, all of which were marketed as young adult fiction, form the core of discussion. The chosen texts – Nancy Farmer's *The House of the Scorpion*, Neal Shusterman's *Unwind* quadrilogy, and Fred Venturini's *The Heart Does Not Grow Back* – serve to underline not only that bestselling novels position organ transplantation in dystopian futures but furthermore establish the fruitful and varied discussion offered by works published for adolescents. These novels are brought into conversation with several examples of life writing, prominently Kathy Magliato's *Heart Matters* (first published as *Healing Hearts: A Memoir of a Female Heart Surgeon* in 2010), Bud Shaw's *Last Night in the OR* (2015), and Maria Siemionow's *Face to Face* (2009). It appears noteworthy that the 21st century also saw the publication of autobiographies penned by female transplant surgeons that present a shifting perspective on the medical field. Magliato, for instance, remembers the sexual misconduct of her superiors and the particular struggles she encounters because of her gendered identity. Following my aim of bringing different forms of speculations into conversation, I argue for the surplus value added by the discussed speculative works and their interrelation of transplant practices with marginalization. As the young generation is exploited for their tissues, these examples offer a subversive reading of transplantation as contributing to global good. Thus, I show in this genre-crossing discussion that the speculative mode remains pervasive in depictions of transplantation even though these recent decades no longer position the practice in the experimental realm.

7.1 *The House of the Scorpion* by Nancy Farmer

When Matt Alacrán understands that he was not born like the people around him, he confirms what the reader has known all along: Matt is the clone of El Patrón,

leader of an opium empire. Nancy Farmer's *The House of the Scorpion* (2002) follows Matt's struggle to develop a sense of agency and identity even though his existence is inseparably tied to a single purpose: Should El Patrón fall ill and need an organ, Matt is the designated organ "donor." The Alacrán family strictly differentiates between Matt and themselves, a line of demarcation that is also based on their sheer power, ruthlessness and access to technology. Thereby, as a speculative work for young adults, the novel critically engages with the implementation of biotechnological advances in strategies of Othering. Kathleen Harris states in her review: "Nancy Farmer has created a frightening world in which human clones exist to serve a purpose – to either become slaves or organ donors for humans" (351). Similarly focusing on the matter of inequality, Erin T. Newcomb explains that "Matt, cloned as an instrument of another's will instead of a person in his own right, exists as part of a posthuman, subhuman class" (175). Matt's existence relies both on the technological feasibility that allows for cloning and on the ruthlessness of those in power to use organ transplantation as a means to achieve personal longevity.

The House of the Scorpion was published as part of a duology and was followed by *The Lord of Opium* in 2013. Both novels focalize Matt, with the first installment focusing on Matt's upbringing, realization of his status and final transgression from his assigned role as a resource for El Patrón. Matt's experience is situated in-between futuristic technological developments and nostalgic reminiscences of the past. Growing up in a simple shed in the fictional country of Opium, his foster-mother, Celia, works in the "Big House," a denominator that clearly resonates with America's history of slavery. The Big House itself is modelled to resemble mansions from the patriarch's youth and appears stuck in a luxurious past, featuring a "marble-walled entranceway and statues of fat babies" Farmer (61). The parallels to exploitative practices of the past are further underlined by El Patrón's work force. Opium is positioned between Átzlan, former Mexico, and the United States and El Patrón intercepts the stream of hopeful people crossing the border. By microchipping them, he turns them into "eejits," controllable entities forced to follow given commands. Clearly, the novel comments upon the role of immigrants in affluent countries and their workforce in low-paying lines of business – a comment that appears even more biting due to the novel's use of antebellum imagery. This intersection of different temporal signifiers also converges nostalgia and technological progress. Ryan Kerr argues with regards to Opium that "El Patron has frozen it in the time of his youth, making it a sick perversion of Eden" (111). Rather than representing biblical Eden as part of a natural order and sublime presence, El Patrón has created an artificial realm that appears as a timeless, isolated space. While the second novel is also mostly set in Opium, it focuses on Matt's role as the country's new leader and his attempts to liberate the technologically

enslaved group of eejits. In comparison to the first novel, transplantation is of little interest in the second installment. Therefore, this discussion focuses on *The House of the Scorpion* in which organ transplantation is represented as unspeakable, hidden and unknowable and thus appears as a looming threat.

Farmer's novel intersects two biotechnological developments: Cloning and organ transplantation. Thereby, it also resonates with other speculative texts, such as the already mentioned *Never Let Me Go* (2005), Michael Marshall Smith's *Spares* (1996), or the Hollywood Blockbuster *The Island* (2005). These texts discuss cloning and transplantation as interrelated and tie them to structural exploitation in the future. Fittingly, in 2016, twenty years after Dolly was born, health and science journalist Karen Weintraub explains in *Scientific American* that "[c]loning a mammal defied the scientific dogma of its time. The success led to dire and fantastic predictions: Humans would be cloned. Diseases would be prevented. Lost children rebirthed" (Weintraub). Even though Weintraub does not refer to a speculative text, speculation appears as a key ingredient in engagements with the practice as "dire and fantastic predictions" prevailed. Such predictions tended to be further fleshed out in works of speculative fiction given that Matt is the result of cloning, which "in the context of medicine, biotechnology and molecular biology means the production of entities, individuals and populations that are genetically identical or near identical with the original organism or part of an organism from which they are derived" (Häyry 16). The basic tenet of "sameness" is discussed both in the public sphere and in the realm of speculative fiction and Hilary S. Crew explains that "the fear of being a copy of an original and all that this means in terms of human dignity emerges as both a dominating issue in debates about human cloning and a significant theme in science fiction texts" (207). The addressed question of how copy and original would impact readings of individuality appears particularly prominent in discussions on cloning.[49] Aside from the clone themselves, discussion also follows the matter of production: Should researchers even be allowed to manipulate the human DNA – information metaphorically referred to as "The Book of Life" (Kay 504)? Hereby, one of the most fundamental issues of bioethics is reiterated, namely the inquiry into human responsibility and the possible limits of their interference.[50]

The discussion of *The House of the Scorpion* resonates with basic concerns of the cloning debate, prominently with the intersection of difference and sameness.

49 Elliott differentiates between "The Manufacturing Objection" and "The Nonuniqueness Objection" as counterarguments towards cloning. For further reference see Elliott, pp. 220 – 228.

50 The timeliness of this discussion is suggested by current debates on CRISPR-cas9, a cheap and effective means of gene editing, which "has rekindled the ethical debate about modifying the human germ line" (Caplan et al. 1421).

At the same time, it also examines the role of organ transplantation as a transgressive endeavor – considering, for instance, transplant surgeon Bud Shaw's musing on the "hubris" present in transplant proceedings (16). This chapter places specific emphasis on the intersection of Matt's role as a resource for organs, on the one, and as a clone, on the other hand. Tracing this intersection, I aim to establish the construction of Matt's role as a clone and as a donor, El Patrón's framing as an eternal recipient and lastly, transplantation as a transgressive force within the narrative. Thereby I want to show that Matt needs to be strategically framed as an Other in order to denote him as an exploitable resource.

7.1.1 The Subjugated Donor: Creating Difference

Farmer's novel depicts a world of strict hierarchical difference: The Alacrán family reign supreme and command the eejit population of mindless, controllable workers. As a clone, Matt finds himself in-between these strict lines – while he is the genetic copy of the country's most powerful person, he remains in a distinctly non-human, Othered space. As Kerr argues, "Matt occupies an uncanny space: he has the full consciousness and feeling of a human, yet is still defined as nonhuman by those around him" (100). It is fitting that Matt begins to realize that he inhabits a liminal position once he transitions from childhood to adolescence. His development into an individual who is aware of his status as posthuman can thus be related to Newcomb's conclusion of "the posthuman as a transitional period (like adolescence itself)" (176). Even though Matt is presented as different, his coming-of-age and accompanying feelings of estrangement appear familiar to the reader who encounters a victimized child and adolescent. Matt's moral judgement and self-reflection on faulty behavior, in particular, portray him as a feeling, thinking and developing individual (for instance, there is no reason to doubt Matt when he explains that he did not kill María's dog). Moreover, he is a gifted musician, a creative talent that characterizes him as a human. In her study on posthumanism in young adult fiction, Ostry explains with regard to another fine art: "Poetry is an art of emotion, sensitivity and individual perception: human, not mechanical, attributes" (236). Matt's musical talent, his ability to fall in love and fight for his friends, his anger, his dreams for a better future, his enjoyment of children's story and his pain all suggest the protagonist's humanity.

Yet as the reader is all too aware, in Opium, it is hierarchical structures that decide about individual status rather than individual capacities. Rather than seeing him as posthuman, the ruling family frames Matt as non-human, a reading he also adopts for himself. Prominently, he is related to the monstrous, for instance, he comments when not attending Emilia's wedding: "He didn't want anyone to

point at him and say, *What's* this? *Who brought* this *creature into a place for people?*" (Farmer 205, emphasis in original), and is likened to a werewolf by María (30). Aside from illustrating Matt's position as Other, these references also establish ties between transplant patients and the monstrous, a relation that was already addressed with reference to Frankenstein-imagery. At the same time, Matt's status is also navigated with reference to the animalistic, for instance, he understands that "the beast was himself" (37), and establishes himself as part of the food-chain when wondering: "*By the way, is anyone planning to cut me up into T-bone steaks?*" (194, emphasis in original) and thus also caters to metaphors of cannibalism in relation to transplantation.[51] The animal metaphor, however, is also used to overcome Matt's stigma, prominently by María, to whom Matt, with reference to Saint Francis, becomes "Brother Wolf" (158). Even though she still understands Matt in terms of the animalistic, María offers – in fact actively forms – a frame of reference in which the animal metaphor presents a chance for growth and personal development. As Newcomb argues, "[b]y drawing the comparison between 'Brother Wolf' and 'Brother Clone,' Maria works within the limitations of her culture's perspective on clones as 'bad animals' to secure an eternal place for Matt" (183). María's reading of Matt is thereby entangled both in the Alacrán family's understanding of him as an animal and an adjusted reading of biblical texts.

Yet the bible is not the only narrative frame that lends itself to readings of Matt, given that conceptualizing him as animal also bears legal significance. Matt learns that: "The law is very clear. All clones are classified as livestock because they're grown inside cows. Cows can't give birth to humans" (226). Here, the law provides an unambiguous interpretation of Matt's otherwise troubling and unsettling presence. This "clear[ness]" juxtaposes the novel's focalization which invites the reader to perceive of the protagonist as human. As a work for adolescents, the text thereby opens an area of conflict that not only encompasses Matt's relation to the Alacrán family and Opium but that implies that his very existence complicates perceptions of human creation. While the cyborg might reconfigure the distinction between the technological and the biological, this reference to the law indicates a blurring between species, more particularly, between human and animal. The framing clearly establishes an either/or position: Matt was carried by a cow – therefore he cannot be human. However, it is vital to note that the intersection of species has long been part of organ transplantation and also resonates with contemporary biotechnological developments. Historically, both living

51 In relation to the global organ market, Scheper-Hughes speaks of "divisible bodies in which detached organs emerge as market commodities, fetishized objects of desire and of consumption, a form of neo-cannibalism" ("Neo-Cannibalism" 83).

animals and animal cadavers have served as resource for organs (see also the discussion of *Brown Girl in the Ring* in the previous chapter). *The House of the Scorpion* does not focus on animal tissues in human bodies, rather the novel resonates with how an intersection of human and animal genomes may benefit transplant practices. In 2016, Jun Wu et al. reported on their experiments on the creation of rat-mouse chimera in *Cell* magazine and tied their study's aim into a shortage of transplantable organs: "Ultimately, these observations also raise the possibility of xeno-generating transplantable human tissues and organs towards addressing the worldwide shortage of organ donors" (484). Three years later, the ties between transplantation and chimerism were further underlined, when on July 26th, 2019, *Nature Magazine* published an article stating that "Japan approves first human-animal embryo experiments: *The research could eventually lead to new sources of organs for transplant, but ethical and technical hurdles need to be overcome*" (Cyranoski, emphasis in original). Even though human-animal hybrids have been created before,[52] a change in Japanese law in March of the same year allows for transplanting hybrid embryos into uteri and bringing them to term (Cyranoski). In previous experiments, as the *MIT Technology Review* reports, the development of a pancreas made of rat cells in a mouse had already been accomplished (Regalado). Following this reasoning, a genetically human organ, for instance, a pancreas, could be grown in an animal. This blurring of boundaries between species and particularly the growth of genetically different tissue within an animal exhibits striking parallels to Matt, the genetic clone of another human being, grown within a cow's uterus. Hereby, Matt's story also plays out the addressed "ethical and technical hurdles" in the speculative realm and focuses on how biotechnological developments correlate with cultural readings of the body.

Matt's structural disenfranchisement is thus linguistically and legally produced and is further developed in his treatment as an object. The reading of clones as objects is forcefully presented when the children encounter MacGregor's clone, who Matt calls "the thing on the bed" (121) but who to María appears as "a boy" (119). The clone oscillates between personhood and his status as an object, a tension that is further developed in the case of Matt. Most prominently, Matt has a tattoo on his foot declaring him to be "Property of the Alacrán Estate" (23) and which assigns his role as a commodity. The revelation of the tattoo establishes his difference since "[o]nly that marking differentiates him from the other children" (Newcomb 177) and Kerr adds: "Nobody can distinguish Matt as a clone unless they are told of his origin or they see the tattoo printed on his foot betraying

52 For a short introduction to the history of experimentation on human-animal hybrids see Bourret et al. 1–2.

an abnormal genesis" (103). Kerr establishes that the tattoo, as an external marker, serves as a shortcut clearly establishing Matt's "abnormal" origin. As part of his body, the tattoo already suggests that Matt's objectified status has become part of how he perceives of himself: "He understood he was only a photograph of a human, and that meant he wasn't important" (84). Reminiscent to René Magritte's descriptive "ceci n'est pas une pipe," Matt realizes that he is merely the representation of a person, not the person themself. Newcomb explains that "the photographic metaphor defines Matt not as a machine but as the product of a machine, yet with the appearance of a biological human" (177). Yet Matt does not solely use the photograph metaphor as a means to depict his creation but also to explain his current lack of individual agency. Matt, in desperate need for meaning and understanding, employs the metaphors of his surroundings and enriches them with individual dimensions.

The text's discussion of clones as organ "donors" and as objects also resonates with the hospital as a deindividualized space in which patients are predominantly treated as bodies – a reading that already became apparent with reference to Cook's *Coma* (see chapter 5.2). In the 21st century, heart surgeon Magliato offers a fitting example for the tendency to distance the body encountered in the OR from the person that is being operated upon. The surgeon remembers when she assisted as an intern in the amputation of a woman's arm:

> This was possibly one of the most important events in this woman's life. One that would change her forever. I am mortified that I stood like a stone in the OR and never imagined the impact this would have on her, so preoccupied was I about the impact it would have on me. I feel absolutely awful that I never wondered anything about this woman. (52–53)

Magliato's confession introduces a shift in her perception: Rather than focusing on her patient and how the loss of her arm would affect her, she focuses on herself, the doctor. The sense of shame that colours this passage indicates that Magliato perceives this behavior as wrong, as unfitting for the medical profession. Accordingly, she ascertains later on: "No. Never again. When I operate, I am fully aware of who is beneath my drapes, what I am doing to them, and how it will affect their lives forever" (53). Magliato's insistence on the patient's presence in the OR establishes a counter position to her previous distancing. However, the patient remains in a necessarily passive position, even though Magliato is now aware of "what [she] is doing to them." The passive patient, particularly in case of anesthesia, needs to be actively read as human, rather than as an object. Here, this chapter claims, medical practice resonates with Matt's experience of the clone. It is, then, no coincidence that the children encounter MacGregor's clone in the hospital setting and that the bed looms large in Matt's narrative. The clinical gaze and objectified

treatment of patients is powerfully expressed in the encountered clone who is strapped to a bed and left to struggle against the passive role imposed on him.

This discussion emphasizes that Matt is perceived in varying non-human terms that shift according to his surroundings. He internalizes these readings and adjusts them to incorporate his individual grasp of his existence, thereby, they are continuously modified and mirror his struggle to create meaning. It is particularly noteworthy that Matt's growing awareness correlates with him entering the transitional phase of adolescence. As he is perceived as a monster, an animal or has to accept that he will be read as an object, I derive that the clone functions as a novum which can be approached in comparison only. Thereby, the clone – much like the adolescent – remains in an in-between sphere and Matt struggles to accept a positive reading of himself as an individual rather than relying on metaphors of difference created by his surroundings. In the context of young adult fiction, the novel thereby also serves a highly pedagogical purpose of pointing out that difference is culturally constructed instead of biologically prepositioned. This notion is prominently suggested by the permeability of his role given that Matt takes over El Patrón's estate and María's mother, Esperanza, summarizes: "Oh, you *were* a clone" (366, emphasis in original). The use of the past tense shows that Matt's status has changed and that since El Patrón has died, he is not merely a copy anymore but a full person who now reigns over Opium. This shift constitutes the cultural construction of difference in the novel and highlights that Matt's status – and the value of his tissues – does not rely upon biological fact, but rather upon their interpretation.

7.1.2 The Eternal Recipient: Upholding Power

Matteo Alacrán, Lord of Opium, genetic original to Matt and destined recipient of his organs, is different, too. While Matt's status as a non-human Other forces him into a state of subjugation and uncertainty about his individual personhood, El Patrón appears in a dominant position. At the age of 143, El Patrón defies expectations of chronological aging and has established himself as the eternal head of the Alacrán family. His survival, it is revealed in small comments, is based on the repeated incorporation of cloned tissue. These references to the tissue he has already received, however, are comparatively sparse in comparison to the excessive role El Patrón's advanced age is granted in the novel. Tam Lin mentions once that "[t]hey had to do a piggyback transplant on him. . . . That's where they put a donor heart next to his, to regulate the beat. The donor was – the heart was – too small to do the job by itself" (181). Tam Lin's comment indicates that the inhabitants of Opium are familiar with transplantation, at the same time, it shows his difficulty to separate between

donor and organ as the shift from "donor" to "heart" underlines. Thereby, El Patrón is presented as preying on the young, a notion that is further underlined with regard to his mental fitness. MacGregor, a fellow drug lord and clone-owner comments: "Fetal brain implants – I must try that sometime. . . . It's done wonders for you" (105). Due to these "wonders" El Patrón is of clear mind, the basis for remaining in charge of family and estate. El Patrón appears as both Matt's blueprint and his counterpart: While Matt is disenfranchised because of how he was created, El Patrón remains in power because of an exceptional use of his body. The relation between Matt as the destined donor and El Patrón as his recipient frames the narrative and presents transplantation as an integral part of El Patrón's strategies of staying in power.

Matt's surroundings present him as a beast, a creature in need of caging and subordination, El Patrón, too, is likened to the monstrous, yet, as the vampire-trope underlines, remains on top of the food chain. At El Patrón's birthday party, Matt overhears a guest commenting on their host: "The old vampire. So he managed to crawl out of the coffin again" (99). The reference to vampirism depicts El Patrón as a parasite, preying off unsuspecting humans and leeching their lifeblood. At the same time, the vampire remains a symbol of what needs to be feared: an unnatural monster hiding in plain sight. Even though the comment is supposed to be insulting, the speaker remains unknown and Matt cannot "tell which of the partygoers was guilty" (99) – clearly El Patrón can only be ridiculed in secret. Interestingly, reading El Patrón as a vampire also presents the incorporation of cloned body tissue as part of his being. The vampire, even though they might appear unnatural to their surroundings, bases their existence on the consumption of blood, which forms the defining characteristics of their species. El Patrón, in extension, is framed as a recipient who bases his very existence on the consumption of organs. Transplantation, then, is not merely a procedure El Patrón undergoes, rather it has become integral to his being, a reading that is underlined in the figure of the vampire (173; 213; 321). Hereby, Farmer's text also ties into the relation between the vampire and tissue transfer as suggested in the case of blood (Stephanou 53). Befitting for the vampire image, El Patrón is not only non-human himself but infects his surroundings: Even though he does not turn them into vampires, he distances them from human life and aligns them to his utterly egotistic goals. El Patrón, the vampiric recipient, thus remains at the top of the food chain – were it not for Matt.

As a vampire, El Patrón's chronological age seems fitting, as a human, it is perceived as unnatural by the novel's characters. María explains: "'He's so old,' she murmured. 'Not that there's anything wrong with that, but he's *too* old'" (207, emphasis in original). The emphasis on "too" underlines the transgressive potential of El Patrón's aging: He appears in an exceptional space in which old age presents "unnatural" power rather than frailty. His position as an unnatural anachronism

is further underlined in the comparison to El Viejo's aging and death. El Viejo, who is El Patrón's grandson, is deliberately framed as "old", as his name already suggests. As he denies cloned organs for religious reasons, El Viejo ages and dies in the course of novel. Hereby, El Patrón's incorporation of cloned tissues also circumvents generational difference as is prominently established when he asks Matt: "Would you believe that's my grandson?", given El Viejo's declining mental state, Matt answers: "I could believe he's your grandfather" (106). As the oldest family member in years, his chronological age should make El Patrón "el viejo", instead, he redefines his role as the ever-lasting patriarch. The contrast to El Viejo thus also indicates that traditional notions of aging and death do not apply to the Lord of Opium. Thereby, the cultural dimension of aging[53] is illustrated whereas transplantation appears as a means to circumvent what is presented as more natural approaches to aging and death.

Given these transgressions from normative expectations about aging, El Patrón has been read as a cyborg by both Newcomb (178) and Kerr (107). Here, El Patrón's exceptional life is tied to both, his subordinating treatment of clones and the biotechnological progress that makes it possible. Yet, reading El Patrón as a cyborg also entails following a reading of the clone in non-human terms, a reading that the novel deliberately opposes by presenting Matt as a complex and developing individual. At the same time, understanding the organ recipient as a cyborg also means framing him, post-transplantation, in less-than-human terms. This reading deeply resonates with how surgeon Magliato described an artificial heart implantation in her autobiography. She clarifies: "The human heart has to be prepared to accept the machine and the machine has to be assembled in such a way as to be accepted by the heart" (155). Magliato depicts the pairing of human and machine as aimed at a beneficial symbiosis in which both agents are in interplay. After having implanted the artificial heart, Magliato perceives of the patient as a cyborg and calls her "bionic woman" (157), a reference to the TV series of the same name in which a young woman receives bionic implants granting her superpowers, such as advanced hearing, strength and speed. Magliato's reference to the recipient presents her as different yet at the same time, it highlights an increase in agency, even in power. Magliato establishes that as a member of the medical profession, she is still impacted by speculative narratives of the cyborg.

Baudrillard explains that "[t]he question concerning cloning is the question of immortality" (*The Vital Illusion* 3). Yet rather than perceiving of Matt's life as an

53 Age scholar Margaret Morganroth Gullette has famously argued for the cultural construction of age, explaining in *Aged by Culture:* "The meanings of age and aging are conveyed in large part through the moral and psychological implications of the narrative ideas we have been inserting into our heads, starting when we were very young indeed" (11).

extension of his own and as part of his legacy, El Patrón desires to live on as an individual and in his original body. Clearly, he is unable to accept a world beyond his passing, a notion that is strongly featured when his family is poisoned with the wine offered at his funeral. His wish to survive appears as a hubristic undertaking, Kerr speaks of El Patrón as a "false-God" (108). At the same time, however, the original Matteo insists on his survival as an individual with lived experience that cannot be expressed by genetic sameness: He does not wish to be survived by either his family or his clones. Even though he raises Matt with music and education, this strategy is based on "simple *vanity*. When the old man looked at Matt, he saw himself: young strong and sound of mind" (Farmer 192, emphasis in original). Yet El Patrón does not fully see himself – if he did, organ transplantation would be impossible. Instead, he needs to create difference between himself and his clone in order to allow for his own survival. El Patrón's treatment of his clones is thus also established as a complex interplay of sameness and difference in which the clone's body needs to be similar enough to provide organs, yet clearly perceived as Other in order to allow for its reduction to biomaterial. Here, Kerr's perception of El Patrón as both God and false-God further clarifies his double role: "As a god, El Patron acts tyrannical, controlling that which he has created and demanding complete subservience" (107). For El Patrón, Matt's life exists only in relation to his own. Therefore, this analysis emphasizes the old man's double role as both the creator and the destroyer of worlds – and of tissues.

7.1.3 Transplantation: Un/Knowing

The previous subchapters have underlined contrasting and similar conceptions of recipient and "donor" bodies and emphasized how processes of Othering play into the construction of both roles. Lastly, this subchapter engages with transplantation as the procedure in which both asigned roles converge. My discussion thus positions transplantation at the intersection of bodies, Matt's and El Patrón's, and at the intersection of social roles, with Matt appearing on the fringes of Opium's microcosm and El Patrón functioning as its patriarchal leader. At the same time, I argue for an understanding of transplantation as a junction of knowing and unknowing: On the one hand, transplantation is presented as a pre-established fact, the reason for Matt's existence and is framed as the facilitator of El Patrón's vampirism. On the other hand, Matt remains unaware of his purpose for a significant part of the text and transplantation is thereby positioned in his individual realm of unknowing and, in effect, of speculation.

Naturally, the reader is more intimately acquainted with Matt's perspective, whose path from unknowing to awareness presents a core element of his transi-

tion from child to adolescent. Soon, Matt becomes aware of his lack in knowledge: "It had been like that for years. Matt knew there was vital information he was missing" (190). The purpose for his existence remains a blank space to Matt who soon attempts to create meaning from titbits of information: "The doctor once told Rosa that clones went to pieces when they got older. What did that mean? Did they actually fall apart? Matt hugged himself. His arms and legs might drop off his body" (71). By speaking about "going to pieces," El Patrón's gruesome endeavor is naturalized and becomes part of a clone's life cycle. Matt internalizes the processes of his physical subjugation: Rather than suspecting someone of cutting him apart and using his organs, Matt is afraid of the failings of his own body. Hereby, adolescence as a period of physical maturation in which a grounded sense of self is developed is reinterpreted: Instead of transitioning into adulthood, Matt is grown up to a certain age as Abbie Ventura notes (94). The planned transplantations thereby govern not only how his surroundings perceive him but also complicate the development of embodied personhood.

While Matt is kept oblivious to his final purpose, it needs to be assumed that his surroundings are more familiar with El Patrón's plans. Yet despite this awareness, future transplantations remain the unmentionable reason for Matt's existence. When Matt finally realizes why he was made, this divergence between his loved ones' knowledge and his individual ignorance is emphasized:

> So many hints! So many clues! Like a pebble that starts an avalanche, Matt's fear shook loose more and more memories. Why had Tam Lin given him a chest full of supplies and maps? Why had María run from him when they found MacGregor's clone in the hospital? Because she knew! They all knew! (216)

Matt's internal turmoil is expressed in a number of questions and exclamations. Yet the statement also illustrates how Tam Lin prepares Matt for his escape once he has fully understood his purpose. Rather than accepting the planned transplantations as the inevitable end of Matt's life, Tam Lin prepares to defy El Patrón and to help the adolescent in claiming ownership of his own body. Hereby, autonomous action is linked to knowledge not only about Matt's future but also about his past. In this regard, Celia's and Tam Lin's diverging approaches come to the fore: "'You were harvested,' repeated Tam Lin. 'He doesn't need the details,' Celia said. 'And I say he does!' roared the man, slamming his fist on the picnic table" (188). Tam Lin and Celia's behavior is portrayed in gendered terms: Celia's attempt presents her as a concerned mother who wants to shield her son from the harsh realities of life. Tam Lin is presented as "the man" and underlines his denial by assaulting the picnic table. Tam Lin's anger may not only be directed towards the brutality of Matt's existence but also towards Celia's desire to keep Matt in the dark. The

differing approaches to whether Matt ought- or ought not to know about his fate present transplantation as a taboo topic: His planned "donations" appear as a fact that his surroundings are aware of, yet which defies consensus or calm discussion.

This reluctance to speak about Matt's future as an organ "donor" also resonates with post-mortem transplantation as a taboo topic. The importance of discussing organ donation is typically emphasized in relation to donor numbers. In 1994, a campaign claiming "Share Your Life. Share Your Decision" was launched by the Coalition on Donation and the Ad Council, its "goal was to bring organ donation into mainstream conversations so that individuals felt comfortable discussing their decision to be an organ donor while they were still in good health" (Molinari 4). Yet transplantation remains a difficult topic that is often not discussed with family members, as a study by Morgan et al. from 2005 underlines (674). Naturally, this tendency gains particularly importance against a background in which families are asked for their consent for organ donation because "[b]y themselves, neither stating that one is willing to donate nor signing a donor card serves to increase family members' awareness of a loved one's wish to be a donor should the situation present itself" (Guadagnoli et al. 342). Signing a donor card and discussing matters of organ donation in the family thus do not necessarily correlate. Rather, a family member's wish may remain unknown, a fact that can cause great uncertainty should brain death occur. The reluctance to discuss organ donation indicates that the topic remains taboo in the 21st century, despite the successes of the practice. Willingness to communicate, in turn, has been tied to knowledge of the topic, as Morgan and Jenny K. Miller's study illustrates (132). In the context of Matt's lack of knowledge and discussion with his family in *The House of the Scorpion*, the significance of speaking about transplantation is granted even further significance. Clearly, Matt's forced organ donation cannot be compared to the informed consent of signing an organ donor card. However, Farmer's novel frames Matt's transplantation in terms of the unknown, as something that can hardly be discussed by family members. Given the suppression of the topic, Matt is forced to develop different readings of the future and is incapable to grasp the full meaning of his relationship with El Patrón. Thereby, the novel also resonates with the reading of transplantation as a taboo – a topic that appears as a matter of life-and-death yet remains difficult to bring up in conversations.

Despite Celia's attempts, Matt does not remain ignorant of El Patrón's plans and finally realizes that he was created as an organ "donor." The parallel between growing up and reaching awareness of his creation is highlighted in a chapter titled "Coming-of-Age." Interestingly, the realization about his purpose is not triggered by the revelation of new information, rather it is part of an ongoing process of developing awareness in which Matt reinterprets the previous events of his life:

> The evidence was all there. Only Matt's blindness had kept him from seeing the truth – and his unwillingness to think about it. He wasn't stupid. The clues had been there all along. The truth had been too overwhelming to bear.
> El Patrón, too, had created clones to provide himself with transplants. (191)

Matt, who has been met with silence or excuses when inquiring about his purpose, seems to have adopted his surroundings' desire to deny his future as "donor." In this denial, ties between Matt's developing sense of his final purpose and children's realization of death are indicated. In both instances unknowing appears as a central element. Kathryn James explains: "It has been suggested that awareness of death is the origin of self-consciousness itself, yet perhaps the most obvious thing about death is that it is ultimately *unknowable*" (9, emphasis in original). Death can never be fully known yet awareness of its inevitable role in any human life is part of the transition into adulthood. At the same time, death is not only shrouded in mystery but also in strategies of denial. However, while death serves as a denominator common to any life form, Matt's realization of his (premature) mortality is presented as even more difficult since it does not affect his surroundings in a similar fashion: Everyone he knows will die, yet no one was created to die for someone else.

In conclusion, this chapter has emphasized that *The House of the Scorpion* intersects organ transplantation with a speculated form of biotechnological progress – human cloning – and ties them into strategies of disenfranchisement. Thereby, transplantation enters the narrative as a powerful tool of subjugation because the old and rich exploit the young and vulnerable. While cloning might seem as the novel's more obvious focus, I have shown that the work's engagement with transplantation interweaves the procedure with the abuse of unequal power relations and introduces it as an ultimate form of exploitation. Interestingly, Farmer's work does not focus on how disenfranchised parts of the population fall prey to exploitative transplant practices, as, for instance, *Brown Girl in the Ring* emphasizes. Rather, it opens the possibility of using the biotechnological development of cloning to consider the creation of a group of individuals destined to be exploited by the rich and powerful. The novel, then, positions transplantation within a larger framework of biotechnological progress and muses just how different strands might interact. The correlation of transplantation and cloning thus allows for speculation on the reciprocal impact developments in separate fields might yield, while paying specific attention to the individuals they may affect.

7.2 The *Unwind* Dystology by Neal Shusterman

"I'd rather be partly great than entirely useless" (Shusterman, *Unwind* 26), explains an adolescent on the bus destined for a hospital in which all of his organs will be removed and distributed to the sick – or to those interested in upgrading their body. In Neal Shusterman's *Unwind* dystology,[54] published between 2007 and 2014, unwanted young adults are dismembered, and their organs become a resource for the rest of society. The series depicts a future in which a war between pro-life and pro-choice activists has led to a rather disturbing outcome: In Shusterman's future America, abortions have become illegal, however, parents can "retroactively abort" their child by giving them up for unwinding between the age of 13 and 18. Unwinding appears as a euphemism whose positive connotations stand in stark contrast with the deconstruction of the adolescent's body and the use of every tissue and cell in transplantation. The procedure of unwinding, however, is defined as being strictly different from dying, as the teenager is believed to live on in a "divided state" (*Unwind* 263). Unwinding is thus positioned at the intersection of life and death as it is defined as "[t]he process by which a child is both terminated and yet kept alive" (Shusterman, *Unwind* n.p.). In the course of the series, adolescents are unwound for a variety of reasons: Parents might deem their children uncontrollable and sign the unwind order, lack of financial resources might prompt unwinding, and religious beliefs trigger the process. Stewart therefore concludes that in *Unwind* "children become sacrifices and scapegoats and are eventually cannibalized through their whole-body 'donations' or rather, mandatory conscriptions" (165). Again, transplantation is depicted as cannibalism and again, a specific group is made vulnerable to exploitation.

While in previous examples discussed in study, the impact of transplantation was individualized by focusing on one character's struggles and developments, *Unwind* engages with a multitude of adolescents and present as variety of reasons for their unwinding or receipt of tissues. At the series core, three protagonists emphasize that the practice of unwinding has become a pluripotent tool in Shusterman's speculative version of the U.S.: The rebellious Connor Lassiter is given up for unwinding by his parents due to his unruly behavior, Risa Ward is living in a state home and about to be unwound due to lack of funding, and Levy Calder is about to be willingly unwound because of religious beliefs. Despite their differences, the protagonists become friends as they face a multitude of dangers related to the structural premise of unwinding. Thereby, the series also follows well-known

54 In the following, I use *Unwind* to refer to the series as a whole. If I am solely referring to the series' first installment of the same name, I will specifically address it.

tropes of YA fiction, as adolescents form unlikely friendships and tackle an unjust world governed by adults. The series consists of four novels and two novellas and introduces a variety of facets of its basic predicament. In this chapter I trace the novels' employment of transplantation in three regards, namely the separation of body and self, technologization of the medical realm and the societal dimension of medical progress. By positioning these considerations in the framework of YA, the series intricately relates its characters' maturation with transplant processes and negotiates embodied personhood as a complex, everchanging human condition. Beyond the borders of the text, the reduction of their young bodies to bioresource draws attention to the marketability of transplant practices and introduces the teenage body as culturally produced.

7.2.1 The Separation of Body and Self

The process of unwinding constitutes a dilemma. On the one hand, the body is perceived as rearrangeable: Organs are removed and implanted, bodies become, similar to, as Roberta Seelinger Trites explains, "a clock or a timepiece that can be turned back, as if the body never existed" (65). On the other hand, bodily tissue is inseparably tied to a specific individual, since the adolescent is believed to live on in a "divided state." The novels simultaneously present both of these diverging perspectives and negotiate their implications. Engaging with the body-mind separation in the *Unwind* series thus means sketching two diverging notions, namely, the body as a sum of its parts and the body as tied to individual personhood. As the subchapter's title indicates, it will thus engage with the Cartesian legend of a separated body and self and specifically navigate its boundaries in Shusterman's novels.

The very basis for unwinding, the ethical status it has reached in society, is the belief that an unwound individual lives on in their tissues. This notion becomes apparent in the "Bill of Life," which states that "between the ages of thirteen and eighteen, a parent may choose to retroactively 'abort' a child … … on the condition that the child's life doesn't 'technically' end" (*Unwind* n.p.). The law's reliance on a specific timeframe resonates with the significance of different temporal frames in abortion laws in U.S. states.[55] As Jacqueline Bach et al. explain, the Bill of Life "established specific guidelines for when and how life will be valued" (128).

55 For a detailed record of abortion laws in U.S. states see "An Overview of Abortion Laws" by the Guttmacher Institute, for further reference on the changes brought by the overturn of Roe versus Wade see "The New Abortion Battleground" by David S. Cohen, Greer Donley and Rachel Rebouché.

Most importantly, the Bill addresses the conceptual frame of unwinding and stipulates that the child is still alive after being unwound. The quotation marks around, "technically", however, suggest the theoretical nature of this undertaking, since the "technical" form of life presented by the unwound individual clearly deviates from what can be assumed to be the reader's lived experience. Here, the concept of the "divided state" comes prominently into play: The unwound adolescents are not perceived as dead but as living on in their "donated" tissues. Stewart understands unwinding as "semi-murder" (167), while Jacqueline Bach et al. understand it as a "rhetorical move" (130). Alongside these conceptual considerations, the idea of the divided state also relies upon neurografting, a fictional biotechnical development which allows for the unwound tissue to be stored and used in their entirety. These developments enable the "survival" of each body part and form the basis for the divided state: "[I]f every part of you is alive but inside someone else … are you alive or are you dead?" (*Unwind* 167). The novels do not offer an answer to this ontological question and the divided state remains an inherently evasive concept. Comparable to transplantation practices which rely on both the acceptance of a redefinition of death as brain death and biomedical progress, the Bill of Life presents unwinding as both rooted in conceptual frameworks (the acceptance of the divided state) and biotechnological developments.

The Bill of Life, then, defines a group – adolescents – that are more valuable to society as tissues than as persons. Once an unwind order has become official, the adolescent body becomes a communal good and, accordingly, when fleeing from an unwind order, teenagers become criminals: They are stealing their own bodies. As Sara Wasson explains: "the transgressive body is a harvestable body" (112). Unsurprisingly, the treatment of individuals as a sum of their body parts is associated with an economic perception of the human body. The commodifiability of adolescent tissues becomes apparent in the illegal workings of parts pirates, a ruthless group of buccaneers who are hunting adolescents to sell their organs and whose success relies on the demand in tissues (*Unwholly* 18). Beyond the criminal realm, the ties between unwound tissues and economic interest are deliberately underlined by the inclusion of advertisements for a variety of products. These advertisements intersperse the main narrative and offer insights into the purposes unwound tissue serves. Predominantly, the advertisements promote unwound tissue as a facilitator for an easier life: The NeuroWave Trademark, for instance, advocates for the implantation of "living brain tissue" to guarantee better grades (*Unwholly* 15), the "International Society of Nanosurgeons" advertises for heart transplants to regain the motivation to exercise and lose weight (52), and muscle grows faster once you "[b]oeuf-out with Sculptura!" (*Unsouled* 100). By reducing adolescent tissues to enhancers of other bodies, said tissue is subordinated and, like other commodities, ruled by the laws of the market. The impact of profit

and society's indifference is further underlined by Stewart, who explains that "unwinding becomes a normalized process soon to be motivated by greed" (163). Wasson adds: "Transplant is unapologetically commercialized in this imagined society, and all unwound tissue must be paid for" (111). The scope of Wasson's observation is underlined in the advertisements which form a clear counterpoint to the protagonists' struggles. The positioning of these advertisements is particularly noteworthy: The reader follows teenagers desperately running for their lives only to have the plotline forcefully interrupted by the shallow uses their organs might serve. As the origin of tissues is never clearly exemplified in these ads, the adolescent themselves appear absent while their parts are highly visible. Thereby, unwound tissue is presented as utterly separate from the individual body and the idea of the divided state is neglected in order to be remain buyer – and recipient – friendly.

Following the understanding that being unwound is the best way for some adolescents to serve society, not using their bodies in transplantation appears as a waste, a reading that ironically comments on the waste-metaphor commonly used with reference to transplantation. For instance, when Roland is unwound, he is reminded: "Not a bit gets wasted. You can bet you'll be saving lives!" (*Unwind* 289). Not having his tissue "wasted" provides comfort, a consolation that helps the teenager to accept his dismemberment. Hereby, the novels also tie into a reframing of the transplantable body as valuable resource, while non-donation merely creates waste. In surgeons' life writing, this sentiment is prominently presented, for instance when Frist explains that "thousands of suitable organs were wasted every year" (6), while Todd adds that because of few recipients in Canada, he "witnessed several donors wasted" because no match was found (90). The shared assumption is the redeemable quality of transplantation, a notion also underlined by Wasson. She explains that the metaphor of waste allows for "the alienation and commodification of tissue" and thereby "sees waste as *rendered valuable* through the operations of capital and biotechnology" (109, emphasis in original). Accordingly, considerations of what constitutes waste with regards to bodily products and tissues are in constant flux and Waldby and Mitchell summarize: "The social consensus of what constitutes a waste or abandoned tissue is breaking down, so that the economy of waste tissue rehabilitation is becoming more complex and contested" (86). Similarly, the fictional biotechnological possibilities presented in the *Unwind* series impact notions of what constitutes waste. Hereby, *Unwind* deliberately ties into contemporary discussions of transplantation and appears as an ironic comment on the waste metaphor: As these teenagers are forced into dismemberment, speaking of not wasting their tissues rings cruel and pointless to readers invited to identify with the protagonists.

So far, I have outlined that *Unwind* presents the unwanted adolescent body as a valuable resource and that their tissues are framed as a purchasable commodity. As these tissues can serve to enhance anyone's body, it may seem that the tissue is devoid of any ties to the unwound individual – however, the novels also cater an opposed reading and suggest the possibility of the divided state and thus, the survival of the unwound teenager. This notion is prominently suggested by the practice of gathering the recipients of unwound tissues, which is performed in different forms, as a means to overcome trauma relived after receiving neurological tissue (*Unsouled* 130) and even as part of a wedding ceremony (*Undivided* 351). Here, the previously established untethering of Unwound and their tissue is overcome, and it is these ties that allow for regretful parents of an unwound son to briefly bring him back by gathering all recipients of his tissue. Here, fragmentation is deliberately established: Each individual is marked by the part they have received, signifying themselves as "RIGHT HAND", rather than by name (*Unwind* 331). The meeting hints at the transgressive potential of transplantation underlined as the son, Harlan, functions as a common feature beyond genders and age groups. Yet, it is not only Harlan's body that gathers in the garden, it is the teenager himself. Harlan's presence appears to be channeled by the recipients: "He's in the voices of their many party guests" (*Unwind* 331) and is not only represented by his bodily tissue. Stewart summarizes that "[s]omething, indeed everything except a unified consciousness (if a consciousness can ever be unified), remains of Harlan even if he isn't contained in one body" (166). As Harlan himself is present in the gathering, a distinction between body and self is neglected: Clearly, the reunion of the Unwound's body parts also leads to a temporarily shared consciousness of the gathered recipients. Thereby, Trites argues, "Shusterman makes clear that the most important thing about the soul is its sentience" (64). The reunion also indicates the existence of the divided state while at the same time indicating its limits: Harlan is only present once a coherent voice has been established from his parts.

The fact that Harlan is somewhat present, that his tissues have indeed not fully detached from the individual, appears as a speculative reimagination of contact between donor families and organ recipients. Contact has been found to severely affect both parties and Sean Glenton Dicks et al. conclude that communication with the recipient can facilitate closure about unanswered questions prominently: "Who are we after deciding in favour of donation/transplantation? and 'What are the qualities present in our post-death relationship with the donor as a result of this decision?'" (16). The establishment of a "relationship" is particularly interesting and resonates with *Unwind*'s depiction of gathering recipients: As tissue has "lived on," has the relation between donor and their loved ones survived, too, and which role does the recipient play in this context? Prominently,

UNOS explains that contact may also help with grief, in the case of the donor family, and with expressing gratitude, with regard to the recipient ("Connecting Donor Families & Recipients"). Yet, this gratitude ties into the conceptualization of received tissue as a gift and in effect, may trigger feelings of responsibility. For instance, Sylvia explains in her autobiography: "I was sad that a young man had died, and I saw myself as a privileged guardian who had been entrusted with a special responsibility" (110). For Sylvia, caring for the received organ becomes a means to honor the deceased. Fittingly, a study from 1996 by David Lewino et al. shows that expressing gratitude was the motivation for 93 % of recipients to contact the donor family (192). This tendency also resonates with LaRhonda Clayville's quote of a donor family's response: "Part of the healing comes from knowing that [the recipient and family] are extremely grateful, that this did affect them in a positive way" (84, comment in original). It seems that the expression of gratefulness forms a shared interest for recipient and donor family.

The desire to express or receive gratefulness, however, relies upon the success of the surgery, as a sample letter from the "Life Alliance Organ Recovery Agency," an organ recovery agency certified by UNOS, illustrates. On their website, the agency offers sample letters to help in the process of writing to the donor family: "*I know how hard it must be to live without him/her. I hope you can find some comfort in knowing my life has changed because of your generosity and compassion*" ("Donor Family and Recipient Communication", emphasis in original). It becomes apparent that the recipient needs to be well enough for the donor family to find solace in their health, a notion that also ties into Sharp's discussion of transplantation in altruistic terms, which is often underpinned by the understanding that "each recipient will be given the chance to live a longer, healthier, and, therefore, more productive life" (364). Moreover, perceiving this benefit appears to be tied to the deceased individual themselves: "Although the loved one is dead, that person can 'live on' (or, in the case of the heart or lungs, literally 'beat' or 'breathe on') in another body" (Sharp 364). Such considerations are literalized in *Unwind:* When recipients meet, the unwound adolescent is somewhat present, and a final act of farewell becomes possible.

Hereby, and as Sharp's comment on "living on" illustrates, contact between loved ones and tissue recipients also transcends individual personhood and may even redefine familial ties. This notion is prominently exhibited in in lung-recipient Jackie Price's account of meeting her donor's family, which was published via the Cystic Fibrosis Foundation. Price explains that "Toward the end of the evening, Samantha's younger sister Sara told me she felt so comfortable around me – like we had known each other for more than hours. I felt the same way. It was an instant bond" (Price). The idea of an "instant bond" resonates with an understanding of "bonds of fictive kinship" (Sharp 376). Such readings are commonly reiterated in

accounts of meeting the donor family and evan made headlines in 2016 when a bride, Jeni Stepien, was walked down the aisle by the recipient of her father's heart. In a *New York Times* article, the recipient expressed why he thought that his presence was vital: "'I thought that would be the best way for her to feel close to her dad,' Mr. Thomas said. 'That's her father's heart beating'" (K. Rogers). Even though the recipient had already lived with the heart for a decade, it is now framed as someone else's – namely the donor's – heart. In another article published in *Country Living*, the emphasis on familial ties becomes particularly clear as Jeni Stepien is quoted: "I am so excited. It's like the whole family's here now. It's like everybody's here" (Bruk). These examples follow similar tropes to the gathering of unwound organs in *Unwind*, as donated tissue is still tied to its donor and meeting the recipient becomes a means to regain contact with the deceased family member.

Whereas these stories focus on contact as contributive to healing, they neglect the troubling potential that Shusterman prominently navigates in the speculative realm of his novels. For instance, Sharp offers the case of a multiple organ transplant in which the donor family contacted the recipients after a hospital press conference and "to the utter shock of these recipients, the donor's kin had come to find their new 'family'" (369). The short anecdote presented by Sharp illustrates the vast differences in perspectives between donor family and recipient. Here, pressure to do justice to a donor family's expectations might arise as a response Sharp received in her interview study underlines: "She thinks that her husband lives on in me; but I feel uncomfortable about that – I feel they are my lungs now. My job is to take care of them, because he took such good care of them, too" (376). The quote illustrates that the wife's hopes to experience how her husband's lungs are "living on" in someone else's chest also cause discomfort severely complicate the acceptance of the transplanted organ as part of the recipient's body. Still, it is interesting to note that the recipient themself refers to the donor and ties a specific obligation to the transplanted lungs: It is their "job" to treat them right, just like the donor did. Hereby, the donor also becomes an imagined presence in the recipient's life and speculation about the donor's desires and lifestyle is introduced. In *Unwind*, this troubling potential is revealed in the myths surrounding Harlan's parents, which, rather than merely gathering the recipients, are believed to be willing to reassemble their son from his unwound tissues. Rather than merely perceiving of how his organs – and in extension himself – are "living on," the parents are believed to forcefully take back his tissues. Hereby, the novels hyperbolize the troubling potential of families' claims over donated tissues. Even though these tales of contact between donor families and recipients are presented in the realm of life writing – some of them published via official online presences of transplant foundations – the speculative potential they share with fictional tales

such as *Unwind* is noteworthy. By bringing them into conversation, I want to draw attention to speculation as a tool to accommodate divergent readings of physical presence and individual absence which allows for the imaginative reintegration of both aspects.

Whereas the gathering of recipients thereby already alludes to a continued donor presence in unwound tissues, this notion is further substantiated by the novels' engagement with organ receival. First and foremost, one protagonist, Connor Lassiter, receives the unwound arm of his archenemy, Roland. The acceptance of the arm as part of himself not only accompanies Connor's struggle to reach maturity and to take on responsibility for others, it also resonates with the experience of transplant recipients' difficulties to accept donated tissues as part of their own bodies.

The fact that Connor has received the arm of Roland, a brutal and abusive adolescent who is unwound in the series' first installment, is deliberately presented by the shark tattoo edged to its skin. Hereby, the young, tattooed body as a signifier for teenage individualism and prowess is turned into a stigma and Trites explains: "That Roland is a shark-who-cannot-be-contained emphasizes the tension between his embodied power and the limitations placed on him by that body effectively being imprisoned by the designation 'Unwind'" (66). When Connor awakens with the new arm, a feeling of estrangement ensues: "He flexes the fingers. They flex. He twists his wrist. It twists. The fingernails need clipping, and the knuckles are thicker than his own" (*Unwind* 319). The reader follows Connor's sensual perception of his new arm and the change of pronouns, the shifts from "his" to "it," plays with familiarity and strangeness. The arm's untamedness is already suggested by the unclipped fingernails which also serve as a reminder of Roland's feral behavior. This notion is further underlined when a nurse comments that "[p]arts often come with their own personalities. . . . Nothing to worry about" (*Unwind* 319). While the nurse attempts to soothe Connor and exhibits a sentiment similar to those expressed in meetings of donor families and recipients, her statement appears ominous when applied to an arm that once belonged to Roland. Thereby, the transplanted arm also serves as a constant reminder of Connor's subordinated state: Receiving the arm of his archenemy constitutes that Connor and his friends have lost control, in fact even ownership, of their bodies and frames them as victims of Roland's legacy.

Following this first introduction, the ties between Roland and the transplanted arm are repeatedly suggested, most prominently with regard to violence. Accordingly, "*[h]e's here*, Connor tells himself, *Roland is here with every punch I throw with his hand.* And the worst part about it is that throwing those punches feels good – as if the arm itself is enjoying it" (91, emphasis in original). Here, the arm is presented as an extension of Roland himself and is granted individual agen-

cy: It "enjoy[s]" throwing punches. The arm thereby becomes a symbol for Connor's internal struggle with base reflexes: "If he lets Roland's muscle memory rule that arm, then Connor loses more than just his temper. In a sense he loses a part of his soul. 'Stop,' he tells the shark" (315). Controlling the arm thereby becomes a matter of identity-formation as losing control would entail losing "part of his soul." Connor has thus received a body part that symbolizes the brutality threatening to dominate his life. In the context of YA fiction, this internal struggle serves as a fitting reference for the immediacy of adolescent emotions, prominently, of anxiety and anger. Even more, it is related to sexualized violence and Connor is afraid what the arm might do to Risa if he lost control: "What if that hand held her too tight, tugged her too hard – what if it hit her, and hit her again, and wouldn't stop?" (*Unwholly* 105). Connor's wish for intimacy with Risa is circumvented by his distrust in what he still perceives as "that hand." In the context of teenage sexuality, the uncontrollable hand also serves to signify the need for self-control in consensual relations. The arm becomes an intruder, an active agent within Connor's body willing to take over should his control ever wane.

Given that Roland's arm is framed as a link to Connor's baser instincts and also illustrates that violence is still a part of himself, Connor's fears could be read as displacement, as a means to assign his desire for brutality and anxiety of intimacy to a specific body part. However, in his final encounter with yet another opponent, Starkey, the arm is granted agency beyond its metaphorical significance. In the series' last installment, *Undivided*, Connor attempts to release Starkey, the leader of a terrorist group of teenagers, from unwinding. As Starkey realizes that he cannot be freed, he begs Connor to kill him, yet Connor realizes that Roland's hand does not follow his orders, instead he uses his own hand: "That's the hand that digs in until he feels Starkey's windpipe collapse beneath his fingers. That's the hand that is tenacious and determined enough to do what must be done" (265). In a moment of violence, Connor cannot regain control over the hand, yet rather than acting more brutally than he intended, it refuses to kill. This refusal – and Connor's surprise – circumvents readings of the arm as serving only as a symbol for Connor's suppressed desires. Rather, it really has "come with [its] own personalit[y]," as the nurse mentioned, a personality that is deliberately aligned with Roland's incapability to kill. Hereby, the arm's significance moves beyond its role as a metaphor for Connor's growing maturity and control of his anger, it is, in fact, presented as having agency beyond Connor's control.

This conflict between Connor and his arm, then, also prominently poses the question of where the individual resides. In other words: Does the arm contain part of Roland's self? The series, I would argue, deliberately poses the question without offering a definitive answer. By refraining from a clear position, the novels also connect with the, at times rather speculative, research on cellular memory. As

a scientific endeavor, UCLA scholars Shanping Chen et al. published an article in *elife*, suggesting that the formation and storage of memory might differ tremendously from what had been previously assumed. They explain that rather than being stored in synapses, their research on aplysia, a marine snail, suggests that memories might be stored in a cell's neurons.[56] David L. Glanzman mapped the potential of their findings in an interview with *UCLA Newsroom:* "As long as the neurons are still alive, the memory will still be there, which means you may be able to recover some of the lost memories in the early stages of Alzheimer's" (Wolpert). Given this vast potential, the study has found considerable attention. While Susan Cosier of the *Scientific American* wonders: "Could Memory Traces Exist in Cell Bodies?"(Cosier), *The Huffington Post* titled: "There May be Some Hope of Restoring Lost Memories in the Brain" (Gregoire). These articles refer to the basic finding, namely that memories might be stored differently than assumed, however, they still position the process of memorizing in one specific organ: the brain. This governing role of the brain, however, is abandoned in other engagements.

The role of cellular memory has already been discussed with reference to *Brown Girl in the Ring* and is also of significance in the context of *Unwind.* Here, it becomes apparent that Shusterman deliberately refers to studies conducted on cellular memory and specifically to a study by Paul Pearsall, Gary E. R. Schwartz, and Linda G. S. Russek on cellular memory which shows:

> The incidence of recipient awareness of personal changes in cardiac transplant patients is unknown. The effects of the immunosuppressant drugs, stress of the surgery, and statistical coincidence are likely insufficient to explain the findings. The plausibility of cellular memory, possibly systemic memory, is suggested. (65)

Pearsall et al.'s study with ten participants hypothesizes about cellular memory's impact on transplant practices and presents a clearly speculative approach. The speculative vocabulary employed in the study's findings, as expressed by "likely," "possibly" and "suggested", illustrates this notion. This example is so striking because in *Unsouled* five "[d]ocumented cases of cellular memory being transferred to heart transplant recipients" are listed, all of which are quoted from Paul Pearsall (*Unsouled* 139). It is interesting to note that the reference may function as an attempt to root *Unwind's* development in scientific findings and thus to further validate its speculation. However, as the series does not pay attention to the speculation already at play in Pearsall et al.'s study, different forms of speculation on the same topic intersect.

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56 For further information on their research on memory storage see Chanping Chen et al.

As the case of Connor's arm signifies, unwound tissue has a decisive impact on the recipient and even impacts their developing social role: Connor's final acceptance, then, underline his maturation and his engagement with both his individual hardship and the generational trauma of unwound teenagers. At the same time, the arm serves as an example for how the novels complicate a clear-cut divide between body and mind, a notion that is repeatedly addressed throughout the series.[57] As Wasson explains: "In other words, in this fictional world at least, tissue alienation is far from easy" (112). The novels' treatment of the body in close connection to the individual self thus also follows recurring motifs of "the body as a collection of rebellious parts" (R. D. O'Neill 224). At the same time, the novels give voice to the ultimately exploited Roland whose disenfranchisement lingers beyond his unwinding and is intricately tied to the tissue Connor receives.

Even though the series thus denies a clear stand on the relation between self and their tissues, the case of Connor's arm follows tropes of body horror,[58] yet, *Unwind* does not solely present body parts as unruly but includes the brain in its depiction of organ receival. In Shusterman's series, the brain, too, becomes reassemblable as the case of Camus Comprix, the world's first "rewound," an individual assembled completely from unwound tissue, illustrates. Cam's very existence relies on a rather mechanistic perception of the body: He is deliberately designed and, given the multitude of skin tones and experiences present in his brain, challenges previous notions of ethnicity and upbringing. As has been noted, Pravinchandra Laxmidas has remarked on transplantation's capacity to emphasize "the obsoleteness of race" (20). This neglect of race as a significant category is also addressed by surgeon Magliato who explains that "if you take two people of different race and cover them completely with sterile drapes, I cannot tell if they are African American, Caucasian, Asian, or Hispanic by looking at their hearts. Discrimination is an external phenomenon. On the inside, we are all equal" (20). Magliato thus emphasizes the superficial nature of racial difference and, even more, presents surgical intervention as a means to overcome possible racial prejudice. In *Unwind*, transplantation may appear in a similar vein given that different skin tones are aligned in Cam's face and form a new, race-transcending whole. However, it is important to note that the skin Cam receives could be taken because of

57 In fact, a lingering sense of self within received organs is emphasized with reference to a variety of characters, for instance, a card-dealing truck driver who knows magic tricks because of the unwound hand he has received (*Unwind* 14) or a teenager who is told that in order to become a pianist she does not only need the brain tissue but also the muscle memory of a hand transplant (*Unsouled* 164).

58 The haunting quality of received organs presents a recurring theme in the horror genre, see R.D. O'Neill, pp. 224–225 for further reference.

structural disenfranchisement and the tissues cannot be separated from the vulnerability of the group of adolescents they used to belong to. The brutality at stake in Cam's very existence thus comes to the fore and is prominently revealed when he sees himself and frames himself in terms of the monstrous: "'Monster!' he says. That word comes from so many different bits of memory, he needs no help finding it. 'Frankenstein!'" (*Unwholly* 59). Aside from presenting Cam's struggle to perceive of himself as human, the fact that he immediately utters "Frankenstein!" underlines that any form of creating life is read in terms of Shelley's work and necessarily has to engage with its heritage.[59]

While Cam's relation to his body remains challenged, he is soon able to appreciate his physical form as his wounds begin to heal, the acceptance of his assembled brain, however, appears more difficult. When Cam awakes for the first time, a multitude of voices fills his head: "My father was an accountant! No – a policeman. No – a factory worker, pharmacist, dentist, unemployed, dead. His thoughts are all true, and all false. His own mind is a riddle that he can't hope to solve" (*Unwholly* 47). Each of the voices echoing through him presents the individual experiences, abilities and fears of the brain's "donors." These contradicting voices frame the organ in an uncommon way: The brain is no longer the governing instance behind the machinelike rest of the body, instead it is itself assembled like a machine and functions accordingly. Yet at the same time, it hosts memories and affects processes of meaning-making. Thereby, it is also tied to an (albeit highly fragmented) individual sense of self. On the one hand, the brain's physicality is highlighted, and it is presented as potentially re-arrangeable. On the other hand, the brain affects Cam's development of a sense of self in a manner that the rest of his body does not. While Cam has found words to describe his physical appearance ("Monster!"), he cannot describe his inner state of turmoil since he cannot distance himself from his brain. Cam's struggles underline that the separation between body and self can only be obtained to a certain degree, as the brain simultaneously appears as both a physical, manipulatable organ and as inseparably tied to a sense of self. Cam's struggle corresponds with the brain's significance for matters of transplantation, however, complicates readings that equalize individual and brain, such as Roland Puccetti's assessment: "Where goes a brain, there goes a person" (70). Rather, Cam's assembled brain cannot function as the seat of personhood of one specific individual, instead, it appears as a construction site.

59 Anita Wohlmann and I have engaged with Cam's ties to mechanic metaphors and *Frankenstein* in "Rewinding Frankenstein and the Body-Machine: Organ Transplantation in the Dystopian Young Adult Fiction series *Unwind*".

Here, the novels' most basic deviation from perceptions of the brain as the governing instance becomes apparent: Even though a multitude of voices are assembled and represent the brain's "donors," someone is hearing these voices. As "[h]is own mind is a riddle that he can't hope to solve" (*Unwholly* 47), Cam is immediately present after waking up. This notion is emphasized later on, when Risa, his love-interest, states that "[s]omeone is pulling those parts together" (*Unwholly* 289). Who this someone is, however, remains cause for speculation. At best, Cam's individual character could be understood as relational – as the connection between the converging tissues of his brain. In this case, the whole (equaling Cam) would constitute more than the sum of its parts (the converging voices). The mind itself arises as the connection between individual tissues and appears as a governing voice in the ongoing discussion within his brain. The fictional discussion, then, does not circumvent the assumption that the self resides in the brain, at the same time, however, it also does not a solution to who exactly awakes after the surgery. Read in the context of YA fiction, Cam's struggles and the diverging voices in his head also from a fitting metaphor for the struggles of adolescence, in which a variety of choices need to be made and in which the questions of identity-formation gain center stage. It is particularly apt that Cam's struggle to accept his transplanted body is situated in the temporal frame of adolescence and matters of identity-construction are related to both: him, as an adolescent, and to him, as a transplant recipient.

In the novels' end, Cam manages to find some closure, a rite of passage that is signified by the issuing of a driver's license which to Cam means that "now I actually exist" (349). The significance of documents and their relation to personhood also resonate with practices of slavery. When Roberta calls him someone's property, Cam is outraged: "'It's more than a word!' insists Cam. 'It's an idea – an idea that, according to the history expert somewhere in my left brain, was abolished in 1865'" (*Unsouled* 209). Aside from presenting his brain as shaped by the knowledge of various individuals, Cam's reference to the end of the Civil War and the passing of the thirteenth amendment frames his struggle in terms of the structural subjugation and exploitation of slavery. His statement and insistence of not being someone's property ties into the bondage of slavery and serves to establish how he strives for ownership over his body. Cam's use of the American past further interrelates his struggles with the country's practices of subjugation. Even though this rather complex undertaking is only briefly addressed in the novels and remains a rather vague allusion, it indicates that in his attempts to come to terms with his existence, Cam relates to existing frames, such as the fictional realm of Shelley's *Frankenstein*, but also to America's history of violent exploitation. Hereby, the novels also correlate their future setting with forms of past oppression and emphasize the impact of societal readings of individual bodies, in this case along the lines of

race. The body and its tissues are thus presented as intricately tied to their specific temporal and cultural framings.

In conclusion, this analysis has presented a dual perspective of self and tissues in Shusterman's series: On the one hand, the novels depict the dismemberment of adolescents as a medically feasible practice and establish a variety of instances in which unwound organs are incorporated by unaffected recipients. In these cases, organs are commodified, and human tissue is reduced to its marketable potential beyond individual significance. Fittingly, the divided state is mocked by a number of characters and at times reduced to a front for the brutal practice of unwinding. On the other hand, the practice of gathering recipients of unwound tissue and Connor's struggle with his arm present muscle memory as an active plot device that ranges beyond a means to metaphorically explore the impact of transplantation. Cam's struggle to develop a sense of individual identity underlines this notion, as it also serves to highlight the physical nature of the brain. These cases present a cartesian separation between body and self as impossible to attain. Given this twofold depiction, Wasson emphasizes the underlying tension presented in the first installment: "The novel simultaneously mocks and endorses the notion of 'living in a divided state' after harvest" (112). Strikingly, both of these strategies, the distancing of body and self and their intermingling, are employed to benefit the practice of unwinding: Disassociation contributes to the perception of tissue as a produce and facilitates a lucrative market, while the divided state, is used to alleviate caregivers' inhibitions to sign an unwind order and to help some adolescents to accept their unwinding. Thereby, both participants of the market, the buyer and the provider, are addressed with a fitting framing of body and mind, in effect facilitating the smooth transplantation of organs. The novels' unclear stance on the topic thus also retains the need for speculation with regard to separating body and self, a need that is also prominently expressed beyond the series' fictional frame.

7.2.2 The Unwinding Process

To the reader, the practice of unwinding is supposed to appear shocking, after all, the series was promoted as being "[m]ore chilling than *The Hunger Games*" (*Unsouled* cover). This "chilling" potential, I would argue, not only derives from the brutality of the practice but is prominently tied to the normalcy it has reached in vast parts of Shusterman's imagined society. In order to facilitate the perception of the practice as a humane treatment of a significant part of the population, the unwinding process is designed to support an image of gentleness, it is conducted under strict regulation and is governed by rules passed to create an utterly painless experience for the adolescent. As the discussion of a separation of body and

self has already shown, unwinding simultaneously relies on notions of embodied personhood and on an understanding of the body as a rearrangeable cluster of organs and tissues. In a similar vein, the unwinding process is presented as both a spiritual ritual that focuses on the adolescent's transition into the divided state and as a technological procedure designed to maintain tissue quality.

As a ritual, the unwinding process resonates with religious rules on how to treat the deceased body. Even though unwinding is a well-known practice and unwound tissue is used regularly, the exact workings of the procedure remain unknown to society:

> The harvesting of Unwinds is a secret medical ritual that stays within the walls of each harvesting clinic in the nation. In this way it is not unlike death itself, for no one knows what mysteries lie beyond those secret doors, either. (*Unwind* 287)

The reference to death is particularly striking here because it naturalizes unwinding as part of the human life span, never mind that the practice has been invented in the lifespan of a significant part of the population. Even more, relating unwinding to death is already subversive, since unwinding "[i]s not dying" (*Unwind* 24). Comparable to religious approaches to death, unwinding appears as a "ritual" and Wasson understands it "as a ceremony" (113). As a ritual, the unwinding process follows a specific set of rules, and each step of the surgery is regulated by an administered code of conduct. These regulations become painstakingly clear in Roland's unwinding which is described from Roland's restricted perspective and only ends when the adolescent's brain is dissected. Roland's point of reference is a nurse who pats his hand, smiles and reminds him to let go of his previous worries (*Unwind* 289). The nurse's alternating answers of "I understand" (*Unwind* 289) and "It's nothing to worry about" (*Unwind* 289) seem standardized and are probably uttered countless times per day. Wasson fittingly concludes that Roland's unwinding experience is governed by "callousness and bizarre tenderness" (113). This tension comes to the fore once Roland has been unwound and the gentleness he has received is revealed as part of a professional performance as a surgeon remarks: "All right, I'm on a break. Prep for the next one" (294). As the chapter ends with a reference to the following surgery, Roland's unwinding and the horrors it represents are painted as merely one case in a series of procedures. Thus, Roland's highly personal and to the reader utterly shocking experience becomes part of a sequence. Unwinding, then, is simultaneously utterly personal and completely deindividualized. Similar to the Christian sacraments of weddings or funerals, it holds immense individual meaning, while completely adhering to an already existing frame.

This standardized frame is contrasted with Roland's individual experience of horror and utter loss of control. Roland's rage is met by the personnel's kind indifference, their utter lack of interest a disconcerting reminder of the inconsequence of his unwinding. The opposition between Roland's individual experience and the hospital setting is further underlined in the contrast of his sense of time and the establishment of standardized time, as Wasson notes (114). These diverging perspectives on time also resonate with the OR as a disruptive force in temporal experience – for instance, hours-long anesthesia can be reduced to a momentary black-out to the patient but comprise hours of work for medical personnel. Moreover, cardiothoracic surgeon Magliato frames the OR as a timeless space when operating: "Think of the OR as a vortex. It sucks you in and when you are inside, spinning, time stops" (22). Magliato's short comment relates to Roland's perspective who experiences a timelessness within the externally ordered temporal frame. This alignment, however, is clearly not shared by Shusterman's fictional medical staff. The singularity experienced by Roland and its opposition to the repeatability experienced by the personnel might bear uncanny resemblance to a patient's encounter with surgery: While the surgery is an exceptional event to the patient, it is a repeatable part of the professionals' employment. *Unwind* distorts this distance between professional and patient by circumventing the OR's purpose: There is no waking up from anesthesia, rather, each Unwound experiences the operation only to die – or pass over into the divided state.

The correlation between biotechnological progress, organ harvesting, and the supposed care of medical professionals is further developed in the construction of harvest camps. From the inside, harvest camps resemble a disturbing combination of holiday resort and brutal machinery. As is revealed, they used to be called "unwinding facilities" (*Unwind* 265), now, the term "harvest camp" portrays them as sinister versions of summer camps. Happy Jack Harvest Camp, in which Connor, Risa, and Lev meet again, is a prime example for the novels' depiction of the space of unwinding. Wasson speaks of "a hybrid heterotopia, a blend of hospital and festival site: a holiday camp" (113). Fittingly, the portrayal of Happy Jack is picturesque: "Nestled on a pine-covered ridge in northern Arizona, the sedating forest views give way to the breathtaking red mountains of Sedona to the west" (*Unwind* 265). The depiction could be part of a hotel advertisement that addresses a need for seclusion ("nestled") and rural calm. This calming image is juxtaposed with the use of medical expressions that form a macabre reference to the purpose of the camp. The adolescents of Happy Jack Harvest Camp will not only be "sedated" by the views but will be anaesthetized during their stay. It is not only the red mountains that are "breathtaking" but also the planned loss of organs and lungs. The camp itself follows this dichotomy of tranquility and brutality and is designed in light colors, with the barbed-wire fence hidden behind flowers. Buses are exclusively

seen when they arrive, while trucks only leave the camp in the back (*Unwind* 265–66). Stewart perceives of the arriving buses as a version of trains reaching concentration camps (167), at the same time, they also resemble school buses bound for summer camp. As Anna Bugajska comments, the harvest camps fit the overall framing of unwinding practices: "Just like the grafts people get are supposed to remain invisible, the reality of the camps is hidden behind a holiday resort façade" (16). Despite their friendly décor, then, harvest camps are also "massive medical factories" (*Unwind* 265),[60] built by adults supposed to care for their offspring. Hereby, harvest camps are populated by adolescents yet run by adults and Bugajska explains: "This particular Neverland, although seemingly dominated by underage population, is run by adults who try to engineer the illusion of happy childhood most of the kids did not share" (16). Even though adults only appear as a majorly faceless and exchangeable group in the harvest camps, they are the controlling entity shaping the adolescent experience.

Beyond the "state licensed, and federally funded" (*Unwind* 263) harvest camps, unwinding also occurs on the black market and without the need for an unwind order. Prominently, the parts pirate Divan Umarov has built a flying unofficial harvest facility. Umarov's distinguished air ties into the control he yields over bodies, for instance when incarcerating the enemies he has captured in large vases (*Undivided* 110), or when showing Risa the Orgão Orgânico (*Undivided* 251), a pipe organ that uses unwound heads and their vocal cords to produce sounds. Whereas the unwinding procedure performed in harvest camps is granted ritualistic qualities and simultaneously relies on technological developments and standardized medical procedures, Divan's system is even more time-efficient and employs specialized machines, rather than well-trained professionals. The black-marketer's activities take place on the *Lady Lucrezia*, a remodeled Antonov AN-225, the biggest aircraft ever built. The plane's name could refer to different namesakes, prominently to Roman Lucretia, whose rape led to major political uproar, and to Lucrezia Borgia, whose family has become an epitome for financial greed. Both references resonate with Divan's ship as they oscillate between powerlessness and profit. The airplane is the result of engineering, yet still holds spiritual potential because "standing inside the jet's cavernous cargo hold can be a religious experience, because it rises around you with the breathtaking drama of a cathedral, but can get about eight miles closer to heaven" (*Undivided* 247). The deliberate use of "heaven" is a pun on the flying harvest facility most of whose passengers will not survive

60 The intersection of organ retrieval and a factory-setting resonates with Manjula Padmanabhan's *Harvest*, in which Om is handled like cattle before signing his donor agreement (see chapter 6.1.1). As is the case in *Harvest*, a faceless force is controlling the facility and has planned and designed its layout.

the flight. The idea of an underground economy is distortedly mirrored in the airplane, which only lands to take on new Unwinds and to distribute unwound tissue. The interior of the plane "was meticulously redesigned to be both a lavish residence as well as a fully functioning harvest camp" (247). In contrast to federal harvest camps, Divan's facility hosts Unwinds only in a sedated state, their bodies arranged in niches, "like bodies in a catacomb" (*Undivided* 252). The facility abandons the façade of a holiday camp, rather, Risa realizes that "Divan does not run a harvest camp at all. He runs a factory" (*Undivided* 252). The notion of standardization of the unwinding procedure is developed even further as adolescents are processed by machines. These machines, as Divan emphasizes, are meant to keep the Unwinds comfortable: "I give these Unwinds a quality of treatment finer than any officially sanctioned harvest camps" (253). As Risa watches in disbelief, the machine comes to life and "a mechanical arm reaches over to check on one of them [Unwinds] with the gentle care of a mother's touch" (253). The machine becomes the Unwind's perverted caregiver, a nurturing, yet utterly uncaring presence. The caregivers' neglectful role in the unwinding process, given that it is mostly parents who sign the unwind order, is mirrored in its technical equivalent. The *Lady Lucrezia* therefore underlines the dichotomy hidden in federal harvest camps, with its interior focusing on the adult in charge and adolescents kept in a comfortable yet utterly suppressed state.

The most important part of Divan's facility is the Unwinding Intelli-System, UNIS. UNIS, the automated unwinding system, only needs forty-five minutes to complete the unwinding of a young adult and to store their organs in containers. It is interesting to note that UNIS appears almost as a homophone of UNOS and can be read as a macabre comment on the mechanized functions of the organization, for instance the politics of the waiting list. The functions of UNIS are governed by efficiency, as Connor realizes when he witnesses the unwinding of a girl: "Fifteen minutes later stasis containers of various sizes begin to roll out of the other end of the chamber and are neatly stacked in the cargo hold by mechanical arms" (260). Again, unwinding is presented as devoid of humans as mechanical arms arrange the containers and secure the mechanized, smooth functioning of Divan's facility. Once Connor enters the machine, its professional conduct mirrors the kind words uttered during Roland's unwinding: "The voice is genderless. Guileless. UNIS truly wants to make this the happiest day of Connor's life" (*Undivided* 286). The "guileless" machine appears as innocent as the scalpel used in surgery: It has no personal agenda, there is no emotion leading its processes.[61] UNIS therefore presents the

61 UNIS also resembles Niven's depiction of organ retrieval in "The Jigsaw Man" in which he describes "the doctor", a machine dissembling an individual (see chapter 4.1). Shusterman's depiction

next logical step of unwinding as a culturally established norm and emphasizes that unwinding has become an unstoppable machine. If the medical personnel at the harvest camp are butchers, UNIS is factory farming.

Engaging with the unwinding process, then, faciliates ample connections to transplantation as a spiritual undertaking, with unwinding functioning as a ritual that allows for the adolescent to calmly move on to the divided state. At the same time, it appears as a highly technologized and callous surgical intervention that can, in fact, be performed by a machine. *Unwind* thus resonates with previous instances of speculative writing in which medical professionals' insistence on caring was revealed as a mere façade for financial gain – in these cases, the ties to organ theft narratives have already been established. However, in contrast to previous examples, *Unwind* imagines tissue harvesting from a socially unwanted group as an accepted and openly discussed procedure in its imagined future, what remains unspeakable, are the exact workings of the unwind procedure. Given that tissue harvesting is openly addressed, the novels illustrate a shift in speculative engagement with transplantation: This shift may correspond with readings of transplantation as a reliable practice in the 21st century, on the one hand, and a continued reluctance to engage with the topic of brain death or becoming a donor, on the other.

7.2.3 The Societal Dimension

The possibility of unwinding turns adolescents into a vulnerable group. While at first glance, the focus on teenagers might primarily appear as a means to refer to the novels' targeted readership, it also positions the adolescent body as specifically vulnerable to objectification and practices of exploitation. Hereby, the novels redefine the adolescent body and its tissues as commodifiable: As adolescents are Othered and become the epitome for social disruption, their bodies are culturally renegotiated. The speculative practice of unwinding thereby frames transplantable tissues as inseparably tied to the status of their "donors" and, in effect, as culturally produced.

At first, unwinding is presented as a compromise between pro-life and pro-choice, thus suggesting the "complicity as adults, who know better, send children to their deaths as a way to end the violence" (Stewart 164). The consequence of the Heartland War, then, occurs as an instance of adult neglect which turns coming

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of a an utterly technological unwinding process thus also ties into science fiction's representations of operating spaces devoid of humans.

generations into pawns in a war beyond their impact. However, this reading of unwinding as a mere compromise is soon expanded and begins to include another political dimension: the desire to control a still uncontrolled part of the population, namely troublesome adolescents. In the series's third novel, *Unsouled*, the drafting of the Unwind Accord is reinterpreted and becomes part of the political agenda against a frightening social phenomenon, the so-called "feral teenager." In an analepsis, the narrative shifts to Sonia and Janson Rheinschild, whose work on neurografting unknowingly facilitated unwinding, discussing the possible implementation of unwinding. In their conversation, the establishment of unwinding is presented primarily as a means to control teenagers:

> "Ferals," the news now calls them. Feral teens. "Something must be done about the feral teens this war has created," the politicians bleat from their legislative pens . . .
> These kids, they may be lacking in education since the school closures, but they're not stupid. They see distrust all around them, and it makes them want to deliver their anger all the more. "How dare you distrust me?" their violence says. "You don't know me." But people are too wrapped up in their own fearful security measures to hear it . . .
> "They have this new weapon," she [Sonia] says, "unwinding. Maybe just the threat of it is enough. Maybe they'll never actually use it."
> "A cold war implies a balance of power. What do these kids have if the authorities start unwinding them?"
> Sonia sighs, finally seeing his point. "Not a chance in hell." (4–5)

The first part of the quote interrelates the teens' deviant behavior with external forces: They are the product of a war that has "created" discontent adolescents. The lack of education and the closing of schools further illustrate that this society has no place for its young adults. Bugajska fittingly emphasizes: "It is observable that the dystopian state fails to recognize the crisis stage of the teenage population, labelling youths as misfits and banishing them to spaces associated with imprisonment and death, rather than education and growth" (16). Bugajska's statement underlines a gap between the adolescent and the adult experience. A lack of empathy is further highlighted by the narrator who suggests that the "ferals" are predominantly misunderstood. By emphasizing the encountered obstacles, the Rheinschilds' conversation attempts to rationalize the adolescents' violence as a reaction to their surroundings' distrust. The second part of the quote emphasizes the unequal social standing of adolescents and adults with the former lacking impact and in effect, agency. The clear opposition between "the authorities" and "these kids" appears reminiscent of David against Goliath. This emphasis on a lack of understanding and on society's distrust in teenagers forms a fitting framework for an adolescent readership that might just struggle with a world that is not governed by them and which does not seem to understand them. Interestingly, the series does

not linger on these teenagers' deeds, thus instilling pity, rather than fear. Nevertheless, the novels also relate to the literary motif of "feral children":

> If feral children can be deemed evil, they do not willingly decide to be so. As horrific as these packs of feral youth are, many of the texts in which they appear suggest that the children ultimately are not culpable for their actions but rather have been corrupted by exposure to adult cruelty. (Renner 14)

The deviant behavior of youths deemed "feral" is interrelated with adult behavior and cannot be separated from the experiences the adolescents have made. The feral teens are thereby introduced as a group of misunderstood individuals who are lacking in impact and whose violence is predominantly facilitated by a fearful adult population.

The adults' fear is majorly based on deviant behavior that is soon associated with young adulthood. Fittingly, the temporal framing of unwinding coincides with the years of adolescence, as Stewart notes. She explains that those at danger of being unwound are "between thirteen and eighteen – the most challenging age for many parents" (165). Stewart's assessment indicates that rebellious behavior tends to be perceived as an inherent part of adolescence beyond the novels' realm. Moreover, this group is predominantly formed by male teenagers prone to violent behavior, with Roland, Starkey and Connor forming prime examples. Stewart wonders: "[W]hat does a culture do with its unwanted, troublesome, sometimes inconvenient or imperfect children who aren't quite good enough to become adults?" (159) and thereby also frames adolescence as a trial period for adulthood. The triggering marker for unwinding is thereby not merely deviant behavior – but deviant behavior at a certain age. Adolescents are reimagined as being on parole for their own lives and are expected to behave better. In other words, to contribute to society in a more responsible way than what society demands of its adults.

The possibility of unwinding turns deviant adolescents into a problem of the past and, in effect, makes signing an unwind order for a troublesome child obligatory conduct for their parents. An instructional note from Juvenile Authority explains: "These are teens with a history of delinquent behavior, but whose parents, for whatever reason, have declined to sign an unwind order" (*Undivided* ix). The inclusion of "for whatever reason" presents unwinding as the sole responsible treatment of conspicuous adolescents and accordingly, "[o]fficers should gently encourage these families to seek a divisional solution" (*Undivided* ix). The encouragement to sign the unwind order in case of deviance further presents the practice as a means to control and select the country's future population. This fictional development is deliberately tied into contemporary discussions via Shusterman's employment of extradiegetic references. A prominent example is an excerpt in

Unsouled which features a 2012 *Huffington Post* article about Charlie Fuqua's book *God's Law* in which the Arkansas legislative candidate suggests the death penalty for rebellious young adults (Celock). In Fuqua's own words:

> Even though this procedure would rarely be used, if it were the law of land, it would give parents authority. Children would know that their parents had authority, and it would be a tremendous incentive for children to give proper respect to their parents. (Fuqua 179)

Fuqua's highly problematic statement primarily frames his suggestion for death penalty for rebellious teenagers as a means to regain authority. He supposes that the mere threat of the death penalty could reign in unwanted behavior and thus function as a conditioning measure of parenting. Similar to Fuqua, Sonia Rheinschild hopes for altered behavior in a speculated future: "Maybe just the threat of it is enough. Maybe they'll never actually use it" (5). Aside from lacking a basis in either jurisdiction or ethics – the law presents an actual inversion of child and youth protection – Fuqua's suggestion also resonates with the dystology's depiction of a structural disconnect with the adolescent population and implies similar reasoning and a similar solution. Both Fuqua's proposal and the signing of the Unwind Akkord thus grant adults the authority to govern adolescent lives and, in their strive for control, aim at establishing a structurally subordinating system.

Unwinding, then, appears to solve two problems at the same time: It tames feral adolescents and it offers a new supply of transplantable tissues. Hereby, adoelscents are also sacrificed for a greater good and Stewart notes that this behavior "translates into an economy of tragedy and is one method of illustrating precisely how unacceptable the dystopian world is" (162). The sacrifice of teenagers, a group not yet fully responsible for their actions, for a supposed greater good thus functions as an important element of Shusterman's world-building. Their unwinding relies upon an established belief that they serve society more by "donating" their organs than by living their lives. Thereby, the insistence on benefitting society also resonates with redemption narratives commonly tied to organ donation as Wasson underlines that in the text "the primary narrative of procurement is of wasted lives being redeemed by medical intervention" (113). In contrast to the rest of society, Unwinds are not worthy of their own organs, as Risa is reminded: "People out there are dying for lack of parts, but you and your selfish friends in the resistance would rather let good people die" (*Unwholly* 157). An Unwind keeping their organs is stealing from the rest of society, who are "good" in comparison to unworthy adolescents. Apparently, society agrees with Samson's understanding that "[he]'d rather be partly great than entirely useless" (*Unwind* 26).

Whereas Shusterman's novels openly problematize the reading of tissue transfer as a means of social redemption, this reading still forms the basis for a Donate Life America commercial for registering as an organ donor (2016). The clip introduces Coleman Sweeney, who, as the narrator explains, "was an asshole" (*Coleman Sweeney* 0:07). The commercial's first part introduces Sweeney's poor behavior towards animals, children and adults, a narrative that concludes with him dying while arguing about overpaying for fries. His death functions as the turning point in the commercial's depiction of its protagonist because his driver's license reveals his status as an organ donor. Even though no one knows why he chose to donate, "there it was, generous and majestic" (01:34). His death and his status as an organ donor transform Sweeney's narrative, now "Coleman went from asshole to hero" (01:40). Fittingly, among those to receive Coleman's organs are a father of two, a teacher and a staff sergeant. His tissue donation is directly tied to family, education and military service and is thereby presented as benefitting pillars of American society. The advertisement closes with the narrator exclaiming: "[Coleman,] you're not an asshole anymore" (02:34), thus concluding the redemption arch presented in the clip. Apparently, Coleman's deeds, and the fact that he was an "asshole" appear insignificant in comparison to his selfless act of organ donation. In life, Coleman Sweeney is depicted as a burden to society, in death, however, he becomes its benefactor. Coleman's death is thereby framed as a blessing, even a contribution to a greater good, since more considerate members of society benefit from his donation. Even though the advertisement is presented tongue-in-cheek and clearly aims at reframing a taboo topic, it presents organ donation as a means to redeem oneself and to become a benefit to society, notwithstanding that one might not be present – or even interested – to experience it.

Hereby, organ donation is also considered to grant meaning to fatal accidents and the contingent experience of death. This potential benefit of individual death in the framework of organ transplantation is also expressed by Kathy Magliato who explains upon possibly being late due to an accident:

> My only hope was that there would be no accident so I would at least stand a chance of getting to school before they were singing the good-bye song under the good-bye tree. If there was to be a motor vehicle accident that day, perhaps it would be between two organ donors so that the whole day wouldn't be a wash. (6)

The possibility of an accident is framed as a troublesome event in the surgeon's life: It might make her late. This disruptive potential, however, could be out balanced by the casualties' status as organ donors. The arbitrary brutality of an accident is turned into a chance for organ donation and Magliato's comment exhibits a rather striking disregard for lives possibly lost. It seems that the delay that might

be experienced and the annoyance that might be caused can be redeemed by the purpose the accident might still serve. The possibility of donation, then, grants these imagined individuals meaning that might just save the surgeon's day from being "a wash" – possibly, because it might be spent operating. Magliato's speculation about donor status, however marginal it may be, follows a similar reasoning than Shusterman's speculative works and Coleman Sweeney's advertisement: Individuals causing trouble can easily be redeemed by benefitting society through post-mortem organ donation.

The social function of unwinding thus becomes obvious as it distinguishes between how an adolescent might serve society better: as a person or via their tissues. Yet by stigmatizing and structurally disenfranchising young adults, Shusterman's imagined society also creates a subculture of AWOL Unwinds. Prominently, they share common vocabulary, for instance, when speaking about harvest camps as "chop shops" simultaneously referring to unwinding's basis in a mechanistic reading of the body and framing it as an illegal procedure. Moreover, the budding subculture of Unwinds is presented in a variety of group-formations, particularly notable in case of the Graveyard, a secluded safe haven and model society that grants responsibility to AWOLs and whose rules postulate: "YOU ARE BETTER THAN THOSE WHO WOULD UNWIND YOU. RISE TO THE OCCASION" (*Unwind* 198). Yet the teenage utopia falls with the rise of the Stork Brigade, a group of storked[62] adolescents willing to use violence to further their aims. Even though unwinding presents the common enemy of the novels' protagonists, the brutality of the Stork Brigade is presented as working against the practice's abolition. Accordingly, the employees executed at the harvest camp liberation are used as an argument for unwinding: "They're martyrs now – evidence, according to some political pundits, of why certain incorrigible teens simply need to be unwound" (*Unsouled* 327). Rather than drawing attention to the system's flawed nature, the Brigade's interception appears as a case in point for the need to target specific adolescents. The novels thereby emphasize both: how the neglect and structural exploitation of an assigned group can impact said group's behavior, while simultaneously questioning violence to overthrow an unequal system. The group's downfall and its leader's increasing disregard for his army's lives indicates the need for ethical choice in unjust circumstances and thereby fittingly contributes to the didactic purpose of YA fiction.

So far, I have shown that even though Shusterman's novels are openly fictional, and adolescents are not likely to become victims of the practice of unwinding

62 Even though abortion has become illegal in *Unwind*, babies can be "storked", in effect placing them on someone else's doorstep to lose the responsibility to raise them.

beyond the books' pages, the works use speculation as a distorting mirror that engages with contemporary readings of transplantation practice, for instance, as a form of redemption. In the following, I want to further draw attention to Shusterman deliberately interrelating the *Unwind* series with the biotechnological and medical developments of its time. Hereby, the texts not only blur boundaries between the fictional and the factual, rather, I want to argue, they illustrate speculation as a genre-crossing endeavor.

Whereas the practice of unwinding, and the underlying possibility of neurografting, are fictional, the novels also introduce an alternative to the practice: The 3D organ printer. Sonia, who worked with her husband Janson Rheinschild on neurografting technology, reveals that her husband developed a 3D organ printer to make unwinding unnecessary – yet for economic reasons, the technology was never brought to public attention. She explains:

> The Unwind Accord took our lifesaving technology and weaponized it to use against all those kids that no one wanted to deal with. The board of Proactive Citizenry went along with it – pushing Janson out – because they saw more than just dollar signs: They saw an entire industry waiting to be born. (*Unsouled* 396)

Sonia's explanation situates unwinding at the intersection of financial and societal interests: While the population is afraid of troublesome teenagers and longs for a means to control them, Proactive Citizenry sees a financial opportunity. The development of the practice is thereby clearly rooted in capitalist structures. Making the organ printer disappear, then, becomes a marketing strategy, a means to keep competitors at bay: "'What word strikes fear into the heart of any industry?' And when no one answers, she whispers it like a dark mantra. 'Obsolescence …" (*Unsouled* 397). Hereby, unknown and faceless corporations are presented as the driving forces behind a conspiracy that leads to the structural exploitation experienced by the novels' protagonists.

The deliberate neglect of the organ printer thereby frames medical practice as an unknowable realm, in which financial gain has gained priority over the lives of those deemed non-beneficiary to society. The connection between medical treatment and financial gain has already been addressed with reference to several speculative works in this study,[63] in *Unwind*, however, the connection to extradiegetic disenfranchisement is not only suggested, but is deliberately catered to by the employment of non-fictional articles and references. The fact that these quotes are introduced with specific references ties the novels' fictional proceedings in seeming-

63 The connection between transplantation and individual financial gain was already traced in *Coma* (chapter 5.2) *Brown Girl in the Ring* (chapter 6.2) and *The Scavenger's Tale* (chapter 6.3).

ly scientific discussions – as was already suggested in their use of Pearsall et al.'s discussion of cellular memory (see chapter 7.2.1). With regard to 3D-printing technologies, *Undivided* quotes a *cnet* article from 2013 on progress in the field at the Heriot-Watt University in Scotland. The article presents the technology as a vast impact on the future and speculates: "Some day in the future, when you need a kidney transplant, you may get a 3D-printed organ created just for you" (Kooser). The article quotes Wil Shu, who is part of the research project, and underlines the advantages of 3D-printing "eliminating the need for organ donation, immune suppression, and the problem of transplant rejection" (Kooser). The main incentive for the development of 3D-printing is the establishment of a resource of tissue independent from organ donation and the immunological difficulties it entails. The article thereby also presents 3D-printing as a means to overcome organ shortage. On a related note, a *TechCrunch* article from 2018 on progress in 3D-printing in San Francisco quotes a researcher: "Roughly 330 people die every day from organ failure, and if there were a fast way to manufacture those organs, there's no reason for those fatalities, says Matheu" (Shieber). The technology of 3D-printing is introduced as a game-changer, a major impact on the future, similar to how transplantation practice was perceived in its early days. Fittingly, transplant surgeon Starzl explains in 1988: "Suddenly, with the advent of transplantation, it became possible for the first time in human history to provide exactly what was needed, a completely new organ" ("Small Iowa Town" 12). Comparable to Amanda Kooser's outlook to the future in which a new organ may be "created just for you," Starzl emphasizes the massive shift brought by transplantation, which also provides "exactly what was needed" at the time. Both instances present biomedical developments as caesura, breaks that reconfigure how the human body can be treated. In the 21st century transplantation has already impacted many lives and has become a repeatable practice – rather than emphasizing the possibility of transplanting organs, it appears fitting that those invested in 3D-printing specifically speculate about how the technology might contribute to the still perceived difficulty of organ shortage.

At the same time, the employment of the 3D printer in Shusterman's work suggests the – future potential of the technology, a reading that resonates with its framing beyond the *Unwind* series. For instance, in a study published in *The British Journal of Ophthalmology*, Carl Schubert et al. explain: "In this review, we discuss the potential for 3D-printing to revolutionise manufacturing in the same way as the printing press revolutionised conventional printing" (159). The analogy to the printing press likens 3D-printing to a technical development that made an otherwise scarce resource available to the masses. Thereby, printed organs are implicitly compared to mass-produced newspaper and, it is thus suggested, might become part of everyday life. Schubert et al. further outline the fields which could benefit

from 3D-printing, ranging from pharmacies printing required drugs on demand to organ replacement (160). They conclude: "At the present time [2014], however, the impact of 3D printing in medicine is still small, but it has the potential to grow into an enormously beneficial technology" (161). The future-orientation of this statement is obvious because its currently small impact is granted significance by possible developments yet to come. In an article for *The Lancet Respiratory Medicine*, published one year prior in 2013, Stephanie Bartlett further underlines 3D-printing's future possibilities:

> The ability to custom-create new bodies or spare body parts has long been a staple of science fiction stories. But recent developments in 3D printing have shown that we are now well on the way to making on-demand repair, or even creation, of vital organs a reality. (684)

Both Schubert et al.'s and Bartlett's articles present 3D-printing as a technology of the future, a technology that remains to be completely developed. Schubert et al. speak of a "potential to grow," and Bartlett perceives that they "are now well on the way." Thereby, the technology's remaining inadequacies are read in the framework of its future chances. Bartlett's direct reference to science fiction illustrates that the realm of science is influenced by fictional narratives and further emphasizes that the practice still pertains to the future and to the speculative realm. Her comment on the genre not only illustrates that fictional forms of 3D-printing have existed since Jules Verne (Birtchnell and Urry 6) but also underlines the technology's specific appeal as part of an ongoing narrative of human development. These instances exemplarily indicate that 3D-printing is framed as a technology of- and for the future which is also positioned in the speculative realm by those invested in the life sciences.

Speculating a future of 3D-printing, then, appears as a common feature both within and beyond speculative fiction. Yet while in *Unwind* 3D-printing technology also serves as an alternative to human tissue, the series presents a significant change in perspective: Whereas the quoted medical articles focus on the opportunities for recipients, Shusterman's novels navigate the role of the "donors." In other words: The excerpts of current medical discussion engage with patients about to die on the waiting list, the fictional future concentrates on those dismembered to serve the demand for organs if 3D-printing is not developed further. This distinction also becomes apparent in how an *Unwind*-fan reacts to progress in 3D-printing on *Twitter.* In 2016 aiman retweets a *buzzfeed* article on 3D printers and comments: "It's already being developed. So no 'unwinding'?" (aiman). Here, 3D-printing is humorously presented as preventing teenage sacrifice in contemporary society, despite its humorous tone, however, the comment also establishes unwinding and the reduction of adolescents to their tissues as a real-life possibility –

should no alternative be developed. Thereby, the conversations created by Shusterman's novels point towards a positioning of 3D-printing in the future and emphasize that their readers perceive of new technologies in terms of the narratives they have engaged with. Thereby, speculative fiction functions as a tool of meaning-making that impacts those invested in the life sciences and that shapes how the scientific realm is perceived, and which conclusions are drawn from scientific developments.

Yet, the inclusion of extradiegetic sources within Shusterman's fictional framework also specifically pertain to transplantation practice. The chosen references tend to focus on the unlawful use of bodily tissues, such as headlines claiming: "SURGEONS HARVEST ORGANS AFTER EUTHANASIA" (*Unwholly* 167), or: "GIRL SMUGGLED INTO BRITAIN TO HAVE HER 'ORGANS HARVESTED'" (*Undivided* 51) and even specifically refer to organ trading: "GLOBAL ORGAN HARVESTING A BOOMING BLACK MARKET BUSINESS; KIDNEY HARVESTED EVERY HOUR" (*Unsouled* 79). The inclusion of these sources seemingly roots the novels and the practices they present in the factual – and thus non-speculative – realm. It is only fitting that some of these headlines deliberately relate to outlandish examples, such as, such as: "DOCTORS GROW NOSE ON MAN'S FOREHEAD" (*Undivided* 169). Here, the quoted headlines pertain to events that appear stranger than the speculative fiction of Shusterman's work. Read in conversation with these sources, unwinding may just appear as reasonable as any other of the quoted sensationalist headlines. These sources, then, aim to "factualize" the speculative fiction of *Unwind* and suggest its relevance and significance for medical discussions. At the same time, their inclusion suggests the reciprocal relationship between medical and fictional narratives.

This interrelation is further underlined by the identical formatting and framing of extradiegetic snippets and quotes from *Unwind*'s fictional characters. For instance, a quote by President Johnson is followed by a comment on the context of his statement: "PRESIDENT JOHNSON *on Vietnam and the school campus war protests*, 1968" (*Unwholly* 369, emphasis in original). Following Johnson, the novel includes the fictional character of President Moss whose statement is framed identically: "PRESIDENT MOSS *on the Heartland War, two weeks prior to his assassination by militant New Jersey separatists*" (*Unwholly* 389, emphasis in original). The similar framing of both quotes and the emphasis on contexts, in Johnson's case as part of official U.S. American history, in Moss's, an alternative past, correlates both statements. By positioning Rheinschild next to Oppenheimer (*Unsouled* 1) and Johnson before Moss, levels of fictionality are explored and boundaries between fictional and factual layers are eroded. This notion is particularly interesting for young readers who might not immediately differentiate between the layers addressed in the novels. When *Unwind* quotes the *Parents' Unwinding*

Handbook (*Unwind* 263) and *Unsouled* quotes legislative candidate Fuqua's call for a death penalty for young adults (305) differentiating between the novel's dystopian premise and real-life utterances is turned into a deliberate challenge. The series is thereby deliberately positioned as part of ongoing conversations and openly encourages readers to establish ties to current practices and to critically reflect upon them. It is fitting that Bach et al. explain that "Shusterman's series could serve as supplemental reading in a number of general education courses in the humanities and social sciences" (127–28). The intermingling of fictional and factual quotes thus also roots the series in the frame of young adult dystopian fiction, as it presents the novels' future as a possible trajectory for current events.

These ties, however, are not only established via the novels' allusions to newspaper coverage or historical events, but they are further developed in Shusterman's ongoing conversation with his readers and via his online presence. In 2016, the author posts an article on the reanimation of an explanted heart and captions it with "This week on '#Unwind is Becoming More and More Real'" (@NealShusterman, "This week"). The comment resonates with a tendency to grant speculative fiction particular relevance based on how "true" their future is perceived to be. Following this tendency, Shusterman's post emphasizes that *Unwind* engages with, possibly even foreshadows, ongoing scientific developments. At the same time, the tweet suggests that progress in transplantation medicine can be related to the vastly troubling practices presented in his novels. This notion is further emphasized in another tweet: "First human-pig embryos have been made in lab, may carve path for transplants" which the author titled with: "Still not sure if this is good news or bad news—well, it's certainly weird news!" and several hashtags related to his series (@NealShusterman, "Still not sure"). By connecting the research article to his works, Shusterman, similar to the use of headlines in his fictional works, questions the notion of medical progress and instead emphasizes its "weird" nature. This "weirdness", it could be argued, needs further consideration and triggers speculation about its future developments, at the same time, the depicted events are not "weirder" than the practices Shusterman presents and also serve to underline the credibility and relevance of his fictional future. Yet Shusterman does not only include news he deems "weird" but also comments on an example of life writing about transplant receival: "If you have half an hour, you NEED to read this story about a 21-year-old face transplant patient. Every detail is absolutely incredible" (@NealShusterman, "If you have"). Even though Shusterman uses similar hashtags as in the previous examples, the article is introduced in different terms. The reference to a face-transplant and the personal account offered in the article deviates from sensationalist portrayals of science. These tweets, which need to be perceived at aiming towards his readership, thus seem to follow a similar trajectory as his novels and do not allow his audience to perceive of

transplantation in binary terms. In the context of YA, Shusterman thereby suggests the immense opportunity for recipients, while also catering to the "weird" sensation of scientific experiments.

In this subchapter I thus argue for a complex interrelation of the *Unwind* series and societal contexts. Firstly, on an intradiegetic level, the dystology is based on the relation between the role assigned to young adults and the redefinition of their tissues as a transplantable communal good. Secondly, these proceedings are deliberately intertwined with ongoing biotechnological and medical developments. These interrelations purposely draw a connection between contemporary developments in the life sciences and the strategies of Othering presented in the novels. Thereby, the speculative renegotiation of tissue is intricately related to developments in the medical realm and suggests the latter's inseparable ties to cultural readings of the body.

Tying these findings into this chapter on *Unwind*, it becomes apparent that the series offers complex, at times incompatible perspectives on human tissues. On the one hand, the body is treated as a mechanical object whose parts function in separation, on the other hand, the individual is inseparably tied to their embodiment and received body parts challenge recipients' sense of self. Thereby, the validity of life in a divided state is suggested even though the concept is used to justify the structural dismemberment of adolescents. Similarly, the unwinding process itself is depicted among two main axes: Firstly, it is likened to a sacred ritual, steeped in the unknown and presented as following rigid protocol. Secondly, it appears as a biotechnological process which relies upon advanced technology and is portrayed as a parody of human compassion and caretaking. The integration of extradiegetic sources interrelates the fictional works with medical, jurisdictional and cultural discussions of their time and thus animate their young audience to critically engage with the possible results of medical progress. These divergent perspectives not only contribute to an understanding of YA as engaging with complex issues, I moreover argue that they open the future as a realm in which such considerations can be played out in a distorted form while still alluding to parallels to current adolescents' lived experience.

How, then, does the *Unwind* series contribute to a discussion on speculation and organ transplantation? The dystology emphasizes the integral ties between difficult – and ultimately unwanted – parts of population, their disenfranchisement and structural exploitation for what is framed as a greater good. Thereby, it engages with the dystopian trope of juxtaposing individual and society in a specific biotechnological context. In the 21st century, in which transplantation tends to be discussed primarily with regard to a demand for organs, the evaluation of individual bodies in relation to their benefit to society forms a fitting comment on ongoing processes of commodification. Almost all novels discussed in this study portray

strategies of disenfranchisement via the Othering of specific groups within a fictionalized society. At first glance, *Unwind* thus follows the tradition of YA dystopian fiction, in which adolescents are positioned in a variety of bleak future surroundings and have to break free from their suppression.[64] Yet this study's emphasis on the body also grants further significance to cultural constructions of the teenage body. I argue that the young body, as the epitome of desirable, is turned into a commodifiable object itself, a notion that might seem too familiar to teenagers whose changing bodies are not only compared to those of their peers but gazed upon by society. This reading of the fragility of the adolescent body is particularly important given the audience's engagement with the novels and the ties they establish to ongoing medical practices. As the young body fall prey to disenfranchising practices, authorities are questioned alongside medical progress – unwinding or organ transplantation, then, might appear as two sides of the same coin.

7.3 *The Heart Does Not Grow Back* by Fred Venturini

While organ scarcity presents a recurring motif in speculative fiction and medical discussions of the 21st century, the organs of Fred Venturini's protagonist are not scarce. *The Heart Does Not Grow Back*[65] (2014) was first published as *The Samaritan* in 2011 and even though the republication brought some changes, including the ending, both versions feature the premise of a young man who can regrow his organs. Dale Sampson grows up in a small town in Illinois and remains on the fringes of high school life yet becomes friend with Mack, an athlete and popular member of his class. The coming-of-age narrative is forcefully interrupted when Dale survives a shooting in which his love interest Regina is violently killed, while Mack's shoulder is destroyed alongside his plans for a baseball career. In the aftermath of the traumatic event Dale discovers that his shot-off fingers and ear regrow and decides to use his ability for financial gain. With Mack's help, he becomes the star of a reality TV show in which his organs and tissue are donated to deserving recipients. In this chapter, I show that Dale's donations are framed in terms of his personal motivations, namely as a means to overcome trauma and

64 Scholes and Ostenson note that "[m]ost YA novels feature a protagonist who is faced with challenges, external or internal, and who must overcome those challenges as part of coming of age or establishing an identity" (Scholes and Ostenson). While dystopian fiction for adults has been prone to rather bleak endings, YA versions typically end with the hero*ine having made a severe impact on unjust or unequal living conditions.

65 In the following *Heart*

raise the attention of his love interest – and Regina's twin sister – Raeanna, as well as a media stunt fueled by transplantation's potential for human drama.

As the novel follows Dale's first-person account of his social short-comings and difficulties to actively engage with his environment, the work does not yield to expectations of a superhero narrative. Nevertheless, what has been called Dale's "wacky superpower" (Bomer), appears as a major focus of the novel's discussion. A *Tor* interview, for instance, speaks of a "darkly comic superhero tale" ("Pop Quiz: Venturini") and the novel's cover advertises: "Every superhero needs to start somewhere" (*Heart* n.p.). The author himself, however, emphasizes the ties between Dale's superpowers and his emotional challenges:

> Healing is the one superpower that everyone shares, and I wanted to contrast limitless physical healing capabilities with emotional wounds that were beyond the reach of his powers. Every superhero story is a test of the hero and his powers, usually through a supervillain, but in the novel the real tests are ones we've all experienced – heartbreak, tragedy, failure. (Centorcelli)

Dale's power, then, draws from the human capacity to heal and is exaggerated to include the regrowing of tissues, an ability that, as Venturini suggests, also forms a counterpoint to Dale's struggle to overcome trauma and loss of human relationships. Here, his ability functions as a metaphorical tool, that gives concrete form to Dale's desire to atone for his survival. At the same time, the introduction of Dale's advanced healing positions the novel in the speculative realm: Even though it does not feature a technological novum, it appears as a thought experiment by wondering how Dale as an underprivileged young person may use this ability – and to what ends.

The central position of Dale's ability in the novel and his lack of superhero bravado makes genre classification difficult. Most reviews focus on the work's at times humoristic tone, Jason Heller speaks of a "mix of tragedy and low-key comedy" (J. Heller), Betty Lytle ascertains that "Fred Venturini has created a dark comedy with an unusual twist" (Lytle), and *Kirkus* presents the novel as "a black comedy about the nature of the human body and, remarkably enough, a cathartic sort of redemption" ("The Heart Does Not Grow Back"). Venturini himself appears aware of the genre-bending quality of his work and explains: "I get asked a lot about my novel, 'What genre is it?' I don't know, and I don't really care that it may not fit neatly into one genre" (Ben). The neglect of genre-boundaries fits the novel's basic premise, namely the intersection of the highly personal, Dale's personal tragedies of the shooting, his mother's death and his social struggles, with the highly publicized world of mass media. The fact that organ donation and -transplantation are positioned at the story's center thereby also underlines the practice's significance for both the personal and the universal.

So far, Venturini's novel has not received critical attention and references to the novel only appear in form of reviews and interviews with the author. The reason might be that *Heart*, as the author explains, "has not achieved the results that [he] hoped and dreamed for" (Venturini, "Novelist"). Despite this lack in interest, the novel presents ample ground for discussion as it portrays transplantation as a complex undertaking, introduces it as a means of atonement, frames it as an element in dramatic storytelling, and navigates its ties to obligation. Hereby, the novel positions transplantation in-between the utterly private and the marketable, between the criminal and the televizable and thus suggests its potential to deliver heart-wrenching story arches.

7.3.1 Overcoming Trauma: Donation and Absolution

In the novel's end, Dale has seemingly become the title-giving Samaritan of his television show, a figure of Christian selflessness and charity. In the beginning, however, he discovers his ability and primarily ponders two aspects: firstly, his incapacity to align his unchanged body with the experienced trauma, and secondly, how to benefit financially from the regrown tissue.

Even though Dale has experienced both mental and physical trauma, his body does not display his suffering and the fingers he has lost have regrown. To Dale, his healing ability distances him from the trauma he has experienced and the guilt he feels: "I was robbed of the injuries I'd earned that night. I needed those scars. I needed physical damage to reconcile it mentally, to tell myself I'd paid the proper price for letting Regina die. The pain of loneliness was all I ever knew" (*Heart* 103). Here, what has been perceived as Dale's superpower does not appear as an asset. Clearly, Dale feels undeserving of the regrown limbs and longs for their absence as a sign for the loss he has endured. Moreover, the missing tissue appears as a means of payment, without the injuries, there is nothing he has given, nothing that could lessen his survivor's guilt. Venturini himself appears to be interested in the relation between scars and lived experience and has repeatedly told the story of his eleven scars from eleven separate incidents, most prominently those left by him being burned as a child (Turner Publishing). This storytelling presents physical scars as a map to what a person has experienced and aligns emotional development and physical transformation, a connection that Dale is denied. Rather than perceiving of the regrown tissue as a gift, he thus feels "robbed" of its absence. The quote's final sentence aligns emotional and physical suffering, and loneliness becomes the pain that remains even though no physical change has occurred.

This opposition between emotional loss and physical soundness appears haunting rather than soothing. When Dale shows his regrown fingers to his sick

mother, she immediately connects her son's losses to the returned tissue: "'This is God making up for what was taken,' she said. 'This is God making things right'" (*Heart* 76). Dale's power becomes indicative of a divine balance and the religious explanation not only suggests the needlessness of Dale's guilt but grants purpose to the regrown fingers. To the protagonist, however, the healing never presents a balancing force. On his eighteenth birthday, the day he becomes an adult, Dale muses:

> Nothing had been made right or whole by my miraculous healing. A dead mother, for what, an index finger? Regina's corpse for a useless piece of ear flesh? My friend's golden shoulder, his pride, our dreams, for what? . . . Everything was taken, and I was left with a power I didn't want or even need. I didn't need my hand or ear to heal. In due time, they'd have been capped with scars and the pain would vanish. The parts I needed to regenerate, the pain I needed to subside, were deeper and there forever, untouched by my abilities. (*Heart* 78)

Again, Dale's healed body is connected to his losses, and he begins to wonder about the nature of the balance his mother introduced. The attempt to compare the people he has lost to the tissue he has received remains necessarily futile. This connection between physical and emotional loss is further highlighted in the case of Mack's shoulder, whose destruction not only presents the end of his career but also of their shared dream of leaving for California together. Dale summarizes that "everything" has been taken from him, a notion that stands opposed to the "pieces" of flesh that have regrown. His healing remains partial and superficial, never touching what needs to be healed. As his hurt can never be compensated, denying his ability also means insisting on the injustices he has suffered. He explains: "I didn't want to accept the trade. I hated the new hand and what it represented", and he cuts off his finger and a piece of his ear (*Heart* 78–79). The denial of the "trade," of the balance between trauma and physical gain, indicates an option, a choice of trading back, of returning what has been lost. Yet, clearly, he cannot exchange his tissue for Regina, for his mother or for Mack's shoulder and is left with his healed body. The futility of not accepting his body's capacities is emphasized in the end of the novel's first part when Dale looks at his regrown fingers, "and the only reminder of those cuts that remained was a new set of white lines tracing the border between who I am and who I used to be" (*Heart* 79). The changes to his body, as small as they may be, appear at the intersection of past and present and thus illustrate that his life has irrevocably changed. Dale's healing, then, is presented in close connection to what has been taken from him – a notion that severely impacts his desire to donate his organs.

The inability to accept his healing body also forms a prime reason for Dale's future donations, which constitute a means to lose the organs he feels undeserving of. While his regret and survivor's guilt are clearly part of his reasoning, Dale's ul-

timate decision is also based on further external factors, primarily his wish for meaning and significance. In the proposal to the production company, Dale explains: "One man gives his organs away to needy families. The same guy. Because his organs keep growing back" (*Heart* 172). The framing of the recipients as "needy families" roots the planned show in the heroic act of altruistic donation, however, the novel denies this reading as the narrator explains after losing his love interest: "She was gone and it hurt like I didn't expect it to hurt. And I knew that *The Samaritan* would happen then. I finally wanted it. I wanted to be on television and look into the glittering eye of a camera and know she's out there, and I was here, saving people" (*Heart* 192). This motivation introduces a double perspective on Dale's decision to become an organ donor: Internally, he is mostly driven by a desire for human relations, externally, he presents his decision in the socially accepted frame of altruism.

Dale's ability thereby becomes a vehicle: Even though it is undesired by the protagonist, it develops into a means to transform his current situation and forms the basis for his TV persona. Here, Dale becomes the title-giving Samaritan and his very being is defined by his ability to regrow and donate his organs in selfless acts. Since Dale has become the "man [who] gives his organs away to needy families," his change in lifestyle mirrors the transformations of his healing body. However, as he is forcefully reminded when the season ends, the ability has not truly altered who he is and has been:

> Everyone was left to prepare for and get nervous about the premiere, but *I was me again*, free to do whatever I wanted, so after that last checkup and surgery, I sat outside the hospital on the bench and cried. Even though most of my body was different, I was still the same goddamned Dale. (*Heart* 200, my emphasis)

The show is over, and Dale is left by himself again. The friction between difference and sameness that was already introduced in relation to his body's incapacity to present his trauma comes to the fore again. This time, his body is presented as "different," while he himself remains the "same." Thereby, Dale, the Samaritan, and still the "same goddamned Dale" appear at odds. This notion is underlined when he asks Hollie, who has received his kidney and has shown interest in him: "If I didn't give you a kidney, and you met me without the whole *Samaritan* thing, would you have liked me just the same?" (*Heart* 224). The impact of his ability and the show are underscored: To Dale, who has spent his life feeling distinctly insignificant, the show's insistence on his exceptionalism affects readings of himself. His endlessly healing body, then, does not only appear at odds with his internal suffering but becomes his sole recognizable feature and he no longer trusts his surroundings' perception of him.

As satirical as Venturini's use of reality TV may be, it also hints at a darker truth, as Dale's vulnerable, impoverished position is employed to cater to audiences' and producers' needs. When Dale still lives at home, he attempts to find a meaning in life and lastly decides on: "*The meaning of life is practicing the will to live*" (*Heart* 129, emphasis in original), his starring in the show might appear as an attempt to finally seem worthy to his surroundings, at the same time, however, it is also framed as a mode of survival. Dale's complex reasoning to enter reality TV is thus based on his personal struggles: his desire to neglect an ability he feels undeserving of, his need to become someone that Raeanna might leave her husband for. As Mack explains, becoming the Samaritan is an act of transformation in and of itself and allows for Dale to move beyond his adolescent role: "You'd be the biggest story in human history. . . . The world would fucking love you. You could have whatever you wanted" (*Heart* 162). Rather than rooting the show's development in altruistic considerations, it is thus based on both Mack's and Dale's need for recognition. Hereby, Dale is deliberately portrayed driven by his individual, at times even selfish reasoning. In effect, Venturini's novel, I want to argue, appears as a purposeful and subversive deviation from media portrayals of transplantation as selfless undertakings. Instead, particularly when read in the context of discussions on transplantation of the 21st century, the narrative presents a tongue-in-cheek comment on notions of the "heroic act" of organ donation.

7.3.2 Marketing Transplantation

Taking the form of a drama-centered reality TV show, *The Samaritan* features Dale's donations and deliberately employs language evoking his charitable goal. In countering these altruistic representations, not only the show but Dale's ability itself are soon tied to the possible marketability of his organs. In fact, the potential to commodify Dale's ability is introduced as connective force between different parts of the novel: As the protagonist encounters the black market for organs, is confronted with governmental interest to experiment upon him and finally finds shelter in reality TV, the novel indicates that Dale's ability, and in consequence the organs he produces, are a valuable resource for a variety of agents. To Dale, who has suffered from poverty, his ability prominently offers financial opportunities that lead him to consider the black market for organs, and he realizes that it "[t]urns out that tissue is one of the last bootlegging frontiers in America, poorly regulated and improperly structured" (*Heart* 109). The reference to the frontier myth and the presentation of illegal human tissue sales in terms of "bootlegging" inscribes the black market into the American way of life and its founding myths.

This understanding of medical practice as a business is also shared in the life sciences and cardiothoracic surgeon Magliato explains in her autobiography,: "Like it or not, medicine is a business just like Walmart or FedEx" (190). As the physician likens medical practice to a supermarket and a logistic partner, she indicates the involvement in moving product and an interest in quantifiable data. For transplantation to become a business, however, it needed to be established as repeatable and reliable first, as surgeon Starzl argues in 1988: "What was a crusade when it was *not* a reliable way of treatment became a business when it turned successful" ("Small Iowa Town" 17, emphasis in original). Marketability of transplantation and its success are thus presented as intricately related.

Soon, Dale finds a more lucrative venture to employ his ability than selling his organs on the black market: The TV show *The Samaritan*, which frames his donations as altruistic deeds and is steeped in Christian imagery. The show's title forms a reference to the proverbial Good Samaritan, a trope that derives from Luke 10: 25–37, "The Parable of the Good Samaritan." The story of a robbed and injured Levite who is helped by a Samaritan rather than by a fellow Levite or a priest resonates with altruism beyond religious and social divides. Fittingly, as a trope in television, "The Good Samaritan" has been perceived as "a character who, despite owing nothing to the hero, helps them when they're at their weakest, often at risk or cost to themselves" ("Good Samaritan"). Interestingly, the act of selflessness is also tied to matters of class: "Not coincidentally, the Samaritan is almost always a part of the blue collar or underclass of society. There's almost no such thing as rich Samaritans in fiction" ("Good Samaritan"). Clearly, Dale is presented as part of an underprivileged part of society and his standing vastly impacts his decision to enter reality TV. In relation to such formats, John McMurria, for instance, refers to makeover shows such as *Extreme Makeover: Home Edition* as examples for "Good Samaritan reality TV" (307). The fictional show's title ties into the use of the Samaritan-term, given that Dale's donations offer an ultimate before and after effect. At the same time, the title is also tied to organ transplantation given that undirected organ donation has been referred to as "good Samaritan donation", for instance by OPTN ("Living Non-Directed Organ Donation"). The term suggests a Christian reading of donation proceedings and indicates a metaphorical equaling of donor and proverbial Good Samaritan.

The significance of the show's framing as reality television, rather than as a documentary, is repeatedly emphasized by deliberate references to the genre's features. Defining reality TV as a genre is difficult, given the wide-ranging quality of contributions to the field (Kavka 5). Laurie Ouellette and Susan Murray fittingly offer a rather broad definition: "We define 'reality television' as an unabashedly commercial genre united less by aesthetic rules or certainties than by the fusion of popular entertainment with a self-conscious claim to the discourse of the

real" (3). The commercial aspect of *The Samaritan* might not seem central because the show primarily depicts medical procedures. However, financial gain is a major incentive for the production, not only presented by the producer's insistence on the show paying off financially (*Heart* 203) but also by the sponsorship of insurance companies (*Heart* 179). The aspect of the "real" appears particularly prominent, since Dale's ability remains a central aspect of the show's appeal: "As Tracy put it, showing me in healing mode drove home the fact that I could regrow these organs, and highlighted the extent of my sacrifice" (*Heart* 206). The emphasis on the authenticity of Dale's healing body is entangled with the notion of sacrifice: Even though his organs may regrow, he needs to be shown as suffering in order to depict his "sacrifice" and turn him into the proverbial Samaritan. At the same time, reality TV is presented as an odd choice for Dale, as somewhat lacking in comparison to his ability. Fittingly, Tracy is shocked by the planned employment of his ability: "An honest-to-goodness superpower, and instead of putting a mask on, you're taking it to reality TV" (*Heart* 177). It seems that the show, even though it will be presented as an epitome of altruism, does not constitute a fitting outlet for Dale's ability. Moreover, Tracy's insistence on the ability's realness ("honest-to-goodness") also indicates a contrast to the talents typically presented in the field and the staging involved in their production. Dale's venture into the realm of reality TV thus further complicates notions of "the real" in his story: By choosing an outlet that appears to stage the authentic and that embraces the dramatic, his ability and the ensuing donations also become a sensationalist asset to the genre.

Within the field of reality TV, *The Samaritan* employs principles of the makeover show. This format has been known to "showcase dramatic transformations of ordinary people as they undergo either simple procedures, such as fashion makeovers, or major life-altering plastic surgeries" (Tsay-Vogel and Krakowiak 2). It is important to note the "ordinary" quality of presented people, a notion that ties into Dale's role as the underprivileged Samaritan. Clearly, the transplantation of an organ cannot be perceived as either related to fashion or plastic surgery, however, *The Samaritan* deliberately mirror the conventions of such shows. Fittingly, the episode firstly focuses on the recipient and their situation, and Dale concludes, "[t]he more tragic the story, the bigger the impact" (*Heart* 204). In the episode's second part, Dale encounters the recipient, in a third, the surgery is briefly shown and lastly, both the recipient's and Dale's recoveries are featured. This narrative arch deliberately resonates with the makeover show which, as Jack Z. Bratich argues, presents "powers of transformation" (8). At the same time, the show employs these television tropes and intersects them with a dramatic version of transplant surgery, particularly by offering a narrative of a horrendous wait for an organ, the receipt of the life-saving body part and the transformed life after surgery. The dra-

matic appeal of these steps also becomes apparent in the life writing by surgeons, and Bud Shaw explains: "Their [the patients'] wait for a donor on the one hand and the heroism of organ donation on the other remain the most compelling part of the transplant story" (xi). Shaw's reference to "the transplant story" indicates that tropes are at play in the depiction of transplantation medicine. Both sides of this narrative follow specific framings: The desperate, sick recipient and the heroic donor. If, as Dana Heller suggests, "[p]erhaps . . . it is true that makeover television programming provides the new consumerist fairy tales for our times" (2), organ transplantation is adjusted to offer a familiar tale in this frame.

The show's marketing thus relies upon an emotional story, a story that Dale is part of and is made to fit. As he explains, his shots are repeated several times (*Heart* 203), in an effort to align him with TV aesthetics. Similar to the fashioning of its protagonist, the show also features his organs to provide a certain spectacle. As Tracy explains, "we simply must have some donations that are uncommon, visual, the type of thing no other human can give. I mean, I can give a kidney. We need to make sure to get an arm off of you. An eye, maybe" (*Heart* 179). Dale's ability can no longer be separated from the medium it is portrayed in. Tracy's insistence on a "visual" quality of the planned donations emphasizes the stylized image of organ transplantation portrayed in the show. Moreover, her comment underlines that transplantation itself is not enough of a spectacle for a show: In the 21st century, donating a kidney does not appear spectacular enough, because, Tracy indicates, any human could do it. Dale and his body are thus framed to adhere to the show's goal of presenting a novelty, a unique selling point in the competitive television market. On a grander scale, the show's deliberate framing of its protagonist emphasizes its function as reality TV, rather than documentary. As Susan Murray explains: "While some nonfictional television texts fit squarely within the generally agreed-on borders of either documentary or reality TV, many others seem to defy easy classification" (41). *Heart* deliberately portrays Dale at the intersection between these categories, his ability, as extraordinary as it might be, has to be accepted by the reader, while the reality formats they may be familiar with are revealed to be staged to cater to an audience's needs.

Yet it is not only Dale who is groomed according to a given standard, the formulas of the makeover show also deeply affect a key concern of tissue allocation: recipient selection. Naturally, the depicted recipients are not only chosen according to their place on the waiting list but based on whether or not they adhere to the show's aesthetics. Therefore, a candidate is chosen even though "everyone thought farmer Jack was a colossal asshole who thought God owed him a leg. But there weren't many legless, tough-luck stories with kids out there, so Jack got his wish in the form of my right leg" (*Heart* 240). This brief insight indicates that the notion of "deserving" a new organ remains necessarily inadequate: Based on Jack's char-

acter, Dale would rather have his leg given to someone else. Jack's story, however, appears compelling for the TV format. Thereby, choosing the recipients also appears as a comment on the conundrum of recipient selection. If the reader follows Dale's line of thought, one may wonder whether personal character should ever affect the choosing process, or whether having a family should. These complex ethical questions are satirically portrayed in *Heart* as possible recipients are reduced to their marketability in the reality format. Recipient Hollie therefore wonders: "'That's what I was to the show-running people?' she said. 'Stuff?'" (*Heart* 193). By referring to herself as an object, her lived experience, which is prominently featured in the show, is reduced to a role with appeal for mass media. Choosing the donors according to expected audience reaction underlines that transplantation has already received considerable coverage to establish a desired story-arch, and that these tropes can be used to create the human drama needed to market the story. The show, then, is not depicted as a means to gain insight into transplant proceedings but appears as an active impact upon the reiteration of tropes and thus the cultural framing of transplantation.

In order to follow the presented narrative arch, *The Samaritan* also needs to present Dale's donations and the recipients' recovery as a success story. When donating his skin to a burn victim, Dale explains: "I wouldn't have met the boy if the story editors couldn't deliver a happy ending" (236). Clearly, Dale is well-aware that even in the 21st century, and even given his specific ability, organ transplantation is not always successful. Yet the show hinges upon this predicament, upon the understanding that Dale's selflessness will undoubtedly contribute to the fulfilled life of the recipient. As a makeover show, the format relies upon a "before" and a noticeably improved "after." The short comment indicates that rather than presenting transplantation as a success story, the choosing process has been successful: It is not about how transplantation can save any patient, but how the patient needs to be chosen to benefit from the procedure. Obviously, the notion of choosing patients in Venturini's text appears particularly noteworthy in relation to the waiting list, which reflects urgency, but might also take age into account ("Frequently Asked Questions"). As surgeon Shaw explains in his biography: "Not everyone who needs a liver transplant will get one even though more people support organ donation than ever. That means we have to choose who gets a new liver and who doesn't, and to be fair, to best serve the public good, we need to be picky" (Shaw 247). Shaw presents his assessment as born from necessity: Clearly, the decision of who receives a life-saving organ – and the always implied opposite of who does not receive one – remains complex and cannot be answered by a single person's reasoning and decision-making. Instead, as UNOS explains, an "organ-specific allocation algorithms derived from OPTN allocation policies and the combination of donor and candidate information" ("The National Organ Transplant

System") matches donor and recipient. Despite this data-driven approach, uncertainties remain as transplant surgeon Shaw suggests: "How long is long enough? Is a year of survival for Mrs. A enough when hundreds of other people on the waiting list are likely to live for decades after getting a new organ? What about two years?" (248). Shaw's contemplation illustrates the highly personal dimension of organ allocation and emphasizes the temporal framing of "success" in terms of years yet to come. I therefore understand *Heart*'s insistence on successful transplantation in the speculative realm as relating to both considerations of recipient selection in transplant practices and to the framing of a compelling story arch.

The novel's portrayal of recipient selection as a means to cater to a dramatic narrative arch of reality TV also resonates with the medialization of transplantation, prominently presented in the competitive angle of *De Grote Donorshow* (*The Big Donor Show*) in the Netherlands in 2007. *HuffPost* comments upon the show before its airing:

> The 37 year old would-be donor, "Lisa," will choose the lucky recipient based [on] the contestants' personal story and conversations with their family and friends. And although only Lisa will pick the recipient, viewers can voice their preference, a la *American Idol.* (Satel)

The reference to the casting show emphasizes that *De Grote Donorshow* deliberately ties into well-known strategies of reality programming. Fittingly, it was produced by Endemol, which had created *Big Brother* eight years earlier. The framing of the show as reality TV positions it in the context of pop culture, and it received vast media coverage which strongly focused on ethical concerns.[66] The employment of casting show aesthetics for organ allocation was perceived as thoroughly impious – a playful approach to a too serious topic. At the same time, the format was chosen to prominently comment upon the harsh realities of waiting for an organ as "[d]uring the show, 25 kidney patients were vetted by 'Lisa,' and most were quickly dismissed for being too old, too young, smokers, ex-smokers or unemployed" as an article published in the *Seattle Times* explains (Tosterling). The dismissal of patients and the sheer number of contestants for a single kidney introduces ethical dilemmas of choice involved in organ allocation to prime-time TV. The show thus stirred conversation and brought discussions on what could – and what could not be – reality TV to the fore.

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66 *The Independent*, for instance, reported on attempts to ban the show via the parliament (Shaikh), while *Variety* summarized that the program "has drawn widespread criticism across Europe, with politicians, patients and medical professionals slamming the premise as highly unethical and immoral" (Schreiber).

Despite its presentation, *De Grote Donorshow* did not intend to actually choose a donor, instead, it was a deliberately staged event designed to draw attention to a lack in donor numbers. Clearly, the controversy was part of the show's agenda to create an audience for its engagement with organ donation. These strategies, however, might appear problematic themselves as the acceptance speech for the international Emmy for Non-Scripted Entertainment of host Patrick Lodiers suggests: "*The Big Donor Show* was a hoax, so don't worry and enjoy your dinner" ("2008 International Emmy Winner" 0:46). The comment indicates that the show's status as a "hoax" and in consequence as "unreal" makes the depicted topic acceptable for prime-time television, comfortable enough to keep on eating and enjoying the evening. At the same time, however, Lodiers emphasizes the realness of the matter at hand when dedicating the prize to patients on the waiting list and appealing to the government to adjust donor regulations ("2008 International Emmy Winner" 1:05). The show thus appears as a mirage, a political appeal disguised in the format of reality TV. Thereby, the stunt also distances *The Big Donor Show* from other formats of reality TV as its staged nature is an integral part of its function. *The Hollywood Reporter* called the show "fake" (Zagt) and thereby underlines that it went against reality TV's most basic promise, the claim to the real. *The Times* explains that "[i]t was the reality show to end all reality shows" (Charter and Sanderson) and highlights even further that the show not only commented upon organ donation but also upon its own genre. With relation to the show's aim, raising awareness for organ donation, *BBC* titled: "Donor boom after TV kidney hoax" and concluded: "Some 12,000 more people have registered as organ donors in the Netherlands since a Dutch TV hoax that featured a 'competition' for a kidney" ("Donor Boom after TV Kidney Hoax"). Whether the show can truly be recognized as the monocausal explanation for a rise in donor numbers extends beyond the scope of this analysis, yet it remains noteworthy that the show was immediately tied into the development and was thus validated as a means to raise awareness. The show's ending and its final neglect of any claim on authenticity appears central to its impact as it positions itself outside the realm of both recipient selection and reality TV and instead appears as a piece of performance art.

Similar to *De Grote Donorshow*, Venturini's fictional *The Samaritan* is presented as actively impacting donor numbers. Dale's producer reminds him: "Organ donations are up. . . . That's our shield against any puritans out there saying you're soiling the institution of donation" (*Heart* 213). Here, Tracy suggests that the show actively impacts its audience's behavior. Suddenly, people are "remembering" to sign up for donor status and the show, which reaches its audience in their living rooms, becomes a persuasive force. The novel thereby illustrates the impact of televised formats on willingness to donate, a relation that was also ad-

dressed in a study on medical dramas by Calista Harbaugh et al. They detect a tendency of negative portrayals of transplant practices and conclude that "widespread exposure to these representations may reinforce public misconceptions of transplantation" (E377). The impact of, in this case, fictionalized narratives of transplantation is emphasized and underlines that "[t]he mass media can be both useful in promoting, but also potentially dangerous in adversely affecting organ donation" (Matesanz and Miranda 2127). Tracy, too, underlines her show's impact but, unsurprisingly, perceives of this influence as contributing to its marketability. At the same time, the reference to donor numbers appears particularly fitting in the contexts of televised depictions of organ transplantation. The U.S. American transplant documentary *Dying to Live*, for instance, emphasizes the importance of donating in chosen interview passages (8:51). Donor numbers, then, appear as a shared goal of different formats of televised transplantation tales. In *The Samaritan*, this focus is related to the show's marketability and becomes another number to establish its success.

Even though the novel opts for a satiric exaggeration of narrative technique and organ transplantation, it nevertheless insists on donation's impact on the lives of recipients that ranges beyond the sensationalist portrayals of reality TV. As Bratich claims, "[r]eality television (RTV) might be less about representing reality than intervening in it; less mediating and more *involving*" (6–7, emphasis in original). In fact, *The Samaritan*, despite its staged nature, deeply intervenes in the presented recipients' lives. The producer Tracy plans to feature the lives of waiting patients who would probably not receive organs otherwise: "Really dig deep into the donor list where people not only can't find an organ but don't have the coverage to get it transplanted" (*Heart* 178). Obviously, these recipients are assets for the show's narrative, still, they receive organs when otherwise they would not. The impact of his donations is underlined when Dale sees Hollie after the show has ended and describes: "The sun was out and Melissa [her daughter] was playing outside, her yellow dress swirling in the breeze. . . . Hollie's hair was in a simple ponytail, her face devoid of heavy makeup. Just a casual day around the house" (*Heart* 303). As cynical as the novel may be, Hollie's life has been transformed – a transformation that not only relies upon Dale's ability and his willingness to donate but also on the show's strategies of recipient selection. Even though *The Samaritan* is driven by agents who seem utterly uninterested in the lives that are altered, the novel also presents the change done by the staged programming. Tracy fittingly explains: "Well, if you start to forget the level of awesome, just remember, we are filming a pilot, but *you* are saving someone's life" (*Heart* 178, emphasis in original). The producer thereby bases the show in both: Dale's altruistic deeds and the creation of a marketable product. The novel

thereby emphasizes the "realness" of Dale's – and in extension organ transplantation's – contribution that lingers despite the show's narrative corset.

As Venturini's novel frames Dale's extraordinary ability to cater to audiences' tastes, it also suggests that cultural engagements with transplantation have developed a specific story arch that may not seamlessly adhere to the realities of surgery or recovery. I want to emphasize that the invasiveness of these narrative framings is also suggested in forms of life writing as Bud Shaw speaking of "the transplant story" prominently illustrates (Shaw xi). In Venturini's novel, this aspect is granted further significance and transplantation is turned into a compelling plot device which contributes to dramatic entertainment. The timeliness of this framing becomes particularly apparent by reading the novel in the framework of the performed *De Grote Donorshow* which abandoned its claim on authenticity only after presenting recipient selection as a spectacle. I therefore conclude that the novel's speculative approach offers the framework to navigate the relation between media portrayal, drama and transplantation and illustrates the underlying role of meta-narratives for depictions of medical practice.

7.3.3 Transplantation and Obligation

When Spider-Man Peter Parker is told that "[w]ith great power comes great responsibility," he begins to realize that having a superpower is also tied to social obligation.[67] Even though Dale's role as a hero is deliberately questioned in *Heart*, the significance of being responsible, possibly even obliged to donate is negotiated from various angles. As Dale begins his journey as the proverbial good Samaritan, he also starts to wonder whether it is his obligation to keep on giving and whether he has to devote his life to surgery in order to let society benefit from his ability. The discussion of obligation appears particularly noteworthy in the context of organ transplantation, in which the obligation to donate has repeatedly been emphasized.

The 2015 documentary *Dying to Live* opens with an emphasis on organ shortage: "On any given day of the United States a hundred thousand people are waiting for organ transplants that could save their lives, but because too few of us are donors there are not enough organs to meet the need" (*Dying to Live* 0:19). Here, the fact that individuals are waiting for a life-saving organ is based not on their termi-

67 What has been called "The Peter Parker Principle" (Raman) first occurred in slightly different wording as "with great power there must also come – great responsibility!" in *Amazing Fantasy* 15 (Lee and Ditko 11). Since then it has occurred in a variety of Spider-Man publications and was for instance reiterated by Uncle Ben in Sam Raimi's *Spider-Man* (2002).

nal illness but on those unwilling to donate. The waiting list is not related to a lack in transplantable organs, for instance given a decline in brain-dead patients, but is solely based on a lack of willing donors. Thereby, the audience is framed as being either responsible for the suffering or new hope they are about to witness – based on whether they are organ donors or not. This framing of obligation to donate is expressed in various forms in televised coverage of transplantation. For instance, the U.K. documentary *Transplant Tales* also directly ties death on the waiting list to lack in donors, rather than to suffering from an illness. In an included interview segment with a medical professional it is stated: "There's not sadly enough organs and that's why three patients die a day in the U.K. waiting for some sort of organ transplant" (01:18). The insistence on scarcity of organs has been emphasized in almost all texts of this analysis and appears as a shared basis of transplant discourse in the 21st century, when transplantation is no longer perceived as an experimental practice. In effect, the decision to donate is framed as both: an altruistic act and an obligation. In her autobiography, face-transplanting surgeon Siemionow explains: "The people who sign those small donor cards tucked in their wallets or purses harbor a philosophy borne of an astounding courage and generosity, and a profound sense of obligation to their fellow human beings" (189). Here, different framings of transplantation come to the fore: Can a donation remain "the Gift of Life" if one might feel obliged to give it?

An obligation to donate also serves as the basis for the "Kill Jill" advertisement campaign by the Scottish Government from 2008. The campaign hinges upon active audience engagement: While presenting the fading image of a girl, the viewer is asked whether they want to "kill Jill" or not. Showing a decision diagram, the audience is confronted with the option to choose either "yes" or "no." Should they choose "no" and thus, the campaign suggests, decide against killing Jill, they are presented a registration number to become an organ donor (The Union Advertising Agency). Thereby, saying "no" actually stands for signing in and approval and rejection are counterintuitively assigned. The simple yes-or-no framing of the complex choice of organ donorship makes the audience responsible for an imagined person's life: Not signing a donor card is equaled with actively killing an unknown person waiting for an organ. The campaign thereby also suggests a reinterpretation of corporal ownership: The individual has lost the rights to their own body, in fact, keeping it from benefitting society is equaled with manslaughter. Clearly, the campaign aims at giving the waiting list a face, non-coincidentally, it is the face of a girl which is slowly fading in the background, as well as a name and the implied status of a person. The advertisement deliberately implies suffering of the innocent that needs to be prevented by the audience's active resistance, their choosing "no." The commercial's effectiveness is suggested by an increase in organ donation numbers which the *BBC* relates to the campaign (Jeffreys). The article explains: "While polls

generally show very high support for donation only a quarter of adults get round to signing up to be a donor" (Jeffreys). The advertisement ties into this indecisiveness as it pressures a generally supportive but non-registered audience to reframe their status as actively harmful to innocent individuals. Thereby, donation is not presented as a gift anymore, it is conceptualized as an obligation, owed to one's community.

While the "Kill Jill" campaign presents post-mortem donation as an individual's duty, specified donation can create even more intense feelings of obligation and responsibility. Familial ties, for instance, can strongly impact decisions concerning living organ donation: "This centrality is biological in terms of establishing the extent to which compatible tissue matching exists, however it is social in terms of establishing the conditions under which both donating and receiving organs are culturally and personally feasible" (Crombie and Franklin 197). Genetic family thus not only plays an important role for tissue-matching, but social entanglements impact the occurrence of tissue transfer. In *Heart*, the repercussions of denying donation within the family are negotiated when Dale is supposed to donate bone marrow to Marvin whose brother, Jonathan, refuses to do so. Dale describes a conversation with Jonathan's son:

> "Uncle Marvin taught me how to fish," one of them said. "My father isn't just killing his brother, he's killing a good person."
> Killing. In America, the organ-donation system is based on altruism. Nothing can be forced. Yet here was a man being accused by his own blood of murder, not through activity, but through inactivity. (*Heart* 243)

Read in the framework of the "Kill Jill" campaign, Jonathan has decided not to donate and has thus opted to vote "yes." Hereby, refusing to donate is reframed as a hurtful act by his own sons and the costs of keeping his bone marrow is being shunned by his family. Dale's reading clearly opposes the son's as he underlines the significance of altruism and, in effect, voluntary action. Yet the novel also strongly suggests that the theory of free choice may not brave the reality of familial obligations.

While family members might feel obliged to donate, their possible donation tends to reach a certain limit, in case of Dale, however, tissues regrow, and the protagonist begins to wonder how much he is obliged to give. Unsurprisingly, his visibility on reality TV further contributes to the pressure to continue his donations. After the first season is aired, discussions begin to include Dale's personal responsibility: "The final debate was more specific to me: What was my responsibility? Should I give and give forever? What if I stopped? What if I wanted to retire and stop enduring the surgeries? That was a messy one for even me to consider" (*Heart* 234). Dale himself is uncertain whether there might be an end to his obli-

gation to donate, clearly, the novelty of his ability creates new challenges. Even though his ability might not present a technological novum, it presents major bioethical challenges.

The matter of social obligation gains momentum when Dale decides to give his heart to Harold, being well aware that he might not survive the donation and that he will likely lose his ability to regrow his organs following the strain of the surgery. His decision is based on his personal relation to Rae, who he is led to hope might finally leave Harold if he is well again. In his interview-episode, Dale explains: "There will be no cameras. No episode. No coverage. An old friend needs me to save her husband, and I'm going to do it" (*Heart* 266). By denying the audience access to his final donation, Dale insists on the private nature of the surgery. However, he also uses the public exposition of *The Samaritan* as a means to contact Raeanna and is "looking into the camera, but seeking Raeanna" (*Heart* 265). His decision, which is intricately tied into his personal trauma, forms the basis for public debate. Donating his heart, thereby effectively terminating his body's healing, is also presented as being triggered by personal preference rather than by communal benefit. In the interview itself, this trolley problem is already indicated: "You can save a hundred more people. People might say you're being selfish" (*Heart* 266). Apparently, Dale's ability accounts for the uncommon framing of living heart donation as a selfish act. Yet Dale choosing the recipient for personal reasons is quickly taken up by the public:

> Then I saw a bearded man holding a sign that said SELFISH SAMARITAN! And some greasy-haired teenager waving one that said SAVE 1, OR 100? DO THE MATH! . . . I froze on the sidewalk, wondering just what would happen if I approached my door – would I catch another beating? . . . All because I had the audacity to die for one person instead of living to yield organs for dozens more. (*Heart* 270–71)

Correlating the image of the Samaritan and selfishness appears oxymoronic: A selfish Samaritan ceases to qualify as a Samaritan. The insistence on his selfishness emphasizes society's claim on Dale's singular body. Accordingly, Dale has lost autonomy of his corporal being and of how he chooses to employ his ability. Rather than being part of his person, his body has become a matter of universal interest – how it is used, then, is discussed in the public, rather than in the private sphere. This intersection gains particular relevance in the show's framing as reality TV since the field has been known to publicize the private. Dale's body is no longer private, instead, it has transgressed in the public domain. Even though to Dale his body retains a private, subject quality, he still frames his ability in terms of an obligation to someone else when stating that he is "d[ying] for one person." The internal and external debate on Dale's use of his ability thereby further under-

lines intricate ties between donation and obligation which are shaped by societal factors as well as by individual relations.

Individual responsibilities can thus complicate notions of free will in regard to organ donation, however, recipients, too, might feel a sense of obligation intermingling with the received tissue. In *Heart*, Dale's donations create obligations that the donor himself appears unaware of. When Hollie receives Dale's kidney and meets him afterwards, she falsely derives that he expects sexual favors and explains: "I don't have anything else to give you. I thought this might be what you wanted, and you sort of deserve it. My body, in a strange way, belongs to you" (*Heart* 187). Here, sexual acts, like organ donation, are presented as a physical currency as Hollie indicates a trade of her recovered body for Dale's donating one.[68] While in this previous example the choicelessness of the Donor was underlined, Hollie's statement also illustrates a perceived impossibility to ever reciprocate the "Gift of Life." As she offers her body, sex and organ donation are equaled as seemingly priceless, yet commodified acts. At the same time, the encounter between Dale and Hollie also follows deeply gendered readings of their bodies, in which Hollie reduces herself to the sexual consent she might still offer in a structurally unequal situation. Even more, Hollie displays a loss of ownership of her body: Having received Dale's kidney, she feels like he holds a claim on her body – and in extension – her well-being. Here, the recipient's and the donor's experience intersect as Dale answers: "Hell, my own body doesn't even belong to me" and continues to explain that his kidney has already grown back (*Heart* 187). The shared feeling of loss of autonomy and claim over their bodies forms a common bond between the characters. Beyond physical ties, transplantation is thus presented as both majorly impacting individual relationships and as reframing embodied experience.

This intermingling of donor- and recipient perspective is further developed when Dale, the eternal donor, becomes a recipient himself: In the novel's end, he receives a heart transplant, thus emphasizing that, in contrast to his other tissues, his heart does not grow back. The receival of the new organ is accompanied by a changed attitude, however, in contrast to *Brown Girl in the Ring*, the novel does not suggest that Dale is impacted by the donor's personality, rather, it appears that the narrator himself strives towards a new outlook on life:

> Dale Sampson was dead, but whatever was left behind, whatever new person would emerge, that was up to me and I wasn't going to let Dale regenerate – the Dale who would turn on the TV and wait his life away. (*Heart* 302)

68 The analogy between sex work and the organ market has repeatedly been navigated in fiction, for instance, in Stephen Frears's *Dirty Pretty Things* (2002) and Jeetu's sex work in *Harvest.*

Dale is metaphorically reborn, and the former Dale has to die in order for a new, improved version to emerge. His new-found desire to participate in life is also related to a sense of obligation: Now that he has received a second chance, Dale is bound to use it. Here, Dale's experience resonates with transplant patients who desire to change their lives after transplantation, and commonly have to do so based on their medication. Thereby, his desire for a new life intersects physical and emotional change and ties his altered body into an altered frame of mind. Thereby, it also follows the trope of transplantation as a "Second Chance of Life"[69] as Dale is literally starting a new life after receiving the heart.

The speculative premise of *Heart* allows for navigating obligation in a variety of facets: Given that donation comes at a – comparatively – low cost to his own health, Dale's increased healing ability allows for a thought experiment on the nature of altruism and self-abandonment. Within the 21st century framework the novel thereby underlines that transplantation itself has ceased to be perceived as novel or shocking and that organ scarcity has led to the reconceptualization of death on the waiting list: Rather than terminal illness, patients are framed as dying because of a scarcity of organs. Hereby, as the "Kill Jill" campaign suggests, opting to not donate organs can narratively be framed as murder. *Heart* presents a counter-narrative to such absolutist claim on the donor body and negotiates the various pulls that impact decision-making. It is thus the employment of *Heart*'s speculative approach, I want to argue, that allows for the satirical investigation of transplantation as simultaneously an altruistic, heroic story *and* an obligation to society. This obligation is also based on the fact that while the rest of society does not share Dale's ability, they do need his organs. In effect, and given the supposed affluence of his organs, his tissues are evaluated differently from anybody else's, hereby the text not only presents him as an outsider but emphasizes that his tissues, too, are the product of cultural construction.

Tying this discussion of *The Heart Does Not Grow Back* into this chapter's focus on the 21st century, it becomes apparent that the last two decades have established a prevalence, even a rise in engagements with transplantation practices. This rise might appear surprising as transplantation practice has become repeatable and is widely believed to have lost its experimental status. Yet, as the example

69 Organ receival has repeatedly been framed as a second chance at life. For instance, already in 1986, an article in the *Los Angeles Times* titled "Transplants: The Gift of a Second Chance at Life" (Kevles), while in 2018 the U.S. Government Information on Organ Donation and Transplantation published a recipient story called "Getting a Second Chance, and Running with It" (Chris), even more, there is an organization named "Second Chance at Life" engaged in offering financial support to transplant patients ("Who We Are").

of Sergio Canavero who in 2017 declared his willingness to transplant a human head – or rather a human body – suggests, transplantation still makes headlines in the 21st century. It is thus fitting that tissue transfer itself is not presented as a novel development in either of these works, instead, transplantation is intricately linked to other nova such as cloning, neurografting or Dale's ability to heal. Hereby, I want to argue, these works present transplantation as a reliable practice and wonder just how it might interrelate with other form of biotechnological progress and how such relations might impact the individual. These considerations appear particularly relevant given the pedagogical roots and purposes of YA and their possible effect on a young audience. The chosen texts, then, illustrate not only the growing market of YA fiction but also the impact of transplant stories on the field. By focusing on adolescent narrators or focalizers, these texts interrelate the processes of coming of age with transplantation.

The millennium as the epitome of "future" might have come and gone yet thinking about years to come remains a vital occupation not only of those invested in the creative arts but also of medical professionals. Surgeon Siemionow titles the final chapter of her autobiography "When the Time Comes" and narrates her plans for face transplantation in the future tense. In the end, she ascertains: "It will be done" (203). Siemionow's assessment proved correct, as she was well aware given that the first face was transplanted before the publication of her autobiography. It is therefore even more striking that in the text, the surgeon positions the face transplantation in the future and reimagines it as an event yet to come. Her "It will be done" thereby underlines the ongoing developments within the field of transplantation which are necessarily directed towards the future, even though the first heart was transplanted more than fifty years prior. Despite this future orientation, however, the surgeon somewhat proudly establishes her absolute belief in the practice: Its future success is presented as a certain fact that seemingly ranges beyond mere speculation.

Speculative fiction and the examples of life writing, media coverage and organ campaigns discussed in this chapter share Siemionow's certainty that developments in transplantation are yet to be made. Even though some take a skeptical stance towards how specific biomedical progress may impact individuals, the dominant positioning of transplantation in technologically advanced societies also suggests a firm belief in the practice's relevance in the future. At the same time, given the canon of texts discussed here, I argue that transplantation's future repercussions are still cause for speculation. In the medical realm, speculation suggests that developments still remain to be made, in the fictional realm, the prominent correlation between transplantation and disenfranchisement underlines the im-

pact of structural Othering on perceptions of transplantable tissues. Even though the millennium has come and gone, transplantation thus also remains part of the speculative realm as both authors of fiction journalists and medical professionals position it in the future, albeit with divergent purpose and results.

8 Conclusion: The Futures of Transplantation

This study began with a simple premise and several questions: It started with the observation that both medicine and fiction speculate about the future in relation to biomedical progress. I began to ask: Why and for which purpose do physicians and authors of fictional texts speculate? Which results does this endeavor yield? And: How do disciplinary and genre conventions shape imagined futures? Now, after having analyzed six decades worth of transplant stories, I need to briefly recapitulate my findings, but even more prominently, I want to surpass the rigid boundaries of decades and trace common tropes among works of speculative fiction on the one hand, and speculative approaches in the medical realm, on the other hand. By structurally comparing these histories of speculating transplantation, I conclude that the tool of speculation brings different realms into conversation and makes divergent perspectives on the human body and its future role visible.

My diachronic analysis drew attention to developments within the field of speculative fiction and its depiction of transplantation. The earliest example, *The Penultimate Truth*, Philip K. Dick relates transplantation to scarcity, however, not to scarcity of living tissue but of artificial organs. Rather than relying on human tissue, technology has surpassed the functioning of the organic body. Hereby, transplantation is related to a future of technological progress but also of social disparity. The close ties between access to artiforgs and status, as is already expressed in the novel's basic premise of life above- or belowground, frames transplantation as an integral part of social differentiation. At the same time, Dick investigates the complex interplay of real and fake and suggests the corruptibility of both the media and the health care system in transplantation practices. The role of speculation, however, also became apparent beyond the borders of the fictional realm as media portrayals of these early transplantations deliberately employ science fiction imagery. Not only are transplant practices and space travel intricately related, surgeons themselves are presented as "visitor[s] from another planet" ("Surgery: The Best Hope of All"). Thereby, tropes of speculative fiction are employed to denote the novel and fascinating but also deeply troublesome aspects of modern medicine. Ultimately unknowable, inner and outer space present ample cause for uncertainty and speculation both within- and beyond the realm of fiction.

While the Sixties saw great promise in the future of transplantation, the Seventies and Eighties experienced major obstacles in tissue exchange. Despite difficulties in immunosuppression and low survival rates, the discussed examples indicate that transplantation was related to a variety of aspects of cultural life and was negotiated in the context of different disciplines. As Niven's "The Defenseless

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Dead" illustrates, the relation between transplant practices and jurisdiction was prominently discussed in works of speculative fiction. The short story suggests the impact of legal frameworks for transplant proceedings which had already come to the fore in the context of the first heart transplantation in South Africa. While Niven introduces the body as vulnerable to exploitative practices, Cook's *Coma* underlines the role of clinical medicine in processes of disenfranchisement. In the conspiracy-driven medical thriller, consciousness becomes a decisive factor for personhood and human rights while the unconscious human being is treated as little more than a resource by corrupt physicians. However, tissue transfer not only served as an inspiration for these suspenseful mysteries, it also triggered philosophical engagement as William Dennett's "Where am I?" indicates. The story of the removed brain told in the narrator Dennett's whimsical voice suggests a reframing of the relation between body and self and playfully navigates ever-changing intracorporal relationships driven by technological innovation. These examples, then, demonstrate that transplantation had become a topic to be discussed not only in relation to technology but was read with regards to cultural structures, such as jurisdiction or financial benefit. These engagements with the cultural conceptualizations of transplantation correspond with the development of cyclosporine and the legal framing of brain death, as well as the establishment of UNOS to accommodate the practice.

When the 1990s arrived, transplantation had developed into a repeatable practice that called for a variety of speculative engagements. The transnational significance of transplantation and its specific relevance in globalized contexts becomes particularly clear in the developments of organ markets that also majorly benefitted from the development of cyclosporine (Waldby and Mitchell 171). Manjula Padmanabhan's successful play *Harvest* is firmly situated in a world governed by social difference and presents organ transplantation as deeply entangled in technologization. The text navigates freedom of choice in relation to lived experience and presents a nuanced reading of a surveilled family shaped by their seeming lack of options but even more by the corruptive impact of a technologized Other. Comparable to *Harvest*, *Brown Girl in the Ring* also correlates geographical distance, transplantation and exploitation of a disenfranchised group of women of color. While Padmanabhan deliberately allows for her play to be adjusted according to its performed location, Hopkinson's text is firmly rooted in the abandoned center of future Toronto. The novel prominently positions heart transplantation at the intersection of the colliding worlds of affluence and poverty, and technology and spirituality. *The Scavenger's Tale*, too, imagines urban space as a realm of abandonment and disenfranchisement. The medical practice itself is not exempt from these practices as caregivers are turned into ruthless abductors and beneficiaries of an exploitative system. As a text of young adult fiction and comparable to

Brown Girl, Anderson's text juxtaposes the individual experiences of its protagonists with their framing in official discourse and thereby underlines the constructed nature of Otherness. The chosen texts thereby question worldviews based on center and periphery and emphasize the impact of speculative fiction for post-colonial discussions. Ruthless transplantation practices are presented as deeply entangled in structural inequality that is deliberately positioned in the future but whose depiction deeply resonates with organ marketing and the perceived exploitability of poor bodies as expressed in organ theft narratives. While disenfranchisement was already prominently featured in the previous decades, these texts suggest that the health system is already fallible with regard to, for instance, race, dis/ability and financial means. Hereby, they present the human body and its tissues as physical realities but also as culturally produced.

In the 21st century, surgeons' life writing, such as the autobiography by transplant surgeon Siemionow, tends to express that medicine has left its experimental days behind (155). Yet experimentality continues to shape the practice's representation as it is correlated with different forms of biotechnological development, such as cloning in *The House of the Scorpion* which already suggests that considering transplantation in the future entails a reading in its accompanying scientific framework. The depiction of the protagonist's coming-of-age is mirrored in his growing awareness of his purpose and presents transplantation as a mark of demarcation between the young and disenfranchised body, and the older and exploiting one. A similar trajectory of exploitation of the young is presented in Shusterman's *Unwind* dystology. The complex and ultimately unresolved presentation of body-mind-relationships connects adolescent struggles for identity with tissue transfer and underlines that ongoing developments in transplantation practice reconfigure the human body. Hereby, these texts also emphasize that transplantation calls for constant cultural renegotiation and continues to develop alongside biotechnological breakthroughs. Even though Venturini's *The Heart Does Not Grow Back* does not present Dale's ability to regrow his organs as biotechnological in origin, the novel suggests that new possibilities inspire new ethical questions, and the speculative realm intricately relates the narrator's trauma to his obligation to donate – an obligation that organ campaigns have metaphorically tied to murder. With the chosen examples I have aimed to illustrate that transplantation has become a fixture of biotechnological treatment of the human body which has been incorporated as a motif of exploitation and that needs to be read in intersection with other, newly emerging, or clearly fictional, modes of interventions to the human body.

So far, I have looked at these works of speculative fiction in their specific temporal framework and have shown that they correlate with and further develop the discussions of their time, as shared topics with newspaper articles, legal docu-

ments or medical publications have been underlined. Yet, by focusing on the shared lens of speculation, I have also attempted to show that transplantation is positioned in the future in both medical and fictional narratives. As I have asked which form speculation may take in different genres and in text written for different purposes, I now want to draw attention to common traits between speculative fiction on the one hand and life writing, on the other in order deduct how speculation is used in either form and to thus contribute further to the study of speculation as a tool for meaning-making.

It is noteworthy that despite their diverse engagements with transplantation, almost all discussed speculative works intersect organ transplantation with strategies of disenfranchisement. Already in the earliest example, *The Penultimate Truth*, access to organs is inseparably linked to socio-political status. In *Coma*, published ten years later, patients are put in a state of absolute powerlessness to be used as a resource for organs and in *Brown Girl in the Ring*, class becomes a decisive factor for the brutalization at the hands of a criminally inclined country official. In *The House of the Scorpion*, as just one example for the 21st century, clones are created as a group specifically destined for exploitation. Disenfranchisement thereby is uncovered as a shared interest even though each work refers to different markers of social demarcation. These lines of demarcation are traceable along various normative readings, for instance dis/ability (*The Scavenger's Tale*), race (*Brown Girl in the Ring, Harvest*), consciousness ("The Defenseless Dead", *Coma*) and age (the *Unwind* dystology). On the one hand, this focus correlates with speculative fiction's – and particularly dystopia's – interest in the opposition of individual and society in which emphasis is shifted to include powerless positions. On the other hand, this parallel also suggests that the practice of transplantation is, and has been, read in the context of social disparity. By referencing economic readings of the body, these works wonder how biotechnological developments interact with individual rights, freedom of choice and the sanctity of the human body. Even though only some of the texts discussed in this study were penned by authors from the Global South, these considerations strongly resonate not only with the organ trade but with inequalities of a globalized world. Hereby, these texts also emphasize that each individual body occurs in specific cultural frameworks and is valued according to a given society's standards. I thus argue that speculative fiction majorly contributes to discussions on transplantation by presenting the vulnerabilities of the body and the cultural construction of human tissue.

Beyond the role of the donor body, my analysis also presents striking resemblances in the way speculative fiction constructs oppressive rulers or systems. Most of the discussed works focuses on structural disparity, ranging from governmental exploitation (the *Unwind* series) to unequal power dynamics between donor and recipient (*Harvest*). Yet not only the donor body is of interest to

these works and can be compared beyond specific timeframes, the recipient body, too, tends to be presented in a similar fashion. Firstly, and most obviously, many of the discussed contributions establish access to organs as a privilege of a ruling – or at least financially affluent – class. Secondly, several texts position a single antagonist at the center of a transplant plot. In *The Penultimate Truth* Stanton Brose is pictured as the spider who has incorporated all artiforgs, and some thirty years later, El Patrón's exploitation of clones in *The House of the Scorpion* presents him as a vampire. Both of these examples position masculine, powerful and ruthless leaders at their center and oppose them with the struggles of their protagonists. In a similar vein, Susan Wheeler discovers in *Coma* that the leading physician behind the conspiracy in her hospital is the Chief of Surgery, Stark, who looks "aristocratic" (*Coma* 204), is wealthy (*Coma* 365) and clearly follows clichéd readings of a dignified medical professional. *Harvest* also places a white man of advanced age at the center of exploitative practices. Only Hopkinson's *Brown Girl in the Ring* constructs a female politician willing to exploit and disenfranchise for her own benefit. Yet, Premier Uttley can easily be compared to the other novels' antagonists, as she, too, employs transplantation practices as a means to remain in power and to further her political rule. It is striking that despite the works' framing of organ transplantation as part of complex societal and cultural frameworks, several of these texts still opt for a personification of the structural inequality correlated to the practice in the form of a single antagonist. Even more, this leading figure is often constructed as a white, male and affluent character. This similarity suggests the dominance of Western male protagonists in speculative fiction of the last decades as the majority of the novels' protagonists, too, are white and male. It can therefore be derived that these texts also navigate interrelations between power structures and medical practice and suggest that transplantation is also tied to cultural constructions of bodily tissues with reference to gender, race and class.

The discussed speculative works also juxtapose readings of the subject and object body and renegotiate clear cut divisions of body and self. Dick's novel predominantly discusses the difference between a grown organ which is framed as natural in opposition to the artiforg which "could not sustain life for even a second" (*The Penultimate Truth* 106). Here, the concept of life is opposed to the mere functioning and survival of the body. The opposition between composable and rearrangeable object body and unique subject body is further developed in *Brown Girl in the Ring* in which the separation between body and self is suspended. First, Ti-Jeanne needs to keep her distance from her dying grandmother because "[t]hat woman is a biomaterial donor" (*Brown Girl* 152). This treatment is juxtaposed with the transplanted heart's impact on the Premier since "*the heart was taking it* [the body] *over*" (*Brown Girl* 237, emphasis in original). A similar framing and renegotiation

of a body-self divide is presented in the *Unwind* dystology in which the impact of Roland's arm on Connor ranges beyond mere metaphorical framings of adolescent struggle. Moreover, by the series' introduction of transplantable brain tissue, the inability to ever fully separate body and self is suggested. These references indicate an ongoing but intensifying debate on transplantation's necessary divide between body and self. While asserting the medical feasibility of transplantation, these speculative works present complex readings of body-self interactions that circumvent a clear disassociation of the body.

The opposition between external readings of the object body and individual experience relates to a third aspect: the intersection of personal lived experience, on the one hand, and global or societal considerations, on the other. By engaging with the protagonists' lived experience, the fictional representations strongly emphasize the personal dimension of tissue transfer both in relation to the donor and the recipient. For instance, Ti-Jeanne's horror at the murder of her grandmother and her subsequent heart "donation" prominently introduces the personal dimension of the prime minister's plot, while Connor's receival of Roland's arm underlines the unique quality of organ receival for the adolescent. The focus on subjective experience is further underlined by an opposition between the microcosm inhabited by the protagonists and the greater structures that surround them. Here, both worlds only come into contact because of the possibility to transplant tissue. This notion is prominently featured in Nicholas's search for artiforgs aboveground in Dick's *The Penultimate Truth* or Bedford's contact with the CHAWMs in *The Scavenger's Tale*. These texts intersect personal and global readings on transplantation and juxtapose both perspectives. Thereby, transplantation is revealed to be utterly personal and intimate since the corporal boundaries of bodies are transgressed and loved ones are reduced to their physical capacities. At the same time, the practice is portrayed as being of major political and societal interest and is discussed in relation to social welfare and oftentimes a supposed and ultimately abstract greater good. In effect, these fictional accounts introduce neglected perspectives that function as counter-narratives to the success-story of progress and communal benefit tied to transplantation.

In conclusion, speculative fiction introduces a counter-narrative that deviates from either sensationalist news stories of cloned mice or the well-known presentation of active post-transplant patients. Rather, speculative works shift perspectives to wonder how the transplantability and the exploitabability of tissues may correspond with strategies of disenfranchisement and Othering. They thus also fictionally explore that bodily tissues cannot be separated from the cultural significance bestowed on them. Ultimately, I argue that speculative fiction neglects universal readings of the body and insists on bodily tissue as continuously culturally negotiated and produced.

Having established these overarching tendencies of imagining transplantation in the fictional realm, the same needs to be endeavored for my study's second focus: medical life writing. Firstly, autobiographical forms of speculation tend to emphasize the unique nature of transplantation not just as a new form of treatment but as an utterly novel development which cannot be compared to any previous form of operation. This notion becomes apparent as William H. Frist muses when carrying a donor heart on an airplane: "If someone had told Dad fifty years ago when he began practicing medicine what I would be doing that night, he would have laughed and shook his head in disbelief, dismissing it all as pure science fiction" (33). Here, transplantation appears as the absolute novum, separating previous- from current forms of medicine. Temporal difference is established as Frist's present is reinterpreted as his father's imagined future. Even though Frist directly refers to the speculative mode ("pure science fiction"), transplantation needs to be presented as a positive impact beyond mere speculation. Frist titles his autobiography *Transplant: A Heart Surgeon's Account of the Life-and-Death Dramas of the New Medicine* (1989). As the title of his account and its framing of organ transplantation as "the New Medicine" might already suggest, many transplant surgeons advocate for the novel quality of transplant medicine. Hereby, transplantation is framed as a field in which important "firsts" can still be made and fame can be reached. Thomas R.J. Todd explains in 2007, "I still yearned for the big one – the uniqueness of doing something for the first time ever; a true isolated lung transplant" (104). The planned surgery is depicted not in relation to its impact on the patient's well-being but as part of a physician's contribution to biomedical progress. Given this framing of transplantation as new, these autobiographical accounts also present uncertainty about where their endeavors might lead. Strikingly, this "newness" and the speculation it causes still applies in the 21st century, which has seen a vast array of transplantations.

Secondly, I trace a persistence to position transplantation in the future in physicians' autobiographies that defies transplantation's role as a repeatable medical practice. As transplantation is still related to times yet to come, it also remains part of speculative medicine. Accordingly, Christiaan Barnard introduces his idea for overcoming the amputation of a leg in 1969 and expresses a desire for a technological solution, a solution, his colleague assumes that can only be reached in the year 2000 (140). The relation between a constructed and thus artificial leg and the future – the iconic year 2000 – seems obvious. More than 40 years later, in 2010, Kathy Magliato implants an artificial heart and speaks of her patient as the "bionic woman" (157). Barnard's experiences in the medical realm and Magliato's surgical undertaking are vastly different and their temporal and geo-political setting do not align. Nevertheless, both of them perceive of their patients in terms of science fic-

tion imagery, imagery that, as Barnard's colleague indicates, belongs to the still distant future.

Thirdly, aside from this shared metaphorical employment of narratives, a substantial part of the discussed autobiographies shares an interest in wondering "what if …?" with regard to transplantation's impact on patients specifically of those perceived as exceptional. In 1988, Thomas Starzl muses about how transplantation practice might have impacted Mozart's life ("Small Iowa Town" 12), some thirty years later, Siemionow wonders how modern medicine might have saved Chopin (42). The shared and continuing interest in how medicine might contribute to the future by prolonging the lives of significant individuals comes to the fore. Here, medical intervention is presented as a major influence on positive future developments and the technological means it employs ultimately serve who is perceived as noteworthy by the speculating surgeons. As transplant practices benefit these significant individuals, they are framed as a contribution to societal and cultural betterment and ultimately as furthering the progress of a universal idea of humankind. The speculative mode that is inscribed in the margins of medical narratives thus deviates from speculative fiction: The autobiographical format shapes instances of speculation and surgeons are destined to emphasize the positive impact of their endeavors by highlighting that their possible failings have contributed to major advancements beyond their individual role.

It comes as no surprise that speculative fiction and instances of life writing have developed specific positions and employments for the speculative mode. Drawing from these considerations, my analysis derives inherent qualitative differences in how the medical and the fictional realm evaluate and frame the future. Physicians predominantly employ speculation as a means to wonder about how transplantation might impact individual patients and to create meaning from the bodies that have been altered by medical intervention. As surgeons introduce their personal perspectives via life writing, they also reflect on their unique roles and individual responsibility. This responsibility, I suggest, is correlated with a metanarrative of medical progress which bestows meaning on individual action. Hereby, the imagined transplantation of the future becomes a beneficial force in the progress of humankind, securing survival and contributing to patients' lives. Speculative fiction, on the other hand, neglects such universal readings of universal progress and introduces disenfranchised voices neglected in narratives of global benefit. Instead, it draws attention to how bodily tissue is culturally produced and remains vulnerable to societal status, prominently discussed with reference to, for instance, class, age and dis/ability. The different outlooks on the future are thus the result of divergent readings of the cultural construction of human tissues: Whereas medical life writing upholds a universal reading of the human body, speculative fiction positions bodies in their specific cultural and social frame-

works. Hereby, it becomes clear that differences in readings of transplantation in the future are not merely the result of skepticism or enthusiasm towards a specific medical practice. Rather they give concrete form to divergent perspectives on human tissues in specific societal contexts.

Ultimately, I have used transplantation as an example for speculation's role in depictions of medical developments both within and beyond the realm of fiction. However, the proposed role of the speculative mode begs to be applied to other medical, biotechnological or scientific developments in order to further emphasize that physicians are always and necessarily part of the cultural realm. This emphasis on the role of cultural frameworks and the positioning of medicine in relation to the humanities also resonates with Borck's concept of "Medizinphilosophie" and Bettina von Jagow and Florian Steger's emphasis on literature and medicine. Jagow and Steger constitute that literature is important for medicine because it shifts perspectives to the subject (15), thereby also suggesting shared interests of both fields. By emphasizing the role of speculation in approaches to transplantation, I also aim at drawing attention to shared ground between the humanities and medical practice.

Drawing from this shared ground, it becomes apparent that the underlying role of temporal frameworks and significance of the future is not exclusive to transplantation – or even to medical practice. When Shaw wonders whether Mrs. A's one year of survival compares to another patient's remaining decades (248), he also illustrates that illness not only deeply impacts plans for- but also conceptualization of the future. Here, the role of the future for medical practice comes to the fore, a notion that is also underlined in Paul Kalanithi's autobiography *When Breath Becomes Air* (2016). When describing his transformation from neurosurgeon to terminally ill lung cancer patient, Kalanithi indicates an accompanying shift in temporal framing:

> Now the time of day means nothing, the day of the week scarcely more. Medical training is relentlessly future-oriented, all about delayed gratification; you're always thinking about what you'll be doing five years down the line. But now I don't know what I'll be doing five years down the line. I may be dead. I may not be. I may be healthy. I may be writing. I don't know. And so it's not all that useful to spend time thinking about the future – that is, beyond lunch. (197)

Kalanithi, the cancer patient, frames the future differently than Kalanithi, the medical professional. Hereby, engagement with the future, hence speculation, is presented as part of the medical profession yet is simultaneously deeply shaped by Kalanithi's individual lived experience and expectations of the future. Speculation, then, is tied to both: disciplinary frameworks and knowledge of an individual body. Being faced with a vastly uncertain future, he decides that ultimately, any

attempt of conceptualizing what is yet to come relies upon a certain trajectory – a trajectory that the rupture caused by illness denies.

The notion that not only Kalanithi's future has changed but his desire to speculate about it has changed, too, already suggests that the speculated future is necessarily unstable, transforming and, to a certain extent, personal. At the same time, the future also impacts the present and distances the possibilities of transplantation from its failures in the present. In fact, transplantation continues to be negotiated in speculative frameworks even though it has been a repeatable medical practice for more than forty years. Hereby, I have also introduced the ongoing correlation of transplantation and speculation as a form of narrative continuity: despite temporal, geographical and cultural differences, speculation is established as a common denominator that surpasses decades and temporal framings. Shared speculative strategies and the employment of narrative tropes in medical discussions not only validate interdisciplinary approaches to the human body but further emphasize the intricate relations between the humanities and the life sciences. The speculative realm allows for the dissolving of binary oppositions – both of disciplinary lines and of readings of the human body as either physically or culturally constructed. In this context, I introduce the future as an imaginative realm in which contradictory readings of transplantation are navigated, criticized and brought up for scrutiny. Speculation thereby opens an effortlessly interdisciplinary realm in which narratives intersect and in which physicians' and authors of speculative fiction's answers to the question of "what if?" entangle in a complex, contradictory and ever-changing net of (im)possible futures.

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