CHAPTER 10

Designing for Mental Health: Psychiatry, Psychology and the Architectural Study Project

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Introduction

In historical reflections on the architecture of the mental hospital, there is a familiar narrative arc.[1] This runs from an optimistic era of moral treatment in the eighteenth and nineteenth centuries which informed the designs of those such as Thomas Kirkbride that the hospital should be light, spacious and connected to nature, to one of intense pessimism in the twentieth, with damning exposés and critical ethnographies of the mental hospital that used personal accounts and participant observation

[1] See, for example, Lawrence A. Osborn, "From Beauty to Despair: The Rise and Fall of the American State Mental Hospital," *Psychiatric Quarterly* 80 (2009): 219–31.

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techniques to dramatic and disturbing effect.[2] In Albert Deutsch's *The Shame of the States*, the reader is introduced to inhuman practices and conditions, and in Erving Goffman's *Asylums* to the idea of the 'total institution' in which 'a large number of like-situated individuals, cut off from the wider society for an appreciable period of time, together lead an enclosed, formally administered rounds of life'.[3] The mental hospital therefore becomes an intensely problematic space due, in part, to its physical features such as its geographical isolation from the world, designs for confinement and surveillance, depressing wards and crowded dormitories. It is also seen as a site of perpetual conflict between disciplines and communities, such as psychiatrists, psychoanalysts and social and behavioural scientists, the latter gaining their institutional strength and legitimacy from the university, rather than the mental hospital which was increasingly questioned as a locus of research and care.[4] Together with the emergence of new drugs and therapies, this criticism contributed to the opening-up of psychiatric services from the 1950s with the emergence of community care legislation, the growth of psychiatric units in general hospitals and the establishment of new buildings such as Community Mental Health Centres to better integrate different therapies and communities, rehabilitate patients and prevent mental illness.

This chapter will take a different tack, and, rather than seeing the mental hospital as cut off, isolated and left behind, will examine it as a physical space that served as a crucial site for cross-disciplinary communication and collaboration in the twentieth century. The architectural historian Daniel Abramson has explored how the 'obsolescence' of urban buildings generated innovative solutions through designs that emphasised flexibility, choice and freedom, and so too in the case of the mental hospital where architects and psychiatrists came together to provide creative

[2] On Kirkbride, see Carla Yanni, *The Architecture of Madness: Insane Asylums in the United States* (Minneapolis: University of Minnesota Press, 2007). See also Leslie Topp, James E. Moran, and Jonathan Andrews, eds., *Madness, Architecture and the Built Environment: Psychiatric Spaces in Historical Context* (New York: Routledge, 2007).

[3] Albert Deutsch, *The Shame of the States* (New York: Harcourt, 1948), Erving Goffman, *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates* (New York: Doubleday, 1961), xiii.

[4] See Andrew Scull, "Psychiatry and the Social Sciences, 1940–2009," *History of Political Economy* 42 (2010): 25–52.

solutions for a system under severe pressure.[5] We will be focusing on the short history of a collaborative project between the American Psychiatric Association (APA) and the American Institute of Architects (AIA), and the longer term influence of some of the individuals, principles and practices involved. The Architectural Study Project (ASP) began in 1953 and reflected a growing concern with the state of mental hospital facilities. Psychiatrists and architects turned their attention to various aspects of the hospital environment, such as light, colour and the creation of spaces for privacy and social contact, in ways that would go on to influence theories, methods and designs developed and applied far beyond the walls of the institution. This chapter explores the role of the mental hospital as a 'hybrid' place and an 'experiment' of nature and society that combined elements of laboratory and field.[6] As Robert Kohler argues, the adaptation of laboratory instruments and techniques to the field helped to create a 'distinctive border culture' or 'zone' which proved a richly fertile ground for modern biology.[7] Critical to its success was the reinvention of the field as a place where experiments were possible. Mary Morgan has focused on the significance of 'Nature's or Society's experiments' in which events, situations or places provide elements of isolation and control that give them value as 'rich sites for scientists to research'.[8] Here, we will see how the mental hospital served as such a site for an emerging interdisciplinary field of environmental psychology, allowing for new methods for mapping behaviour and measuring emotional reactions and the development of concepts such as personal space to analyse the relationship between human beings and their physical environments. The work that resulted from the study of the mental hospital would play a critical role in the study, planning and designing of the wider territories of the city to prevent mental illness and promote mental health and psychosocial well-being in the United States in a period of urban crisis.

[5] Daniel M. Abramson, *Obsolescence: An Architectural History* (Chicago: Chicago University Press, 2016).

[6] On the value of uniting these two elements, see Thomas F. Gieryn, "City as Truth-Spot: Laboratories and Field-Sites in Urban Studies," *Social Studies of Science* 36 (2006): 5–38 (7).

[7] Robert E. Kohler, *Landscapes and Labscapes: Exploring the Lab-Field Border in Biology* (Chicago: University of Chicago Press, 2002), 134.

[8] Mary Morgan, "Nature's Experiments and Natural Experiments in the Social Sciences," *Philosophy of the Social Sciences* 43 (2013): 341–57 (354).

The Architectural Study Project

In a paper read before the American Hospital Association (AHA), Daniel Blain, Medical Director of the APA, declared 1953 to have been an 'epochal year' for mental health. Events had demonstrated 'that we have come to the end of one era and are at the beginning of another'.[9] Not to be overlooked among the congressional hearings and the 'outstanding' treatments by the World Health Organization (WHO) and National Institute of Mental Health (NIMH), was the APA's comprehensive report on manpower and the move to standardise training. With these contributions, the mental health field was moving from 'vague and subjective planning efforts to a more scientific quantitative approach'. It was also embracing a wider range of preventative measures and treatments that recognised the relevance of psychological, socio-economic and political conditions. Blain interpreted this reorientation through scientific planning as contributing to a shift from the 'mere adding of hospitals' to the 'provision for multitudinous other services'.[10] It had not come soon enough in North America, with its 'enormous' hospital system of which 714,000 beds of the total 1.5 million were filled by mental patients, and another 300,000 were required. It was expensive and dangerously short staffed, with recruitment crippled by the damning revelations of 'inhuman conditions' in large state mental hospitals.[11] In this regard, Blain observed that 1953 was also the year that the APA had secured a large grant from the Rockefeller Foundation and the Division Fund of Chicago for a 'first project on design, construction and equipment of mental hospitals'.[12] The ASP reflected both a determination to fix the ailing hospital system and a growing interest in designing and building for new philosophies of prevention and treatment that moved away from long-term custodial care.

[9] Daniel Blain, "Mental Health Program Planning," read at the Institute on Hospital Planning, American Hospital Association (AHA), DC, February 16, 1954, Archives of the American Psychiatric Association, Architecture Study Project (hereafter ASP Papers), Folder 122. See also Daniel Blain and Robert L. Robinson, "A New Emphasis in Mental Health Planning," *American Journal of Psychiatry* 110 (1954): 702–4.

[10] Blain, "Mental Health Program Planning."

[11] Memorandum: Mental Health, July 1955, Council of State Governments, Chicago, ASP Papers, Folder 106.

[12] Blain, "Mental Health Program Planning." They received $140,000 from the Rockefeller Foundation and 15,000 from the Division Fund.

The ASP grew out of a conference in April 1952 organised by the APA to develop solutions for a system suffering 'extreme overcrowding' in buildings 'obsolete, deteriorated, and sometimes condemned'.[13] While new treatment strategies might reduce the hospital population of the future, they still had a 'vast backlog' of patients who were so damaged that they required long-term custodial care in buildings that needed to be rehabilitated or replaced. Many buildings, even new projects, failed to properly consider patient and staff needs, and, as a consequence, lacked the 'optimism' and 'atmosphere of peace and comfort' of a truly 'therapeutic milieu'. Environment was of critical importance because mental patients were unusually sensitive, and this was compounded by the fact that their stay would last for months, even years; it could not afford to be 'dingy, forbidding or bleak'. While the two days of discussion did not contribute any new design solutions, it did confirm an awareness of the need for the exchange of information between those who designed and constructed the buildings and those who worked in them. It was decided that the fundamental cause of the failure of hospitals was the 'lack of mutual understanding between doctors and designers of each other's needs and problems'.[14]

To realise what the architect Isadore Rosenfield described as the 'humanization of mental hospitals', they needed some form of central agency where hospital planners, administrators, architects, engineers and psychiatrists could contribute ideas and access the latest information, criteria and standards.[15] Architects expressed their frustration at not having fully explained to them the function of a ward or treatment and on the absence of a comprehensive source of reliable answers to a wide range of questions. Therefore they were hindered in their attempts to realise functional design, the precepts of which are central to modern architecture. Psychiatrists, in turn, were disappointed by how poorly medical needs were met by designers.[16] Seeking to solicit funds to launch such a project, the conference proceedings were published and circulated in pamphlet form as 'Design for Therapy'. Included was a proposal for an

[13] Daniel Blain, "Heart of the Matter," in *Design for Therapy: An Investigation into The Possibilities of Collaboration Between Psychiatrists and Architects in Developing Basic Information for Mental Hospital Design, Construction and Equipment*, Conference in Washington, DC, April 6–7, 1952, p. 5, APA, ASP Papers, Folder 90.

[14] Blain, "Heart of the Matter," 6.

[15] Blain quoting Rosenfield in "Heart of the Matter", p. 7.

[16] See "Notes from Talk by Dr. Paul Haun," 1/10/55, Consultants' Meeting, ASP Papers, Folder 104.

organisation to collect, analyse and disseminate the 'best information' on design, construction and equipment, and an introduction written by Blain which declared: 'With close collaboration between architecture and psychiatry once established, mental hospital design for modern treatment can become a reality. Buildings yet to be blueprinted will help instead of hinder the task of those who will work in them for the ultimate recovery or easement of the patient.'[17]

The ASP was directed by the APA with a strong input from the AIA who helped to provide a series of architectural consultants. Alston Guttersen, an architect with experience in hospital design with the US Public Health Service, was employed full time as the Project's Assistant Director. A wide range of experts were called upon to give evidence on various technical elements of design and equipment, such as colour and furnishings, to help humanise hospital architecture by making it 'more home-like'.[18] Through correspondence, conferences and hospital visits, the ASP began to collect vast amounts of material relating to elements of design, such as blueprints for new buildings, wards or recreation facilities or information on materials for walls, windows or doors. This was then organised and shared as the ASP offices became a clearing house of information, inundated with requests from administrators, planners and designers seeking to build or refurbish. They established a consultancy service, organising expert interventions on request (for a small fee) and served clients across North America. They also put local architects and psychiatrists in contact with one another, establishing joint teams to aid with the collection of data regarding good and bad design practices. To help share information and generate publicity, examples of good design—consisting of descriptions, sketches and blueprints—were published in a new architectural section in the monthly magazine *Mental Hospitals*, which some 700 hospitals subscribed to.[19] The object, as psychiatrist and ASP Director Charles Goshen, declared, was to provide 'little notes on various innovations' and 'ingenious little ideas from various people'.[20]

[17] Blain, "Heart of the Matter", 8.

[18] "Mental Hospital Architecture," n.a., n.d., ASP Papers, Folder 91.

[19] "Proposed Hospital Construction and Equipment Project, to be administered by APA Mental Hospital Service," ASP Papers, Folder 92. *Mental Hospitals* was published by the APA's Mental Hospital Service, which served as a clearing house for technical information.

[20] Charles Goshen, "Summary of Year's Progress and Projects Now Underway in the Architecture Study Project, to APA Council," November 1957, ASP Papers, Folder 118.

ASP members saw their role as working to dispel the fog of 'ignorance and prejudice' surrounding mental hospitals in the minds of architects who, through design, ended up making 'many of the major decisions on the subject'.[21] Patient sensitivities were described, and design implications suggested, such as countering the common tendency to withdraw by means of environmental innovations that could 'draw and hold human interest'.[22] Colour, long associated with emotion, was explored as a means of making the hospital atmosphere seem softer, less institutional and, where needed, as an 'attention-getting' measure.[23] But ASP members were also concerned to influence the field of psychiatry, to encourage it to move beyond the mental hospital as the site for psychiatric care. This was an issue that emerged early in the debates regarding the Project's direction, and with subsequent changes in leadership, it became increasingly central. With the final two directors, Lucy Ozarin and Charles Goshen, in 1956 and 1957 respectively, a greater proportion of Project work became oriented towards alternatives to large state mental hospitals such as the day hospital, clinics, community centres and psychiatric services or units in general hospitals.[24] In their correspondence, Goshen and Ozarin questioned building for the 'sole purpose of housing more patients' and argued that future needs for rehabilitation would be met by smaller and more flexible installations, providing 'more personal and… a better type of psychiatric care'.[25]

The travels of Guttersen in Europe, in part funded by the WHO, helped to popularise the opening-up of psychiatric units to the community. His accounts of visits to facilities abroad were published in *Mental Hospitals*, complete with detailed descriptions, sketches and

[21] "Space—The Essence of Mental Hospital Design," n.a., n.d., ASP Papers, Folder 91.

[22] "Mental Hospital Design—Environmental Therapy," n.a., n.d., ASP Papers, Folder 91.

[23] Charles Goshen, "Guidelines for the Development of Psychiatric Services in General Hospitals," n.d., ASP Papers, Folder 90.

[24] Both had worked in some of the most innovative sites of psychiatric work, Charles Goshen as Executive Director of the first private day hospital, the Robbins Institute in New York, and Lucy Ozarin as Chief of Hospital Psychiatry in the Veteran's Administration. There were numerous directors over the years which did not help the Project's coherence, and prior to Ozarin and Goshen, John L. Smalldon served as director with the beginning of the Project on September 8, 1953, and he was replaced by Charles K. Bush in May 1954. "Report to the Rockefeller Foundation of the Activities of the Mental Hospital Architectural Study Project, from June 1, 1954 to May 31, 1955," ASP Papers, Folder 105.

[25] Goshen to R. E. Peek, August 28, 1958, from Goshen, ASP Papers, Folder 88; Ozarin to Samuel Whitman June 25, 1956, ASP Papers, Folder 119.

photographs, and made the point that the US in particular was falling behind. New advances in treatment, most notably the new range of tranquilising drugs, allowed and indeed required new kinds of psychiatric spaces. For example, Goshen observed that the 'elaborate facilities' needed for insulin and electric shock therapies were no longer necessary, and that the 'old-fashioned hydro-therapy units have become storage rooms'.[26] The ASP was also building on the conclusions of the Joint Commission on Mental Illness and Health which, by bringing a wide range of health and service organisations together from 1955, had sought 'solutions outside of the traditional framework of the mental hospital'.[27] Goshen went so far as to describe the mental hospital as having a 'built-in obsolescence' due to the fact that all but the most difficult patients sought alternatives to the closed institution.[28] In the place of custodial isolation, the ASP promoted two alternative psychiatric spaces, the day hospital and psychiatric services in general hospitals. The latter was a means of better integrating psychiatry with general medicine, thereby connecting more successfully with the public and taking advantage of the federal funds spent on hospital construction following the Hill-Burton Act of 1946, of which psychiatric services had received little. The day hospital provided intensive treatment while allowing the patient to retain and rebuild important connections to family and community. The psychiatrist Bernard Robbins argued that with the range of activities on offer and an atmosphere that was more like a 'school, club or workshop', they could make a 'clean break with the undesirable aspects of the tradition surrounding the usual psychiatric hospital'.[29] These new kinds of environments would, in turn, drive innovation in psychiatry as, by bringing together diverse groups of mental health researchers and professionals

[26]Charles Goshen, "A Re-appraisal of the Architectural Study Project," 7/15/57, ASP Papers, Folder 104.

[27]Arthur Noyes, President of the APA, to Edwin Crosby, Director of the AHA, February 22, 1955, ASP Papers, Folder 83.

[28]Goshen, New Concepts of Psychiatric Care with Special Reference to the Day Hospital: A Summary of the Proceedings of the First National Day Hospital Conference held in Washington D.C., March 1952, presented at the Annual Convention of the APA, May 13, 1958, ASP Papers, Folder 76.

[29]Bernard S. Robbins, "The Theoretical Rationale for the Day Hospital," in *Proceedings of the 1958 Day Hospital Conference, A Mental Hospital Design Clinic Conducted by The Architecture Study Project and The General Practitioner Project of the APA*, Washington, DC, March 28–29, pp. 6–7, 1958, ASP Papers, Folder 76.

around psychiatric places, rather than theories, it would be possible to build common therapeutic practices.[30]

However, there were tensions between ASP members. Some wanted a much broader focus on mental health programming and community services from child guidance centres to clinics for the treatment of addiction. Others wanted to continue restricting the attention of the ASP to hospitals, private and public. In meetings, they spoke of the need for a 'manual' for hospital design, with Blain hoping for 'a sort of textbook on mental hospital architecture for the use of the people doing the building'.[31] But Guttersen was noticing a growing 'preference for the first activity on the part of some of the Consultants'.[32] The architect Moreland Griffith Smith was forthright, declaring that as 'pressing' as the problems of institutional facilities may have been, the ASP was in an 'ideal position to do more'; the promotion of psychiatric facilities in general hospitals could, he suggested, be the Project's 'finest contribution'.[33] The ASP was being pulled in two directions, one towards improving conditions for the huge majority of psychiatric patients still being treated in large mental hospitals, and the other, away from the total institution in an effort to keep pace with a field that was changing rapidly. It was proving difficult to reconcile these approaches and establish coherence. The psychiatrist Addison Duval expressed his concern early in the Project, that with 'such a diversity of opinion… the Study will come up with nothing'.[34] With this continuous broadening of the Project's base, the end goal of the ASP was also shifting. The idea of a 'manual' or 'textbook' of standards and plans was being displaced by a more flexible and universal series of 'principles' of design that could

[30] Charles Goshen, "Day Hospitals: Physical Facilities and Equipment," presented at the First Day Hospital Conference, Washington, DC, March 1958, ASP Papers, Folder 76.

[31] "Minutes—Meeting of Consultants' Committee," ASP, April 5, 1954, ASP Papers, Folder 120.

[32] Alston Guttersen, "Review of Designated Activities for the Architectural Study Project," ASP Papers, Folder 93.

[33] Moreland Griffith Smith, "RE: Proposed National Plan for Mental Health Facilities," ASP Papers, Folder 93.

[34] "Minutes—Meeting of Consultants' Committee," ASP, March 1, 1954, ASP Papers, Folder 120. Duval was an important and influential member of the ASP as he served as Chair of the Committee on Standards for Psychiatric Hospitals and Clinics of the APA, which he combined with his role at St Elizabeth's Hospital in Washington, DC, where Goffman had carried out his studies.

travel across these increasingly varied sites of psychiatric treatment and satisfy concerns with both hospital improvement and more diverse psychiatric services. As Goshen argued, 'There is no single set of model blueprints which could be reasonably recommended as a guide to design any psychiatric unit.'[35] To generate these principles, as well as plan more effectively for the future, the ASP needed to conduct its own studies rather than merely rely upon information and opinion offered by others.

The Mental Hospital as an Investigative Space

When Goshen assumed the directorship of the ASP in 1957, he described the dissipation of early optimism that 'new and progressive ideas, as well as standards, for mental hospitals might be developed'. As psychiatric care had been changing so quickly, the 'Project never really came up with anything of value'.[36] Goshen was seeking ways to make the project 'perform'. The ASP would move beyond its early attempts to match building types with demographics or therapies and better appreciate the environment from an architectural perspective, as one architect demanded: 'We do not want standards, we want principles and philosophy'.[37] This meant understanding how space was experienced and used in the day-to-day life of a hospital, space being, it was argued, 'the essence of mental hospital design'.[38] Here, Goshen was building on the direction established by his predecessor, Lucy Ozarin, who saw the development of 'principles' of design as dependent upon a programme of investigation.[39] Research was not new to the ASP and in late 1954, they had begun the laborious process of sifting through thousands of hospital admissions to secure 'basic data' to aid planning in accordance with

[35] Goshen, "Guidelines for the Development of Psychiatric Services", p. 11.

[36] Goshen to Vincent Kling, July 24, 1957, ASP Papers, Folder 88. Goshen wanted to involve Kling as a consultant as he believed that, despite Alston Guttersen's contribution, the project lacked 'any real architectural orientation'.

[37] John R. Magney, "Minutes—Advisory Committee Meeting," December 14, 1956, ASP Papers, Folder 120.

[38] "Space—The Essence of Mental Hospital Design."

[39] "Proposal for a Program of Investigation and Evaluation of Psychiatric Facilities Leading to the Derivation of Principles of General Architectural Design and Equipment," November 30, 1956, ASP Papers, Folder 120. This shift towards investigation was also driven by the failure of the psychiatrist and architect teams, few returning the prepared questionnaire.

changing patient needs.[40] But as the ASP adopted broad survey methods to mirror its widening focus, some were driven to question: 'is this an architectural approach?'[41] Ozarin's work was more directly tied to architectural concerns with the use and function of space. Her studies sought to improve design through the application of observational techniques used in the social, biological and behavioural sciences, thereby complementing the quantitative approaches applied for the benefits of planning.

Aided by a clinical psychologist, Abdul Tuma, Ozarin's studies consisted of 'direct observation' of patient and staff movements and activities.[42] In a study of patients in seven psychiatric wards in five general hospitals, movement was recorded for a total of 18 hours over several days. Every 15 minutes in 3-hour blocks of time, the patients were checked to see where they were and what they were doing. Observation generated specific information on space requirements and allowed Ozarin to make a series of recommendations: few patients needed to be housed in secure wards; open wards which allowed patients to use the kitchen generated an 'active social center'; lots of small semi-private spaces were better for activities than large day rooms; the option of single bedrooms was critical for patients in need of privacy; and spaces for occupational therapy and recreation were essential.[43] Following another study, it seemed apparent that nurses stations 'do not suit the purposes they presently serve'. Physical barriers, such as a pane of glass, isolated staff from patients.[44] More generally, Ozarin used the evidence to criticise atmospheres that were 'rigid', 'bare' and 'typically institutional',

[40] This survey originally encompassed 10,000 case records of patients admitted to six state hospitals and two outpatient psychiatric clinics in the calendar year of 1953 and was then extended to include other facilities in accordance with the broadening focus of the ASP. The widening survey approach did not help their case when they requested an extension to their grant, and the source of funding shifted from the Rockefeller Foundation to the NIMH.

[41] Duval in Meeting, AHA & ASP, June 30, 1954, ASP Papers, Folder 105.

[42] "Progress Report, ASP, APA, Study of Intensive Treatment Facilities for Psychiatric Patients, USPHS Grant W-5, 1956," ASP Papers, Folder 105. Abdul Tuma was employed by the ASP having been recommended by the VA. Ozarin to Abdul Tuma, June 7, 1956, ASP Papers, Folder 111.

[43] Lucy Ozarin, "Patterns of Patient Movement in General Hospital Psychiatric Wards," ASP Papers, Folder 91. Later published in *American Journal of Psychiatry* 114 (1958): 977–85.

[44] "Addendum to Progress Report", Study of Intensive Treatment Facilities for Psychiatric Patients, USPHS Grant W-5, 1956, ASP Papers, Folder 121 and Lucy Ozarin, "Functions of Nursing Stations on Psychiatric Services in General Hospitals," ASP Papers, Folder 90.

and celebrate open, busy, active, comfortable and colourful wards with reduced security measures and increased patient privileges.[45]

In designing her studies, Ozarin drew from a variety of sources. She credited the so-called 'Boston experiment' for having re-established a philosophy of 'social treatment'.[46] At the Boston Psychopathic Hospital, psychiatrists, anthropologists and social scientists had come together to explore how the environment could be used more therapeutically. To this, the ASP could contribute the important dimension of improved physical design.[47] She drew from the sociological study of a private mental hospital by Alfred Stanton and Morris Schwartz who, in their volume *The Mental Hospital* of 1954, privileged highly 'acculturated' conditions over the cold, charmless and 'spartan' environments so common to institutions, as critical to patient recovery.[48] By 1957 Stanton was writing to Ozarin to request help with an 'architectural problem' at one of the Harvard Medical School's psychiatric hospitals.[49] Ozarin also drew from some less obvious sources, such as the work of Heini Hediger, zoo director and author of several influential books on animal behaviour in captivity. As an ethologist, Hediger argued that it was essential to design artificial environments in accordance with the biologically determined behaviour of a species. To do otherwise resulted in pathologies comparable to those of human beings in the total institution. As Ozarin surmised, the health and well-being of animals were determined by the 'quality and quantity of space in which they live'.[50]

Ozarin had learnt of Hediger's work from a psychiatrist, Humphry Osmond, whose ideas and methods would prove increasingly central to the work of the ASP. As director of Weyburn Hospital, Saskatchewan, Osmond had been seeking design solutions for a hospital described by his research associate as 'cavernous, poorly lit, with long corridors,

[45] Ozarin, "Patterns of patient movement." See also, A. H. Tuma and Lucy B. Ozarin, "Patient 'Privileges' in Mental Hospitals," *American Journal of Psychiatry* 114 (1958): 1104–10.

[46] Lucy Ozarin, "New Horizons in Psychiatry," ASP Papers, Folder 91.

[47] The physical environment was the thinnest section of the resulting volume—Milton Greenblatt, Richard H. York, and Esther L. Brown, *From Custodial to Therapeutic Patient Care in Mental Hospitals* (New York: Russell Sage Foundation, 1955).

[48] Ozarin, "New Horizons."

[49] Alfred Stanton to Ozarin February 13, 1957, ASP Papers, Folder 113.

[50] Ozarin, "Patterns of Patient Movement."

institutional colors, inadequate ventilation, and little soundproofing'.[51] The flaws of Weyburn were all too common, a 'testimony to the failure in communication which has existed between architect and psychiatrist for much of the last century'.[52] Osmond worked with Robert Sommer, a psychologist, and architect, Kiyoshi Izumi, to design an alternative therapeutic space. But they were immediately struck with the lack of information available, Sommer later complaining: 'More was known about the design of zoo cages and chicken coops than about the design of hospital wards.'[53] Zoo animals were expensive, he quipped, and often the subject of greater sentiment than the mentally ill, and 'this is sufficient reason to undertake research into conditions necessary for their survival'.[54] And so, it was Hediger's insights that helped them to develop a methodological and analytical framework for understanding the relationship between people and the physical environment. The most important requirements for the individual were spatial. Patients needed spaces in which they could interact with others, but on their own terms. They needed their own territory and privacy. Osmond argued that Hediger had 'shown that for many wild animals incarcerated in zoos, the presence or absence of this nest or den makes the difference between the survival or death of the creature. He has also shown that the size of this place is much less important than that it should be *functionally rather than structurally* equivalent to the conditions found in nature'.[55]

Through their own observational studies, the Saskatchewan team argued that the quality of physical space was more important than its quantity; for psychotic people, smaller rooms, even with as little as 50 square feet of floor space, were better than overly spacious, often cavernous, dormitories, whose scale was likely to confuse and overwhelm. It was critical to avoid ambiguous, muddled and complicated designs and ensure that spaces were manageable and clearly defined to avoid making demands on the patient's impaired perceptual apparatus. Social

[51] Robert Sommer, "Studies in Personal Space – This Week's Citation Classic," *Current Contents* 24 (1983): 14.

[52] Humphry Osmond, "Function as the Basis of Psychiatric Ward Design," *Mental Hospitals* 8 (1957), 23–29 (23).

[53] Sommer, "Studies in Personal Space."

[54] Robert Sommer, *Personal Space: The Behavioral Basis of Design* (Englewood Cliffs, NJ: Prentice-Hall, 1969), 12.

[55] Osmond, "Function as the Basis of Psychiatric Ward Design", 25–26.

interaction also needed to be controlled to reduce the possibility of panic and withdrawal, while maintaining healthy and suitable social relationships. Enlarged spaces meant increased frequency of unwanted social contact due to high population numbers; 'unpleasant even for the healthy people', such overconcentration could 'so damage the mentally ill that they lose all hope of recovery'. The large corridors that dominated hospitals were a particular problem as they were 'admirably suited for keeping people on the move, but ill-suited for developing interpersonal relationships'.[56] Osmond developed a set of guidelines based on the psychological and behavioural needs of patients which included privacy, choice, the reduction of uncertainty and beneficial social relationships.

With its emphasis on principles of planning and design, the 'Saskatchewan plan' was becoming increasingly influential in the work of the ASP.[57] In 1954, there had been a flurry of correspondence and a sharing of information with Osmond and Izumi.[58] As the programme of modernisation progressed at Weyburn, the ASP solicited the plans of Izumi's innovative semi-circular designs for a nursing unit that tackled the problem of corridors while providing patients with freedom of movement, stimulation and meaningful interactions with staff.[59] The ASP pushed for its publication in *Mental Hospitals* with a complimentary article by Osmond described as a 'think piece', Ozarin declaring: 'I think architects are begging for this kind of information [on] principles

[56] Ibid., 25, 28.

[57] The plan involved breaking up and dispersing psychiatric facilities and had a central architectural component. For an insightful, extensive and detailed analysis of this and the work of Osmond and Izumi more generally, see the work of Erika Dyck on which this paper draws—Erika Dyck and Alexander Deighton, *Managing Madness: Weyburn Mental Hospital and the Transformation of Psychiatric Care in Canada* (Winnipeg: University of Manitoba Press, 2017) and Erika Dyck, "Spaced-Out in Saskatchewan: Modernism, Antipsychiatry, and Deinstitutionalization 1950–1968," *Bulletin of the History of Medicine* 84 (2010): 640–66. Dyck notes that the rapid pace of deinstitutionalisation in Canada meant that little was built.

[58] For example, Guttersen sent Izumi reprints of type plans and suggested useful hospitals for him to visit. Guttersen to Izumi August 9, 1954, ASP Papers, Folder 54. The following year, he provided information on dormitory spaces and nursing units and suggested the need for a 'master plan.' Guttersen to Osmond, January 12, 1955, ASP Papers, Folder 54. Smalldon had been advising Osmond on design issues regarding security and group sizes since late 1953. Smalldon to Osmond, October 7, 1953, ASP Papers, Folder 77.

[59] Ozarin to Izumi, November 13, 1956, ASP Papers, Folder 54.

and philosophy'.[60] The Saskatchewan plan was the focal point of the first mental hospital design clinic in 1958, jointly sponsored by the ASP and AIA to 'lead to a set—not of blueprints—but of principles of good psychiatric hospital design'.[61] In their joint presentation, Izumi explained how his design had fulfilled the principle of 'sociopetality', as developed by Osmond, in which stable interpersonal relationships were fostered through a design that encouraged small group formation and face-to-face contact. Socio-petal space, designed to bring people together and foster communication and cooperation, was contrasted with the socio-fugal, which drives people apart, and 'prevents or discourages the formation of stable human relationships'. This was a quality that, while necessary in some urban buildings, had been become too common in the 'monstrous' mental hospitals of the recent past.[62]

The work at Saskatchewan embodied what Goshen described as the 'new look' being brought to the ASP, as they sought to 'define more clearly what the psychiatric requirements of design are, or what we hope them to become'.[63] It helped to bring much-needed conceptual and methodological advance and encouraged a functional and research-based approach. It also showed how it was possible to translate principles into plans, blueprints, bricks and mortar. Goshen edited the ASP's final contribution, *Psychiatric Architecture*, published in 1959 with the last of their funds from the NIMH, a text which collected together a selection of innovative designs and processes such as furnishing and soundproofing, and highlighted the wide range of potential facilities for rehabilitation. It was a text in which the Saskatchewan plan had a prominent place, Osmond providing two of the papers focused on the relationship between psychiatry and architecture. While the ASP had struggled in its search for coherence, Goshen now declared that its 'most important aim

[60] Ozarin to Osmond, January 24, 1957, and Ozarin to Osmond, December 19, 1956 ASP Papers, Folder 54.

[61] "New Trends in Psychiatric Architecture—The First Mental Hospital Design Clinic", sponsored by the ASP and AIA, Washington, DC, January 16–17, 1958, ASP Papers, Folder 91. The clinic also included three further reporting teams from Ohio, Indiana, and Delaware, but it was Saskatchewan, represented by Osmond and Izumi, and recipient of the APA's Hospital Improvement Award, that was the focal point of the discussion.

[62] Osmond, "Function as the Basis of Psychiatric Ward Design", 28, 23.

[63] Charles Goshen, "Progress Report," October 30, 1957, ASP Papers, Folder 120.

[was] the development of effective communication between the two main professions concerned—psychiatry and architecture'.[64] To this, Osmond added a request for 'the help of colleagues in other disciplines'.[65] As we shall now examine, it was this much broader interdisciplinary endeavour, focused on the relationship between the physical environment and mental health, that would continue to use psychiatric spaces as critical sites for controlled investigation. In turn, the focus on the mental hospital would help establish territory, privacy and personal space as key principles for the study and design of a wide range of institutional and urban spaces.

Principles of Privacy, Territory and Personal Space in Built Environments

Among significant changes that took place in the mental health field in the post-war era was the growing influence of the social and behavioural sciences, funded extensively through the NIMH. Andrew Scull sees sociologists and psychologists as having 'contributed extensively to the loss of legitimacy that institutional psychiatry experienced'. Critical to this loss, Scull argues, was the pessimistic portrait of the mental hospital painted by those such as Goffman.[66] The mental hospital did, however, continue to make a more positive contribution to this very movement away from institution that gathered pace in the 1960s, with the growth of community mental health programming. It continued to serve as a site that brought different disciplines and professions together to focus on the relationship between environment and behaviour and a place where ideas, concepts and principles could be generated and tested through observation and experimentation.

The social and political upheavals of the 1960s may have contributed to the decline of the total institution, yet they also generated a new appreciation of the environment, be it natural spaces threatened by pollution, crowded cities, or suburban sprawl. When it came to the built environment, Robert Sommer declared:

[64] Charles Goshen, "A Review of Psychiatric Architecture and the Principles of Design," in *Psychiatric Architecture: A Review of Contemporary Developments in the Architecture of Mental Hospitals, Schools for the Mentally Retarded and Related Facilities*, ed. Charles Goshen (Washington, DC: The American Psychiatric Association, 1959), 1–6 (1).

[65] Humphry Osmond, "The Historical and Sociological Development of Mental Hospitals," in *Psychiatric Architecture*, ed. Goshen, 7–9 (9).

[66] Scull, "Psychiatry and the Social Sciences, 1940–2009," 37.

> The clearest realization of the connection between environmental form and human behavior is taking place in the institutional field. People… are surprised to find that decisions regarding the physical plant amounting to tens of millions of dollars are made without adequate information about user behavior. Whether it is a matter of separate or bunks beds in college dormitories, secluded or exposed nurses' stations in hospitals, open or partitioned offices, ceilings eight or eight-and-one-half feet in apartments, it is evident that little is known as to how the alternatives affect people.[67]

In this statement, Sommer moves deftly from the institution to the modern apartment building and, therefore, from the hospital to the city. While earlier attempts to humanise the mental hospital had attempted to make it more 'homelike' and thus more like the world outside, there was now a reversal of roles; the hospital was reinterpreted as a critical site for the development of principles that were not only relevant to all psychiatric services, but to a wide variety of urban spaces in this new era of preventative mental health.

Sommer was also identifying the demand for design information that was coming from administrators and managers of institutions which, in turn, placed pressure on architects and planners. This pressure was considerable in an era of expanding urban and suburban development, increased population density and an accelerated pace of life, and with it, growing fears of a mass society in which speed, impersonality and uniformity became the norm. Concern intensified in the 1960s with the growing fear of violence and crime in the era of 'urban crisis'. Architects were beginning to organise in response. In the late 1950s, the AIA established a Committee on Research for Architecture to 'contribute to the public welfare through better building in both the physical and esthetic sense'.[68] And yet, as the environmental analyst and designer Mayer Spivack noted, architecture and the design disciplines 'offer us very little in the way of reliable and sophisticated conceptual and design tools'.[69] Advisors to the AIA such as the sociologist Robert

[67] Sommer, *Personal Space*, 9.

[68] "Special Report no. 4, A Statement on Architectural Research by the AIA Committee on Research, AIA," May 1956, Martin Allen Pond Papers, Yale University Library, Box 12, Folder 227.

[69] Mayer Spivack, "Some Psychological Implications of Mental Health Center Architecture," 1966, Archives of the Environmental Research and Development Foundation (hereafter ERDF Papers), Kenneth Spencer Research Library, University of Kansas, Box 58, 2600. Spivack also drew from ethologists such as Hediger.

Merton suggested a 'clinical' approach, in which, just like the physician, the architect drew upon a variety of sciences to solve 'classes of recurrent problems'.[70] In order to understand the psychological impact of the environment, one AIA group declared: 'we need the help of behavioral science skills and techniques'.[71] Psychologists reciprocated in turn, concerned to move beyond the 'contrived settings' of the laboratory and address social problems in the 'real world'.[72] The result was the intensely interdisciplinary field of architectural or environmental psychology, supported largely by the NIMH, and described simply by one of its leading early figures as: 'The psychological study of behavior as it relates to the everyday physical environment'.[73]

While the field of environmental psychology emerged in the 1960s, its origins lay in the work of the 1950s. Sommer was a pioneer and Osmond's paper published in *Mental Hospitals* was considered field defining. Sommer continued to work with Osmond's concepts and apply them to a range of institutions and environments. Using naturalistic observation, experiment and interview, he examined how space was controlled by individuals and the effects on intrusions into what he defined as 'personal space', an area that surrounded a person's body. These were a further advance on methods originally developed in the mental hospital, such as his studies of seating arrangements to understand user behaviour and model the right kinds of spaces on a geriatric ward.[74] The development of the invasion technique, where the researcher would sit too close to individuals and gauge their

[70] R. K. Merton to Walter E. Campbell, AIA, November 4, 1957, Pond Papers, Folder 227.

[71] "Report A," in *Research for Architecture, Proceedings of the AIA-NSF Conference, Ann Arbor, Michigan, 10–12 March 1959*, ed. Eugene F. Magenau (Washington, DC: AIA, 1959), 90. Attendees expressed much support for such interaction.

[72] William H. Ittelson, H. M. Proshansky, L. G. Rivlin, and G. Winkel, *An Introduction to Environmental Psychology* (Oxford: Holt, Rinehart & Winston, 1974), 71; Harold M. Proshansky, "Environmental Psychology and the Real World," *American Psychologist* 31 (1976): 303–10.

[73] Kenneth Craik, "The Prospects for an Environmental Psychology," Draft, for *Journal of Environmental Design*, ERDF Papers, Box 55, 2154.

[74] For a much more detailed analysis of Sommer's work at Weyburn, see John A. Mills and Erika Dyck, "Trust Amply Recompensed: Psychological Research at Weyburn, Saskatchewan, 1957–1961," *Journal of the History of the Behavioral Sciences* 44 (2008): 199–218.

response, was made possible in the mental hospital, 'a place where the usual sanctions of the outside world did not apply'.[75] Once refined, Sommer transferred these techniques to a wide range of spaces, from college libraries to airport terminals, and argued that the spatial principles developed had universal relevance. When he turned his attention to 'softening' correctional architecture, he compared, as he so often did, the 'barren, cold, or hard' conditions where inmates were treated 'worse than… zoo animals', to those of mental hospitals before their research at Saskatchewan had helped to overcome the state of inertia and neglect.[76]

Sommer also drew from continuing research in the mental hospital such as the ethologically informed work of psychiatrist Aristide (Hans) Esser on a psychiatric ward in the Rockland State Hospital, New York.[77] Patients were observed according to a strict time-sample and their location, posture and interaction recorded with code on maps of the ward divided into a grid of 3 × 3 foot squares. The processed information gave them a breakdown of each patient's movement and interactions. Esser argued that, just as in nature, 'an ordering principle occurs' based on territoriality and a dominance hierarchy. The way in which patients used space was related to their social rank—the more dominant moved freely around the ward, while the weaker and more withdrawn established their own restricted 'definite territories' which they defended aggressively.[78] The mental hospital offered a unique opportunity for understanding this very complex process of social ordering in relation to space, as the 'chronically mentally ill… are incapable of and are not allowed to participate in most role relationships. Clearly revealed is the simplicity of their aggressive behaviour related to defence of property

[75] Sommer, *Personal Space*, 31–32.

[76] Robert Sommer, "Final Report: Research Priorities in Correctional Architecture," July 1, 1970–December 30, 1970, ERDF Papers, Box 28.

[77] This was reciprocated with Esser drawing on Sommer's seating techniques—Richard Almond and Aristide H. Esser, "Tablemate Choices of Psychiatric Patients: A Technique for Measuring Social Contact," *Journal of Nervous and Mental Disease* 141 (1965): 68–82. Esser was also influenced by Osmond and Izumi—Aristide H. Esser, "Environmental Design Needs Empathy to Combat Pollution," to appear in *Matrix*, 1971, ERDF Papers, Box 47, 3669.

[78] Aristide H. Esser et al., "Territoriality of Patients on a Research Ward," in *Biological Advances in Psychiatry*, ed. Joseph Wortis (New York: Plenum, 1965), 37–44 (37).

and rank'.[79] The mental hospital had further advantages, as not only was the territorial behaviour 'unmasked' or 'undisguised', but the ward was both a 'closed' setting in which variables were relatively constant and a 'natural habitat' unlike the artificial setting of the laboratory.[80] The ward was a hybrid space, a natural experiment that allowed them to interrogate the functions of spatial behaviour from the vantage point of the nurses' station, Esser noting just how easy 'systematic observation' was in 'our specially designed observation area'.[81] It also, of course, generated principles such as territoriality that could inform the design of environments to sustain communal living in 'the increasingly crowded conditions in our technological world'.[82] To help achieve these aims, Esser founded and directed the Association for the Study of Man-Environment Relations in 1968 and edited the journal *Man-Environment Systems*, both important to the development of environmental psychology.[83]

So central was research in mental hospitals that all three of the first centres for environmental psychology that emerged in the 1960s did so as a direct consequence of research in spatial behaviour and design in the psychiatric ward. The most prominent, and the first to offer graduate training, was based at the Graduate Centre of the City University New York (CUNY). It emerged through a series of NIMH grants, beginning in 1958, to a research team to study mental hospital design led by a psychologist of perception, William Ittelson, at Brooklyn College. The purpose, as one member described it, was to 'be able to tell some architects *how* to build a mental hospital so the patients will get cured much faster'.[84] But of course it was not so simple. They described how 'questionable assumptions' were stripped

[79] Aristide H. Esser, "Interactional Hierarchy and Power Structure on a Psychiatric Ward: Ethological Studies of Dominance Behaviour in a Total Institution," in *Behavior Studies in Psychiatry*, eds. Sidney J. Hutt and Corrine Hutt (Oxford: Pergamon Press, 1970), 25–59 (42).

[80] Esser, "Interactional Hierarchy."

[81] Ibid., 43.

[82] Aristide H. Esser, "Social Contact and the Use of Space in Psychiatric Patients," Abstract, AAAS Meeting, 1965, ERDF Papers, Box 54, S.1692.

[83] John Zeisel, "Behavioral Research and Environmental Design: A Marriage of Necessity," *Design & Environment* 1 (1970): 51–66.

[84] Proshansky, "Environmental Psychology," 303.

away and they were forced to 'postpone the question' of design and turn instead to explore how the hospital environment was experienced by patients.[85] An extensive research programme was undertaken and they developed an even more sophisticated technique of 'behavioural mapping'. This not only involved time-sampling with multiple observers recording behaviour during a predetermined period in the wards of three hospitals, but also included a more formal series of 'behavior categories' to establish 'types' such as the 'isolated passive', a withdrawn individual either lying in bed or sitting alone.[86] This isolation was, they suggested, a consequence of the individual's failure to control space and establish territory and privacy and so attain 'freedom of choice' in behaviour. The implications for design were that single or double bedrooms were preferable, as they encouraged social interaction on the patient's own terms and thus hastened recovery. These studies were not only relevant to the design of psychiatric facilities, but, as the researchers made clear, they also had taken a step 'toward developing general principles applicable to a variety of settings'.[87]

The CUNY research group described the mental hospital as the catalyst for the development of a field 'born of social necessity'.[88] Lawrence Good was also funded by the NIMH to model the renovation of a ward in Topeka State Hospital, Kansas in 1962.[89] Some of the anthropologists, psychologists and sociologists brought together for the project founded the Environmental Research Foundation in 1965 which soon

[85] Harold M. Proshansky, William H. Ittelson, and Leanne G. Rivlin, "The Influence of the Physical Environment on Behavior: Some Basic Assumptions," in *Environmental Psychology: Man and His Physical Setting*, eds. Proshansky, Ittelson, and Rivlin (New York: Holt, Rinehart and Winston, 1970), 27–37 (27).

[86] William H. Ittelson, Harold M. Proshansky, and Leanne G. Rivlin, "Bedroom Size and Social Interaction of the Psychiatric Ward," *Environment and Behavior* 2 (1970): 255–70.

[87] William H. Ittelson, Harold M. Proshansky, and Leanne G. Rivlin, "The Environmental Psychology of the Psychiatric Ward," in *Environmental Psychology*, eds. Proshansky, Ittelson, and Rivlin, 419–39 (424).

[88] Proshansky, Ittelson, and Rivlin, "The Influence of the Physical Environment on Behavior," 27.

[89] "The Foundation's Work in the Area of Mental Health Care Environments," ERDF Papers, Box 7.

'expanded its research scope into urban problems'.[90] Finally, a doctoral programme in architectural psychology was established at the University of Utah following a series of conferences on mental hospital design. Its co-director, Roger Bailey, again emphasised how research focused on the relations between the architectural environment and patient behaviour had 'wide application in the other fields of architecture'.[91]

The wider relevance of principles of psychiatric architecture was captured by a comparative piece in the magazine *Progressive Architecture* in 1965. This brought together an architect and psychiatrist in an investigation of two environments—a mental hospital and a college campus. The recent appointment of architect Robert Geddes as Dean of the School of Architecture at Princeton was considered 'significant, for it implies a new direction in architectural education, in which the study of the behavioral and social sciences will become an integral part of the curriculum'.[92] Geddes was strongly influenced by Osmond, now at Princeton, and involved him in a mental hospital study carried out by his students which included materials by the ASP. The purpose of having students design for the mentally ill, and its relevance to the hall of residence designed by Geddes, was to demonstrate how Osmond's principles of social design were 'in effect, applicable to all architecture that involves people, whether in office buildings, in apartment houses, or, as in their case, in a college complex'.[93] It was necessary to design spaces in ways that encouraged social interaction but also ensured that individuals were

[90] Robert B. Bechtel, *Environment and Behavior: An Introduction* (London: Sage, 1997), 84. See also Lawrence R. Good, Saul M. Siegel, and Alfred Paul Bay, eds., *Therapy by Design: Implications of Architecture for Human Behavior* (Springfield, IL: C.C. Thomas, 1965). The Environmental Research Foundation became the Environmental Research and Development Foundation (ERDF) in 1970. Of considerable importance to their philosophy was the work of Roger Barker at the Midwest Psychological Field Station in Kansas, which grew out of research into child development. Barker's observation techniques and concepts made field studies work amenable to the production of objective data on behaviour. Also critical was the work of the anthropologist Edward Hall on proxemics which served to unite disciplines around the study of spatial behaviour and communicate ideas and methods to a broad audience—see Edward Hall, *The Silent Language* (Garden City: Doubleday, 1959).

[91] Roger Bailey, "Needed: Optimum Social Design Criteria," *The Modern Hospital* 106 (1966): 101–3 (103).

[92] "The Psychological Dimension of Architectural Space," *Progressive Architecture* 46 (1965): 159–67.

[93] Ibid., 163.

not overwhelmed by unwanted social contact, otherwise 'friendships and social groups do not form'.

Osmond advised on many other similar projects, the majority funded by the NIMH, as the behavioural sciences became increasingly influential in architectural departments, organizations and practices in the interests of promoting mental health and social well-being. He was listed as an advisor to a project devised by Mayer Spivack and others at the Laboratory of Community Psychiatry, Harvard Medical School, which was aimed at providing evidence for improved architectural practices and design criteria 'at a critical time' for the NIMH and the new mental health centres.[94] But the grant application captured, once again, a much broader vision. With the acute sensitivity of the 'emotionally disturbed individual' to spatial factors, they could be used as 'probes' to explore the environment. Thus, the naturalistic studies of the ward could provide 'optimum' specifications for 'architectural and urban spaces in general' and generate a better understanding of the 'relationship between the physical environment and its influence on the minds and movements of men'. Once again, the psychiatric facility served as an ideal, valid and intact setting for the investigation and design of functional spaces. The knowledge gained would, they anticipated, feed back into the 'design of urban structures in general… correctly classified as preventative mental health for our increasingly urbanized population'.

Conclusion

In 1968 the social psychiatrist Leonard Duhl published a paper entitled 'The shame of the cities'.[95] The title acknowledges Deutsch's earlier exposé of the state mental hospital, now reworked by one of the leading promoters of preventative mental health to focus attention onto 'failure'

[94] "The Effects of Physical Settings on Patient Behavior," research grant application, 1967, ERDF Papers, Box 58, 2710. Spivack was named as the proposed project's director and the principal investigator was sociologist Harold Demone, Jr. Notably, both the application and Spivack's work in general drew strongly from ethological ideas. For an important analysis of the architectural design and function of the Community Health Centre as a critical technology in the transition from a clinical to a public health model in psychiatry, see Joy Knoblauch, "The Permeable Institution: Community Mental Health Centers as Governmental Technology (1963 to 1974)", in Delia Duong Ba Wendel and Fallon Samuels Aidoo, eds., *Spatializing Politics: Essays on Power and Place* (Cambridge: Harvard Graduate School of Design, 2015).

[95] Leonard J. Duhl, "The Shame of the Cities," *American Journal of Psychiatry* 124 (1968): 70–5.

in the 'real world' at the height of the urban crisis with American cities blighted by sickness, stress, violence, and poverty.[96] And yet, for an emerging group of environmental psychologists, mental hospitals had done much more than stimulate, through their obsolescence, a turn away from custodial care; they had played a critically important role in building, adapting and refining the tools needed to address many of the problems that now inflicted the wider urban environment, problems with which experts and policy-makers were struggling to deal. When Lucy Ozarin reflected on the rise of collaborative efforts between architects and psychologists to design for mental health, she made a point of beginning with the ASP's early studies of patients and staff, its consultation and publications as central to an 'intensive campaign to improve existing psychiatric facilities'.[97] Similarly, when William Ittelson considered a programme of research for architecture, he reflected on his own studies of the psychiatric ward and argued that they had 'a vast laboratory of already completed structures for study. All we need to know is how to go about doing it.'[98]

The mental hospital was a particularly important 'laboratory' for the development of concepts and methods to explore the social and psychological aspects of the built environment. Kohler argues that the key characteristic of a laboratory is its 'placelessness'; its ability to generate objective knowledge and generalisation stems from 'stripped down-simplicity and invariability'.[99] The laboratory gives the experimenter close control over material and 'when place affects laboratory experiments we know that something went wrong'.[100] The mental hospital, with its separation from the outside world and its 'clearly delineated physical and social system', offered an impressive degree of control.[101]

[96] Harold M Proshansky, "The Field of Environmental Psychology: Securing the Future," in *Handbook of Environmental Psychology*, eds. Daniel Stokols and Irwin Altman, v. 2 (New York: Wiley, 1987).

[97] Lucy Ozarin, "Notes on the Development of Collaboration Between Architects and Clinicians," *Hospital & Community Psychiatry* 31 (1980): 276–77 (277).

[98] Ittelson, Discussion in Magenau, ed., *Research for Architecture*, 38. To this end, the architect Walter Taylor noted, they had been working closely with the APA in their research and in their 'clinic conferences' for design of mental hospitals.

[99] Kohler, *Landscapes*, 7.

[100] Ibid., 9.

[101] Ittelson, Proshansky, and Rivlin, "The Environmental Psychology of the Psychiatric Ward," 419.

The carefully regulated systems of time, space and function allowed behaviour patterns in the hospital's uniquely sensitive population to be identified, controlled and manipulated, such as in Sommer's experimental altering of furnishings, for example, or in the comparison between an original and refurbished ward. But, of course, at the same moment the complexity of place, of real and intact settings, was critically important, and many psychologists were dismissive of laboratory studies for their neglect of social and physical context of behaviour. While the mental hospital granted researchers a significant degree of control, it was also a natural setting representative of the 'real world' which so concerned environmental psychologists. The mental hospital was a 'hybrid' space that contained elements of both laboratory and field. Blain described the institution as 'part laboratory, in part hospital in the traditional sense, in part convalescent home, in part rest-home, in part university, and overall, as has been said "an institution where we teach the patients how to live"'.[102] It was, as one environmental psychologist pointed out, 'in many ways a microcosm' of wider society that 'reflects within its own organization many of the larger unsolved complexities of urban life as a whole'.[103]

The credibility of the mental hospital as a site for generating principles for design was further reinforced by the interpretation of the world as a multitude of comparable spaces, the city now broken into a series of settings to which the methods and concepts for understanding the spatial behaviour of the psychiatric patient could be usefully transferred. 'In fact', environmental psychologists declared, 'a large part of our lives is spent in institutional settings of one kind or another, and the qualities that make a setting institutional imply some common effects on behavior'.[104] The understanding of territorial behaviour and personal space that had been established on the psychiatric ward (and which had been informed by the zoo) could be applied to the general hospital, prison, classroom, dormitory and even family apartment. In public housing developments, an understanding of territoriality was deemed critical to building more cohesive communities that promoted mental health and

[102] Daniel Blain, "Psychiatric Facilities of the Future," n.d., ASP Papers, Folder 98.

[103] Roslyn Lindheim, "Factors Which Determine Hospital Design," in *Environmental Psychology*, eds. Proshansky, Ittelson, and Rivlin, 573–79 (573–74).

[104] Ittelson et al., *An Introduction to Environmental Psychology*, 368.

prevented crime.[105] In this way, the study of psychiatric architecture fulfilled the broader ambitions of the ASP. The 'immediate need' of improving the therapeutic potential of psychiatric facilities had brought together, for the first time, a diverse group of psychiatrists, architects and behavioural scientists who had then worked to contribute a broader and more basic understanding of spatial behaviour in the context of mental health.[106] As the ASP turned to 'principles' of 'functional design' to address the problems of psychiatric treatment, 'by the same token', its members suggested, 'psychiatric thinking can be related to architectural and community design in a general way'.[107] The principles established in the context of the mental hospital could be incorporated into 'homes, schools, factories, public buildings and community projects'. The ASP had identified the very obsolescence of the mental hospital as offering a 'tremendous field for the architect's imagination, putting the architect in a position to make a significant contribution to both psychiatry and society'.

[105] On this important application of ideas of territoriality to the design of urban spaces, see Joy Knoblauch, "The Economy of Fear: Oscar Newman Launches Crime Prevention through Urban Design (1969–197x)," *Architectural Theory Review* 19 (2015): 336–54.

[106] Ittelson, Proshansky, and Rivlin, "The Environmental Psychology of the Psychiatric Ward," 419.

[107] The Psychiatric Architecture Design Contest, 1957, ASP Papers, Folder 118. This was a contest open to students of architecture to encourage interest in psychiatric architecture, and was organized around a series of 'principles'.