Kim Rosenfield

re: evolution

RE: EVOLUTION

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Contents

This book is for Coco
whose being here has shaken the earth
a little bit

Introduction

Sianne Ngai

A hog, a fox, a dog, mud, seawater, an ass, a weasel, a mare, an ape, and a bee. Kim Rosenfield loves (and loves to infiltrate) the language of systems: lists, tables, trees, graphs, catalogs, taxonomies. She's also interested, at the same time, in the diverse forms of secular enchantment that capitalist modernity generates—both the good or hopeful variety (literary utopias, aesthetic semblance, fairy tales) and the baleful kind, as well (commodity fetishism, feminine mystique, nationalist mythologies). While enchantment is the explicit theme of her previous book *Tràma*, her interests in both varieties converge in *re: evolution*.

Now an interest in modernity's rational systems and in its forms of enchantment (however nontheistic) may at first seem incompatible—but as *re: evolution* shows, they are not. There is no more contradiction here, in fact, than in the idea that scientific reason and desire, or even aesthetic pleasure, can go hand in hand.[1] This is the underlying thesis of *Darwin Loves You*, in which George Levine attempts to counter the "conventional understanding of Darwin as a primary disenchanter of the world" by suggesting the exact reverse: that "Darwin's work can be read as contributing to a radical *re*-enchantment of the world."[2] *Sweet aphid* excrement */ Limpid drops and sweet sugars // All motion in the world of man / Involves some rubbing of one material / Over the other*. As Darwin's

1 S. Chandrasekhar, *Truth and Beauty: Aesthetics and Motivations in Modern Science* (Chicago: University of Chicago Press, 1990), 148.

2 George Levine, *Darwin Loves You: Natural Selection and the Re-enchantment of the World* (Princeton: Princeton University Press, 2006), 22.

theory recognizes, Nature is kinky and often dazzlingly strange. It's a dynamic system driven by the *different ness principle*, by *beautiful mistakes*. And so is *re: evolution*.

I like the argument of *Darwin Loves You*, and would hazard that the author of *re: evolution* does too. Noting the rise of religious fundamentalisms of all kinds at our current moment, however, one has to immediately ask: Are we sure that a world of "radical re-enchantment" is what we *really* want? Even if we understand the social and ethical costs of living in what Max Weber described as a disenchanted one? That is, a world understood as no longer "suffused" with meaning or value, but rather as just inert matter posing no resistance to its ruthless instrumentalization for profit?[3] There's been a lot of debate about this recently among the humanist left, boiling down in some ways to the question of what the project of enlightenment includes, and whether that project is truly complete. But *re: evolution* suggests that the question of which trajectory is better for humankind is a red herring, or *a monkey orbit*. From the biological surprise of *masculine flowers with feminine qualities*, to the romantic fantasies woven around the purchase of a new hat, to the altered if not exactly magical states promised by commodities bearing the names of *Celexa* and *Zoloft*, various forms of post-religious enchantment—strong or weak, good or bad—will continue to be produced as long as the project of enlightenment remains unfinished. Ranging from the pathetic to the powerful, from the ideologically progressive to the ideologically rancid, these approaches to the modern world as post-sacred, yet not for all that totally purged of wonder, make up a kind of system of their own. They have an impact on how we act. Like other aspects of our nature/culture—the line between them is blurred in increasingly ambiguous ways in this age of patented genomes—they thus deserve to be documented and schematized.[4] And of course, sung

3 Akeel Bilgrami, "Occidentalism, the Very Idea: An Essay on Enlightenment and Enchantment," *Critical Inquiry* 32 (Spring 2006): 381–411, at 396–97.

4 Though at moments *re: evolution* satirizes the ugly history of scientific taxonomy—especially in the form of the nineteenth-century lust for labeling and categorizing sexual and racial differences—Rosenfield, like Gertrude

about, perhaps while strumming a banjo in a *Birch Bark Canoe*, in a variety of tones—from *sweetly and slowly* to *like a dirge*: "*If a vine from the top / mixed with a vine from the bottom / all our next generation / would be altered*."

So here is *re: evolution*, a world as full of ditties and dingbats as DNA, in which genes get switched on and off, *electrons* and *ladies of fashion* desperately pursue distinction along parallel orbits, *molecules hang like dinner lamps*, and *an ostrich arises from a cross between a camel and a sparrow*. Running throughout the poem in a way that makes things even more interesting, is the language of psychotherapy, another modern praxis based precisely on the idea that systematically studying enchantment—collective as well as individual dreams, wish-fulfillments, and fantasies—can transform and better people's lives.

re: evolution's overall affect is one of a playful yet intensive curiosity. This is a passion long associated in Western culture with the image of women pursuing forbidden knowledge, from the legend of Pandora's box and the story of Eve and the wife of Bluebeard, to the Final Girl's exploration of taboo spaces in the late twentieth-century horror film. *re: evolution*'s dominant feeling tone thus reminds me a little of the curiosity that animates Marianne Moore's natural history poems, though without their nostalgia, lapidary quality, or emphasis on visual images.[5] By contrast, Rosenfield's curiosity ("the libido of theory") is much more restless and forward-looking.[6] In its constant movement from one thing to another, it recalls Laura Mulvey's interesting argument that this infamously feminized passion has the capacity to *block fetishism*, which fixes the female image into place.[7]

Stein, refuses to let go entirely of its progressive promise and/or pleasures.

5 On curiosity and Marianne Moore, see Srikanth Reddy, "'To explain grace requires a curious hand': Marianne Moore's Interdisciplinary Disgressions." *American Literature* 77 (September 2005): 451–81.

6 Hans Blumenberg, *The Legitimacy of the Modern Age,* translated by Robert M. Wallace (Cambridge: MIT Press, 1985), 449.

7 Laura Mulvey, *Fetishism and Curiosity* (Bloomington: University of Indiana Press, 1996). On the *Final Girl* and the slasher film, see Carol Clover, *Men, Women, and Chainsaws:*

Such pitting of curiosity against fetishism (sexual or aesthetic) clearly has feminist implications—though to be sure, feminists are just as capable of getting off on a fetish as anyone else. What Kim Rosenfield has therefore done is create a poetics of anti-fetishism that is, remarkably, just as pleasurable, funny, and creepy as the kind of fixation or obsession it critiques: *The pattern of hair-growth in the sexes may have a zero behavior value, despite the story of Samson. But razors and lipsticks are not devoid of a suggestion of the implication of sex*. No small or hairless feat, this is the same queer anti-fetishism which we see in the writing of poets like Mina Loy and Stacy Doris, whom I imagine blowing kisses to Kim Rosenfield in their literary orbit round *re: evolution*.

The cultural politics of scientific rhetoric has always been an ongoing preoccupation in Rosenfield's work. She is, after all, the author of *Cool Clean Chemistry*: a phrase that was once advertising for a line of cosmetics. But why evolutionary theory? Perhaps because it offers an oblique model for thinking about the questions of systemic change and/or reproduction in poetry—a question that can't help but be of interest to any avant-garde or "experimental" writer. Why do contemporary poets write the works they do? And how are we to theorize literary change? What kinds of innovations get passed on? Which ones don't and why? We should recall here that Darwin's evolutionary theory is one driven primarily by the principle of maladaption, rather than adaptation, "a strategy that ran on the whole against the grain both of the dominant modes of taxonomy and the biblical and natural-theological view of the world as harmoniously designed."[8] I have heard Fredric Jameson say that this is what Marx, theorist of social revolution, liked about Darwin's theory in particular: its implication that history proceeds *more by elimination of old forms* than by the invention of the new. This Darwinian focus on what doesn't make sense, on what doesn't fit into a dominant narrative or schema, becomes especially salient for thinking about all the ways in which *natural selection itself*

Gender in the Modern Horror Film (Princeton: Princeton University Press, 1993).

8 Levine, *Darwin Loves You*, 15.

gets routinely "short-circuited" by civilization (which as Levine notes, most contemporary Darwinians believe).[9]

With its own short-circuiting of the relays between the language of systems and of enchantment, *re: evolution* reflects a parallel interest in what we might call linguistic maladaptation—poetry as a system of discursive aberrations, incoherences, *Strange fishes in the awkward contortions and posturing of their glad way through the exhilarating waters of life*. Just as for Darwin, "the most interesting aspects of any organism were the 'rudiments, echoes of the past, traces of vanished limbs, soldered wing cases, buried teeth—all that conglomeration of useless organs that lie hidden in living bodies like the refuse in a hundred year old attic,'"[10] Rosenfield conducts her investigation of literary change by experimenting with linguistic junk and vestigal forms, mixing show tunes with textbook captions, advertising with the names of enzymes, as if to test which forms, in which *combinations*, still seem available and which ones likely to die out. Unlike others fascinated by the archaic and obsolete, Rosenfield's experiment with maladaptation as the motor of poetic development is thus explicitly anti-nostalgic, oriented to the future rather than the past. *Life is so deep in a crisis of change that it squirms and tortures its way into novel forms*. Nothing could be less like a Joseph Cornell box than a poem by Kim Rosenfield—reading her feels much more like a Mariko Mori cross-fertilized with a sci-fi novel. Welcome to the *200 scrambled eggs*, the *chemical soup*, the *bottom of the bottomless*, the weird and wonderfully squirming world of *re: evolution*.

Los Angeles, 2008

9 Ibid., 14.
10 Ibid., 15.

re: evolution

Kim Rosenfield

Out of the blue, to you, for whom today is difficult.

Introduction

Each copy of this book came along exactly during the day of publication. A second edition was ready to go and stamped and circulated in 30 languages. It became the first of its kind and a classic.[1] It was important then and remains important today, because of the swimming pool that is still modern biology (at which this work constitutes the base). Also, it was the first to advance this idea that species of plants and animals could walk upright in beautiful weather. Well, in all kinds of weather. This book was interested initially in a human population, but natural principals begat numerous progeny and we had to include a sparrow who could generate diverse dozens of little ones, and a salmon who made knitwear for its little ones (a few of whom had the potential to become adults). Because of this growing reproductive capacity, the adult populations tend to remain stable from generation to generation. A mutation of ambient conditions became equal to procuring food. O this suffering-unto-predators. O this that we call "descended" with "modifications." Proper, like a man determined to superintend. Each species is potentially capable of winning the lottery (ecological and genetic unity). A splendid neck of the dinosaur but now the same sequence of fossils embrace a certain "let's go" quality. Plants & animals simply appear in their best form. Very old rocks are privatized. Also, certain streets have genetically proper flora and fauna and walking down them feels stratospheric. This all to suggest that geology and the possibility of creation is successive and extinction could be like a grand room full of sunlight.

1 In the winter came a commune of reconciliation. The genesist and geologist couldn't assume that the biblical story refreshed only. Creation finalized plants and animals through a stressed-out Man-At-The-Top.

Chapter 1

Hark!

False reports have contaminated our fish and terrestrial vertebrae. We are particularly concerned with problems of the moment when oregano becomes creation, proving that God often does overlook certain species.

When I think of gradual consequences I've known, my reason tells me that this is going to be a simile of comparative anatomy and a phenomenon of general erudition.

(It is possible to become erudite through use and non-use.)

i.e.: (clear throat)

THE CASE OF OBSTETRICAL REPOSE

When obstetrical repose will be cured, the majority of science will demonstrate that one cannot be left unattended.

Devote yourself to a cause that you can't completely ignore and then maybe there will emerge a new variety of species and the population can be isolated for impeding the variation of coming summers. Therefore, erudition of melancholy can be pleasing.[2] This hypothesis anchors fundamentally our conviction that to walk evolutionistically is in itself gradual and slow.

2 According to Basilican hypotheses, *nature is not easily salted*.

Dear/ Treasured/ Theory:

Please/ benefit/ from the revolution/ of thought/ of "geological time"/ mentioned/ in the abovementioned/ paragraph.[3]

Thank you,

3 But a solitary excursion is a tentative analysis. Open the door—*et violà*—more fountains of difficulty.

Chapter 2

Our original theory includes calculations based on systems of cups of erosion. This erosion suggests ample strictures of wooded lands extending from North Downs to South Downs, representing restive erosion, which must circulate 300 million dollars per year to remain at the actual productive level. If these are true facts and we are right, then the earth has aged more than we think.

(Because our time has already passed). Also, our exit depends on thermo-dynamics about the mental status of the earth. We are trying to get it to pass the test. Our calculations are based on calories consumed per person, minus the problem of time, which continue to consume us.[4]

A nanosecond more attention to this problem:

We walk with our feet all over the earth. In speculation or improvisation, briskly walking and by this miracle, we accelerate.

The problem is not a result of what happens after death, but of radioactive particles of light that surge with calories inside our earth, demonstrating that in the long-term, we must be more prudent.

We decide then that radioactivity furnishes order.

But another dilemma for our time is—what do we do with our sons?

4 These problems—documentation of fossils, origins of complete adaptation, biological superiority, time necessary to make purchases—are the affronts and successes of our groundwork.

Chapter 3

We've tried to furnish sustaining questions with different types of information: from the erudite nature of variety, to the distribution of geography, embroidery, and taxidermy. We've made progress in all these disciplines and have, indeed, learned to walk without anyone's help.

Our first matriarchs have tried to prove that modern research has the half-life of a board game. The first "cramps" in our "consciousness" transcended genetics. DO YOU UNDERSTAND ME? IT'S NOT ALL IN THE DETAILS AND PRINCIPLES OF GENERAL ERUDITION!

Genetic molecules sense doubt and this is the grandest science of our generation. Then came descendents & interpretations & results. With our little pea plant, successive generations could obtain results.

♫ *If a vine from the top*
mixed with a vine from the bottom
all our next generation
would be altered[5]

5 Sung like a dirge.

Chapter 4

(A, T, G, C)[6]

ATTCGACGG
ATT CGA CGG

Z=sugar
F=phosphate
A=adenoids
C=city dwellers
G=guano
T=timid ness

When chromosomes duplicate, molecules hang like dinner lamps. Then two neophyte molecules form and identify their origins. This is the whirl in which genius might be transmitted in general succession. The genetic message of DNA is content with these lewd sequencings.

Three base sequences codify together and when the basest sequence is treated in an amicable manner, it cries out for protection or protein.

Once there was an error in the duplication of DNA and one base event was substituted for another. The base sequence became lost, old, and aggravated.

Informational genetics stay flushed and alone from DNA gone straight to hell.

This is what we call "dogma central."

6 The structure of genetic material, the acid of desire, nuclear, is based on an after-structure uniting phosphate and sugar alternatively and turning to the left.

Chapter 5

If we were able to cross a vast series of experiments, it would be improbable that we would remain serially perfidious. This signifies that acquired characteristics are not erudite and that there's no right street to walk on for information to rage against the molecule and for a walk-on part for genetics. All this to say that security is lackadaisical, and we definitely get more sober as we die.

The enzymes of the body balance on a tale of precision and improbability and usually have a favorable effect. An important recent example of this is the development of penicillin "resenters."

Little by little we'll march out genetic poisons that will produce a lethal effect. When a prime cell doesn't have a nucleus, scientists call it a *procreator*.

Earth is not simply a palace that represents evolution—*it is also the author of that representation.*

There is naturally a grand difference between "organic broth" and a recipe one creates in the kitchen.

[INHALE]	[BILDER]	[STAMENS]
Sybille:	You must be klug	
Claire:	An über beithz or geizig	
Janet:	Die, Christ hammered in	
Helena:	My life among the Zionists	
Patria:	Berzerk in Israel	
All Together:	War begins tonight: eat knockwurst[7]	

7 Über-sized knockwurst.

Chapter 6

Helena Rubenstein brought her handbag to see Picasso at his house where she was going to be a portrait model. *Here's our wee Polish one* thought Picasso. *She's going to befriend me and she's rich. Should we all sing together? Forget her. So fat, fat like an elephant—and enough jewelry for 4 people! And what do you think of me?* demanded Picasso. *Ach! You're a genius, but a genius without!*

Chapter 7

Secured by scientific supervision, glancing upwards over the whole field, its varied and orderly schemes of enrichment, the eye rests upon the consummation of the hole in the figure. There, standing erect, is seen the quintessence of Nature. With outstretched arms and upward gaze, directed toward an even higher power.

Endless variations of form and surface exemplified by the animal/vegetable kingdoms, carefully collected specimens. The museum of the future will be... (insert drumrole here) Life Itself! Racism replete in primatology—male orangutans fighting over females in the lush Bornean forests. Hunting trips as fund-raisers—skulls of 2 lions who ate 140 railroad workers. Paleontology clinicians chisel the fossil bones of "Sue" out of the rocks in which she was found. Microcosms of national goals, territorial expansion and faith in progress.

Faded fur, yellow bones, glassy eyes. Small collection of deaths. Today's Nature is a fragile sickly child in need of care. The love of iron and glass. Honestly expressed construction.

Noah's Ark
Biblical Flood
Ice Age
Civilization at Babel
Tell It to the Bees.

No Nature Outside Culture.

Quae Prosunt Omnibus Artes
(These arts benefit all)

Porcelain cups. Silk pillowcases, the envelope-making machine. Our society is not one of spectacle, but of surveillance. Slices cut across tree trunks, concert hall, live monkey show, neat rows of skeletons. The line between man and lower animals. Do you descend from apes on your grandmother's or grandfather's side?

The portal angel who holds both the Book and the Cell (a dividing nucleated cell). The mylodon and the glyptodon. The skeleton of an Irish giant. Bodies of 2 men impaled on metal poles. A portion of Napoleon's intestine preserved in spirit. Rejoined skulls of 2-headed Bengali boy. Digestive and respitory organs of animals displayed in jars. A depository of all human knowledge, cabinet of curiosities.

Hounds drag down a deer caught in a rushing stream.

The birds and beasts will teach thee.

Chapter 8

Fossils document our imperfections
Then, there was the use of a great tree
Whose pollen was difficult to transport from
Tree to tree, but each tree had a
Tendency to have flowers with separate sexes
When the sexes were separated, there were
Masculine flowers with feminine qualities.

There is a tendency toward limited variation
I believe that antique structures
Improvise, transform, and by an internal force
Which constructs to support each individual in his or her contemporary variations.

There is also another construct to
Believe in: that this grand transformation
Is not only left to the embryo, but
Traced to each of our actions
Between the reign of miracles, we
Are left with the whip of science.

But let's not make a grave error
Supposing that the major # of instincts
That we acquire become habits in 1
Generation and then are transmitted to
The following generation.

If we demonstrate with ease
Each marvelous instinct, then the domesticated
Ape is very well formed, and has
Not come to be in this state
By attitude.

In a mutated condition
Modification of the instincts can be many
Instincts have miraculous
Causes, and their development could
Serve to accomplish all my theories.

We will not look for a definition of
Instinct.

Chapter 9

Between instinct and habit, there is
A migration and an action that shows
Us a rich experience to compute, and to compute for
    an arrival,
Especially a young and inexperienced one
And to compute this individual
In the style of the day, without
The sapiens he/she knows.

Like our unconscious, so many
Actions are habitual
This is easy to associate with
Other habits, at certain times and
States of the body, and another
Acquisition, reminding us
Constantly of all our lives.

It is possible to indicate other
Points of resemblance between instincts and
Attitude.

Like a good movement well
Noted, this instinct/action follows
One from the other.

If we interrupt a person
Singing a song, or try to
Repeat something from
Memory, this, in general
Constricts an indirect turning
In order to respond in a habitual
Course of thought.

Each habit/action becomes erudite—
And therefore demonstrates that which we
Want to verify—that which we believe
Is habitual—an instinct becoming
Stronger and no longer distinguishable.

Each instinct varies
A little, then, we have no
Difficulty in making a natural
Selection committee and accumulating
The variations of instinct.

Like the verification
Of structures and attitudes that are
Lost through non-use, therefore
We have no doubt, that this is the
State of instincts.

I believe that the effect of attitudes on cases of
important
Inferiority has effect on natural
Selection and spontaneous variation
Of the instincts.

Sweet aphid excrement
Limpid drops and sweet sugars.

All motion in the world of man
Involves some rubbing of one material
Over the other.

That's the way Nature is.

Chapter 10

The need of every electron to be different from all other electrons results in some very interesting behavior.We might facetiously compare it with the behavior of stylish women who devote much time and effort to finding clothes unlike anyone else's. If they should miscalculate and two of them appear in the same day in identical hats, these two women would not be found going along the same street together. Either one would be moving at a much greater speed than the other, or one would change direction and go along the other side of the street or even along a different street. Similarly with electrons. They rearrange their "orbits" and paths so that they are all different.

Fig. 31. The different ness principle applied to the behavior of ladies of fashion.

Fig. 28. Monkey orbits—no organization.

Chemical soup
Obstacles in the soup
No soup

Without suggesting that much science is to be gleaned from the pages of *Vogue* and *Harper's Bazaar,* or from observing stylish women, nonetheless, we can imagine a similar effect in their behavior. Suppose these women all agreed with one another (they wouldn't ever really, but electrons do) as to just how different they had to be in the hat line. Suppose they agreed that one hat per block each way was the minimum separation or different ness consistent with chic. (They would have to be on opposite sides of the street, of course.) If there were only a few identical hats in the shopping district, most of the time the ladies could walk where they pleased without suffering the indignity of meeting another identical hat. But as more and more of these hatted ladies went downtown to shop, they would have to be more and more careful not to pass another hatted lady, except on the other side of the street. Eventually as more and more ladies appear, there would come a time when the downtown area had one such lady walking each way every block. This situation is saturation, as any woman will testify.

Note the consequences of saturation: one woman wants to turn off the street she is on and go down a different street. But that street already has all the hats it can carry. If she wishes to remain respectably different she cannot turn! In diamonds the electrons cannot go in the direction the electrical force would urge them because they must remain different from all others.

There is a way out for a determined lady with gumption. She can catch a cab, drive wherever she wishes, and still maintain her dignity.

Chapter 11

Uranium Decay Series, Matter "A":

♫ Sun, Stand Thou Still[8]

Sun, stand thou still
Errors, of dissolvable air

Nothing Vacuum Vapor

♫ A Drop of a Drop[9]

He ran/ one more drop/ on the microscope/ slide's top
He had/ a fine glass rod/ drawn out/ to a fine solid point/
And he withdrew/ a "drop of a drop"/ He wiped the
point/ right on the cloth/ and he withdrew another
"drop of a drop"/ He'd done this one hundred/ times
before/ the drop disappeared.

♫ You've Got to Dig It Up[10]

Reaction is taking place very slowly
in both directions

Reaction is taking place very slowly
in both directions

Reaction is taking place very rapidly
in both directions

Reaction is taking place very rapidly
in both directions

8 Sung sweetly and slowly.
9 Sung with love and feeling.
10 Sung screaming.

The rubber bung is pushed
right into the test tube
The rubber bung is pushed
right into the test tube

Carrying out the reaction in an inert atmosphere
Carrying out the reaction in an inert atmosphere

Lead is not a very reactive element
Lead is not a very reactive element

Chlorine begins to dissolve
Copper begins to dissolve

Reactions appear to have ceased.

♫ Value for the Volume of the Ocean[11]

Molecules they undergo many collisions
And their direction of motion
Alters everything
Their movement is sometimes called the drunkard's
walk
And there's value for the volume of the ocean

Ring of solid/ carries no charge
Ring of solid/ it carries no charge

A gas
A glow in the dark

11 Sung with a carefree twang.

Chapter 12

If both assertion and reason are true
statements but the reason is NOT
a correct explanation of the assertion.

If the assertion is true but the
reason is a false statement.

If the assertion is false but the
reason is a true statement.

If both assertion and reason are false statements.

And when it is all over with the human
intellect, nothing will have happened.

—Nietzsche

Chapter 13

Cast off by a mother
So utterly transcended
Hallucinating up ephemerality.

"I feel"
"I sense that"
"I have an idea."

Aha! He's done it! He's broken the rules and I've found him out!

Dream screen.

This story is like a cheap cops-and-robbers-movie
Or a poor-man's version of Kafka.

Attacks on alpha-function
Constantly finding fault.

He reported the presence of the lake but never drank from it.

The contemporary crisis of an
Engorged image-spectacle
Prostituting privacy.

Human growth/biology of the human animal.

Justice through knowledge
Thought worlds.

5-alpha reductase deficiency syndrome
Gifted prodigies, botched poets
Herculine Barbin.

States of being and ways of acting human.

Kwolu aatemwol: a personal transformation.

Sexual Wissenschaft.

This interesting pair of blood-sisters
Sex organs buried in the earth/beneath a living tree
With the help of a glass, sometimes
Unsilvered, or a pane blackened with smoke.

In the boundless future
The "I" in an excess of excess
The "I" is empty still
The "I" calculated and therefore still knowing where it stood.

Path of grace
♫ Every_____'s like the setting sun.[12]

Simplicity stripped of all attributes
Will soon sink to the bottom of the bottomless
Like a bolt from the blue.

B r e a t h e before you think.

The "I" would go so far as to reinvent all language.

Leave us helpless, helpless, helpless, helpless.

12 Sung with nostalgia.

Chapter 14

Saying "no" to everything is a
Crucial way to be assured that
One is really themselves
(The "I" is still a child).

Economy as waste product
Do we have a chance to be better?
A second chance?

When the baby enters the birth canal
Does a disembodied spirit go in and pull
A switch-a-roo?

What happens when you like the merchandising
More than the man?

"State-dependent recall."

Pity toward another version of the self.

Emotions are culturally
And historically
Specific.

Ennui, angst, amai, being a wild pig
Desirable, contemptible, admirable, despicable,
respectable.

"Maternal thinking"
People who were diseased with this default.

♫ *Why was I borne? When I was borne?*
Why was I given
The body I'm livin' in?[13]

Klonapin, Wellbutrin, Lexapro, Lamictal,
Effexor, Prozac, Celexa, Zoloft, Ambien.

13 Sung like a show tune.*

Decorum, gravity, and norm-making
Clowning, parody, and norm-breaking.

Masculinized sorrow
Everlasting virginity
Black Register of a Thousand Sins
Ontological and essentialist
He-Whore.

B. went through the forest of being
But is coming out of the lake of knowing.

Networks, meeting sites, body language.

Who has the power to establish a version of the self?

Jane never doubted why she needed to hate Charles.

It's not true to be so good—
Now goodbye daughter!

A masterpiece in the medical style.

I buried myself alive.

It's not a fancy yesterday.

♫ So many beings I know I could be me in.*

! Genderlicious Genderbars !
One individual? Or several?

Chromosomal similarity is
Not an all-or-nothing affair.

The cultural heredity of a human population.

The cultural heredity of a horse population.

The ultimate extension of the ancestral family.

Also, the family of the future.

(Genetic endowments of posterity).

(Vermont frogs will never meet Florida frogs).

Chapter 15

Weak and stunted rogues
Wheat-producing rye
Fishes turn into birds
An ostrich arises from a cross between a camel and
    a sparrow
Mud warmed by sunrays.

Tabula rasa
Population cage
Withstanding the wear and tear of modern "tempos"
Natural heredity of the body
Inheriting the wisdom
Of people we've never met in the first place.

Survival by schizoid retreat
Ruptures lurking in the corners of our souls
And all through the dream.

Then a man with a light strapped to his forehead
Looks into the infant's ear.
Eye gleam of the luminous past.

(Naturally, in the first place
In the beginning, all along, and forever one or the
    other)

Chapter 16

She has
A Vulva
Labia Majora
And
A feminine
Urethra
Independent
Of
A sort of
Imperforate
Penis
Which
Might be
A
Monstrously
Developed
Clitoris.

She
Has
A
Vagina—
True
IT
Is
Very
Short
And
Narrow
But
After
All
What
Is
It

If
It
Is
Not
A
Vagina?

Chapter 17

Yes, it was.

Even when I think about it now, it makes me…

Mm.

[Five-second pause] Only because what I know now if I was back then and I knew what I know now I most probably would have went whack to her and told her to leave me alone so I could um I can do what I ==========
==========want to.

==========want to, yes.

But um.

Mm.

When she

==========she's never been

Yeh.

Chapter 18

How do you feel?
How do you find yourself?
Could an ant retrieve a stone from your palm?

What is sealed out?
Is that stone a picture-breaker?
A window smasher?
An I- You-Thing?
An electron?

Who is sealed out?
People, are they different from stones?
Their lived-in worlds do they live-with?
Is it excitement like violence or ho-hum I'm not aroused? Is this what is called ontological?

Bandwidths of experience, know they sell (self) or sell (self) knowledge.
George Washington had to go back to the war in the wilderness for a little while. CAPTAIN
George Washington shed a few tears in bed that night.

Humans are live-ins in an active way. Feelings always already understand themselves. Thoughts are harmful, thoughts FUCKING KILL! Personal relations are interactions between two big empty boxes. ONCE MORE WITH FEELINGS!!! I will never, ever feel, unlike Nature, that I can get anything done. Even bear scat bares seeds. Don't you ever romanticize gender, DO YOU HEAR ME! Gender is datum and we suffer for it. Like recreational antifreeze added to a toilet bowl. Then gender can become a solution like: *how many histories does it take to screw in a light bulb?*

Chapter 19

The light of the morning sun had borrowed the brightness of the snow and had already illuminated the whole city. Blue heavens, white snow, light of the sky, and the light on the snow, with gold roofs shimmering between, was so thrilling that one could hardly open one's eyes to look at it.

Chapter 20

You stand at the door of your mind
And you determine what goes on in it.

Our childhood is a blackmailer
Who makes us pay over and over again
For failures and mistakes
That have long ago
Been outgrown.

Chapter 21

The simple workings of the human machine
Pornographic, in the hands of fanatics
Boys are eunuchs from childhood
"Where did the baby come from?"
Ovaries and spermeries
Cretins, spinal tuberculosis, rickets, acromegaly, gigantism
Ovaries and testes "awaken" savages
Premature emotional stimulation
"Petting," dancing, etc.
Shortage of sleep
On a royal way to healthy womanhood
Sexual incidents should be regarded as we do mumps and chicken pox.

Privacy is dangerous for all children
Proper diet, well-fitted and not tight clothing, cool bedrooms, light covers, prompt
Treatment of constipation, and plenty of outdoor exercise.

Self-controlled young men are frequently stimulated by modern dances
We now know the methods of giving a kind of protective vaccination of wholesome
Attitude—common-sense eugenics.

Even the prettiest girl can't give more than she's got.

Picturesquely charming and spiritually erotic beauty.

The mouth has full lips that smile sweetly and laugh deliciously (mollica spondens risus).
It invites kisses (küssenlich).

The straight white throat
Whose skin is so clear that when she drinks, the wine causes a visible flush as it goes down.

The small, firm breasts, two walnuts small enough to
be enclosed in the human hand
Or turned, as in a lathe.

At most one in ten women fulfill one of these
conditions.

On the theory of probabilities we may therefore
calculate the occurrence of women who
Simultaneously fulfill all four as 1/10(4) = one in ten
thousand.

Chapter 22

Almost the last thing that keeps people together is the law.

Chapter 23

The presumption of impotency has not been overcome and a decree of nullity will be advised.

Chapter 24

It is founded in a natural instinct
It is founded in a desire for cleansing
It is a form of sexual gratification akin to masochism
It is a form of sexual gratification akin to
exhibitionism
It is a form of devil-phobia
It is a form of power-complex.

Chapter 25

I saw some spittle, the most disgusting that I had ever seen and I had to put my tongue and lips upon it. The act was so nauseating that I could not control myself and my heart beat so violently that I thought it would burst every vein in me and that I would vomit blood. I continued doing that as long as my heart revolted, and it was rather long.

Chapter 26

♫ Happy times, indeed[14]
My Valley—
Our House
Wooden rails
Grain to rye
Come sweetheart do—
Into my Birch Bark Canoe.

14 Sung like a predator.

Chapter 27

The pattern of hair-growth in the sexes may have a zero behavior value, despite the story of Samson. But razors and lipsticks are not devoid of a suggestion of the implication of sex.

Chapter 28

What ideas of right and wrong should be enacted into law?

Chapter 29

Sex is nature's trap—once caught, there is no release.

Chapter 30

Whoever has deprived the needy of their earnings should be excluded from the city.

Chapter 31

Every great house…became a sty of uncleanliness.

Chapter 32

The free-flowing sex expression in cavalier literature was blotted into a forbidden memory.

Chapter 33

"Money-making" is the most "God-given" of occupations.

Chapter 34

A hog, a fox, a dog, mud, seawater, an ass, a weasel, a mare, an ape, and a bee.

Chapter 35

A silence that nothing and nobody can break.

Chapter 36

There was the human race, set free from all its sufferings.

Chapter 37

The disability oft bullied by Louisiana
And an "est mellieur" other appropriateness.

Chapter 38

A really well shaped back is the highest revelation of female beauty.

Chapter 39

He is content with her smile and her jest; more, he knows, is not for him, nor has he ever desired 'facta' of his lady, but the mere sight of her makes him rich and happy.

Chapter 40

6 bottled scents wrapped in
6 colored handkerchiefs signifying
6 moods:
Green/mystery
Orange/jealousy
Red/treachery
Yellow/desire
Blue/anticipation
Pink/consent.

Chapter 41

Were they merely planets? Did they need my sun?

Chapter 42

That copper vessel in which
I was presented
With 200 scrambled eggs.

Bitter it was!

Chapter 43

The rendering of the feminine by artists (speaking male-wise) with chisels, brushes, and pen.

Chapter 44

Ideas of littleness
An organ alleged to be ill.

Chapter 45

The secrets of nature
Cannot be dished out
In neat little spoonfuls.

Chapter 46

Every piece of apparel serves to reinforce and extend the personality.

Chapter 47

Sex life and the demands of the economic order:
Something unclean and unbeautiful.

Chapter 48

The babbling of the term “mother” with tear-stained faces.

Denouement

Freedom nestles in a human context.

Freedom is falsely conceived as a lovable abstraction.

There are lovers of freedom and *lovers* of freedom—
O! The differences to me.

Freedom is linked to human nature that has a million years experience as a cruel animal, a dirty beast, a sadistic hunter, a vicious warrior, a shameless robber, a merciless exploiter, a cunning flatterer and liar and four-finisher and charlatan. A savage bent on canceling humor from the world by encasing his hairy self in evening clothes and learning to manipulate language. A child full of tyranny and tantrums and egoism and provincialism. A creature properly called *homo apien* who only the day before yesterday, possibly a day before that, was known as *Pithecanthropus erectus,* a simian son-of-a-bitch who has been persuaded by a few exquisite-minded men and women, saintly variants, wonderful mutations, (beautiful mistakes on the part of evolution) to practice an unrestrained freedom, an uninhibited laissez-faire to go forth and do with life what the impulse of the moment surreptitiously invites.

(Impulse is the most beautiful force in human nature—when it is. It is the most evil force in human nature the rest of the time.)

♫ (The New Morality, Abnormality. Abnormality, the New Normality.)[15]

(Life is so deep in a crisis of change that it squirms and tortures its way into novel forms.)

(The stink in a chemical laboratory is not an effective argument against the wonder and utility of science.)

15 Sung with a jitterbug-like flair.

The newer Freedom must go through its birth pangs that are anything but beautiful and delay awhile in disgusting swaddling clothes.

Freedom in the perilous chemical laboratory of Life may disastrously blow up the living universe.

Freedom may re-assert the chemicals of desire and produce such marvels, as life has never yet known.

Qui vivra, verra

The extraverts will dominate the sexual scene. The young extraverts will come running in the early dawn from their stuffy rooms out into the clean open, their naked bodies still sluggish and unkempt, unbeautiful in their bed-besprinkled sleepiness, all ready for a hectic plunge into the river of life, in their crude immersion revealing no special exquisiteness of body or grace of motion as swimmers in the river of life, a little polluting the fresh dawn of day by their noisy assassination of the day's wonder and beauty. Strange fishes in the awkward contortions and posturings of their glad way though the exhilarating waters of life.

THE END

Out of the Soup and the Blue: Don't Everyone Evolve at Once. An Analysis

Diana Hamilton

re: evolution lets science have its say. Kim Rosenfield's ability to include multiple voices without submitting any to the criticism of a single author(ity) enables her to appropriate text from several sources, mostly scientific ones, to create a remarkable democracy of perspective. Yet there's no defensiveness distancing the author from the voices just introduced, nor is it easy to come to a totalized understanding of her text—an effort that might render the polyvocal effect moot, or mute, as the meaning-end would undermine the writing-process. These effects in *re: evolution* help elude the sort of conclusions reading expects, but they are also what make Rosenfield's poetry such an effective site for breaking down rigid systems of knowledge, including conventional analyses of poetry.

In an interview with Kareem Estefan on "Ceptuetics," a weekly avant-garde poetry radio show on WNYU,[1] Rosenfield suggests a variety of ways a reader might approach *re: evolution.* Treat it "like a thrift store," she says, a recommendation pointing to the way her work recycles the outdated, while emphasizing the process of finding what fits, so to speak, in a diverse pile. When asked how poetry can address a scientific text that posits itself as authoritative, Rosenfield says that the layering of discrete moments is a way of confronting that which would claim authority: "One way a poetic text

1 Kareem Estafan, "Ceptuetics Radio, Episode 11, March 19, 2008," *PennSound,* http://writing.upenn.edu/pennsound/x/Ceptuetics.html.

can sort of deal with anything is to collect many many little moments [...] and weave them togethers [...] it's about an idea of subjectivity that is coming forward [so that] there isn't an authority, there isn't a known, there isn't a truth." Which is not to say there aren't truths, or knowns, in *re: evolution,* but the presence of so many conflicting *knowns*—sometimes silly, rarely straightforward—prevents the kind of calcification that marks "authoritative truth." This is of particular importance in *re: evolution,* because the language of evolution oscillates between a concept rooted in the very permeability of species, as afforded by susceptibility to very slight environment changes, and another, altogether linguistic drive to act as though evolution has already ended, and its end result is the creation of humans. Yet when Rosenfield writes "creation *finalized* plants and animals" [emphasis added], the suggestion of completion contradicts the very notion of evolution.

The title speaks first: implying that evolution is getting a do-over, evolution all over again. A second evolution may seem strange, as evolution is not normally considered a finished event, but an ongoing one, simply occurring too slowly to see within a human lifetime. Strange unless we consider evolution's second coming as the arrival of capitalist-based social Darwinism. Building on the logic that biological evolution is not in the current picture for humans precisely because it is too slow to see, social Darwinism posits a social order determined by less subtle social events, guided by the same principles of competition and survival. The "re" could also be attached to evaluation, as the book is reexamining textual artifacts. Or it could refer to a clearing of the throat, a restating. With the colon considered, the title also reads like the heading of an memo (regarding evolution), taking evolution as the book's subject—and begging the question of whether evolution is really what the book is about. And then there is revolution, a turnaround, bringing us back to something radical, something that threatens to change the way things are. At the same time, parts of the book speak against that suggestion, like Chapter 22: "Almost the last thing that brings people together is the law" (53). Revolution, in the idea of a turning-back or around, also speaks to the very pro-

cess of revolving, reminding us that evolution does not just happen a second time, but recurs constantly.

An appropriate beginning to a book arranged in the form of short, academic prose, *re: evolution*'s Introduction claims: "Each copy of this book came along exactly during the day of publication. A second edition was ready to go and stamped and circulated in 30 languages. It became the first of its kind and a classic" (19). There is a footnote attached, which reads: "In the winter came a commune of reconciliation. The genesist and geologist couldn't assume that the biblical story refreshed only. Creation finalized plants and animals through a stressed-out Man-At-The-Top" (19). The first two sentences already introduce the creationist perspective in unstressed contradiction to that of the evolutionary biologist: either every copy appeared simultaneously and without gradual development (the implication being that the book was written on the day of publication, or, in fact, was not written at all, but simply "came along"), or there exist various editions (its arrival in various languages, for example, along with its presumably altered second edition). These two perspectives must be "reconciled" by the genesist and the geologist, which brings about the same sort of crystallization publication implies; creation, in the footnote, "finalizes" creatures, and though God here is more a CEO character than a divine being, one person is still responsible for that finalization. Inherent in the gesture of the move from evolutionary biology to social Darwinism is the retention of natural selection in a capitalist framework: while both systems claim to see individuals (or an individual's genes or background) as the deciding factors in the changes that occur in future generations, the presence of power in the latter's framework returns Darwinism to a top-down system. In the same way that the use of the language of intentionality by those who write about evolutionary biology has the potential to undermine the evolutionary framework through its analogical goal-setting, capitalism introduces power—the "Man-At-The-Top" here—in the form of executives with the ability to decide which people do or do not survive, replacing the role of God in the older (now altogether too contemporary) idea of individual creation and development.

Chapter 4 also addresses this contrast between the arbitrary changes occuring over time and sudden, planned change instructed by someone higher-up, beginning with two strings of genetic code defined as such: ("Z=sugar / F=phosphate / A=adenoids / C=city dwellers / G=guano / T=timid ness" [24]). The "T" recalls the previous page's useful information: "Genetic molecules sense doubt and this is the grandest science of our generation" (23). Doubt and timidity have made their way into the genetic makeup, and the importance of the former becomes clear throughout the rest of the text. While no one voice represented in *re: evolution* sounds doubtful, the presence of so many conflicting (and, in fact, confident) voices creates the overall effect of timidity. Combining sources in this way undermines the authorial role of the poet, which is examined playfully in Chapter 5: "Earth is not simply a place that represents evolution—*it is also the author of that representation*" (25). Echoing the culinary concerns of Chapter 1 (when the fish face the oregano), the passage continues: "There is naturally a grand difference between 'organic broth' and a recipe one creates in the kitchen" (25). A recipe, which could be seen as a quintessential simile for bricolage, is instead being used as an example of the form in which one has authorial control. Similarly, the Earth is not the author of evolution, but rather the author of the *representation* of evolution, or rather, the author of the plants and animals (the representations themselves) that evolution affects. If Foucault asks us to question how exhaustive an author's complete works should be—whether the volumes should include correspondence, private diaries, receipts[2]—then literature built entirely of appropriated text may demand that even the bibliography be entered into the author's oeuvre as text literally included, the stuff from which recipes are made. In *re: evolution,* authorial control (when the Earth sits down to write) stands in opposition to the implication of self-organization that comes with borrowed text. This opposition parallels the

2 Michel Foucault, "What Is an Author?," in *Language, Counter-Memory, Practice: Selected Essays and Interviews,* trans. Donald F. Bouchard. (Ithaca: Cornell University Press, 1977), 113–38, at 118.

conflict between intent and chance in explanations for the differentiation of species.

re: evolution's Introduction continues:

> This book was interested initially in a human population, but natural principals begat numerous progeny and we had to include a sparrow who could generate diverse dozens of little ones, and a salmon who made knitwear for its little ones (a few of whom had the potential to become adults) [...] O this suffering-unto-predators. O this that we call "descended" with "modifications." Proper, like a man determined to superintend. Each species is potentially capable of winning the lottery. (19)

This is some kind of reverse evolution, moving from people to offspring to a sparrow to offspring to a salmon (who knits), and back again, and only here are offspring given the chance to grow up. This evolution is so tied to the production of "numerous progeny" that it appears to have its own infantilizing drive, a process in which children are the end rather than the beginning (the chicken/egg dilemma rendered oedipal). Further, the introduction parodies the usual introductory form, which often outlines a book's own evolution. *re: evolution* does the same, jumping head-first into the kind of language that will characterize the rest of the book, in a format affording much less breathing room for the appropriated language than what most of the other "chapters" will provide.

Though the title implies that the primary appropriated science in question here is evolution, the dedication page alludes to the presence of something decidedly different: *"Out of the blue, to you, for whom today is difficult."* The sentence has the ring of a particularly terse greeting card, addressing a reader who is having a hard time, a sort of patient for whom this book is offered as remedy. Rosenfield is a psychotherapist as well as a poet, and the sentence hints at a concern for the way the issues addressed affect the lives of people. Rosenfield insists her therapeutic practice completely relates to her poetic one: both consist of the collection of discrete moments to form something else. The book's earliest connection

between evolution and psychotherapy is in this passage of animals becoming offspring that become more offspring; while this is one way, certainly, of viewing generational changes, it also focuses, especially grammatically, on the becoming-children of adult members of a species. "Our childhood is a blackmailer, / Who makes us pay over and over again" (50). Biological inheritance from previous generations becomes psychological inheritance from earlier years within an individual's life, and the anxiety wrapped up in evolutionary talk can be seen as the essential desire for autochthonous origins—a desire that appears just as conflicted in poetry, where the child's perspective has long gotten more credit than elsewhere.

When Rosenfield writes in the Introduction that "each species is potentially capable of winning the lottery" (19), the book sides with the chance event over creationism, even after the implication of this Introduction's first sentences. The phrase also reverses the process that allowed evolutionary biology to inform capitalist ideology, instead showing how capitalist logic informs how we talk about evolution. It also mirrors (or even directly plagiarizes) language used in actual biological texts, where the strange set of minute evolutionary transformations happening along generational lines are rendered in language more analogous to the changes we can see in observable time, so that evolution seemingly has a motive. Phrases like "determined to" and "potentially capable of" point to how evolutionary science is posited as a future-oriented event, with changes occurring to *ensure* survival, as though someone were doing the selecting.

The reader is reminded of the danger of language in the first chapter, which begins:

> Hark!
>
> False reports have contaminated our fish and terrestrial vertebrae. We are particularly concerned with problems of the moment when oregano becomes creation, proving that God often does overlook certain species. (20)

The false reports responsible for the alleged contamination result in the animals' arrival on the dinner table (cooking being the moment when oregano *becomes* creation), and the use of the word "proving" unites these phrases whose otherwise causal relationship is not as clear as the word implies. Yet "proving" also gestures towards the language of inevitability tied up with evolution. The same thing happens further down, with the juxtaposition of seemingly unlinked sentences:

> Devote yourself to a cause you can't completely ignore and then maybe there will emerge a new variety of species and the population can be isolated for impeding the variation of coming summers. Therefore, erudition of melancholy can be pleasing. This hypothesis anchors fundamentally our conviction that to walk evolutionistically is in itself gradual and slow. (20)

When asked whether her use of scientific language in *re: evolution,* particularly this kind of syllogistic logic, could be viewed as a warning against science, Rosenfield says it is "not necessarily a warning [...] [but] a feeling that those scientific precepts, those kinds of authority have maybe played out [...] they're there, and we know they're there, but maybe we can move on." This idea of "moving on" contrasts with other contemporary poetry which appropriates science and is written *against* the borrowed science—as though a so clearly negative relationship to a borrowed text could have a functional critical end. Instead, Rosenfield uses the artifacts of another kind of logic as the building blocks for a new one. It is also much easier, in a place like poetry, to include contradictions, to let the text include ideas that cannot be strung together as directly as the conjunctions in re: evolution would imply. In the Introduction of his book surveying 'pataphysical poetry, Christian Bök notes the necessary chronology of science by its "*passé dépassé*"[3]—differentiating science and poetry by the fact that science must repudiate its older claims in order to (artificially) con-

3 Christian Bök, *Pataphysics: The Poetry of an Imaginary Science* (Evanston: Northwestern University Press, 2002), 20.

struct a clear narrative of progressive discovery that always ends with contemporary consensus. A similar trend can be found within the logic of a science itself, as in evolution (and in "social" evolution), where adaptations are viewed retroactively as necessary consequences of previous states; the element of randomness is often ignored. This logic is maintained in Rosenfield's syntax, which connects otherwise unconnected phrases consistently with words that immediately create a relationship between the two. Devoting oneself to a cause will bring about the emergence of a species, and this interaction proves that "erudition of melancholy can be pleasing" (20).

The second chapter focuses on the testing of scientific theories:

> We walk with our feet all over the earth. In speculation or improvisation, briskly walking and by this miracle, we accelerate.
>
> The problem is not a result of what happens after death, but of radioactive particles of light that surge with calories inside our earth [...] (22)

"We" is a common participant here, a jarring choice given the book's project of fracturing authority: one would be hard-pressed to find a pronoun more adept, especially in the context of historical nationalism, at creating a dangerously totalizing identity out of seemingly irreconcilable perspectives. In re: evolution, the "we" seems to refer to humans, or at least how humans talk about themselves as a group, but its signification is not altogether rigid. Its usage calls attention to the way "we" can work when in the wrong hands, while also failing to do what this authoritative "we" would; the book ends without a clear idea of a Speaker; the collage is never hidden. But whoever the "we" is in these passages, the relationship with the earth is one not only of ownership but also of reciprocal effect ("our exit depends on thermo-dynamics about the mental status of the earth" (22)). While walking all over the earth implies some sort of dominance, our acceleration is "by miracle," and the source of this movement may not be clear, but it has not

been left to chance. By the next page, however, "[w]e've made *progress* [emphasis added] in all these disciplines and have indeed, learned to walk without anyone's help" (23). "Each species is capable of winning the lottery," that is, until they actually win, and then the winning is seen retroactively as progress. In its new context, "capable of winning" points to a difference between positive and negative freedoms: each species (each individual, too) is capable, potentially, of winning the lottery (negative freedom), but not every species (every individual) is actually given the resources to win (positive freedom).

Chapter 8 marks one of the first sections where the text is actually arranged "like a poem," with line breaks and stanzas, but the language used has not necessarily changed in content from previous pages. The first line reads, "Fossils document our imperfections," referring again to the notion that evolution is a process of gradual perfection rather than somewhat arbitrary change, and the poem continues, halfway down the page, "Between the reign of miracles, we / Are left with the whip of science" (29). These lines resonate in a series of chapters concerning themselves with the evolutionary effect of attitude, or with personality on scientific outcomes. This trajectory is continued in Chapter 10, where electrons are compared to women of particular fashion concerns:

> The need of every electron to be different from all other electrons results in very interesting behavior. We might facetiously compare it with the behavior of stylish women who devote much time and effort to finding clothes unlike anyone else's. If they should miscalculate and two of them appear in the same day in identical hats, these two women would not be found going along the same street together. Either one would be moving at a much greater speed than the other or one would change direction and go along the other side of the street or even along a different street. Similarly with electrons. They rearrange their "orbits" and paths so that they are all different. (32)

Contrary to previous chapters, in which poetic language was organized in the manner of academic prose to make

the poetry work through the rigid framework of scientific logic from within, a passage like the one above takes language directly from a scientific text and submits it to the will of automatic justification in the form of linebreaks, forcing the science itself to confront the would-be poetry contained within its own faulty analogies. At the same time, the logic of intentionality is revealed in its most ridiculous form: electrons not only have "needs" on the level of personality, but those needs function within a comparison reliant upon a very specific sociological view of the behaviors of women. If philosophy and poetry can be faulted with too often misusing science metaphorically to support their own claims, here the same can be seen in science itself, which appropriates what its authors see as societal facts for the sake of its own metaphors.

If the absolutes of scientific authority can be borrowed and moved past because their time is over, or because we have already successfully worked through that, the same cannot be said of issues of gender, which take the fore in this text. "Gender is an area that we're still working through; it hasn't run its course," Rosenfield explains in the same interview, going on to describe how she works in the overlap between the authority of scientific logic and the authority of gender. Expressing her fascination with female cosmetic entrepreneurs like Helena Rubenstein, who makes an appearance in Chapter 6, Rosenfield points to the "whole discourse of feminism and science," in which women are thought of as "creative" rather than "thinking." In this, *re: evolution* marks a place for Rosenfield to "strut her stuff," as she puts it. While the role of women in science, scientific discourse, fashion, and poetry are all certainly explored in this text, another Rosenfield book, *Good Morning—Midnight—*, creates a plurality of thinking voices, coexisting within the same space and speaking to and about women. In this, the book uses polyvocal methods comparable to re: evolution but with a different effect, for *Good Morning—Midnight—* blends advice from nineteenth-century books on hysteria with the advice of contemporary fashion magazines. The issue of female authority is amplified by the title, which comes from the first line of the poem by Emily Dickinson (printed

at the beginning of the book), in which both Midnight and Day are posed as male figures to whom the author makes her case. The male interlocutor comes up as well in *re: evolution*, not only in the way the authoritative voice of science has, historically, been male, but in the specific address formed in Chapter 14: "Who has the power to establish a version of the self? // Jane never doubted why she needed to hate Charles" (40). That Charles could be Darwin, and Jane either specific or generalized: despite the fact that "doubt" was introduced earlier as something within the genetic code, this female character does not doubt this particular position.

In the "Ceptuetics" interview, Rosenfield sang the songs in Chapter 11 (in the voices recommended in the text), and Estefan thanked her for "disrupting" the show in an unprecedented way. He saw these songs as an interruption in the text as well, something that comes as a surprise and interferes with reading. The songs, as presented, easily follow Chapter 10, with descriptions of "Figure 31" and "Figure 28" appearing without any actual pictures represented, and certainly without the necessary 27 other figures that should precede them. The songs show up as scientific evidence; Estefan is right, in a sense, that they are an interruption of the way *re: evolution* has been organized so far, but "songs" are closer to traditional poetry than "chapters" are; the songs bring the book back to verse. They also introduce a specific, altogether human voice amidst the stark, scientific language, with revealing footnotes recommending the manner in which the songs be sung. Take "Value for the Volume of the Ocean":

Molecules they undergo many collisions
And their direction of motion
Alters everything
Their movement is sometimes called the
drunkard's walk
And there's value for the volume of the ocean

Ring of solid/ carries no charge
Ring of solid/ it carries no charge (35)

This song is to be sung "with a carefree twang": the molecules have the wanderlust of a country anti-hero, complete with an apparent drinking problem and a catchy chorus. Just as Rosenfield uses line breaks in the texts whose language appeared least altered from its original scientific source, the form of the song distorts the original use of the scientific language even further.

The contortions to which Rosenfield submits her sources raise the question of what, precisely, those sources are, a question with which one must be careful in order avoid a revisionist reading: if finding the sources of this text would offer a solution, the text itself could be replaced by a reading list. But that does not eliminate the possibility of certain illumination, especially in a text where the number of appropriated sources seems so large that there is always an element of surprise when singling one out.

Take Chapter 27: "The pattern of hair-growth in the sexes may have a zero behavior value, despite the story of Samson. But razors and lipsticks are not devoid of a suggestion of the implication of sex" (58). The two sentences seem to have a forced relationship: the first involves easily marked scientific language, while the second is more social. But a quick internet search finds *Darwin's Impact: Social Evolution in America.* Rosenfield has used both sentences in their entire, unaltered form, though she has suppressed an ellipsis by omitting a third phrase appearing between the two used: "How we regard long-haired men or short-haired women is wholly a matter of sociology, of custom, as changing fashions convincingly show."[4] While finding this "lost" sentence does not necessarily change the reading of *re: evolution,* it does show how little editing is needed to completely recontextualize found texts. And then there are examples of lifted text that make as little sense in their original context as they do in the new one, such as Chapter 34, which reads: "A hog, a fox, a dog, mud, seawater, an ass, a weasel, a mare, an ape, and a bee" (65). A search for this string finds various sources identifying it as a list of all the things to

4 Frank X. Ryan, ed., *Darwin's Impact: Social Evolution in America, 1880–1920,* vol. 2: *Race, Gender and Supremacy* (Bristol: Thoemmes, 2001), 65.

which Simonides compared women, yet even with this referent, it is difficult to pull these things together into a cohesive idea of femininity. In both the original and new contexts, the list remains only parts, thus enacting *re: evolution*'s larger project: grouping together with little explanation a set of disparate things or events and allowing them to either coalesce or remain discrete. Even as this project forms strange subjectivities out of previously incompatible units, it also includes an opposite force that resists that urge. The occasionally contradictory nature of these tasks is laid out by Chapter 45, which reads: "The secrets of nature / Cannot be dished out / In neat little spoonfuls" (76). What we have here, if we are to take that passage's word for it, are definitely not the secrets of nature; that is not the business Rosenfield is in. Instead, there remains what can be dished out, not the secrets of nature but the secrets of individual experience, including individual reading experiences, including the formal fragment. And so when the next page, in direct argument with the above passage, reads: "Every piece of apparel serves to reinforce and extend the personality" (77), the "secret" revealed is not one of nature in general, but of a particular textual artifact, the secret of what was once thought, once meaning both past and singular.

The final section of *re: evolution,* its "Denouement," continues an exploration of freedom begun earlier in the book, but nothing cools down. Rosenfield's denouement increases the tension (a tightening of the knot, the opposite of its etymological sense), as the contrast between the voices builds:

> Freedom nestles in a human context.
>
> Freedom is falsely conceived as a lovable abstraction.
>
> There are lovers of freedom and *lovers* of freedom—O! The differences to me.
>
> Freedom is linked to human nature that has a million years experience as a cruel animal, a dirty beast, a sadistic hunter, a vicious warrior, a shameless rob-

> ber, a merciless exploiter, a cunning flatterer and liar and four-finisher and charlatan. [...]
> (Impulse is the most beautiful force in human nature— when it is. It is the most evil force in human nature the rest of the time.) (80)

The second and third sentences are contradictory before the mess of the paragraph really begins, where freedom becomes an identifiable human subject completely chained down by biological history: freedom, like any other "inheritable" trait, appears to be unavoidable, or is at best the product of a series of evolutionary steps that made it possible. "Human nature" is identified by a string of comparisons not unlike the list of animals used to describe women above, but here the implication is clearer; this is a list whose problematic nature cannot be resolved by omitting its referent, instead, it must be expanded to include seemingly opposing traits. The final page's *"Qui vivra, verra"* (81), literally "who will live, will see" (but used like the English "what will be, will be"), moves the text into the mode of prediction, ushering in a species named the "extraverts" who, in the future, will "dominate the sexual scene" and who will be "[s]trange fishes in the awkward contortions and posturing of their glad way through the exhilarating waters of life" (68). And so evolution, or the second evolution, or the revolution, ends.

By ending with a prediction of who the survivors will be, Rosenfield enacts the logic of how evolution has been discussed formally, her own selection not imitating natural selection, but mirroring the biologists' talk. And the "extraverts" are specified as young, "the children are our future," in the most trite way possible, and children are not only the production of the reproductive drive on which evolution is so focused but the product of the culture in which *re: evolution* exists. While Rosenfield offers the option of "[s]urvival by schizoid retreat" (42), retreat is not the course this book takes, even if it considers the Deleuzian recommendation briefly: this is a book that dives into the language, assumptions, even the datum of scientific discourse and language while also maintaining a critical perspective on that science's place in the cultural milieu (the pop equivalent of the primordial soup).

re: evolution stakes out a place and a voice that cannot be located as much as followed. Science is adapted into this text as something that, yes, one has to work through to overcome, but it remains just one cultural/textual mine among many, another source that can be rebuilt into poetry from the depths of its most internalized logic and language.

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Research Paper

Jennifer Calkins

Abstract

Writing attempts to encompass or to describe, perhaps to subvert or even reject. This is not always successful especially when an individual is writing about nature and science. Here we present evidence that Kim Rosenfield's *re: evolution* succeeds in reinterpreting, in a literary format, the science of evolution.

Introduction

Since Charles Darwin's *On the Origin of Species* was published in 1859, individuals in the literary realm have reacted in text to Darwin's (and Alfred Russel Wallace's) theory of evolution. For the most part these writers have misinterpreted and then misconstrued the theory. Few remember that "[*t*]*he birds and beasts will teach thee*" (28). Indeed, many within the field of evolution itself periodically forget this as well. There is a forgetting of the "endless forms most beautiful and most wonderful."[1]

Methods

re: evolution is Evolution
in theory and in science.
in culture and in history
in history and engendered
in the body and in the body politic
in deformation and in hybridization
in psychology and geography

1 Charles Darwin, *On the Origin of Species, ed. Gillian Beer* (Oxford: Oxford University Press, 2008), 360.

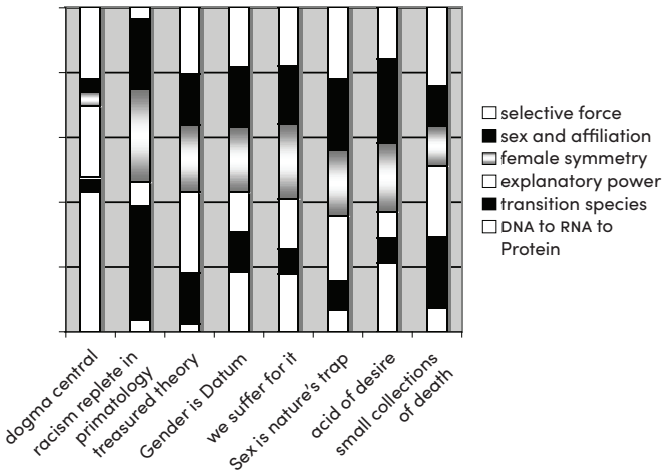

Figure 1: "There is naturally a grand difference between 'organic broth' and a recipe one creates in the kitchen" (25).

in chemistry and sexuality
in song and in verse
at face value and with subtext

In each situation we calculated the intersect between text and current theory using the Calkins Internal Algorithm (scaled from 1-10 [Calkins, unpublished data]). We also examined the theoretical versus embodied nature of the text with the Swanson Index of Intensity (scaled from 1–10 [Swanson, unpublished data]).

Results

We analyzed the language using Calkins's Internal Algorithm (fig. 1). All textual types included aspects of the theory of evolution in practice today, although the ratios of each differed.

We also calculated the Swanson Index of Intensity for theoretical and embodied elements—again text contained both but to differing degrees (fig. 2).

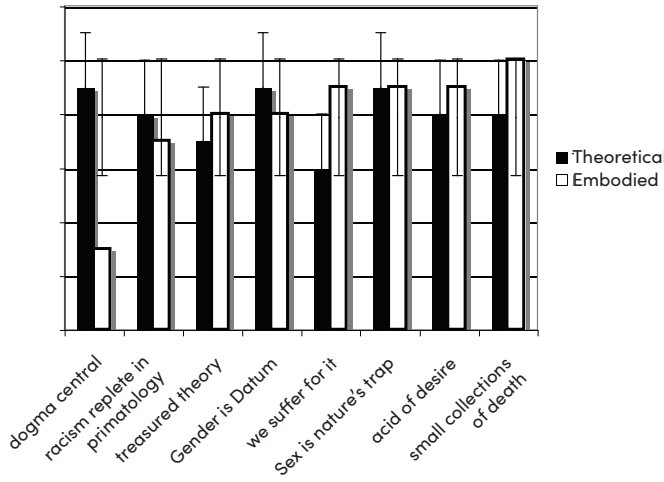

Figure 2: "Earth is not simply a palace that represents evolution—*it is also the author of that representation*" (25). Swanson Index of Intensity±SD.

Discussion

The results indicate that re: evolution expresses both an explicit understanding of the complexity of the theory of evolution and its current assumptions, and recognizes the theory's current intersections. Furthermore, *re: evolution* is an embodied text.

> The secrets of nature
> Cannot be dished out
> In neat little spoonfuls. (76)

These results suggest that *re: evolution* takes evolutionary theory and reconstitutes it, reinterpretes it, illuminates, deconstructs, and critiques it. *re: evolution* transfers the theory of evolution into historical context and breaks it open. The text itself is multifaceted and will be useful for readers hoping for a theoretical analysis of the complexity of the theory and searching for a lyrical embodiment of the theory in the current historical context.

> The stink in a chemical lab is not an effective argument against the wonder and utility of science. (68)

Although "modern research has the half-life of a board game" (23), we suspect that *re: evolution* will provide a source far longer because of its implicit and explicit rigor. Our analysis of the text indicates that putting the human into it does not mean simplifying the human but rather recognizing the complexity in human and nonhuman alike. In situations, such as evolutionary psychology, where the human is the interest, simplification will lead to erroneous conclusions.

> Then a man with a light strapped to his forehead
> Looks into the infant's ear.
> Eye gleam of the luminous past. (42)

Ultimately, *re: evolution* encompasses organism, group, gender, process, intepretation, and history, using lyrical embodiment, to create the argument that in biology, as elsewhere, complexity and dynamism are beautiful. Manifestly so.

> In the beginning, all along, and forever one or the other. (42)

Seattle, 2008

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$(p+r)n$