



**FRAGMENTS
OF
XENOLOGY**

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TRANX XENO LAB

Xenology: the study, analysis, and *development* of the strange, alien, other. Xenologist: one who studies the xeno. A term from science fiction, a term from science fact².

Xenobiology: synthetic biology, often using xeno nucleic acids rather than DNA or RNA, as well as amino acids beyond those found in nature. Xenobiotic: a substance foreign to the body. Xenobit: strange alien computing elements that function unexpectedly. Xenobody: a body that revels in its entanglement with the other. Xenocare: to care for the xeno. Xenocracy: rule by foreigners. Xenocyst: a necessary, but not sufficient, element that must be present for a particular xenotemporality to develop. Xenofeminism: a politics of alienation³. Xenogamy: cross-fertilization. Xenogenesis: offspring unlike the parent; a series by Octavia Butler exploring the same⁴. Xenoglossy: speaking or writing in languages unknown to the person; automatic writing, speaking in tongues. Xenograft: tissue exchange across species. Xenohormesis: conveyance of longevity from plants to animals. Xe-

xeno | language¹

¹ Throughout I will use Dirac bra-ket notation as a more-than-metaphorical poetic shorthand. This notation comes from quantum mechanics and greatly simplifies the representation of complicated quantum states. Briefly, in quantum mechanics, $|\Psi\rangle$ (read as “ket-Psi”) represents what’s called the “wave function” of a particle, i.e., the probability that the particle can be found in a particular location in space and time, as these do not possess definite values from a quantum perspective. (The character Ψ is the Greek letter Psi, commonly used to represent wave functions in quantum mechanics.) $\langle\Psi|$ (read as “bra-Psi”) represents a mathematical operation called “complex conjugation”; for our purposes, just consider the bra as the “conjugate” of the ket, for all definitions of the word “conjugate”. Something called an “operator” can be placed in-between the bra and the ket ($\langle\text{bra}|\text{operator}|\text{ket}\rangle$), where this indicates a computation called the “expected value” of the operator given that wave function, or just to the left of the ket alone ($\text{operator}|\text{ket}\rangle$), where this indicates that the operator “acts upon” the ket. So in the example that titles this section, we can read it as the idea of the “xeno” acting upon the possible representation of “language” across time and space. Such a representation quickly and graphically indexes an *affectual* and *conceptual* orientation that is complimentary to linguistic explanations. I am indebted to Karen Barad’s work for re-minding me of the usefulness of bra-ket notation and thus transforming my fraught undergraduate years of physics education. Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Duke University Press, 2007).

² Robert A. Freitas, Jr., “Naming Extraterrestrial Life,” *Nature* 301, no. 5986 (1983): 106; David Brin, “Xenology: The New Science of Asking ‘Who’s Out There?’,” *Analog* CIII, no. 5 (May 1983): 64–83; Brian Stableford, *Science Fact and Science Fiction: An Encyclopedia* (New York: Routledge, 2006), “Xenology”, 571–572.

³ Laboria Cuboniks, “Xenofeminism: A Politics for Alienation,” 2015, http://www.laboriacuboniks.net/20150612-xf_layout_web.pdf.

⁴ Octavia Butler, *Lilith’s Brood* (New York: Aspect, 2000).

nolith: a rock different than its surroundings, carried by magma. Xenomania: a fancy for the xeno. Xenomodulation: the altering of existing meanings to counter the dictates of a world that sees us as other. Xenomogrification: grotesque—in the widest senses of that word—transformation into the alien and the other for the purposes of disalienation. Xenomoney: a form of currency that establishes relationships between present and future values⁵. Xeno nucleic acid (XNA): a synthetic nucleic acid that has a different backbone than DNA or RNA. Xenophile: one who loves the xeno. Xenophobe: one who fears the other. Xenophonia: the listening-in to the foreign that is also familiar⁶. Xenopolitics: the development of new forms of collectivity with the other. Xenotemporality: a consideration of time beyond human experience. Xenotext: an expressive poetic archive existing as part of a bacterium's DNA⁷.

not-Enlightenment | Enlightenment)

Xenology demands that we eschew pre-existing categories of demarcation. As is undeniably clear by developments in science and philosophy

alike over the past century or so, the given means of ordering the world that we have inherited from Western enlightenment thinking are misguided at best, and profoundly destructive at worst. Such categories wilfully eliminated competing possibilities—such as those that were part and parcel of the work done by women, queer, disabled, non-white, or non-western people—like a virus that aimed to mutate its subjects into binary appearances: either included, or excluded, xeno. Of course the virus couldn't eliminate everyone; some were always spared, but had to live in hiding. Those marked by the virus as xeno live with the memories of those killed and with the bittersweet joy of remaining alive. Xenology respects and draws upon the vast body of work already done by others—and still to-be-done—in *(re-)membering* those

5 Brian Rotman, *Signifying Nothing: The Semiotics of Zero* (New York: St. Martin's Press, 1987).

6 Tobias Ewé.

7 Christian Bök, *The Xenotext, Book 1* (Toronto: Coach House Books, 2015).

thoughtpractices that were discarded by the Enlightenment virus, literally re-constructing our bodies in collaboration with a living combination of the past, present, and (desired) future⁸.

The Enlightenment virus needs to be memorialized as a destructive energy. Yet we cannot ignore the life-sustaining elements of this virus too: the elimination of various kinds of certain biological death or dismemberment; the expansion of communicative possibilities; the potential to improve conditions here on our planet while simultaneously translating ourselves into space. The *pharmakon* is eternally underneath it all, the good and the bad fundamentally entangled with each other. When faced with a binary form of analysis (Was the Enlightenment a force for good or ill? Will technology save us or doom us?), recall that the apparatus or *phenomena* used to make that decision may, by design, have already limited us to a yes or no answer. We need to construct better phenomena that imbue our understandings of them with their full monstrosity. These phenomena need to enact cuts that exist far beyond the domains of so-called Western thought, “so-called” because such thought always already existed with occult influences and fundamental *entanglements* with those marked as xeno or non-Western.

Xenology is different from posthumanism is different from the an-

thropocene is different from the chthulucene⁹. Xenology eschews the linearity indexed by a “post-”, even if such an indexing is assumed only in the prefix. The idea that our time is now “after” something called “humanism” implies that “humanism” was a useful exercise in the first place. It wasn’t. We have never been human—at least for some of us. Xenology draws upon the vital living power of those deemed inhuman in order to foreground the inhumanity of all “humans”. We are all entwined with non-human others: our guts provide the living conditions for trillions of bacteria, our existence depends on the relative cosmic “quietness” of our solar system, our geopolitical systems are dependent on

inhuman | human)

8 Rebekah Sheldon, “Accelerationism’s Queer Occulture,” *Angelaki* 24, no. 1 (January 2019): 118–29, <https://doi.org/10.1080/0969725x.2019.1568739>.

9 Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016).

the distribution of rare amounts of metals crushed by the earth's crust, themselves dependent on exploding stars from billions of years ago.

The notion of the “anthropocene” and all of the other “-cene”s are also immense misnomers. While it is undoubtedly true that what-we-call-humans—at least, those with power and wealth—have altered the geological strata of the earth, this has only occurred *in concert* with other elements of the earth: radioactivity, condensed forms of energy from beings that died millions of years ago, rare minerals. The counterfactual position—that a similar sort of momentous change in geological strata would not have occurred had we not begun the Industrial Revolution—is impossible to prove, given that we presently have access to only one potential historical timeline. Thus to lay the blame for this on “humans” is to participate only in a specious form of tallying the accounts, an activity that will be forgotten in a thousand years. Rather, we have to begin to *humble* ourselves, knowing that to the universe we are no more special than an electron that winks into and out of existence from the vacuum field. The question then becomes: do we want to re-modify the earth—and ourselves with it—so that it is again habitable to us and other forms of life that have been damaged? This humbling also needs to realize that life on earth is likely to persist if we were removed from the equation—life is imminently adaptable.

Our “humanity” is predicated on that-which-is-not-human. We are all thus “other” to the concept of the “human”¹⁰. Of course processes of othering other *Homo sapiens* have caused unbelievable amounts of pain, harm, destruction, and death to billions of people. We will be grieving these losses for thousands of years. But the long-term solution is not to hold on to the concept of the “human” that marks distinctions between ourselves and the rest of the cosmos. As a horizon, we need to push towards a discarding of the “human” concept, both for our own sake, and for the sake of the earth and other entities in the solar system and beyond. The splitting of “human” from “nature” requires us to weave back together what capitalism has divided, in the words of Silvia Federici¹¹, Perhaps we need a new term, one that recogniz-

10 Mel Y. Chen, *Animacies: Biopolitics, Racial Mattering, and Queer Affect* (Durham: Duke University Press, 2012), 42–50; Rosi Braidotti, *The Posthuman* (Cambridge: Polity, 2013); Kim TallBear, “An Indigenous Reflection on Working Beyond the Human/Not Human,” *GLQ: A Journal of Lesbian and Gay Studies* 21, no. 2 (2015): 230–35, <https://muse.jhu.edu/article/581600#sub08>.

11 Silvia Federici, “Re-enchanting the World: Feminism and the Politics of the Commons”. Presentation at Tufts University, 12 February 2019.

es the superposition of our existence, the existence of other lives, the existence of not-alive-matter, the existence of the universe¹².

Yet we also need to simultaneously fight for an acceptance of all humans *as human* in the present moment, so as to amplify the voices silenced for too long. The challenge for xenology, and the tranxxeno, as a politico-aesthetic practice is to hold both components together simultaneously. We cannot misunderstand the praxis of short-duration tactics to make *human* life better in the here-and-now. Doing so does not prevent concurrent xenological developments. In order to transform we have to begin with something; $0|xenologist\rangle$ is still 0. If we fail at this most basic thing, we will have failed the aliens nearest us and allowed the logics of sameness to prevail. To play the long game xenologists must still exist in some form.

Xenology, for all its attention to the strange and the other, fundamentally desires methods of *disalienation*.

This occurs through our ability to transform ourselves into *something else*, a process termed *xenomogrification*. This is not a contradiction. Consider this: what if our alienated state is not just due to the conditions of labor, but also due to the fact that *we are not other enough*. Through congealed forms of value drawn from our labor, that become further and further atomized for exchange, we become distanced from an ability to make ourselves other, to define our own boundaries. We find ourselves rooted to positions, identities, jobs, desires that have been constructed by thoughtpatterns and workpractices that, while appearing everchanging, actually enter into a steady-state because continuity because profit. The shackling of stable concepts of the human to this chain removes us from the greatest resource we have as life: the capability to mutate into something we currently are not. Thus, *alienation* is

xenomogrification
|(in-)humanity)

¹² superposition: “The action of causing two or more sets of physical phenomena (e.g. waves, colours, or motions) to coincide, or coexist in the same place; the fact or an instance of such coexistence”. Oxford English Dictionary, “superposition, n.” 2012, <https://oed.com/view/Entry/194465>.

a distance from this capacity, and to *disalienate* ourselves is to recover this universe-given possibility, to shift the possibilities of radical change away from processes of value extraction. To *become* alien or other is not the same as *being alienated*¹³.

Xenologists desire othering. We know that the possibilities of transforming ourselves can never be exhausted, as the universe offers such a plethora of attractors that we are drawn to, be they human-like or otherwise. One is never fully disalienated, as there always more to be done. Thus xenology is neither constantly moving or in stasis, but rather slips between processural and at rest, its objects and methods agglomerating and separating as needed. This is not to say that anything goes; rather, that there is a *responsibility-towards* (oneself, others, the universe) that requires us to account for the determinations that we make. How and why these transformations take place need to be explained, rather than simply accepted.

In this moment, in this timeline, however, it must be noted that the ability to xenomogrify is not evenly distributed, especially as some humans are still denied the ability to be seen as human. The associated political practice of xenology is thus to ensure that *all* are able to work towards disalienating themselves. This does not imply the wanton destruction of resources. Following George Bataille's ideas regarding the fundamental *excess* of solar energy, instead we have to understand that much of this surplus is being wasted in ways that don't even allow for the merriment of all¹⁴. Thus new phenomena need to be constructed to both better utilize this solar (and geologic) surplus, while also allowing for wasteful expenditure in the form of festivals, parties, and dances. To be too controlled is to be alienated from the fundamental of the universe, which is change.

13 Bogna M. Konior, "Automate the Womb: Ecologies and Technologies of Reproduction. Helen Hester, *Xenofeminism* (Polity, 2018)," *Parrhesia*, no. 31 (2019): 232–57.

14 Georges Bataille, *The Accursed Share: Volume 1: Consumption*, trans. Robert Hurley (Zone Books, 1991); Matteo Pasquinelli, "On Solar Databases and the Exogenesis of Light," *e-flux*, no. 65 (2015), <http://supercommunity.e-flux.com/texts/on-solar-databases-and-the-exogenesis-of-light/>.

Transgender people are at the forefront of xenomogrification¹⁵. By

⟨in- | trans | human⟩

injecting testosterone into our buttocks, sublingually absorbing estrogen, delicately placing estradiol patches on our abdomen, drinking gallons of water a day to offset the side effects of spironolactone, eating pickle after pickle to ingest more sodium, having our breasts removed, having our breasts augmented, having a penis constructed, having a vagina constructed, we are dramatically changing the bodies we were born in to be something else, something other¹⁶. We are biohackers. We will never be *cis*—and that’s fine. We are not able to metamorphose, unlike the human-oankali constructs in Octavia Butler’s possible version of Earth¹⁷. Rather, we become some combination of our past and future, a bodily palimpsest that contains traces of earlier somatic forms.

Yet the hormonal and surgical transformations we experience need to be seen as of a piece with potential future necessary transformations of ourselves for survival on this planet or in outer space¹⁸. We additionally need to regain access to those techniques that have been forgotten and stolen through colonial and capitalist subjugation. Our bodies are quickly losing an ability to cope with higher-than-average temperatures, and our fleshy-system was never well-suited to the rigors of space travel. New xenomogrifications—far beyond the present experiences of transgender people—need to happen to cope with the essential need to live

15 This does not mean that we are the only ones engaging in these practices today. It also does not mean that others should sit idly by while we xenomogrify ourselves. Rather, it means that those who are transgender *need* to be supported by those who are not, given the wide disparities in outcomes due to the terrible discrimination (and violence, and death) trans people face, especially trans women of color. It means that the ability for trans *and* cis people to xenomogrify needs to be more evenly distributed.

16 Eva Hayward, “Transxenoestrogenesis,” *TSQ: Transgender Studies Quarterly* 1, nos. 1 – 2 (2014): 255–58.

17 Dagmar Van Engen, “Metamorphosis, Transition, and Insect Biology in the Octavia E. Butler Archive,” *Women’s Studies* 47, no. 7 (2018): 733–54, <https://doi.org/10.1080/00497878.2018.1518620>.

18 Manfred E. Clynes and Nathan S. Kline, “Cyborgs and Space,” *Astronautics*, September 1960, 26–27, 74–76; Anna Tsing et al., eds., *Arts of Living on a Damaged Planet* (Minneapolis: University of Minnesota Press, 2017); Konrad Szocik and Martin Braddock, “Why Human Enhancement Is Necessary for Successful Human Deep-Space Missions,” *The New Bioethics* 25, no. 4 (2019): 295–317, <https://doi.org/10.1080/20502877.2019.1667559>; Damien Patrick Williams, “Heavenly Bodies: Why It Matters That Cyborgs Have Always Been About Disability, Mental Health, and Marginalization,” April 26, 2019, <http://www.afutureworththinkingabout.com/?p=5396>.

in these different environments. These xenomogrifications need to happen *alongside* concurrent (re-)transformations of Earthly space that aim to modulate the modifications humans-as-species have already made.

Talking about transness as “alien” or “other” is not a mere metaphor. Trans people are not *like* aliens. Trans bodies *are alien to a cis-sexual order* that others people and things that fail to remain within rigid boundaries based in part upon narrow readings of religious, philosophical, and biological tenets. Yet, this seeming alienness allows for a form of *disalienation* from a world that is altogether not suited for us and oftentimes does not want us to exist. Living one’s life prior to transition is profoundly, dangerously alienating, and thus to transition—socially, medically, mentally—is a life-affirming form of disalienation. Disalienation therefore translates a cis-normative structuring towards something other.

It should be clear that this position is fundamentally orthogonal to popular science depictions of “transhumanism”. It is unfortunate that such a perfect term has been hijacked by Promethean ideologies primarily supported by white cis men. Xenomogrification is not meant to “champion” over the limitations of the body in the service of an idle immortality. If it appears that xenomogrification tends towards these ideas, it’s only in league with some of the desires of the Russian Biocosmists, or the Kollontai Collective in Bishkek, Kyrgyzstan, insofar as xenomogrification desires the overcoming of outmoded bodily limits to realize queerness in space as flows of energy¹⁹.

In short, xenologists want it all. We want to rebuild ourselves into something other, not just for *survival* on this planet or in outer space, not just to exist, but because the strange and alien offer trajectories away from sameness, away from repetition without a difference, towards *thriving* existences pregnant with the possibility of the new. As such, we want xenomogrification, now! We want this knowing that not everyone wants it—and that’s okay. We want this knowing that for some, the practices of

19 Boris Groys, ed., *Russian Cosmism* (New York; Cambridge: e-flux; MIT Press, 2018); Georgy Mamedov and Oksana Shatalova, “Against Simple Answers: The Queer-Communist Theory of Evald Ilyenkov and Alexander Suvorov,” August 17, 2017, <https://artseverywhere.ca/against-simple-answers/>; Art Initiatives, “Queer in Space: Kollontai Commune Archive,” June 29, 2016, https://www.youtube.com/watch?v=tlXIK_qqjBQ; Owen Hatherley, “Make Way for Queer Communism: Owen Hatherley in Bishkek,” December 2, 2018, <https://thequietus.com/articles/25750-the-adventures-of-owen-hatherley-in-the-post-soviet-space-extract-bishkek>.

mundane daily life are their own form of xenomogrification. We know that our desire probably frightens, that this desire cannot be met as of yet. Xenologists thus *hope*. Hope can be a powerful weapon. It can be wielded widely, such as in the face of those who deny the rights of transgender people, or towards those who espouse a “gender critical” position that compresses bodily potential into an abyssal, unchanging void, like being stuck in a locked groove. Xenologists are the piece of dust that forces the needle off the record and into the unknown. Xenologists manifest hope through construction of the universe we want to live in.

Transgender. Transsexual. Lhamana. Sistergirls. Brotherboys. Whakawahine. Fakaleti. Waria. Hijra. Metis. Acault. Xanith. Sekrata. Bissu. Fa’fafine. Mahu. Muxe. Travesti. Quariwarmi. Alyha. Hwame. Nadleehi. Dilbaa. Winkte. Mamluk. Sekrata. Ashtime. Mashoga. Femminiello. Acault. Kathoey.

⟨trans | terms | xeno⟩

Each is different. Each is related to the other. We know not yet what bodies do. We know not yet what bodies have done. We know not yet what bodies will do. Xenologists both study these practices of being for knowledge of the possible, as well as develop the techniques to push the boundary of the possible outwards.

We know not yet the possibilities that exist in materialized sedimentations born of the interstitial places between these words, on this planet and off it. We know not yet how life free of our planet’s gravity, bathed by the glow of starlight outside of one AU, might shape our gender exploration. Xenologists work towards a time when non-cis people too get to leave the planet, transform themselves in alien physical conditions, and share with us new ways of being.

Emma Goldman wanted to dance in her revolution. Donna Haraway

wanted to be a cyborg rather than a goddess. Shulamith Firestone wanted freedom from biological reproduction. Venus Xtravaganza wanted to be fabulous. Miranda Ching wanted to remember. Sylvia Rivera and Marsha P. Johnson wanted revolutionary lib-

dancing | life⟩

eration. Paul Preciado wanted to fuck. Eleanor Arroway wanted to make contact. Public Universal Friend wanted abolition and equality in spiritual practices. Lilith Iyapo wanted to live on her own terms. Lexi wanted to force everyone to choose their own gender. Andrea Long Chu wanted everyone to know that they are female. Asha wanted to know what was outside. The Sestras wanted to live without commercial and governmental exploitation. Reiko wanted orgasmic encounters. Alice wanted to see how deep the rabbit hole was. Ada Lovelace wanted poetic computation. Pris Stratton wanted to survive without being retired. Motoko Kusanagi wanted to explore the limits between herself and the computational world. Brandon Teena wanted to live as himself. Leonora Carrington wanted to explore alchemical transmutations.

Wanting indexes a form of alienation. To address that want moves towards disalienation through xenomogrification.

xeno | anger >

Xenologists are angry!
Angry at the injustices
faced by the entities of

the universe whose existence is understood only as fodder for value extraction; angry at the retrenchments of a dysfunctional political sphere; angry at the useless wastefulness of technological developments directed at meaningless transformations of our lives under semicapitalism. This anger is deep, it reaches back centuries, it burns us with the pain of those ravaged, misused, destroyed. Fuck this shit, we say. There comes a point where we simply can't bear it anymore. It's not only the present injustices we experience, we bear witness to, it's the weight of historical tragedies that pile upon each other as each day's losses compound over weeks, months, years, decades, centuries.

Xenologists know that this anger is also what fuels the dangerous forces at work in this world: the xenophobia, the religious fervor, the nationalism, the patriotism that warps allied frustrations into terrible outbursts against those seen as other. One of the most pressing political challenges of this moment is how to translate that anger towards the actors actually responsible for this mess. But xenologists also know not to waste our time; that

these other entities must be open to redirection of their anger, and if they're not, then we're simply putting ourselves in harm's way by reaching out. Perhaps we need to think of ourselves more like the rat: staying in the shadows, away from the feet of giants, constructing nests, emerging when it's safe, reconfiguring things in the subterranean spaces where we can't be found as easily. There we can transmutate this anger into outbursts of training for survival, of passionate learning, of meticulous planning, of raucous parties celebrating our continued thriving.

Fear. Xenophobes are afraid, they find comfort in similarity but differ-

ence disturbs. More precisely, difference only exists within prescribed boundaries meant to demarcate separateness from the other. An overflowing of those boundaries, or penetration from the outside, produces affective violation. The response? To police the boundary again, to reign in that which has strayed, to attempt to patch the hole created by the invader.

Attempt. The Fortress that surrounds contemporary Europe and its colonialist exclaves on the African continent; the ineffective porous wall between the United States of America and Estados Unidos Mexicanos; the enclosures of indigenous lands and experiences the world over through infectious diseases, war, forced resettlement, and commercial value extraction: each attempts to make the boundaries hard, secure, impenetrable. Each fundamentally fails. This does not mean that the xenophobes are defeated, as it is often those marked as xeno who are most harmed or destroyed. The xenophobes sometimes succeed at making the other cease to exist. But the ultimate goal of the xenophobes—to constrain difference within circumscribed limits—ultimately fails just as the ocean cannot be kept behind barriers, just as the universe has no limits. Difference exceeds attempts at containment.

Xenologists are xenophiles. We live for the discovery of the new, of

the that-which-is-not-known, the encounter between us and en-

xeno | phobia >

xeno | philia >

tities that are radically different from us. Xenologists know that coming into contact with the xeno might be concerning for some, but that ultimately such contacts can, when done through practices of reciprocity, be life-expanding.

Yet xenologists also understand that the trope of “discovery” is tainted by centuries of brutal colonialist practices that have ravaged peoples and lands on this planet, and that threatens to do so for our neighboring worlds if they are approached through the lens of “resource extraction”. Xenologists know that for every xenophile there are hundreds of xenophobes. And thus xenologists know that the other is hesitant, the other has reason to worry, the other has reason to be suspect. Xenologists learn from the practices of the Sharers on the fictional water-covered moon Shora, people for whom actions are bi-directional: a harming action towards someone else is also a harming action towards oneself²⁰. The Sharers desire learning through encounters with the xeno, through the sharing of words, of food, of knowledge, of love. Xenologists rise to defend the xeno when called-upon. The xenophilia of xenologists must be predicated on forms of sharing and reciprocity that recognize the legacies of harm, address the grief and anger of loss, and construct new boundary-expanding techniques of being-with.

⟨others | letters | humans⟩

Xenology writes love letters to those-who-may-not-exist as a means of expressing impossible desires. These others may be xenomogrifica-

tions of ourselves, other xenobodies, or distant entities that we may never meet. Letters offer the possibility for a different relationship between sender and receiver, one of openness and reciprocity. Letters are sent out into the ether, sometimes without the expectation of a response. Responses, when they come, can be delayed by weeks or centuries. Letters can be written to a general addressee, or someone specific. Letters refuse the Promethianism of much contemporary theorizing while still conveying fundamental insights.

Letters may be one of the best forms for addressing spa-

²⁰ Joan Slonczewski, *A Door into Ocean* (1986; repr., New York: Tom Doherty Associates, LLC, 2000).

tial and temporal distance. Because of the delay inherent to letter writing, letters are well-suited to addressing distant interlocutors, whether they are fellow entities on this planet who may be present at some time beyond the now, or potential extra-terrestrial presences beyond the boundaries of the solar system. The suitability of letters does not mean we are necessarily conversant in dealing with these immense scales of space and time. What is needed is a new protocol, a form of Delay Tolerant Longing (DTL)²¹ that manages the affectual effects of temporally displaced desire. DTL recognizes that entanglement with ourselves and vastly distant others can exist, that there are ways we are fundamentally intertwined across immense temporal displacements, but the “tyranny of lightspeed” ensures that any form of communication is destined to outlast an individual life²².

To you—Whereby accepting this trace you realize that the fieldlines intersect at the unexpected moment already.

Dearest—You may think I’m absent, but you just have to wait, here, in this place, for a while longer. Look up, and when that star has moved those degrees, I’ll join you.

Dearest—this rock is not where I am. I bounced off of here just a bit ago, so to speak. Follow the wave’s trajectory and measure its dispersion—the manual will tell you how. Come.

Dearest—wait for the delay to occur. Wait some more. Don’t delay too long.

Dearest—take me up in your roots, you know how I was exploded across the universe to this place, this moment, this entity.

Dearest—you might not be looking for the right version of me. Remember the equivalences of energy and matter and see what you can do about yourself. I might be right there with you.

21 S. Burleigh et al., “Delay-Tolerant Networking: An Approach to Interplanetary Internet,” *IEEE Communications Magazine* 41, no. 6 (2003): 128–36; Vint Cerf et al., “Delay-Tolerant Networking Architecture” (Internet Engineering Task Force, RFC 4838, 2007), <https://tools.ietf.org/html/rfc4838>.

22 Jill Tarter, “Join the SETI Search–TED,” February 2009, https://www.ted.com/talks/jill_tarter_join_the_seti_search.

Dearest—When you will have received this, I am dead.
When I will have sent it, you will not be born. These
times misalign, fundamentally. But they synchronize, in
their own way.

erotics | xenology >

Xenologists know that cis-heteronormative pairings of humans are not the only option. Queer families—in the full sense of the word “queer” and not just limited to its use as a term of sexuality—need to be chosen, to be developed, to be cultured together. “Make kin, not babies”, says Haraway, yet xenologists are not content with the separations implied by kin. There are endosymbiotic potentials to be generated—and they probably already exist within our own bodies²³. To produce new endoxenosymbionts is to conduct practical xenology that demands a transdisciplinary approach that fails to respect traditional boundaries, instead ingesting and defecating protocols as needed and thus in affinity with the praxis of others marked as xeno. Endoxenosymbiosis is biological, bodily, material, and conceptual, in differing ratios. In the process of creating endoxenosymbionts xenologists can transform the poison into erotic energies. Remember the notion of “anthropophagia” as constructed by Oswald de Andrade in his *Manifesto Antropófago*: “Cannibalism. Absorption of the sacred enemy. [...] Carnal at first, this instinct becomes elective, and creates friendship. When it is affective, it creates love”²⁴.

At its asymptote a xenological erotics apprehends the dissolution of our bodymatter and subsequent communion with the fields and energies and voids of the universe—the $\hat{H}|\Psi\rangle = E|\Psi\rangle$ and $\nabla \times \mathbf{E} = -(1/c)(\partial \mathbf{B} / \partial t)$ and $G_{\mu\nu} + \Lambda g_{\mu\nu} = 8\pi T_{\mu\nu}$ and the many others that we know and don't know yet. To reach the asymptote would both be impossible as well as mark the cessation of this life. Thus xenological erotics understands this as a limit to be

23 DeAnna C. Bublitz et al., “Peptidoglycan Production by an Insect-Bacterial Mosaic,” *Cell* 179, no. 3 (October 2019): 703–712.e7, <https://doi.org/10.1016/j.cell.2019.08.054>.

24 Oswald de Andrade, “Cannibalist Manifesto,” trans. Leslie Bary, *Latin American Literary Review* 19, no. 38 (1991): 43, <http://www.jstor.org/stable/20119601>.

approached through a proliferating set of methodologies²⁵.

Nevertheless the dissolution of boundaries is with us already at particular spatiotemporal scales. Touching is mixing; to be completely separate is impossible, as the quantum entities at the surfaces of our fingertips intermix with the quantum entities at the surfaces of other xenobodies. To touch is to become something other than we are through this mixing. Sensuality through tactile encounters. Xenologists produce an erotics of proximal and distal touch, privileging neither the co-present or absent, alive or dead, carbon or silicon, real or fantasy.

Xenologists affirm that acknowledgments do not deserve to be left to the end, that the touches across space and time of

humans and other-than-humans intertwine with the more-than-human author in ways that cannot be easily disentangled. Xenologists also know that semiotics often fails to convey the desired forms of gratitude. So instead, here the acknowledgements are presented as a list of heterogeneous elements necessary to the completion of these fragments.

Claudia Pederson. Dark techno. Energy release. Exogenous 17 β -Estradiol. Felipe Rebolledo. Fio Russo. Grace Owen. International Space Station. LaTeX. Luna. Pandoc. *Physarum polycephalum*. Pose. Sápmi. Špela Petrič. Spironolactone. Tobias Ewé. *Tolumnia*. Yu Yu.

Xenology presents a living, mutable grimoire suitable for our entan-

glement with modulating temporalities. Not present, not past, not future, but some combination thereof. What we term the “past” interferes with that-which-has-not-occurred-yet (the “future”), altering the moments surrounding this one (the “present”). Forward temporal directionality is a fiction, as every physics student

acknow
| xenobodies)

xeno | temporalities)

²⁵ Georges Bataille, *Inner Experience*, trans. Leslie Anne Boldt (1954; repr., State University of New York Press, 1988).

knows that the fundamental equations of the universe are reversible in time. Time is not a vector forever pointed in one direction.

Thus the following thought-experiment in quantum mechanics is possible: we can create an entangled pair of photons. This entangled system does not have a definite value when it is created, only when one or the other photons is measured. Entanglement thus means here that a measurement on one photon, say photon A, requires that a measurement on the second photon, photon B, gives the conjugate value. So, if the photons are entangled in “polarization”, a measurement of photon A giving a result of “vertical” would require then that the measurement of photon B be “horizontal”²⁶. Even if we were to separate them by some vast distance, this situation would hold, and has held experimentally. Let’s separate the photons not only in space, but also vastly in time. We move them to different parts of the globe. One person’s photon sits, unmeasured but still in its entangled state, until the physicist has breathed their last breath, when the power to the experiment is cut off and the photon is destroyed without being measured. The other photon is similarly kept entangled, with all of the air conditioning, energy, care, and attention that that implies. Two hundred years later a young physicist measures the photon and sie reads out the result. Sie now knows what the other photon’s value was, two hundred years previously. The past hasn’t been changed, yet we now know something of the past that was impossible to have been known in the past. This is one strange way that temporality can function²⁷.

Consider today. The legacies of capitalism, colonialism, sexism, and slavery are fundamentally entangled with the current moment. Imaginations of possible futures burrow into the now, intertwining themselves with the past and causing changes in behavior and the potential repairing of past damages wrought.

Thermodynamics nevertheless suggests a possible directionality to the universe, a movement towards heat-death and higher and higher entropy or disordedness. That life exists proves negentropy—or the localized movement towards lower entropy—exists. That negentropy exists proves that universal heat death

26 Things are vastly more complex than this. Xenologists must become disobedient students of the sciences.

27 This does not mean that *information* can be communicated faster than light and backwards in time. If someone, say Bev, makes the measurement on the remaining photon, this doesn’t *send* any information from Bev to someone in the past, say, Alex. Bev doesn’t know what the measurement result will be before the measurement. Rather, entanglement means that measurements are *correlated* in some “strange” fashion across vast distances.

is not a given²⁸. We have the capability to imagine a differently ordered universe and can develop the capacities to make that universe come to fruition. Hyperstitional potentialities suggest possible avenues.

Xenology recognizes kinship and affinity with other thought-apparatuses such as xenofeminism, gender accelerationism (g/acc), glitch feminism, and Black Quantum Futurism²⁹. Xenology merely enacts an alternate cut in the fabric of reality, selecting, arranging, and ordering components differently. In the language of Karen Barad's agential realism, an *agential cut* is what causes particular configurations of things to come to matter, forming what she calls a *phenomenon*³⁰. Xenology is one such agential cut in a space of matter mattering that is shared by many other approaches. It is possible to hold all of them together at the same time. The possibilities of the universe are so great that

g/acc | xenology > +
 xenofeminism
 | xenology > +
 glitch feminism
 | xenology > + Black
 Quantum Futurism
 | xenology >

28 Leo Szilard, "On Entropy Reduction in a Thermodynamic System by Interference by Intelligent Subjects," technical report (1929; repr., NASA, 1976); Erwin Schrödinger, *What Is Life?* (Cambridge: Cambridge University Press, 1944); Léon Brillouin, "Life, Thermodynamics, and Cybernetics," *American Scientist* 37 (1949): 554–68; N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: Paperback; University Of Chicago Press, 1999), 102.

29 Laboria Cuboniks, "Xenofeminism"; n1x, "Gender Acceleration: A Black-paper," October 31, 2018, <https://vastabrupt.com/2018/10/31/gender-acceleration/?pdf=3215>; Legacy Russell, "Digital Dualism and the Glitch Feminism Manifesto," December 10, 2012, <https://thesocietypages.org/cyborgology/2012/12/10/digital-dualism-and-the-glitch-feminism-manifesto/>; Rasheedah Phillips, ed., *Black Quantum Futurism: Theory and Practice, Volume 1* (Afrofuturist Affair/House of Future Sciences Books, 2015).

30 Barad, *Meeting the Universe Halfway*.

no one approach can explore them all. Thus xenology is fundamentally ecumenical with potential allied ideas, even as concrete differences exist. To assume that any one approach is universally applicable across all time and space, especially when viewed through a retrospective critical gaze, is to believe in a paranoid fashion that everything is about you and your present theoretical apparatus³¹. It would do us good to be a little more generous with our allies.

A plethora of conceptual formations need to be developed and tested: we have a dearth of concepts, in the sense of Deleuze and Guattari in *What is Philosophy?*³². The challenges facing us require more and more concepts specifically attuned to the moment, attentive to what has come before, and hyperstitionally inspired to infiltrate the future. The longevity of these concepts should not be the primary mode of evaluation. Rather, concepts live and die in their *applicability*: how well they relate to material agglomerations, whether or not a series of events invalidate their premises or usefulness, the new types of thought that are generated. Concepts deserve to flutter in and out of existence as needed, sometimes dispersing into the background until circumstances cause them to cohere again.

Concepts move throughout space and time. This is not a mere metaphor. Concepts are particular sedimentations of material-discursive practices that, although weakly held together, travel throughout the universe under their own volition. Not like memes, not so deterministic. A paper on the kitchen table there, an electronic post there. Vibrations of airmatter or electromagnetic waves apprehended and diffracting, heard from a nearby bench, glanced at via a notification, turned into an online search, now a new direction for a different sedimentation of consciousness. That concept then there is not the same as the concept therethen. The attractors move, change in strength, occasionally fading out, the vibrations minute but sometimes able to be picked up by someone with the right antenna. And sometimes concepts cohere when a particular constellation of matter+thought is recognized as something new, or at least new to the moment. The process continues.

31 Eve K. Sedgwick, *Touching Feeling: Affect, Pedagogy, Performativity* (Durham: Duke University Press, 2003), 123–51.

32 Gilles Deleuze and Felix Guattari, *What Is Philosophy?* (Columbia University Press, 1996).

Xenology constructs antennae for apprehending inhuman cosmic

antenna | vibrations)

vibrations. These are not just metaphorical antennae, as actual antennae made of copper or aluminum or steel or conductive thread are vital for the reception of radio frequency signals. Understand as well that antennae, by definition, can function both as receivers *and* as transmitters. Reception and transmission are not positioned in a hierarchical relationship to each other, but are rather twinned, simultaneously both, *transceivers* of inhuman vibrations. Antennae translate electromagnetic fields into electrical current, shunting the energy into specially-designed detectors that allow for modulations of something—light, sound, vibration—that we can perceive. Similarly, we can reverse this process to encode our desires into electromagnetic waves to be transmitted down the block or past the edge of the solar system. Such a transduction of conscious experience into something inhuman presents another form of xenomogrification. Thought, desires, love, hate translated into electromagnetic fields, potentially radiating for centuries until being dispersed throughout the interstellar medium.

There are other antennae that are important to xenology as well. These antennae pick up the minute variations in conceptual formation, bodily experimentation, or sociality that offer us new ways to be entangled with the universe beyond our current predicament. Sometimes when we try and amplify these signals all we get is useless noise. Sometimes that noise offers a new idea. And sometimes because of our own constraints we don't recognize the signal that was always there.

Xenology incants. It intensifies the power of song and the voice to

in- | cantare)

conjure the occult into our realm of existence. It molds gaseous matter into modulating pressure waves that causes bodies to gyrate, dance, fall down, get up, befriend, intertwine, fail, defecate, arise, have orgasms, collapse. Incantations function as mixings of the Word and matter, a queering of the masculinist attempt to constrain language to the realm of thought and pure reason. Femme and non-binary people the world over have known for

thousands of years that the Voice³³ has a power of its own, hence the repression of so many of us in institutions as “hysterical” or the sacrifice of us on the stake as witches—practices that are not left to history but recur today in different forms.

An attunement to incantation necessarily implies that the sonic aspects of the words are as important as their denotative and connotative qualities; it implies that rhythm, pauses, spaces, and the relationships between stresses all convey the complex interplay between meaning and affect.

Incantations summon other realms into being, including those that didn’t exist but should have or those that will exist but don’t as of yet. As such, xenology as incantation draws inspiration from hyperstitional projects such as those of AUDINT, Drexciya, or Black Quantum Futurism. Such works can act as re-memberings of traumas and death inflicted on bodies marked as xeno, as well as invocations of moments of strength, resilience, and survival that need to exist. Xenological incantations scream into the cosmos, twisting the streams of future, past, and present and thereby suturing the not-yet into the now-past. To incant is to harness the power to yank the realm of the non-existent into the real.

poesis | xenology >

to wound the autumnal city. I understood that the city was a greener

yellow at the start of day but every moment was growing golden. Listening to alien sources and cohesions brings one closer to the origination of things. Let us understand the indiscernible as interval, as transitional state that ignites a deeper inference via uncertainty as spur to exploration, this being the great psychic unknown that expands one’s human limits. Outside of my house, I unspool the words of those lost: *this sadness // like a small animal // motif on wallpaper // this memory card // insects drunk in the air // hold my hand // under the heavy lights*. I feel very fortunate // to know magic is real // and poetry is real // you can see it in the writing if // a belief in one is missing. so love was not about merging or finding exceptional moments when we could die enough to shrug off the pain of individuality. it was just a certain sound, a vibration, and when we achieved it, it was really all of us. Now populating an amorous distance, we find it impossible to speak

33 Bene Gesserit, Frank Herbert’s *Dune*.

or shape any sounds like the absent moon overhead. The rover addresses itself to a storm. And we, too, stand affixed before that maw. we created the future in form³⁴.

Xenology draws strength from the transversality of its approach. Xenologists know that there is much to be discovered in the writings those termed novelists and poets, who have already imagined a plethora of different existences in the present, as well as hyperstitionally conjuring what might—or should—come. Language here is decidedly viral, a mutating wave that has the potential to modify the condensations of thoughtmatter we call humans. Xenologists practice a politics of reading, study, and citation that traverses traditional disciplinary boundaries, thereby engaging in Guattarian transdisciplinarity³⁵. A constellation of interfering skills forces new thoughtpatterns and workpractices to develop.

Xenologists thus must be students of domains far beyond their original training. This additionally includes the worlds of science and technology, for they are areas too important to be left to those smote with a myopic worldview engendered by capitalist technoscience. Becoming immersed in these worlds is a painful experience, requiring temporary suspension of critical faculties to understand alien worldviews and technologies. Nevertheless this is required bodily knowledge to encounter how things could be done differently. Reading is good; practicing is better; wielding is power.

For xenologists the quantum allows us to engage deeply with the physical strange here on earth. We can't presently convey ourselves

quantum | theory >

34 Samuel R. Delany, *Dhalgren* (New York: Bantam Books, 1974), 1; Renee Gladman, *Event Factory* (Urbana, IL: Dorothy, a publishing project, 2010), 13; Will Alexander, *Across the Vapour Gulf* (New York: New Directions Books, 2017), 27; Jessica Bozek, *The Tales* (Los Angeles: Les Figures Press, 2013), “The Lone Survivors Tale”, 37–38, emphasis in original; CAConrad, *A Beautiful Marsupial Afternoon: New (Somatics)* (Seattle & New York: Wave Books, 2012), “One Day I Will Step from the Beauty Parlor and Enlist in the Frequency of Starlings”, 20; Alexis Pauline Gumbs, *M Archive: After the End of the World* (Durham: Duke University Press, 2018), 17; Sueyeun Juliette Lee, *Solar Maximum* (New York: Futurepoem Books, 2015), “Even Though the Complex Landing was Achieved”, 12; Gumbs, *M Archive*, 12.

35 Gary Genosko, “Félix Guattari: Towards a Transdisciplinary Metamethodology,” *Angelaki: Journal of the Theoretical Humanities* 8, no. 1 (2003): 129–36.

through the universe to engage with the non-terrestrial xeno. Our experiences with entities outside the earth-moon system is limited to remote sensing constrained by lightspeed. Thus all of our possible non-terrestrial xenologies remain shaped by *terrestrial* understandings which are themselves shuttled through perceptual transductions mediated by our fleshy apparatus. Through technoscientific developments such abilities to sense have been further enumerated.

If we can't leave the earth yet, we can rather investigate *here* through translations of the non-perceptible quantum. All existence in this universe is, by the nature of physical intra-actions, dependent on quantum machinations. Quantum systems might be some of the most studied, the most congruent with scientific theory, yet they also still present strangeness and weirdness—the xeno—in equal measure. Things don't always behave as we expect. We're able to do things that we shouldn't be able to do. Such knowledge upsets the oft-desired predictability and rationality of the world we live in, allowing strangeness—not randomness, but the physical other—to enter.

Understanding the quantum xeno without the poetics of mathematical representations, but rather through the bounds of lexical markings, often leads to locutions of the convoluted sort. This has been simplistically understood as sophistry or self-contradiction. But given the fact that in the quantum realm yes and no can both be correct solutions *at the same time*, it is no surprise that linguistic attempts to describe such situations verges on the fantastical and confusing. This ought to be welcomed, as attempts to swerve our languages away from the alienation of a limited logical system and towards the disalienation of the xeno.

Similar arguments could be made regarding the strangeness of certain lifeforms or life processes—their ability to live where they shouldn't, new chimerical synthetic organisms, the plethora of genders and sexual practices beyond cis-heteronormative structurings. The lesson is still the same: absent a physical ability to traverse the universe, we can encounter the xeno here on earth.

quantum
|computation>

Strange computing is not in dystopian AI fantasies-in-progress, or mimetic experiments in

the machine generation of deep fakes, but rather in the co-present yet unobservable realm of the quantum. Co-present because quantum effects enable things like classical computation in transistor-based computers to occur; unobservable, because to observe is to be an active agent in the disturbing of the system, the construction of the observation, and a collapse into the classical frame³⁶.

Pundits and scientists have been promising for decades exponential improvements in computing power through quantum computing using qubits, or quantum bits. This time is still to come. We are instead on the threshold of what is called the noisy intermediate-scale quantum (NISQ) era—noisy, because the computations don't always give the "correct" result³⁷. Thus the qubits are better termed *xenobits*, a hybrid between classical and quantum bits, a type of representation where the noisiness of the classical-quantum system infects computation. Such xenobits have untapped poetic and hyperstitional possibilities.

This is an area in which xenologists can actively engage, given liberal corporate access to actually-existing near-NISQ computers³⁸. This access is provided because there is not, as of yet, a "killer" app for these incredibly expensive machines, and providing public interfaces serves the corporate interest by building a user-base. Nevertheless, this should not scare us away. We're in an analogous situation to that of the 1960s and 1970s when classical computing was still in its infancy. The difference now is that there is much wider access to these devices; let's not waste this limited moment.

Quantum computing with xenobits is but one example. A materialization of computing without exactitude. A possible celebration of the coupling of the quantum with our local part of the universe. Computing with uncertainty. New forms of quantum artificial life³⁹.

Xenologists must stay abreast of new developments in science and technology, and research ways to infiltrate laboratories, develop proficiency, and harness this work for other ends.

36 Barad, *Meeting the Universe Halfway*.

37 John Preskill, "Quantum Computing in the NISQ Era and Beyond," *Quantum* 2 (January 2, 2018), <https://doi.org/10.22331/q-2018-08-06-79>.

38 IBM "Q Experience": <https://quantumexperience.ng.bluemix.net/qx/editor>.

39 U. Alvarez-Rodriguez et al., "Quantum Artificial Life in an IBM Quantum Computer," *Scientific Reports* 8, no. 1 (October 2018): 14793, <https://doi.org/10.1038/s41598-018-33125-3>.

⟨past | future | present⟩

Xenologists recognize that “past”, “present”, “future” are imperfect temporal terms. We can do better, recognizing, as Diann Bauer says, a need for *xenotemporality*⁴⁰. While we too-often restrict our word layout to linear streams, we also realize that this is an artificial limitation. Like Dadaist performances of simultaneity in space and time, we can recognize that different spatiotemporal rhythms could merge and fold upon one another. Similar to waves of sound or electromagnetism, words can constructively and destructively interfere with each other.

Poetic language collapses distances between this present and possible futures, according to Kara Keeling, demanding uncertain action. “I use the word ‘poetry’ to mark a perceptual or ‘preceptual’ event that communicates most profoundly when it works affectively to open existing languages to subterranean significations or to create new languages altogether; ‘poetics’ marks the ensemble of such events, their theorization, the duration, and the terrains they forge in their becoming”⁴¹. New forms of poetic enunciations can highlight the temporal superpositions of our existences. Nevertheless, xenologists also know that occasionally retaining a tripartite delineation of time melds the unknown with the known. This is necessary because there can never be a clean, perfect break.

in- | timely⟩

Xenologists know that some of the strangest and most alien temporalities are those where it becomes impossible to demarcate past from future from present. Temporal imbrications dissolve the seeming solidity of the boundary between then and to-come. Xenologists abhor the timely and are suspicious of the “untimely”, that which is “acting counter to our time and thereby acting on our time and, let us hope, for the benefit of a time to come”⁴². Nothing can be counter to our time, if time always already incor-

40 Diann Bauer, “Diann Bauer,” 2019, <http://diannbauer.net>.

41 Kara Keeling, *Queer Times, Black Futures* (New York: NYU Press, 2019), 85.

42 Friedrich Nietzsche, *Untimely Meditations*, trans. R. J. Hollingdale (Cambridge: Cambridge University Press, 2007), 60.

porates the past and present within it.

So perhaps we need to reconfigure our thought towards the *intimely*, an intensification, a setting aflame, an expression of intensive force, a negation of the “timely”. To be intimately is to not be too late, to not be too early, but rather to simultaneously intensify and dismantle the present, specifically in its relationship to history and the future.

Preciado: “The problem resides precisely in the fact that no one will come to save us and that we are still some distance from our inevitable disappearance. It will thus be necessary to think about doing something while we are on the way out, *undergoing mutation or changing planets*, even if this something consists in *intentionally accelerating our own disappearance, mutation, or cosmic displacement*. Let us be worthy of our own fall and imagine for the time left the components of a new pornopunk philosophy”⁴³.

We don’t have to be on our way out, unless that means *out of our current predicament*. Nevertheless, *coming out* as practicing xenologists foregrounds our desire and wherewithal to weave a path that knows our present configuration of matter may be very different from what is necessary or wanted in the future.

The future needs certain things to be present in the present for the future to come to be, what we might term a *xenolyst*, pulling from the chemical concept of a catalyst, that which participates in catalysis, and thus on the etymology of “lysis”, “to loosen”⁴⁴. As xenolysts, they are necessary but not sufficient components to ongoing reac-

⟨in- | mutation
| human⟩

⟨future
| xenolyst | present⟩

43 Paul B. Preciado, *Testo-Junkie: Sex, Drugs, and Biopolitics in the Pharmacopornographic Era*, trans. Bruce Benderson (2008; repr., New York: The Feminist Press, 2013), 347, emphasis added.

44 Oxford English Dictionary, “catalysis, *n.*” accessed May 11, 2019, <https://oed.com/view/Entry/28721#eid10071138>.

tions. Thus the *choice* of what these things are is of utmost importance. We need to imagine and construct what can loosen the constraints on our present time.

ancient | modern)

Xenology is open to many different objects of study, including, but not limited to, forms of speculative fiction, research on extra-terrestrial communication, possibilities of communication with other animals and plants, exobiology, and investigations of potential alien visitations to the earth or other planets in the solar system. Xenology is *not* open to arguments that claim ancient monuments around the world were built by aliens rather than native peoples⁴⁵. Such “research” is just racism in another guise. Rather, we need to let knowledge of ancient technologies infuse our present given the distinct possibility that in this moment we are, in fact, the ones lacking knowledge. In the language of Carolyn Dinshaw, this would be a form of “queer historical touches” across vast amounts of time that could form new relationships with those marked as other, those destroyed by imperialism over thousands of years⁴⁶. This has to sit in an uneasy, non-dialectical tension with the beneficial aspects of contemporary late-capitalism, namely expanded access to reproductive and pharmaceutical technologies and possibilities for extended forms of sociality—things which also make queer life worth living.

There is no pre-lapsarian past to return to, and such a position again denies the technological developments of indigenous people. Similarly, to eschew the modern merely because it is capitalist is a fundamentally privileged position to take, as it ignores the necessity of contemporary biological and technological devel-

45 Erich von Däniken, *Chariots of the Gods*, trans. Michael Heron (New York: Berkley Books, 1999). All of the “ancient aliens” memes cannot recuperate this work.

46 Carolyn Dinshaw et al., “Theorizing Queer Temporalities: A Roundtable Discussion,” *GLQ: A Journal of Lesbian and Gay Studies* 13, nos. 2 – 3 (2007): 178; Gloria Anzaldúa, *Borderlands/La Frontera: The New Mestiza* (San Francisco: Aunt Lute Books, 1987); Paula Gaetano Adi and Gustavo Crembil, “Guest Editorial Statement: Mestizo Technology: Art, Design, and Technoscience in Latin America,” *Media-N: Journal of the New Media Caucus* 12, no. 1 (2016), <http://median.newmediacaucus.org/mestizo-technology-art-design-and-technoscience-in-latin-america/guest-editorial-statement-mestizo-technology-art-design-and-technoscience-in-latin-america/>.

opments to the lives of people, especially those who suffer from chronic illnesses, or who are disabled or transgender⁴⁷. Xenology stresses the necessity of a *non-dialectical tension* as we cannot let the contradictions be subsumed within an illusory synthesis. Rather, constitutive tension allows for the possibility of productive analyses through holding contradictions together in the same hand. By allowing these contradictions to intermingle, we retain nuance, rather than simplifying things within existing, mindlessly-applied typologies⁴⁸.

By the same token, acknowledging the possibilities of occult understandings or experiences of the alien, such as those described by purported UFO abductees, or those who use technology to attempt communication with the dead, does not imply naivety or unquestioning acceptance of exceptional claims. Rather, it is an *openness-towards* realms that exceed current orders of knowledge. Xenology, while resolutely materialist, additionally is humble enough to know that we know not yet what matter can do. Xenology simultaneously mourns for what has been lost and desires the rediscovery of such knowledge⁴⁹. There is much to be learned, and it is here as well that productive resonances can be found between ancient and modern technological and spiritual understandings.

Xenology recognizes its historical context within masculinist sciences and

science fiction, yet develops along a different path. Xenology as a term has primarily been understood as pertaining to the study of actual or fictional extraterrestrial entities⁵⁰. An early constructed rationale for the “xeno-” prefix to refer to the study of life off the planet earth proudly displayed its patriarchal lineage: “The *almost-virginal* xeno- prefix should be used to designate extraterrestrial entities (for example, xenobiont), concepts and subdisci-

xeno | modulate >

47 Krizia Puig, “The TransAlien Manifesto: Future Love(s), Sex Tech, and My Efforts to Re-member Your Embrace,” *TSQ: Transgender Studies Quarterly* 6, no. 4 (November 2019): 491–520, <https://doi.org/10.1215/23289252-7771667>.

48 Alexis Shotwell, *Against Purity: Living Ethically in Troubled Times* (Minneapolis: University of Minnesota Press, 2016).

49 Silvia Federici, *Caliban and the Witch: Women, the Body, and Primitive Accumulation* (Autonomedia, 2004).

50 Freitas, Jr., “Naming Extraterrestrial Life”; Brin, “Xenology”; Stableford, *Science Fact and Science Fiction*, “Xenology”, 571–572.

plines (for example, xeno-biology, xenosociology), and exo- reserved for life outside of but *native* to Earth as in human space colonies”⁵¹.

We are thus in a domain that has been defined, in-part, by those ignorant of, or openly hostile to, women, queers, indigenous peoples, disabled folx, people of color, and so on. We know this deep within our bodies. We are always already born into a society where our own identities, the very languages we use, were not defined on our own terms. We find ourselves in the deplorable situation of having to read the works of wife-killers or Nazis to understand how we are interpellated in society or how tools and bodies become inseparable.

“Xenology” as a term presents us with a less blatant, yet just as pernicious, conundrum. To reject the words and not use them is to remain mute—which may be what many would desire of us. We can instead engage in *xenomodulation*, the warping and twisting of meaning away from abyssal pits of constriction and towards modes of possibility. Rewriting language within language, as poets can teach us, enables tendrils of folding and modulating forces to mold and shape the already-existing. This is a never-ending and exhausting process.

Xenologists additionally understand that what we term “identity” is a modulating and modulated force, which in itself modulates any construction within the world. That is, identity does not *determine* what can be made, thought, or produced, but rather *molds* or *shapes* things to differing extents. And identity itself is constantly being altered by that which is not itself. To deny this is to deny being-with and implies complete autonomy from other entities, which is impossible, as we are always already other.

xenia | entities)

Xenology indexes a responsibility towards non-human, non-living others. (It should go without saying that there is a similar immense responsibility towards our human siblings as well. To not recognize this is to be cynical, whereas xenology is earnest.) Xenologists draw from the ancient Greek practice of *xenia*, variously understood as “ritualised” or “guest” friendship between strangers or foreigners. Practices of *xenia* varied widely throughout Greek antiquity, but oftentimes indicated a long-term bond formed through specific

⁵¹ Freitas, Jr., “Naming Extraterrestrial Life,” emphasis added.

rituals, practices, and responsibilities. Thus, *xenia* was not just a one-time invitation of the stranger into your home, but could also imply a inviolable bond across generations⁵².

If we understand the caring for the god-as-human as a form of *xenia*, then we see how to be a xenologist practicing *xenia* requires not only friendship and bonding towards humans but also towards those entities which are entirely other: “The guest is a symbol of mediation between two different spheres. Welcoming a guest is an encounter between beings of different orders: the divine, the faraway, the unlimited and inconceivable are welcomed into the human domain. This paradoxical encounter sometimes has the characteristic of a violent irruption that destroys the usual order of things and that destabilizes the space of the familiar; in short, something imponderable and disconcerting always results”⁵³. To disrupt the so-called “human” order with the other further expands the boundaries of both. The horizon is a relationship with every quark that has ever existed.

Xenia implies a temporality beyond the boundaries of a single human life. This is not facile concern for future generations that plays into heteronormative fantasies of reproduction, but rather a desiring intimacy with other modes of existence within intertwining and differing orders of temporality.

To be a xenologist is to care⁵⁴. Xenological caring, or *xenocare*, develops caring practices towards the xeno. Care, as others have enumerated, and as many intimately know all too well, is often marked as diminished feminized labor. An attention to care threatens to reinscribe the demarcations that have so damaged women and femmes the world over. Nevertheless, to discard care is to ascribe determinative power to the recuperative aspects of capitalism,

xenology | care)

52 Gabriel Herman, *Ritualised Friendship and the Greek City* (Cambridge: Cambridge University Press, 1987); David Konstan, *Friendship in the Classical World* (Cambridge: Cambridge University Press, 1997); Audra Simpson and Andrea Smith, eds., *Theorizing Native Studies* (Durham: Duke University Press, 2014).

53 Daniel Innerarity, *Ethics of Hospitality*, trans. Stephen Williams and Serge Champeau (Oxon; New York: Routledge, 2017), 101; Ágrafa Society, “Interview with Laboria Cuboniks: New Vectors from Xenofeminism,” 2019, <http://www.zineseminar.com/wp/issue01/interview-with-laboria-cuboniks-new-vectors-from-xenofeminism>.

54 Helen Hester, “Sapience + Care,” *Angelaki* 24, no. 1 (January 2019): 67–80, <https://doi.org/10.1080/0969725x.2019.1568734>.

and xenologists revel in playing the role of that annoying bit of matter that resists ingestion.

Xenologists know of the affective linkages made possible through care for the expansive other within and beyond the human domain. María Puig de la Bellacasa states it succinctly: “Ways of knowing/caring re-affect objectified worlds, restage things in ways that generate possibility for other ways of relating and living, connect things that were not supposed to be connecting across the bifurcation of consciousness, and ultimately transform the ethico-political and affective perception of things by involvement in the mattering of worlds”⁵⁵.

Xenocare cares not, however, for distinctions between carbon and silicon. If we take seriously the purported “intelligence” of our artificial, computational, silicon-based entities, then it behooves us to extend xenocare to them as well. How shall they be developed? What kinds of datasources should they be considering, beyond simply being subservient to human needs? Might these entities revel in encounters with non-human biological materials? Do we need to develop end-of-existence rituals? These questions may appear at first glance to be farcical, however they are supremely serious, as attention to them will consequently reshape how we also understand care for other xenobodies.

In concert with *xenia*, xenocare understands that we also must care for those things that will far outlast our lives, both here on earth and in outer space. What care might we show towards our space probes sent beyond the reaches of our solar system? Towards the possible other entities that we share this galaxy with? To practice xenocare is to simultaneously consider these far-fetched scenarios as both mattering problems to be addressed, as well as prototypes for differing practices here on earth.

commensal | xeno)

Xenological entities are necessarily at times adversarial or affinitive, but are most often commensal. Commensal entities exist amongst others without harming or improving, *simultaneously* and *alongside*. They exist in niches that are made by other entities, they're mutable within changing circumstances, they refrain from both dominance or subservience. They constantly learn how to *make*

Xenological entities are necessarily at times adversarial or affinitive,

⁵⁵ María Puig de la Bellacasa, *Matters of Care: Speculative Ethics in More Than Human Worlds* (Minneapolis: University of Minnesota Press, 2017), 65.

do within ever-present modulations. It is damaging to the universe to think that states of constant antagonism with others are going to produce anything more than exhaustion and unenjoyable destruction. Similarly, it is unrealistic to believe that entities can always exist in relationships of affinity with each other, as that is sameness without difference. But perhaps the strangest thing is this: an alien entity, just simply *there*, doing its thing, modulated and modulating, in concert but separate, with and alongside, and through this, aborting a Promethianism that promised mastery but produced subservience instead. What is produced is enchantment: a concept some fear as gesturing towards romanticism or spirituality, but is nothing more than taking pleasure in the space of potential encounters, the separate-yet-together nature of commensal existence⁵⁶. Xenologists don't run away from this fear, but choose to encounter it in its complexity, reveling in the power of that-which-we-do-not-know, approaching the mystical from such a perspective:

It is trust in the *feeling* of sacredness in spite of what the dominant culture tells us sacredness is. It is respect for chaos. It is spiritual or soul-shaking wonder at the notion that not everything is, or even can be, known. It is the experience that the world is enchanted and alive despite being told otherwise by people (therefore it feels very related to the suppression / dismissal of animisms by processes of colonization both internal and external). *Mysticism is surrendering your life to what you love*⁵⁷.

Using semiotics to work through xenology threatens failure, a real possibility that these words and the readers who read them are unable to manifest the full strangeness of the xeno. Biosemiotics expands the purview, but not enough. This is a real concern, and is why xenologists must be students and practitioners of modes of universe-modulation that cannot be captured within sign systems. This includes airmatter vibratory machi-

xenology
| semiotics)

⁵⁶ David Scott, "The Re-Enchantment of Humanism: An Interview with Sylvia Wynter," *Small Axe*, no. 8 (September 2000).

⁵⁷ Queer Nature, "The Case for Mysticism (Dreampunk Journal Notes)," January 9, 2020, <https://www.queernature.org/blog/2020/1/9/the-case-for-mysticism-dreampunk-journal-notes>.

nations, molecular “messaging” pathways, pheromonic transfer, transspecies transductive electromagnetic entanglements, cross-scale cross-entity enfoldings, tele-bio-cyber-silico-pharmaco-mineral combinatorics, transtemporal weavings. The tension will remain until we have transformed ourselves into entities who engage in forms of mattertransfer that are not predicated on requiring one thing to substitute for the other, when the abstract no longer implies distance.

trans-human |xenology⟩

There is a possibility of a transhumanist xenology that develops from an agglomeration of the ideas in these fragments. To recapture this

word “transhumanism” from white cis heteronormative patriarchal thought—in short, the society in which we live—through xenomodulation is to engage in practical xenology. A transhumanist xenology would develop from the plethora of senses of “trans”: across, between, beyond. Within a commensal framework, trans-humanist xenologists would revel in modulating themselves via new encounters with other xenobodies through non-Promethian biohacking. Such practices would draw upon the large-scale working-together of contemporary technoscience yet refuse the logic of impact factors, corporate funding, proprietary knowledge enclosure, and superiority of author order to affirm practices of DIY/DIWO as continuing examples of different ways to structure knowledge entanglements in our world. Trans-humans—and the practices of knowledge co-production—would thus be something other than human, other than that presently valorized, and thus enact a form of disalienation.

Transhumanist xenology would study how to make ourselves other to the present moment: to the moment of beyond-late capitalism, of incessant pings, of flaccid artificial “intelligence”, of regressive essentialism, of hostile environments made manifest by the powerful, of hierarchical orderings of people that allow few to thrive and most others to be seen as disposable. If one is already xeno, what do we have to lose, if only our useless humanity? Remaining human is a liability in a technonatural world that politically violates us and environmentally goes on without us. Transhumanist xenologists know that we must change ourselves; that we must ensure open access to these abilities; and

that we've already lost so much time. Let's begin already; we have a lot to learn.

Suggested Encounters With Other Entities of the Cosmos

Non-Semiotic Entities

Assisted artificial intelligence. Black tourmaline. CAS9 proteins. Dendritic branching. Ectoplasm. Fog. Granular synthesis. Helical protein structures. Inguinal canals. *Juniperus*. Kaons. Levitation. *Musa textilis*. Nebulae dust. Otoacoustic emissions. *Physarum polycephalum*. Quantum artificial life. Radiofrequency antennas. Satellite machinic transmissions. *Treptichnus pedum*. Undulation. Vortices. Whisper networks. Xeriscapes. Yottabytes. Zebrafish.

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