Informatics of Domination

Edited by Zach Blas,
Melody Jue, and Jennifer Rhee

With an afterword by Donna J. Haraway

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Introduction: Chart of Transitions

Zach Blas, Melody Jue, and Jennifer Rhee

Nano Power, gray goo syndrome, wetware, rhizomatics: such concepts populate artist Ricardo Dominguez's *Virtual Timeline* (1997), a conceptual artwork cum hyperlinked chart that periodizes capitalism and its relations to science, technology, and power (figure I.1).[1] Headlined with directing arrows, ">>>>>," the four columns embed a temporal and spatial argument. When read horizontally, the chart maps a multitude of transitions across four stages of capitalism (Entrepreneurial, Monopoly, Multinational, and Virtual), while its vertical dimension provides a nonexhaustive list of capitalism's conditions at each particular stage. For example, *conquest of nature* shifts to *3rd world conquest* to *conquest of intelligence* to *conquest of existence*. Vertically, *Multinational Capitalism* includes *Micro Power*, *AIDS*, *computer*, *postmodernism*, *plagiarism*, and *simulacra*. Dominguez created the timeline as a website hyperlinking many of the catalogued terms. Now, some decades later, most of the links are broken.

Virtual Timeline responds to technological specificities of the 1990s: namely, the rise of the personal computer and the World Wide Web.[2] Indeed, the "virtual" of the title recalls a then-popular catchall term for describing conditions and experiences enabled by digital, networked computers. The artwork persists in this sense of the virtual, not only diagramming the qualities of four capitalisms but also materializing as a mode of experimental thought made possible through computers and the internet. Philosophically, the virtual signals potentiality—that which is real but not yet actualized.[3] Some of Dominguez's terms are virtual in this sense, like *gray goo syndrome*, a science fictional scenario in which nanomachines consume all biomass on Earth.[4] The virtual as potentiality also manifests in the chart's reading instructions: ">>>>>."

>>>>>

VIRTUAL TIMELINE VIRTUAL TIMELINE VIRTUAL TIMELINE VIRTUAL TIMELINE			
Entreprenurial Capitalism	Monopoly Capitalism	Multinational Capitalism	Virtual Capitalism
Steam Power	Electric Power	Micro Power	Nano Power
Property Rights	Corporate Rights	Copy Rights	DNA Rights
Nature as Other	Alien as Others	Knowledge as Other	Biology as Other
conquest of nature	3rd world conquest	conquest of intelligence	conquest of existence
nationalism	imperialism	multinationalism	globalization
tuberculosis	cancer	AIDS	GGS (gray goo syndrome)
film	television	computer	wetware
Mechanical	Instantaneous	Logico-iconic	Fractal
realism	modernism	postmodernism	rhizomatics
high art	art as commodity	plagiarism	hypermedia
frame	screen	chip	bio-chip
possession	mediation	interface	introjection
image	collage	simulacra	chaotics
worker vanguard	consumer	affinity	virtual

I.1. Ricardo Dominguez, screenshot of *Virtual Timeline*, 1997, https://www.thing.net/~rdom/VRtime.html.

While these directions contain five ">"s, Dominguez only provides four stages of capitalism. What is the reader to make of the remaining ">"? Implicitly asking, "What stage might be next?" or "What aspects of capitalism remain unaccounted for?," *Virtual Timeline* engages in a practice of charting that is inherently unfinished, incomplete, and partial, even at its inception.

Virtual Timeline was inspired by an earlier experimental chart. Dominguez explains that the timeline creatively builds upon the diagrammatic work begun in a previous chart that also maps capitalism and power: feminist science and technology studies scholar Donna Haraway's "chart of transitions," which was published in her classic essay "A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s" (1985). Dominguez describes the influence of Haraway's chart on *Virtual Timeline* thusly: "I was responding to [Haraway's chart] and adding my own drift."[5] In this collection, we, the editors, also return to Haraway's chart of transitions as a diagrammatic structure for thinking about power that invites modification and the addition of new drifts. We look for openings and borders in the chart, as well as latent possibilities to add, divert, and start anew.

The informatics of domination, our title and organizing concept, emerges from Haraway's "Manifesto for Cyborgs," which defines

informatics of domination as "a world system of production/reproduction and communication."[6] In an eponymous section that includes her chart of transitions, Haraway narrates a wide-ranging shift in the operations of power, marking a move from social relations predominantly structured by industrial capitalism to those structured by information capitalism in the second half of the twentieth century. Here, Haraway also describes the informatics of domination in prose that teasingly evokes its meaning:

> In this attempt at an epistemological and political position, I would like to sketch a picture of a possible unity, a picture indebted to socialist and feminist principles of design. The frame for my sketch is set by the extent and importance of rearrangements in world-wide social relations tied to science and technology. I argue for a politics rooted in claims about fundamental changes in the nature of class, race, and gender in an emerging system of world order analogous in its novelty and scope to that created by industrial capitalism; we are living through a movement from an organic, industrial society to a polymorphous, information system—from all work to all play, a deadly game. Simultaneously material and ideological, the dichotomies may be expressed in the following chart of transitions from the comfortable old hierarchical dominations to the scary new networks I have called the informatics of domination:[7]

Haraway's conception of the informatics of domination comes into focus from this description rooted in visual language: sketches, pictures, frames, design. Haraway's particular interest in sketching a picture primes the reader for what follows this passage (which notably ends in the typographic graft of a colon): a two-column, thirty-two-row diagram that maps two modes of domination—the chart of transitions (figure I.2). As an ordering of late twentieth-century scientific, technological, cultural, social, and political worlds, Haraway's informatics of domination begins as a technical image, theorized through visual description and the chart of transitions.

The chart of transitions is inextricable from a genealogy of authoritative diagrams that comprises actuarial tables, slave ledgers, train times, mortality bills, and other bureaucratic, capitalist, and mercantile forms.[8] In reference to charts that appear in her other writings, Haraway

Representation	Simulation
Bourgeois novel, realism	Science fiction, post-modernism
Organism	Biotic component
Depth, integrity	Surface, boundary
Heat	Noise
Biology as clinical practice	Biology as inscription
Physiology	Communications engineering
Small group	Subsystem
Perfection	Optimization
Eugenics	Population control
Decadence, *Magic Mountain*	Obsolescence, *Future Shock*
Hygiene	Stress Management
Microbiology, tuberculosis	Immunology, AIDS
Organic division of labor	Ergonomics/cybernetics of labor
Functional specialization	Modular construction
Reproduction	Replication
Organic sex role specialization	Optimal genetic strategies
Biological determinism	Evolutionary inertia, constraints
Community ecology	Ecosystem
Racial chain of being	Neo-imperialism, United Nations humanism
Scientific management in home/factory	Global factory/Electronic cottage
Family/Market/Factory	Women in the Integrated Circuit
Family wage	Comparable worth
Public/Private	Cyborg citizenship
Nature/Culture	Fields of difference
Cooperation	Communications enhancement
Freud	Lacan
Sex	Genetic engineering
Labor	Robotics
Mind	Artificial Intelligence
World War II	Star Wars
White Capitalist Patriarchy	Informatics of Domination

I.2. Donna J. Haraway, informatics of domination chart of transitions, "A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s," *Socialist Review*, no. 80 (1985): 80.

states, "I like the idea of using a truly monological object like a chart, and not some timely fractal design, to figure nonlinear, dynamic relationships."[9] Yet Haraway is also critical of charts, writing, "The chart itself is a traditional little machine for making particular meanings. Not a description, it must be read as an argument, and one which relies on a suspect technology for the production of meanings—binary dichotomization."[10] In this passage, she alludes to the kind of logic one is conditioned to expect from a chart, and to the varied statistical, economic, capitalist, and medical contexts in which such forms are typically encountered. Undeniably, charts, tables, and diagrams have too easily supported and strengthened oppressive power structures and colonial epistemologies of classification and ordering. This noninnocent history makes it tempting to read Haraway's chart of transitions as a fixed snapshot of a period in time, a grid that locks down a set of characteristics, an unredeemable artifact of dominant power structures. Drawing attention to the chart's history as a compromised form, Haraway uses the chart to express a feminist position that simultaneously refuses any simplistic separation from the informatics of domination while also opening up the chart's organizing borders and potential meanings.[11] To use another of Haraway's terms, the chart of transitions could also be deemed a "compound eye," enclosing, yet multiple.[12]

Informatics of Domination embodies Haraway's critical positioning of the chart. In this collection, we take Haraway's chart of transitions as an organizing structure and experimental form for examining the informatics of domination and its mutations into the twenty-first century.[13] Situating the chart within scholarly and artistic genealogies of domination, informatics, white capitalist patriarchy, and the diagrammatic, we ask, how does this chart of transitions offer particular structures for thinking about power in the twenty-first century? And how does the reader's orientation in the chart determine what modes and enactments of power can be thought?

Like all charts, the chart of transitions requires the reader to decide how they will orient themselves and what vectors of reading they will follow.[14] Artist and writer Patricia Reed describes such diagrammatic reading practices as "a labour of navigation."[15] The chart, as a spatiotemporal material apparatus, requires the reader to do this orienting work—to make interpretations about shifts, directionalities, movements, and embodiments. What kinds of relations exist between the left column and the right column, from a term like *representation*

to *simulation*, from *labor* to *robotics*, from *perfection* to *optimization*? Is it a shift from one mode to another, as in a change in epistemes? Or is the relation between terms additive? Where one formerly talked about labor, must one also now consider robotics?[16] Responding to these questions involves apprehending how the chart diagrams multidirectional flows of power—through its terms and also the orientational relations of the reader. How does domination constrict and homogenize subjects? How do subjects act to reinforce or interrupt systems of power? Upon accepting the chart's invitation to orient, the reader ultimately generates meaning with, against, and beyond its contours as they navigate. In this way, the chart is a formal apparatus for generating and asking questions about relations of domination.[17]

While the cyborg—a feminist figure imbricated in networks of techno-scientific patriarchy—has been, and continues to be, considered the major theoretical contribution of "A Manifesto for Cyborgs," we assert that the surprisingly overlooked informatics of domination concept is a remarkably capacious, generative, and vital theoretical tool for our historical present. After all, the cyborg is but one figure—one myth—enduring in the world system that is the informatics of domination. What other figures, myths, stories, and concepts exist in its networks today? To begin answering this question, we define the informatics of domination as a concept that names and situates domination; as a form of power shaped by (but not totalized by) white capitalist patriarchy that manifests through information systems, networks, and computers in the twenty-first century; as a medium-specific analysis of domination's modalities; and as a diagrammatic form that is at once unfinished and inviting.[18]

Domination

Haraway's use of the term *domination* focuses attention on the inflection and influence of patriarchal power on information technologies. Throughout the 1980s and into the 1990s, feminist theory frequently named patriarchal power as "domination." Across a variety of social, political, legal, and philosophical approaches, feminist theorists utilized domination to broadly critique patriarchal power relations, which spanned gender-based oppression, class exploitation, and other aspects of women's lived experiences.[19] Concurrently, feminist science and technology scholars in the 1980s also invoked domination in their

critiques. In her 1982 essay "Feminism and Science," Evelyn Fox Keller linked a "masculinist" impulse in science with the drive to dominate nature: domination mobilized through "male consciousness" not only extended to the subordination of women's participation in research, but to the feminization of nature.[20] Sandra Harding, another key interlocutor of Haraway (whose formulations of feminist standpoint theory and strong objectivity influenced Haraway's theory of situated knowledges), refers to similar problems of "masculine dominance" in science, in *The Science Question in Feminism* (1986).[21] Domination, in the context of feminist science and technology studies at this time, crucially demonstrated that patriarchal power is not only located in the male subject but also embedded in the techno-scientific and nonhuman. In this sense, domination can be considered an antecedent to contemporary discussions of algorithmic bias, extraction, and other computational means of enacting oppression.

Throughout the sex wars of the 1970s and 1980s, feminists debated another kind of domination, namely, that which is practiced in BDSM, including sexual acts of bondage, discipline, dominance, submission, and sadism. Feminists were deeply polarized regarding the ways in which sex impacted women's emancipation. Luminaries in feminist theory, including Andrea Dworkin, viewed BDSM as a form of gender-based violence against women, akin to pornography and rape, that eroticized the unequal power structure between men and women.[22] Gayle Rubin, active in lesbian BDSM groups, argued against such criticisms and insisted that sadomasochism is not inherently patriarchal, cannot be reduced to gender oppression, and can be enjoyed by feminists.[23] Rubin's proto-queer theory of sex demonstrates that desire and pleasure complicate feminist understandings of domination as purely oppressive. We include feminist theoretical engagements with BDSM in our genealogy of domination, not because we seek to answer, once and for all, whether the submissive and dominatrix are oppressed or liberated. Rather, we take a different conclusion: desire and pleasure can be found and enjoyed while being dominated, in sex and in other aspects of life. Consider the pleasurable rush of dopamine someone may experience when posting and interacting on a corporate social media platform, all the while aware that information generated submits them to dynamics of domination, including surveillance, extraction, and commodification.[24]

Many frameworks for naming patriarchal power as domination during the sex wars relied on essentialist, cisgender interpretations

of men and women, as well as the invisibility of whiteness. One notable exception is social theorist Patricia Hill Collins, whose 1990 book *Black Feminist Thought* expanded feminist theorizations of domination through the concept "matrix of domination."[25] Writing to account for the specificity of American Black women's experiences, Collins argues that oppression converges across structural, disciplinary, hegemonic, and interpersonal domains. Fastidious in its analysis of domination as working across not only gender but also race, class, nation, and sexuality, Collins reframes domination through interlocking structures of oppression. We bring Collins's matrix of domination to our engagement with the informatics of domination to more thoroughly account for overlapping forms of domination extending through informatic technologies.

Informatics

Informatics is a concept that, when left to its own devices, likes to give the impression that domination is not part of the picture. The word emerged in the mid-twentieth century from three European terms (*Informatik* [German], *informatique* [French], and *informatika* [Russian]) that name the study of information processing.[26] In the twenty-first century, informatics overlaps with the field of computer science in Europe, while in the United States, the discipline encompasses a range of theoretical and applied approaches to the study, design, and use of information technologies, including—but not limited to—bio-, health, climate, and museum informatics. Across its varied contexts, informatics names the tendency to see the world as data and information: in the medicalized body, the weather, and in the large-scale surveillance of people's movements and interactions with technologies.[27] For example, the School of Informatics at the University of Edinburgh defines informatics as the "study of the structure, behaviour, and interactions of natural and engineered computational systems [where] information is carried at many levels, ranging, for example, from biological molecules and electronic devices through nervous systems and computers and on to societies and large-scale distributed systems."[28] The University of Edinburgh asks whether it will remain "helpful to maintain the distinction between natural and engineered systems," suggesting a world redefined as information.[29] Institutions often present informatics as a "solutionist" technology, in which the informationalization of the world

will inherently make it a better place.[30] The Information School at the University of Washington exemplifies this attitude with their mission statement that informatics is "for the good of people, organizations, and society."[31] Yet, for all their promise, such understandings of informatics fall short in considering the ways in which culture, politics, materiality, and relationality mark and shape information technologies.

Departing from such conceptions, media theorist N. Katherine Hayles describes informatics as the co-shaping process of information technologies and those who use them—which, in later work, she calls *technogenesis*.[32] Drawing on Haraway's informatics of domination, Hayles defines informatics as "the technologies of information as well as the biological, social, linguistic, and cultural changes that initiate, accompany, and complicate their development."[33] Here, Hayles emphasizes informatics as a set of conditions that comprises:

> the material, technological, economic, and social structures that make the information age possible. Informatics includes the following: the late capitalist mode of flexible accumulation; the hardware and software that have merged telecommunications with computer technology; the patterns of living that emerge from and depend on access to large data banks and instantaneous transmission of messages; and the physical habits of posture, eye focus, hand motions, and neural connections that are reconfiguring the human body in conjunction with information technologies.[34]

Each of Hayles's examples shares an understanding of informatics as a term that capaciously and insistently asserts the inextricability of information technologies from their political, material, cultural, and social contexts, that is, a co-shaping connection between embodiment and information. Her sense of informatics as focused on relations between technologies and humans differs from those offered by informatics departments that center information as a universal ontology in the service of social progress. Informatics, for Hayles and Haraway, also brings political questions of address, access, privacy, and consent. Together, they argue that the study of informatics must also ask: To whom is information intelligible, whom and what does it capture and render/represent as information, and who determines the contours of its legibility? These are political questions about distributions of power,

questions that bring us back to the power relations—of humans, world systems, and information technologies—that enact domination.

White Capitalist Patriarchy —— Informatics of Domination

In the final row of Haraway's chart of transitions, *informatics of domination* appears to the right of *white capitalist patriarchy*. Given that informatics of domination also names the section of the essay in which the chart first appears, these two terms can be understood as structuring the entire chart. The positioning of *white capitalist patriarchy* and *informatics of domination* together in this final row upends expected modes of reading charts, in which organizing concepts typically appear in the first row or as superintending titles. The chart's final row, by contrast, presents an exercise in back-reading. The two terms simultaneously have the final word while inviting a reencounter with the previous rows in the chart, which can be considered anew in light of the structuring role of the dyad white capitalist patriarchy —— informatics of domination. We read Haraway's placement of white capitalist patriarchy next to informatics of domination as marking the intimacy between these two terms, rather than indicating an epistemic shift or a conceptual separation.[35] White capitalist patriarchy is not rendered obsolete or replaced, but is instead reproduced in informatic forms of domination. This diagrammatic pairing, then, conveys that white capitalist patriarchy is no less technical or scientific than the informatics of domination (indeed, race and racial capitalism have long been understood as technologies of domination).[36] Likewise, the informatics of domination is no less political than white capitalist patriarchy, given that the informatics of domination emerges from and enacts white capitalist patriarchal power.

Yet white capitalist patriarchy alone does not encompass the full range of modes of power extended by the informatics of domination. Black feminist theorist bell hooks characterized the dominant system of oppression within the United States as "imperialist white-supremacist capitalist patriarchy."[37] hooks's important expansion of white capitalist patriarchy to include imperialism and white supremacy further enumerates interconnected power structures in a way that resonates with the theory of intersectionality; this theory was first conceptualized by critical race and legal scholar Kimberlé Crenshaw to name the multiple

forms of oppression experienced by Black women.[38] Intersectional analysis also corresponds with the matrix of domination, which Collins describes as systems of "heteropatriarchy, neocolonialism, capitalism, racism, and imperialism [that] constitute forms of oppression that characterize global geopolitics [and that] take different forms across nation-states, and catalyze social inequality."[39] Indeed, Collins has subsequently framed the matrix of domination through intersectionality: "Intersectionality's emphasis on intersecting systems of power suggests that distinctive forms of oppression will each have its own power grid, a distinctive 'matrix' of intersecting power dynamics."[40] *Informatics of Domination* takes seriously the limits of white capitalist patriarchy as an organizing concept, attending to the ways in which informatic technologies, while structured and bound to white capitalist patriarchy, produce novel modes of domination.[41]

Consider code, in all of its informatic as well as noncomputational manifestations. Haraway connects the informatics of domination to the authority given to code: "communications sciences and modern biologies are constructed by a common move—*the translation of the world into a problem of coding*, a search for a common language in which all resistance to instrumental control disappears and all heterogeneity can be submitted to disassembly, reassembly, investment, and exchange."[42] Counter to many interpretations of this passage as a periodizing diagnosis (the world is now code!), the full context of the original passage is, by our interpretation, satirical. It parrots the perspective of those who, in a "common move," celebrate reductive fantasies of "the world" as singular and homogenous, and who desire a mode of control that is absolute and totalizing. The "common move" manifests in the imagination of a "common language" that would eradicate all resistance and difference—code as a means of total control.[43] However, despite this desire for total control and absolute translatability, there is not a singular world, but multiple worlds with much therein that is untranslatable by computer code.[44]

Coding's history reflects this dynamic between a desire for totalizing control and the impossibility of totalization. Coding has been a prevalent mode of ordering worlds long before the emergence of contemporary informatic technologies. This history illuminates that code has functioned as a tool for both control and domination, as well as for resistance, subversion, and dissent. For example, scholars Safiya Noble, Jessica Marie Johnson, and Mark Anthony Neal link computer code to

Black codes, highlighting connections between racist Google algorithms and slave codes.[45] Johnson writes,

> Slave codes were once used to subjugate and control movement, identities, expressions, and access to resources. Placing Black codes in historical context, opens us up to an interrogation of the notion of "codes" as a means of control that apply in multiple material contexts—from the use of public facilities, to unequal education and healthcare, to digital life on the internet. How Black codes, in existence from the eighteenth-century and earlier, re-emerge in everything from slave trade databases to Google algorithms to the appearance of the color black on computer screens impacts what kind of programs, operating systems, and work is created.[46]

In her work on contemporary technologies' reproduction of historic racial discrimination and inequalities through processes of coding, sociologist Ruha Benjamin describes codes as "operat[ing] within powerful systems of meaning that render some things visible, others invisible, and create a vast array of distortions and dangers."[47] Highlighting these dangers, her concept of the New Jim Code describes how contemporary technologies reproduce older forms of racial discrimination under the guise of objectivity. These considerations of code and its Black histories also underscore that code takes on different material instantiations. For instance, code can be a series of embodied gestures, such as the look a face gives to say "'Don't walk all over me,'" or it can materialize as a complex craft practice, as in the case of Hawaiian flag quilts as coded political symbols of sovereignty.[48] Code depends mutually on processes of writing and reading code, as well as interpreting context. Take code-switching, in which minoritized people shift their modes of sociality in different situations. For example, Black people may speak differently in Black spaces than in predominantly white spaces, and queer, trans, and nonbinary persons may alter their voice, gender presentation, and mannerisms as survival strategies to pass in airports, classrooms, and hospitals.

Code can also grant agency and aid in struggles for the liberation of oppressed peoples. For example, handkerchief codes, popularized in the 1970s, were predominantly used by gay and queer men to signal sexual preferences and fetishes, enabling the existence of sexual subcultures. In artist and theorist micha cárdenas's work, "algorithmic

analysis" is a practice-based theoretical tool that includes "the creation of new algorithms, in functional computer programming languages, pseudocode, or code poetry" in art and poetics, with the aim to empower as well as protect queer and trans people of color.[49] In this spirit, artist Zach Blas created *transCoder: Queer Programming Anti-Language* (2008), an artwork that crosses a software development kit with code poetry and queer theory, in order to conjure a computational queerness that can be used to construct new worlds.[50] Together, these examples evidence that the stakes of attending to code are enmeshed with profound considerations of power. Geographer Sarah Elwood's intersectional feminist engagement with code makes this clear: "Much Black, queer/trans, and feminist code studies starts from the proposition that in spite of structural conditions aligned to ensure exclusion and death, these subjects are always also surviving and creatively intervening to catalyze possibilities for life and liberation."[51] Indeed, problems and potentialities of coding abound. For whom is the world a problem to be solved through coding?[52] Whose worlds are construed as a problem to be solved through the eradication of resistance and difference? Whose worlds, by their mere existence, attest to the impossibility of computer code as "a common language in which all resistance to instrumental control disappears and all heterogeneity can be submitted to disassembly, reassembly, investment, and exchange"? These questions animate our engagement with Haraway's chart and its diagrammatic form.

Situating the Diagram

We connect the chart of transitions to a genealogy of practices that use diagrams to understand power relations.[53] In this genealogy, we find particular promise in diagrams that hold openness—of thought, of the future, and of the potential for different configurations of power—as a guiding principle. Here, the diagram is not a mode of capture or containment, but always a starting point for something beyond itself.[54] Reed, for example, imagines diagramming as

> the navigation of what *could be* in the face of *what is*, for *what is* demarcates a zone of epistemic certainty that supports a particular logic of the world, foreclosing on alternative structural possibilities. Navigating the *could be* requires the creation of a diagramme for the inexistent, it is the articulation of a new

> territory of logic unbound to the actual imperatives of the current landscape whose coordinates seem to have calcified our very imaginations, to the exception of cataclysmic narratives.[55]

The chart of transitions evokes Reed's sense of the *could be*. Even though the chart may appear to focus only on the *what is*, the chart's attentiveness to transitions accentuates the forces of change that are inherent to each of its terms, within and beyond the informatics of domination. Thus, the chart finds common cause with other diagrammatic engagements steeped in resistant histories, struggling for the inexistent and the yet-to-be. For example, sociologist and civil rights leader W. E. B. Du Bois's data visualizations from the turn of the twentieth century use bold contrasting colors and unusual bends or swirls of lines to animate a body of African American socioeconomic data, to expose racial inequality but also to spur equal rights and end racial segregation.[56] In 2020, the organization Stop LAPD Spying Coalition and the Free Radicals collective introduced their Algorithmic Ecology, an abolitionist tool for diagrammatically analyzing contemporary algorithms' broader ecologies of power. They used this tool to analyze the Los Angeles Police Department's use of predictive policing software, which disproportionately targeted Black and Indigenous communities, and to envision a world without police surveillance.[57]

We consider the chart of transitions to be a "feminist diagram," as defined by queer and feminist studies scholar Sam McBean. McBean's concept articulates charts and diagrams as theorizations of patriarchal power relations that simultaneously hold open the potentiality of reconfiguration:

> Diagrams seem to attempt to bridge these two temporalities—on the one hand they seem to be about explaining things as they are. Yet, on the other hand, feminist theory's diagrams and diagrammatic imaginaries are not just about observing the state of things. Feminist theory's diagrams aim to shift and challenge power relations; they straddle "the way things are" and a future that might be different.[58]

This work of observing, explaining, and worlding as straddling, rather than contradicting, echoes throughout the genealogy of diagrams in feminist theory McBean traces: feminist activist and writer Ti-Grace

Atkinson's charts map patriarchal power relations while also strategizing a feminist revolution that would radically overthrow these relations; queer Chicana feminist Gloria Anzaldúa's pedagogical drawings explain, for example, the relation between colonized peoples and colonizers; and feminist writer and activist Shulamith Firestone's diagram plots avenues toward cultural, economic, and sexual revolutions.[59] Across these instances, McBean frequently uses "mapping" to describe the work of feminist diagrams. Given that maps are intimately tied to colonial conquest, McBean aligns here with Haraway's feminist insistence on using noninnocent tools to chart toward the *could be*.

McBean also includes in this feminist genealogy a "diagrammatic imaginary," which includes visual metaphors and imagery that conceptually invoke diagrams, as in the work of Crenshaw (intersectionality), feminist writer and poet Adrienne Rich (lesbian continuum), and gender studies scholar Judith Butler (heterosexual matrix).[60] The informatics of domination can also be understood as a diagrammatic imaginary in this sense, through Haraway's use of diagrammatic language to describe the concept as "scary new networks."[61] While the diagrams and imaginaries in McBean's genealogy of feminist theory vary widely in form and style, they share with the chart of transitions a commitment to mapping power and to affirming openness.

The varied publication history of the chart of transitions exhibits principles of diagrammatic practices we have considered throughout this introduction: navigation, orientation, and openness. Different versions of the chart have been published since its first printing in 1985: its reprinting as "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," as well as a modified presentation with different entries in its rows in the chapter "The Biopolitics of Postmodern Bodies: Constitutions of Self in Immune System Discourse," both in *Simians, Cyborgs, and Women: The Reinvention of Nature* (1991); to an altered diagrammatic display in the 2016 republication of "A Cyborg Manifesto" in *Manifestly Haraway*.[62] There are minute but significant formal differences across these versions.[63] In the original 1985 printing, two columns and thirty-two lines separated by negative, white space are displayed on one page (figure I.2). In the 2016 edition of "A Cyborg Manifesto," the overall spacing changes, where the chart sprawls across three pages instead of two (figures I.3–I.5). This publication also introduces two column headings, "Organics of Domination" and "Informatics of Domination," which are separated

by arrows (>) that move the reader from a term in the left column to its corresponding term in the right column—perhaps an unintentional echo of Dominguez's use of ">" in *Virtual Timeline*. Such variations to the chart of transitions demonstrate its openness to modification, that it was never sedimented in a fixed form.

Haraway's and Dominguez's charts employ ">" to articulate relationality, but in this collection, we have created the symbol: "——." Not to be confused with the em dash, the "——" can be understood as an edge in graph theory, which is a mathematical approach used in network science to diagram networks. Here, an edge is a link or connection between two points. (Points are also referred to as nodes or vertices.) Given Haraway's description of the informatics of domination as "scary new networks," we approach the chart of transitions as a diagram of networks. Like the monological chart, diagrams of networks based on graph theory are another "suspect technology for the production of meanings" and can exclude agency, diachronicity, complexity, and materiality in the formation and functioning of networks.[64] Aware of these limitations, we employ edges, represented by "——," to think with and add to the chart of transitions. From our point of view, "——" is a symbol that holds diagrammatic space for openness, navigation, and orientation, not only for the authors in the collection but also for its readers. "——" indicates that terms have relationality, but it does not overdetermine the nature of relation.

Organics of Domination		Informatics of Domination
representation	>	simulation
bourgeois novel, realism	>	science fiction, postmodernism
organism	>	biotic component
depth, integrity	>	surface, boundary
heat	>	noise
biology as clinical practice	>	biology as inscription

physiology	›	communications engineering
small group	›	subsystem
perfection	›	optimization
eugenics	›	population control
decadence, *Magic Mountain*	›	obsolescence, *Future Shock*
hygiene	›	stress management
microbiology, tuberculosis	›	immunology, AIDS
organic division of labor	›	ergonomics, cybernetics of labor
functional specialization	›	modular construction
reproduction	›	replication
organic sex role specialization	›	optimal genetic strategies
biological determinism	›	evolutionary inertia, constraints
community ecology	›	ecosystem
racial chain of being	›	neoimperialism, United Nations humanism
scientific management in home/factory	›	global factory/electronic cottage industry
family/market/factory	›	women in the integrated circuit
family wage	›	comparable worth
public/private	›	cyborg citizenship
nature/culture	›	fields of difference
cooperation	›	communications enhancement

Freud	>	Lacan
sex	>	genetic engineering
labor	>	robotics
mind	>	artificial intelligence
World War II	>	Star Wars
white capitalist patriarchy	>	informatics of domination

Transitions from the comfortable old hierarchical dominations to the scary new networks of informatics of domination.

I.3–I.5. Donna J. Haraway, informatics of domination chart of transitions, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Manifestly Haraway* (Minneapolis: University of Minnesota Press, 2016), 28–30.

We also consider the chart's background: a blank, white, unmarked page. Network science attends only to edges and vertices, links and nodes. But space around edges and vertices is not empty; rather, it is all that is not accounted for by the network form. Media theorist Ulises Ali Mejias describes this as the "paranodal . . . the space that lies beyond the topological and conceptual limits of the node. This space is not empty but inhabited by multitudes that do not conform to the organizing logic of the network."[65] Paranodal space may be outside of networks, but it directly impacts the relationalities of nodes (terms in the chart), as well as the ways in which they link. The paranodal is all that surrounds them. Similarly, a feminist ecological perspective might insist that environments are not neutral backgrounds, yet channel a variety of nonhuman agencies. What kind of milieu makes a particular interpretation of the chart possible? Or, put differently, what kind of environmental imaginaries make their ways into feminist diagramming practices?[66] *Informatics of Domination* engages with the chart's background—its paranodal space, its environment—across the written entries, many of which account for that which exceeds being diagrammable by the network form.

We approach the chart of transitions—its columns, rows, paranodal space, and milieu—as a feminist diagram committed to situatedness. After all, in Haraway's *Simians, Cyborgs, and Women*, "A Cyborg Manifesto" sits right next to the essay "Situated Knowledges: The Science Question in Feminism and the Privilege of the Partial Perspective." Situated knowledges are embodied forms of objectivity, anathema to conceptions of scientific objectivity that are defined by their unlocatability, otherwise known as "the view from . . . nowhere" or "the god trick."[67] Haraway describes situated knowledges as feminist objectivity—modes of noninnocent, "power-sensitive" conversation between embodied, agential subjects and objects of knowledge.[68] This approach to the production, meaning, and reception of knowledge accounts for how one's positionality and orientation shape questions of power and access, as well as the value forms and sources of knowledge take. Situatedness is a feminist practice of being responsible for one's point of view and accepting that one's position is always partial, never omniscient. In "Situated Knowledges," Haraway presents another two-column chart:

> But a dichotomous chart misrepresents in a critical way the positions of embodied objectivity which I am trying to sketch. The primary distortion is the illusion of symmetry in the chart's dichotomy, making any position appear, first, simply alternative and, second, mutually exclusive. A map of tensions and resonances between the fixed ends of a charged dichotomy better represents the potent politics and epistemologies of embodied, therefore accountable, objectivity.[69]

Although this passage may seem to suggest that Haraway is, in fact, arguing against thinking with dichotomous charts (recall that Haraway also refers to the terms in the chart of transitions as "dichotomies"), we see her as suggesting something else. Haraway claims that "a map of tensions and resonances"—more complex, embodied, and objective than dichotomies—emerges from the chart precisely through the careful practice of situating, that is, orienting one's thinking with the chart in relation to one's positionality and partiality. Here, situated engagements with charts are ultimately about learning how to establish and reflect upon one's point of view through the individual reader's efforts and pleasures in constructing connections between elements. Situatedness, then, is necessary to read feminist diagrams.

Haraway writes that any situated engagement with charting must come to terms with the imbrications of the subject and object of knowledge, what she terms "the apparatus of bodily production."[70] A subject does not maintain a dispassionate, neutral relation to its object of analysis; it affects the object directly. Thus, an object of knowledge is not passive but also has agency that impacts the subject doing the studying. Together, subject and object exist in a coagential, embodied meaning-making process. Feminist theorist and physicist Karen Barad expands on Haraway's apparatus of bodily production with the powerful articulation—based on her practice as a quantum physicist—that we are all entangled with our apparatuses of knowing, but to distinguish self from apparatus or other is to enact what Barad calls an "agential cut," a linguistic and cognitive/epistemological separation that creates a boundary.[71] The positionality of the observer always matters in relation to the apparatus, where both belong to a particular phenomenon—a phenomenon that demands a certain delicacy. In a way, Haraway's chart of transitions creates a series of agential cuts across the informatics of domination. These agential cuts enacted by the chart invite readers to examine their own situatedness—their own points of view—in relation to the informatics of domination and to the various terms that constitute the chart. At the same time, the chart also invites readers to make new agential cuts.

The *Oxford English Dictionary* instructs that the etymology of the word "diagram" is of multiple origins, spanning French, Latin, and Greek, with meanings that include "that which is marked out by lines, a geometrical figure, written list" and "draw, draw out, write in a register, . . . to write."[72] This etymological definition crucially highlights that diagrams span text as well as nonlinguistic visual marks.[73] As such, we situate the chart of transitions within a context of visual art, in addition to theory and scholarship. Across different art historical periods, movements, and styles, an abundance of diagrammatic visual artworks aim to understand power relations, like feminist theory's diagrams. Visual art, however, draws attention to the ways in which diagrams can be composed not only of words but also shapes, lines, and marks via a range of compositional techniques, including drawing, painting, collage, graphic design, and 3D modeling. It is no surprise that Dominguez—an artist—experimented with Haraway's chart, as the diagrammatic is not only a conceptual or intellectual engagement but a process of formalization that is also aesthetic, which we understand as modalities that enable

perceptions of the sensible.[74] In diagrammatic visual art, making and interpreting diagrams requires an aesthetic attunement beyond the linguistic, an awareness that diagrammatic forms make meaning sensible through visual, spatial, and temporal logics, as well as through language.

For instance, in the 1990s, neo-conceptual artist Mark Lombardi drew a series of diagrams in pencil named *Narrative Structures* (1994–2000).[75] Employing link analysis, a technique from network theory that assesses relationships between nodes, Lombardi traced spheres of political power and influence that accumulated in drawings featuring lines with arrows (edges) that made apparent corruptions and abuses of power, including connections between former US president George W. Bush and founder of Al-Qaeda Osama bin Laden (nodes). Importantly, it is not the names of peoples, companies, and governments written on Lombardi's diagrams that tell his stories of power; rather, it is the penciled lines and circles, edges and nodes, that visualize relations and make narratives. Diagrams in visual art can also be three-dimensional. American Artist's sculpture *Veillance Caliper (Annotated)* (2021) uses wood and other materials to spatialize vectors of surveillance and Black resistance.[76] The artwork takes up surveillance studies scholar Simone Browne's "dark sousveillance," a Black mode of not being seen.[77] Dark sousveillance is a diagrammatic concept that troubles computer science engineer Steve Mann's "Veillance Plane," a diagram that maps modes of looking.[78] In his diagram, Mann introduces "sousveillance," which names acts of looking by those in subjugated positions.[79] Artist highlights that "Browne critiques Mann's model of veillance saying that the tactics of remaining 'out of sight' employed by enslaved Africans engineered a truly unique form of sousveillance. A form that she calls 'dark sousveillance' that blows Mann's plane apart, because it requires at least a third dimension to become legible."[80] To inhabit this third dimension, *Veillance Caliper (Annotated)* takes shape as a hybrid of wooden planks and a human-sized caliper, which is an instrument for measuring the dimensions of an object (or here, a subject). On its diagrammatic axes, handwritten labels are featured, including indicators for "dark sousveillance," "racially saturated," "CCTV," and "copwatch," which tag and situate the three-dimensional veillance vectors in relation to Black oppression and resistance. Artist, through sculpture and scale, heightens the embodied encounter with diagrammatics of veillance, in order to make dark sousveillance take up space and be felt. Artworks like *Narrative Structures* and *Veillance Caliper (Annotated)*

establish that thinking and experimenting diagrammatically encourages relations between art and theory, which we actively cultivated in our editorial approach to the chart of transitions.

The Chart as Invitation

We have taken the chart of transitions—open and inviting—as a table of contents for this collection in order to generate a set of new writings. We offered the rows of the chart as prompts to a range of contributors—artists, scholars, curators, and creative writers—welcoming them to explore how the concepts in their given row resonate in the historical present. We gave contributors the opportunity to interpret the relationship between the terms in their row as they saw fit. As a result, some entries periodize, some speculate, and some offer sustained experimentations with form. Some entries interrogate the present through the lens of a single term, while others chart an epistemic shift between the original two terms or examine their dialectical relationship. Other entries introduce a third term that better addresses some aspect of the twenty-first century. Still other entries use the conceptual tension of their row as an occasion to trace the possible, the dystopic, and the desirable. For this collection, the chart exists as both an organizing structure and conceptual architecture to think with, to test, multiply inhabited and transformed by a variety of expressive forms—essays, fictions, poetry, conversations.

To emphasize the malleability of the chart and its co-constitutive outside, we have added additional elements to the structure of our collection. As a formal transition between the physical outside of the book covers and its contents, we commissioned a series of diagrams by Patricia Reed that plots epistemologies of information and explores their relations. We have also multiplied the final row of the chart—"white capitalist patriarchy —— informatics of domination"—seven times and dispersed these entries across the collection. We hope that this intentional proliferation of the final row has the effect of diffusing and refracting white capitalist patriarchy and the informatics of domination throughout the collection, rather than carrying a kind of structural weight at the end of the collection. The volume concludes with an afterword by Donna Haraway, in which she considers her chart of transitions decades after its original conception.

We encourage you to orient yourself within the collection as you would within the chart—to enjoy the pleasures and navigational labors

of flipping through the pages, jumping across entries, tracing unauthorized relations, envisioning the *could be*. Our chart of transitions, in its diagrammatic theorization of the informatics of domination, is activated by your very reading. The chart is useful but nonteleological, informative but nonprescriptive, remaining steadfastly open to uncharted iterations of domination and informatics structuring the present, to future mutations yet to come, and to struggles against the informatics of domination.

Notes

1. Ricardo Dominguez, *Virtual Timeline*, 1997, https://www.thing.net/~rdom/VRtime.html.

2. On Rhizome's ArtBase archive, Dominguez states, "Use the timeline as a launch pad for surfing the web. . . . *VRTimeline* was an attempt to teach myself tables and JavaScript in 1996. It was also an attempt to push a post-(e)-pedagogy that would map our current condition in view of the past and some possible futures." See Ricardo Dominguez, *Virtual Timeline*, 1997, Rhizome / ArtBase, accessed March 10, 2024, https://artbase.rhizome.org/wiki/Q4149.

3. Philosopher Gilles Deleuze theorizes the virtual as "opposed not to the real but to the actual. *The virtual is fully real in so far as it is virtual*. Exactly what Proust said of states of resonance must be said of the virtual: 'Real without being actual, ideal without being abstract.'" Thus, the virtual can be understood as the real potentialities of the actual. See Gilles Deleuze, *Difference and Repetition* (New York: Columbia University Press, 1994), 208. "Rhizomatics" in *Virtual Timeline* also comes from Deleuze. The "rhizome" is a term he developed with psychoanalyst and philosopher Félix Guattari to conceptualize a structure of multiplicities. See Gilles Deleuze and Félix Guattari, "Introduction: Rhizome," in *A Thousand Plateaus: Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1987), 3–25.

4. See Colin Milburn, "The Horrors of Goo," in *Nanovision: Engineering the Future* (Durham, NC: Duke University Press, 2008), 111–60.

5. Ricardo Dominguez, email to Zach Blas, November 6, 2023. Dominguez also revealed that he created variations of *Virtual Timeline*: "The first version I did was part of a CAE [Critical Art Ensemble] and x-communication project where we printed a handmade booklet entitled *Total Disaster* in the middle of a very cold winter in an anarchist village named Dream Time Village . . . in about 1989 I think. . . . Then I made . . . an on-line gesture, was in an early online show that Alex Galloway and Mark America curated back around '97 or so (*HTMLConceptualism*)." On the Rhizome / ArtBase archive, Dominguez identifies yet another version of his chart, which he describes as "presented as a very large wall drawing (1993) under which I would stand, point, and discuss with whomever drifted by and asked a question about it." See Dominguez, *Virtual Timeline*, Rhizome / ArtBase.

6. Donna J. Haraway, "A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s," *Socialist Review*, no. 80 (1985): 82.

7. Haraway, "A Manifesto for Cyborgs" (1985), 79–80.

8. On slave ledgers, see Jessica Marie Johnson, "Markup Bodies: Black [Life] Studies and Slavery [Death] Studies at the Digital Crossroads," *Social Text*, no. 137 (2018): 57–79. On mortality bills, see Jacqueline Wernimont, *Numbered Lives: Life and Death in Quantum Media* (Cambridge, MA: MIT Press, 2018). The chart also evokes a related genealogy of the grid. In the writings of philosopher Michel Foucault, lush diagrammatic language prioritizes the grid as a diagrammatic conceptualization for classification and order: grids of identities, language grids, grids of analysis, grids of kinship, thought grids, perceptual grids, and grids of specification. For instance, in *The History of Sexuality*, vol. 1, Foucault describes "a whole grid of observations regarding sex" coming into discourse during the seventeenth century. Michel Foucault, *The History of Sexuality*, vol. 1: *The Will to Knowledge* (London: Penguin, 1998), 26. See also Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage, 1994); and Michel Foucault, *The Archaeology of Knowledge and the Discourse on Language* (New York: Pantheon, 1972). Art historian Rosalind Krauss explains that the grid is the form that declares "the modernity of [western] modern art" (50). Krauss argues that while the grid is ubiquitous in art of the twentieth century, it appears "nowhere, nowhere at all" (52) in artworks of the previous century. The grid in modern art is viewed as "antinatural, antimimetic, antireal" (50), according to Krauss, as its organization is not one of imitation but of its own "aesthetic decree" (50). Krauss continues, "although the grid is certainly not a story, it *is* a structure, and one, moreover, that allows a contradiction between the values of science and those of spiritualism to maintain themselves within the consciousness of modernism, or rather its unconscious, as something repressed" (55). Rosalind Krauss, "Grids," *October* 9 (Summer 1979): 50–64. In this collection, we do not regard the grid, or other diagrammatic forms, as autonomous from broader histories and contexts (in the West and beyond) of power.

9. Donna J. Haraway, "Universal Vampires in a Donor Culture," in *Modest_Witness@ Second_Millenium.FemaleMan©_Meets_Oncomouse™* (New York: Routledge, 1996), 231.

10. Donna J. Haraway, "The Biopolitics of Postmodern Bodies: Constitutions of Self in Immune System Discourse," in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), 209.

11. In "A Manifesto for Cyborgs," Haraway gives the figure of the cyborg a similar feminist recasting: "The main trouble with cyborgs, of course, is that they are the illegitimate offspring of militarism and patriarchal capitalism, not to mention state socialism. But illegitimate offspring are often exceedingly unfaithful to their origins." See Haraway, "A Manifesto for Cyborgs" (1985), 68.

12. On "compound eyes," see Donna J. Haraway, "Crittercam: Compounding Eyes in Naturecultures," in *When Species Meet* (Minneapolis: University of Minnesota Press, 2008), 249–66; Donna J. Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of the Partial Perspective," *Feminist Studies* 14, no. 3 (Autumn 1988): 538.

13. See Zach Blas, "Informatics of Domination: A Lecture Series Organized and Introduced by Zach Blas," *e-flux Conversations*, January 18, 2017, https://conversations.e-flux.com/t/informatics-of-domination-a-lecture-series-organized-and-introduced-by-zach-blas/5890.

14. On oriented knowledge, see Sara Ahmed, *Queer Phenomenology: Orientations, Objects, Others* (Durham, NC: Duke University Press, 2006); Melody Jue, *Wild Blue Media: Thinking through Seawater* (Durham, NC: Duke University Press, 2020), 1–11, 80–87.

15. Patricia Reed, "Diagramming the Common," April 23, 2014, https://www.aestheticmanagement.com/wp-content/uploads/2014/05/reed_diagramming_the_common.pdf. A lecture with diagrams given at the KunstAllmend (Artistic Commons) Symposium at Dampfzentrale, Bern, Switzerland; quoted with Reed's permission.

16. For an argument about the formative links between labor and robotics, see Jennifer Rhee, *The Robotic Imaginary: The Human and the Price of Dehumanized Labor* (Minneapolis: University of Minnesota Press, 2018).

17. Periodization is yet another way to read the chart of transitions. In *Protocol: How Control Exists after Decentralization*, media theorist Alexander R. Galloway describes this method as "theorizing the present historical moment and . . . offering periodizations to explain its historical trajectory" (3). Citing political philosopher Michael Hardt and feminist theorist Kathy Weeks, Galloway further notes that "'*periodization is an initial technique that opens the path and allows us to gain access to history and historical differences*'" (20). Galloway points out numerous theoretical concepts that can be deemed acts of periodization: Michel Foucault's "disciplinary societies" as the historical shift after sovereignty; Deleuze's "control societies" as that which follows disciplinary societies; media theorist Friedrich Kittler's articulation of the years 1800 and 1900 as marking different "discourse networks"; Marxist economist and theorist Ernest Mandel's "late capitalism" as economic expansion post–World War II; sociologist Manuel Castells's "network society" as signaling transformations wrought by globalization and the internet; and Hardt and political philosopher Antonio Negri's "Empire" as world order at the start of the twenty-first century. Galloway continues, "Periodization theory is a loose art at best and must take into account that, when history changes, it changes slowly and in an overlapping, multilayered way, such that one historical moment may extend well into another, or two moments may happily coexist for decades or longer. For instance, in much of the last hundred years, *all three social phases described earlier [classical, modern, and postmodern eras] existed at the same time* in the United States and elsewhere. To paraphrase William Gibson: The future is already here, but it is not uniformly distributed across all points in society. At best, periodization theory is an analytical mindgame, yet one that breathes life into the structural analyses offered to explain certain tectonic shifts in the foundations of social and political life" (27). See Alexander R. Galloway, *Protocol: How Control Exists after Decentralization* (Cambridge, MA: MIT Press, 2006). Galloway has also created charts of transitions, based on periodization, inspired by Donna Haraway. See "Periodization Map" (27) and "Control Matrix" (114–15) in *Protocol*. With theorist Eugene Thacker, see "the transition from the present day into the future" chart (100–101); Alexander R. Galloway and Eugene Thacker, *The Exploit: A Theory of Networks* (Minneapolis: University of Minnesota Press, 2007). Marxist political theorist and literary scholar Fredric Jameson, an adherent of periodization, puts it plainly: "We cannot not periodize." Fredric Jameson, *A Singular Modernity: Essay on the Ontology of the Present* (London: Verso, 2012), 29. Notably, periodization differs from our editorial approach to the chart of transitions, as it is a methodology that does not adequately account for how the reader's orientation produces meaning.

18. On medium-specific analysis, see N. Katherine Hayes, *Writing Machines* (Cambridge, MA: MIT Press, 2002).

19. Feminist philosopher Amy Allen argues that feminist conceptions of domination popularized during second-wave feminism described male forms of oppression, or "male supremacy," and enabled women to focus on "power-over relations," that is, the domination of men over women. See Amy Allen, "Feminist Perspectives on Power," in *The Stanford Encyclopedia of Philosophy*, October 28, 2021 (substantive revision), https://plato.stanford.edu/archives/fall2022/entries/feminist-power/. Scholar Jennifer Einspahr also explains that second-wave feminists "place patriarchal power relations—the system of male domination and women's subordination—at the centre of analysis" (2). Einspahr highlights that domination is a mode of structural critique, "understanding patriarchy as a structure of male domination" (1). See Jennifer Einspahr, "Structural Domination and Structural Freedom: A Feminist Perspective," *Feminist Review* 94 (2010): 1–19. Red-

stockings, a radical feminist nonprofit organization, further clarifies this feminist definition of domination: "We identify the agents of our oppression as men. Male supremacy is the oldest, most basic form of domination." See Redstockings Collective, "Redstockings Manifesto," *Redstockings*, July 7, 1969, https://www.redstockings.org/index.php/rs-manifesto. Notably, for much of second-wave feminist thought, the category of "woman" only pertained to cisgender women. Einspahr points out that with the emergence of third-wave feminism in the 1990s, the appeal of domination as a term of critique waned, citing a growing disinterest in structural critiques of power: "When power relations are understood to function in subtle and insidious ways, the usefulness of such a blunt concept of 'domination' is called into doubt." Einspahr, "Structural Domination and Structural Freedom," 2.

20. Evelyn Fox Keller, "Feminism and Science," *Feminist Theory* 7, no. 3 (Spring 1982): 589–602. Similar to other second-wave feminists, Keller utilizes essentialist formulations of gender. She defines masculinity as a "gender trait" (595) and posits its cultural definition as "that which can never appear feminine" (595). As such, the qualities of masculinity can only be found in cisgender men, and this particular gender trait supports an "impulse towards domination" (596), further exacerbated by cultural understandings of nature as feminine.

21. Sandra Harding, *The Science Question in Feminism* (Ithaca, NY: Cornell University Press, 1986), 80.

22. See Andrea Dworkin, *Women Hating* (New York: E. P. Dutton, 1974); and Robin Ruth Linden, Darlene R. Pagano, Diana E. H. Russell, and Susan Leigh Star, eds., *Against Sadomasochism: A Radical Feminist Analysis* (San Francisco: Frog in the Well, 1982).

23. See Gayle S. Rubin, "Thinking Sex: Notes for a Radical Theory of the Politics of Sexuality," in *The Gay and Lesbian Studies Reader*, ed. Henry Abelove, Michele Aina Barale, and David M. Halperin (New York: Routledge, 1993), 31–79. Rubin cofounded a lesbian feminist BDSM organization named Samois, which takes its name from Samois-sur-Seine, the estate of Anne-Marie, who is a lesbian dominatrix in the novel *The Story of O* (1954). Samois was located in San Francisco and active between 1978 and 1983.

24. See Zach Blas, *SANCTUM*, 2018, https://zachblas.info/works/sanctum/. The immersive media installation "identifies a distorted reimagining of the power dynamics of BDSM at the heart of contemporary surveillance: an opulent display of desire and capture, exposure and punishment, dominance and submission."

25. See Patricia Hill Collins, *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment* (New York: Routledge, 1990).

26. *Oxford English Dictionary*, s.v. "information," accessed March 10, 2024, https://www.oed.com/dictionary/information_n.

27. As scholar of literature and science Bruce Clarke helpfully historicizes, "The 'decoding' of DNA happened to coincide historically with the unfolding of information theory, and the metaphor of 'genetic information' promoted the conviction that information was the skeleton key with which to open up the remaining secrets of matter, energy, and life." Bruce Clarke, "Information," in *Critical Terms for Media Studies*, ed. W. J. T. Mitchell and Mark B. N. Hansen (Chicago: University of Chicago Press, 2010), 137.

28. School of Informatics, "What Is Informatics?," University of Edinburgh, accessed March 10, 2024, https://www.ed.ac.uk/sites/default/files/atoms/files//what20is20informatics.pdf.

29. School of Informatics, "What Is Informatics?"

30. See Evgeny Morozov, *To Save Everything, Click Here: The Folly of Technological Solutionism* (New York: PublicAffairs, 2013).

31. Information School, "Informatics," University of Washington, accessed March 10, 2024, https://ischool.uw.edu/programs/informatics.

32. See N. Katherine Hayles, *How We Think: Digital Media and Contemporary Technogenesis* (Chicago: University of Chicago Press, 2012).

33. N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 29. This definition bypasses the sense of automation present in the French and German definitions of informatics through folding in an accounting of social forces.

34. Hayles, *How We Became Posthuman*, 313n4.

35. In Haraway's 1988 essay "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," she writes, "'White Capitalist Patriarchy' (how may we name this scandalous Thing?)" Published three years after "A Manifesto for Cyborgs," "Situated Knowledges" exhibits Haraway continuing to think with white capitalist patriarchy, questioning how to name it after she had already reconceptualized it as the informatics of domination. This instance further illustrates that the informatics of domination is not simply that which comes after white capitalist patriarchy. Donna J. Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), 197.

36. For example, see Ruha Benjamin, *Race after Technology: Abolitionist Tools for the New Jim Code* (New York: Polity Press, 2019); and Wendy Hui Kyong Chun, "Race and/as Technology; or, How to Do Things with Race," *Camera Obscura* 24, no. 1 (2009): 7–35.

37. bell hooks, *The Will to Change: Men, Masculinity, and Love* (New York: Washington Square Press, 2004), 17.

38. See Kimberlé Crenshaw, "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics," *University of Chicago Legal Forum* 1 (1989): 139–67; and Kimberlé Crenshaw, "Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color," *Stanford Law Review* 43, no. 6 (July 1991): 1241–99.

39. Patricia Hill Collins, *Intersectionality as Critical Social Theory* (Durham, NC: Duke University Press, 2019), 239.

40. Collins, *Intersectionality as Critical Social Theory*, 239.

41. The enmeshment of white capitalist patriarchy with informatics of domination, as well as with wider ranges of interlocking structures of oppression, is reflected throughout the entries, including the seven entries titled "White Capitalist Patriarchy —— Informatics of Domination."

42. Haraway, "A Manifesto for Cyborgs," (1985), 83.

43. The "common move" Haraway describes conceives of translation as a totalizing and automatable process rather than an artistic and poetic practice. While some scientists are cautious about the incommensurability of datasets, given the nonfungibility of data across different contexts, the fantasy of code as a universal language broadly persists. For example, the School of Information Sciences at the University of Illinois at Urbana-Champaign writes that informatics, itself a science of coding, "uses computation as a

universal tool to solve problems in other fields." School of Information Sciences, "What Is Informatics?" University of Illinois at Urbana-Champaign, accessed March 10, 2024, https://informatics.ischool.illinois.edu/home/what-is-informatics/.

44. The tension between translatability and untranslatability of code in Haraway's formulation relates to debates on the uncomputable. Mathematician and computer scientist Alan Turing's theorization of computable numbers is a popular—if not the dominant—model for defining computability in the twentieth century. According to Turing, "The 'computable' numbers may be described briefly as the real numbers whose expressions as a decimal are calculable by finite means." A. M. Turing, "On Computer Numbers, with an Application to the Entscheidungsproblem," *Proceedings of the London Mathematical Society* 2, no. 42 (1936): 230. Pointing to the limits of Turing's theory of computability, media scholar Jacob Gaboury argues that queerness, when thought of as a methodology to engage the computational, is external to it: "we might identify a queer computing—outside the imperative of successful communication. It is those forms of computation that fail, break down, recur, and run forever, and models of computing that are outside of or beyond so-called 'universal' Turing computation—that is, those processes which disappear or recede from computational forms of knowing." Jacob Gaboury, "On Uncomputable Numbers: The Origins of Queer Computing," *Media-N* 9, no. 2 (Summer 2013), https://median.newmediacaucus.org/caa-conference-edition-2013/on-uncomputable-numbers-the-origins-of-a-queer-computing/. In a blog post discussing the work of media philosopher Luciana Parisi, Alexander R. Galloway explains her position on the uncomputable: "Part of the story involves *incorporating* the indiscernible and the indeterminate into the very heart of computation. According to Parisi, 'error, indeterminacy, randomness, and unknowns in general have become part of technoscientific knowledge and the reasoning of machines.' Indeed part of the history of computation is the history of the uncomputable being colonized by the computable." Alexander R. Galloway, "Uncomputer," NYU Department of Media, Culture, and Communication, February 9, 2020, http://cultureandcommunication.org/galloway/uncomputer. See also Luciana Parisi, "Reprogramming Decisionism," *e-flux Journal* 85 (October 2017), https://www.e-flux.com/journal/85/155472/reprogramming-decisionism/; Luciana Parisi, *Contagious Architecture: Computation, Aesthetics, and Space* (Cambridge, MA: MIT Press, 2022); and M. Beatrice Fazi, *Contingent Computation: Abstraction, Experience, and Indeterminacy in Computational Aesthetics* (Lanham, MD: Rowman and Littlefield, 2018).

45. Black codes refer to US laws passed after 1865 that restricted Black people's mobility, freedoms, rights, and economic and political participation; these laws were extensions of the white supremacist oppression enacted by slave codes.

46. Safiya Noble, Jessica Marie Johnson, and Mark Anthony Neal, "Week 3: Race and Black Codes (Main Thread)," CCS Working Group, January 2018, https://wg.criticalcodestudies.com/index.php?p=/discussion/42/week-3-race-and-black-codes-main-thread.

47. Benjamin, *Race after Technology*, 7.

48. See Martine Syms, *Notes on Gesture*, 2015, video, 10:30; Gloria Anzaldúa, "Haciendo caras, una entrada," in *Making Face, Making Soul / Haciendo Caras: Creative and Critical Perspectives by Feminists of Color*, ed. Gloria Anzaldúa (San Francisco: Aunt Lute, 1990), xv; Joyce D. Hammond, "Hawaiian Flag Quilts: Multivalent Symbols of a Hawaiian Quilt Tradition," *Hawaiian Journal of History* 27 (1993): 1–26.

49. micha cárdenas, *Poetic Operations: Trans of Color Art in Digital Media* (Durham, NC: Duke University Press, 2022), 7. Clarifying algorithmic analysis's relation to codes and coding, cárdenas writes, "When I speak of algorithms, I am talking about code"

(7). cárdenas considers her algorithmic analysis to be an addition to both Crenshaw's intersectionality and queer and decolonial studies scholar Jasbir Puar's extension of intersectionality through Deleuzian assemblage theory. See Jasbir K. Puar, "'I Would Rather Be a Cyborg Than a Goddess': Becoming-Intersectional in Assemblage Theory," *philoSOPHIA: A Journal of Continental Feminism* 2, no. 1 (2012): 49–66.

50. *transCoder* is part of Blas's *Queer Technologies* series. See Zach Blas, *Queer Technologies* (2008–12), https://zachblas.info/works/queer-technologies/.

51. Sarah Elwood, "Digital Geographies, Feminist Relationality, Black and Queer Code Studies: Thriving Otherwise," *Progress in Human Geography* 45, no. 2 (2020): 212.

52. This question resonates with W. E. B. Du Bois's famous question examining the African American experience, "How does it feel to be a problem?" ("Of Our Spiritual Strivings," in *The Souls of Black Folk*, Project Gutenberg, [1903] 1996, https://www.gutenberg.org/files/408/408-h/408-h.htm).

53. We acknowledge another genealogy of diagrammatic thought, emerging from Foucault and Deleuze, that addresses power relations. Deleuze states that "every society has its diagram(s)" (35) and qualifies this with a definition of the diagram: "a display of relations between forces which constitute power" (36). Gilles Deleuze, *Foucault* (Minneapolis: University of Minnesota Press, 1986). Foucault supports this claim when he theorizes the Panopticon as a diagram inherent to disciplinary societies. When theorizing the Panopticon, Foucault introduces the diagram specifically in relation to power: "it is the diagram of a mechanism of power [discipline] reduced to its ideal form . . . not a dream building but a diagram" (205). Michel Foucault, *Discipline and Punish: The Birth of the Prison* (New York: Vintage, 1995). Foucault and Deleuze also theorize the diagram in relation to resistance. Foucault writes that there are "points of resistance everywhere in the power network" (95), "matrices of transformation" (99). Foucault, *The History of Sexuality*. Deleuze expands Foucault's sense of diagrammatic resistance, further defining the diagram as unstable because it is constituted by an "irreducible outside"—forces not captured by the diagram—that bears directly on the formation of the diagram itself. Deleuze elaborates further on the diagram in relation to force, the outside, and resistance: "The diagram, as the fixed form of a set of relations between forces, never exhausts force, which can enter into other relations and compositions. The diagram stems from the outside but the outside does not merge with any diagram, and continues instead to 'draw' new ones. In this way the outside is always an opening on to a future: nothing ends, since nothing has begun, but everything is transformed. In this sense force displays potentiality with respect to the diagram containing it, or possesses a third power which presents itself as the possibility of 'resistance.' [. . . Resistance is] 'points, knots or focuses' which act in turn on the strata, but in such a way as to make change possible. Moreover, the final word on power is that *resistance comes first*, or to the extent that power relations operate completely within the diagram, while resistances necessarily operate in a direct relation with the outside from which the diagrams emerge. This means that a social field offers more resistance than strategies, and the thought of the outside is a thought of resistance." Deleuze, *Foucault*, 89–90.

54. The chart's evocation of openness and change resonates with what Uncertain Commons, a group of scholars, mediaphiles, and activists, calls "affirmative speculation," the proliferation of possible futurities, which can channel potential for worlding otherwise. See Uncertain Commons, *Speculate This!* (Durham, NC: Duke University Press, 2013).

55. Reed, "Diagramming the Common."

56. See Whitney Battle-Baptiste and Britt Rusert, eds., *W. E. B. Du Bois's Data Portraits Visualizing Black America* (New York: Princeton Architectural Press, 2018).

57. Stop LAPD Spying Coalition and Free Radicals, "The Algorithmic Ecology: An Abolitionist Tool for Organizing against Algorithms," *Medium*, March 2, 2020, https://stoplapdspying.medium.com/the-algorithmic-ecology-an-abolitionist-tool-for-organizing-against-algorithms-14fcbd0e64d0.

58. Sam McBean, "Feminist Diagrams," *Feminist Theory* 22, no. 2 (April 2021): 223.

59. See Ti-Grace Atkinson, *Amazon Odyssey* (New York: Links, 1974). Anzaldúa's diagrammatic drawings are available for viewing in "Gloria Evangelina Anzaldúa Papers," part of the Nettie Lee Benson Latin American Collection at the University of Texas at Austin. See Shulamith Firestone, *The Dialectic of Sex: The Case for a Feminist Revolution* (London: Verso, 2015). We add to this list of feminist diagrams Catherine D'Ignazio and Lauren F. Klein's table that juxtaposes concepts of data ethics, which secure power, and concepts of data justice, which challenge power. See Catherine D'Ignazio and Lauren F. Klein, *Data Feminism* (Cambridge, MA: MIT Press, 2020), 60.

60. McBean, "Feminist Diagrams," 210, 219–20.

61. Haraway, "A Manifesto for Cyborgs" (1985), 82.

62. In the 1991 reprinting of "A Cyborg Manifesto" in *Simians, Cyborgs, and Women*, the chart splits across two pages, appearing on pp. 161–62. In "The Biopolitics of Postmodern Bodies," entries are added, deleted, and edited to the chart: "Work —— Text," "Mimesis —— Play of Signifiers," "Individual —— Replicon," and "Colonialism —— Transnational Capitalism" are new; "Science management in home/factory —— Global factory/Electronic cottage," "Family/Market/Factory —— Women in the Integrated Circuit," "Family wage —— Comparable Worth," and "Public/Private —— Cyborg citizenship" have been removed; and other entries have been adjusted. For instance, "Organism —— Biotic component, code" now contains "code," "Sex —— Surrogacy" is a reconfiguration of "Sex —— Genetic Engineering," and "Decadence —— Obsolescence" no longer includes its literary interlocutors *Magic Mountain* and *Future Shock*. This chart appears on pp. 209–10 in *Simians, Cyborgs, and Women*. Given that this altered presentation of the chart appears in a publication that is not "A Manifesto for Cyborgs," we did not include its additional entries and edits in our editorial approach to working with the chart for this publication. We committed to staying with the chart as presented in the manifesto, which explicitly frames the chart of transitions through the informatics of domination.

63. "A Manifesto for Cyborgs" has been widely reprinted in journals and edited collections, as well as translated and printed in numerous languages. Many of these publications display the chart of transitions like the original 1985 layout on a single page, as in *Australian Feminist Studies* 4 (Autumn 1987), 16, or the chart from *Simians, Cyborgs, and Women*, which spans two pages, as in Linda J. Nicholson, ed., *Feminism/Postmodernism* (New York: Routledge, 1990), 203–4; and *The Haraway Reader* (New York: Routledge, 2004), 20–21.

64. On limitations of graph theory in network science, see Galloway and Thacker, *The Exploit*, 33–34. Media theorist Nicole Starosielski points out that graph theory leaves behind materiality in *The Undersea Network* (Durham, NC: Duke University Press, 2015), xiii–xiv.

65. Ulises Ali Mejias, *Off the Network: Disrupting the Digital World* (Minneapolis: University of Minnesota Press, 2013), 153.

66. For example, in Ti-Grace Atkinson's diagrams, geologic strata-like abstractions portray patriarchal domination and oppression as a sedimentary weight sitting on the oppressed. Yet both oppressor and oppressed are composed of multiple strata—dotted,

hashed, filled with wavy lines—that encompass factions that are pro-rebellion, antirebellion, and neutral. It takes an environmentally inflected point of reference to interpret Atkinson's diagrams, where gravity (and power) flow from top to bottom. See "Tactical-Strategy Chart" #1–22 in Atkinson, *Amazon Odyssey*, 161–89.

67. Haraway, "Situated Knowledges" (1991), 189.

68. Haraway, "Situated Knowledges" (1991), 195.

69. Haraway, "Situated Knowledges" (1991), 194.

70. Haraway, "Situated Knowledges" (1991), 197–201.

71. Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC: Duke University Press, 2007), 337.

72. *Oxford English Dictionary*, s.v. "diagram," accessed March 10, 2024, https://www.oed.com/dictionary/diagram_n?tab=etymology#6917294.

73. McBean's genealogy of feminist diagrams also reflects this definition.

74. Our approach to aesthetics stems from Jacques Rancière, who theorizes an aesthetic dimension to politics. With the introduction of his concept "the distribution of sensible," Rancière explains that, in any given era or regime, there is a particular ordering of what can be sensed and perceived. This ordering, or distribution, of the sensible is aesthetic because it demarcates what can be sensually experienced. For Rancière, this means that aesthetics are inextricable from politics, as social orders, political systems, and worlds emerge out of distributions of the sensible. Politics, then, can be understood as efforts to reconfigure (aesthetic) distributions of the sensible. See Jacques Rancière, *The Politics of Aesthetics* (London: Bloomsbury Academic, 2006). Similarly, Thomas Keenan and Eyal Weizman have defined "aesthetic operations" as "the way and order by which things and events appear to us." See Thomas Keenan and Eyal Weizman, *Mengele's Skull: The Advent of a Forensic Aesthetics* (Berlin: Sternberg Press/Portikus, 2012), 23.

75. See Robert Hobbs and Mark Lombardi, *Mark Lombardi: Global Networks* (New York: Independent Curators International, 2003).

76. American Artist, *Veillance Caliper (Annotated)*, 2021, https://americanartist.us/works/veillance-caliper-annotated.

77. Simone Browne, *Dark Matters: On the Surveillance of Blackness* (Durham, NC: Duke University Press, 2015), 21.

78. Steve Mann, "Veillance and Reciprocal Transparency: Surveillance versus Sousveillance, AR Glass, Lifelogging and Wearable Computing," *2013 IEEE International Symposium on Technology and Society (ISTAS)* (Toronto: IEEE, 2013), 6.

79. Mann, "Veillance and Reciprocal Transparency," 3.

80. American Artist (@a_____rtist), Instagram post, June 25, 2021, https://www.instagram.com/a_____rtist/p/CQjPZr2lQ7O/?img_index=6.