

Modality

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ABSTRACT: Modal logics support philosophy, providing means to organise information, and to think and act in response to abstract concepts and to real conditions. In its organisation, the modal is generative of the ethics of any given system. Feminist new materialist practices require us to consider ethics when generated by technological rather than theological modalities.

KEY WORDS: ethics, modality, technology

*“What’s that Dog Dreaming for?”
(dialogue, When the Dogs Talked 2014. Dir. Povinelli)*

Why do modes and their modalities matter? This is a central question for all practitioners and theorists engaged in concept and method innovation, in that modal concepts describe the organisation of matter. Modalities contribute to the organisation and regulation of the agency of all things. They assist in defining political subjectivity, narrativising the natural world, and conditioning cultural change. It follows then, that the type of modal concept used in any arrangement has implications for not only the descriptions of daily life, but is in fact a contributing determinant of the laws, doctrines, and mores of all systems and structures of life. Modalities are how humans describe, and are prescribed, by our synthesized experiences. Modalities are the ways in which communities respond to the profound and the vernacular; to questions such as: How did this happen?, Why did this happen?, How should I live?, What should we do?, Why did he do that?, How do we go forwards?, What could it be like? In other words, the modality is expressive of the epistemology of a community—the type and timing of its knowledge.

Modal concepts express the conditions and compositions of situations in terms of the existing and/or the possible. Using a modal concept will allow for a

description of the “what ifs” of life, as well as describing the “this is it” aspect of the existing material conditions of a society, or of a conceptual model of something. It is important to embrace this twofold aspect of modal conceptualisation when considering any system or entity; of speculation and of rationalism. This dual characteristic can be used in analysis of the power driving the modality or the modal conglomerate—whether it is organic or non-organic; a thing or system organised in terms of its biology (Margulis and Sagan 1986); technology (Hayles 2012; Poser 2013; Stiegler 1998, 2008, 2010); industry and its resourcing (Guattari 1995; Hui 2016); institutions (Althusser 2006; Foucault 1984; Braidotti 2006); genealogies (Tamboukou 2016; Foucault 1984; Scott 1991; Van der Tuin 2015); communities (Haraway 1997; Deleuze and Guattari 1987; Fraser 1990; Chakrabarty 2000); pedagogies (Connell 2007; Stengers 1997); the dynamic modalities of energy (Colebrook 2014; Guattari 2012; Weiner 2005; Yusoff 2013); and so on.

Modes are how different domains describe the means, manner, and methods that come to constitute matter;¹ and it follows that modalities are how that matter (of whichever disciplinary field of making or thinking) comes to be described, organised, or formed into a model. Modal concepts are when we refer to the *measure* and the *mood* of the cognition, perception, intuition of specific models of matter; that is, in both concrete and affective terms of constitution. While modes and modalities are a focus of study in areas concerning linguistics and probability (see Hintikka 1968; Leiss and Abraham 2014), or of chemistry and biology (Myers 2015), the use of the modal in relation to the types of ethical domains it constructs is lesser noted. In relation to the current algorithmic condition, and the forms of ethical codes being generated, the modal is defined as: “a qualifier for the quantitative measurement of contingency and necessity stated by systems of propositions, laws, predications, or a particular knowledge model” (Colman et al. 2018: 50). Isabelle Stengers defines ethics from the point of view of its modal framing of knowledge: “ethics, in political matters, is judged less by the types of solutions that are proposed for problems than by the way in which the positioning of the problem and the solutions proposed situate and involve those to whom they are addressed” (1997: 221).

The modal forms a necessary part of the type of contract that is generative of the ethics of any given system. In forms of cartographic, domain, and infrastructural mapping,² the different modalities used for the action render practices of making, thinking, and expressing visible, intuitable, cognisant, audible. Mapping work is generative of and also reflective of the ethical modality of its community and its culture. Modal mapping (of any form) is temporally contingent on its technological platforms and the generational practices of users (which are highly visible across institutional practices), and this method is what is generative of the kind of *ethos*, or ethical framework, by and through which the practice operates. Being aware, knowing, and or even sensing the modalities that contribute to the

creation or formation of something is no guarantee that the ethical conditions generated are “right” or “wrong”; this is a moralist position that in itself enables inequitable, opaque practices that may be limited in their applicability. Rather, it is in being critically attuned to the conditions that the methods for a modal mapping are made, that a more deterministic ethical discourse can be formed. Attention by theory to the material converges in practices attendant to the legal, mediated, and agential, directs thinkers to consider the construction of “reality” and the resultant forms of knowledge generated (cf. Braidotti 2006; Haraway 1998, 2016; Hayles 2010, 2012, 2017; Kay 2000). The pressing question generated by the contemporary *algorithmic condition* is twofold: What kinds of knowledge are being generated and what is the ethos of that knowledge; what is the ethical modality?

In mapping the modalities (Table 1) engaged in the production of forms of knowledge by their modal processes (deontic; virtual; epistemic; logical; semiotic;

Table 1: Fragment of a Modalities Map

Modality	Process/method	Practitioners	Artefacts
Affective	Negative; positive; synergistic	Deleuze; Gatens; Lloyd; Spinoza	Ethics; forces (social, industrial political-ecologies)
Agential	Diffraction; decolonialisation; transformation	Alaimo; Barad; Bennett; Ingold; Povinelli	Archive; biopolitical; feminism; indigenous knowledge; industrial systems
Analytic	Absolutism; correlationism; evolutionary theory; linguistics; semiotics	Akerman; Bourgeois; Copernicus; De Saussure; Hjemlev; Kant; Kepler; Pasolini; Pierce	Arts; astrophysics; film; literature; philosophy; physics; semiology
Aristotelian	Hylomorphism; narratology	Storytellers of all kinds. De Beauvoir; Haraway; Stengers; Woolf	Arts; philosophy; sciences; Netflix
Auditory (see imagination)			
Biological	Autopoeisis; agricultural; domestic labour; militarism; demographics	Bateson; Haraway; Margulis; Varela; Weiner	Agriculture; cybernetics; feminism; health; military
Care	Affectivity; bio-ecology; nursing; vulnerability	Ahmed; Cubitt; Foucault; Nightingale; Puig de la Bellacasa; Seacole; Tamboukou	Anthropology; archives; eco-materialism; health; media; medical
Cognitive	Comparative; pedagogic conditions; memory functions	Clark and Chalmers; Stiegler	Education; psychiatry
Deontic	Values; the ethical realm; performative; meditation, cognitive, location; the divine	Althusser; cults; religious, spiritual groups	Icons; incantation; indigenous knowledge; performance; prayer; sites; symbols; relics

Modality	Process/method	Practitioners	Artefacts
Epistemic	Archaeology; communication media; genealogy; subjectivity; theology	Bateson; Braidotti; Ernst; Foucault; Guattari; Lyotard; Sedgwick; Stengers	Anthropology; ecosystems; education; information; digital systems; genocides; legal systems; religious objects and practices; queer
Ethical	Iterative, action-points; deontic	Arendt; Spinoza; Hodge; O'Donnell	Political systems
Feminist	Active-points; culturing; intersectionality; stand-points	Åsberg; Braidotti; Crenshaw; Haraway; Harding; Hayles; Woolf	Affirmation; positivity; political structures
Genealogical	Confessional; event; history; temporality	De Lauretis; Foucault; Nietzsche; Povinelli; Scott; Tamboukou; Van Der Tuin	Sites; symbols; territory
Hypothetic	Cognition loading; memory; life forms; plasticity	Leibniz; Bachelard; Haraway; Malabou; Ndalians; Sagan	Compossible worlds; objects
Imagination	Audition; resistance, worlding	Borges; Braidotti; Deleuze; Haraway; MacCormack; Palmer	Activism, chthulocene; images; food; love; sound; magic; music; occultism
Informational	Code; data; math; phase; proprioceptual; sensorial	Hayles; Lyotard; Serres; Simondon; Shannon; Turing; Weiner; Zuboff	Algorithms; automation; bionics; bodies; capitalism; cybernetics; habits; laws; rituals
Logical	Propositions; math; quantitative; systems	Latour; Lyotard; Malabou; Newton	Algorithms; anthropocene; calculus; physics; plasticity
Management	Change; duration; economic processes; transformation	Augustine; Bergson; Guattari; Kristeva	Community; culture; ethics; governance institutions; heritage; regulations; social mores; wealth distribution
Materialist	Encounters; diffraction; metaphysics	Althusser; Bergson; Cubitt; Deleuze; Van der Tuin; Varda	Bodies; conglomerates
Ontological	States of affairs / worlds of ideas	Arendt; Braidotti; Povinelli	Conditions; nomadism; zoe
Pedagogic	Action-encounters; cognitive; ethnographic; epistemic; ontic	Freire; De Freitas; Haraway; Hickey-Moody; Revelles-Benavente; Spivak; Truman	Care; contracts; collaboration; creativity; cultural objects; decolonisation; literacies; political systems; renegotiation; translation

Modality	Process/method	Practitioners	Artefacts
Quantum	Clinamen; contingency; diffraction; energy; punctum; liminality; metaphysics	Barad; Bohr; Bühlmann; Curie; Serres; Schrödinger; Planck; Plotnitsky	Actions; behaviours; literacy; measurements; physics; time
Sensory	Experiential; phenomenological	Ahmed; Merleau-Ponty; Deleuze	Immersion; plastic and media arts (photography; film); political subjectivities
Sexual	Care; rituals; stimulation	Colebrook; Foucault; Lyotard; Simondon; Stanford	Hedonism; pleasure; procreation; psychology; schizoanalysis; technology
Speculative	Myths; legends; fictioning; futures; histories; OOO; science; SF	Haraway; Harman; Kay; Palmer; Shaviro	Art, biology; financial, film; genetics; legal; literature; media; mythology; political; vernacular
Spiritual (see deontic)			
Synthetic	AI; cyberneticism; modellisation	Haraway; Guattari; Simondon; Turing	Automation; bionics; eco-aesthetics; robotics
Technological; technicity	Forces; feminism; memory; physics; symbiosis	Cassirer; Chun; Haraway; Hayles; Hjorth; Lovelace; Margulis; Poser; Simondon; Spinoza; Stiegler	Apparatus; archive; biology; cyberfeminism; engineering; militarism
Temporal	Anticipation; duration; longing; measurements; movement; pain	Bergson; Grosz; Hegel; Heidegger; Kristeva; Malabou	Clocks; devices; genealogy; history; sets of values

technologic, etc.), we can discern how the ethics of the informatics-aesthetic of material worlds are activated by various processes and methods, and consider the kinds of objects, artefacts, and residues they generate. The use of modal methods for analysis of data sets and of cultural objects prevails in cultural studies and science critiques, speculatively assisting in mapping out the technological, processual, material, ethical, and discursive changes that a range of conditions bring to different communities (Braidotti 2006; Chun 2011; Thacker 2015; Stengers 2000). Through specific communities' predication of gendered roles; through the design of infrastructures of social behaviour, in the practices of health care and education; through making cultural forms such as art or philosophy; and through the type of forms and languages employed—how the hierarchies of western normativity that create and maintain these domains engage modalities can be understood as knowledge generators. Being attentive to the modalities of an argument or practice (in their scientific or aesthetic forms) enables apprehension of the agency of

the infrastructure in which matter is identified and engaged. The map allows us to see how knowledge (reality/truth/values) are generated, but also engages us in imagining ethical processes.

Post-structuralist feminist theory that critiques the predication of gender ability and “biological role” obligations (for example Young 1980; Butler 1990), refers us to the *modal gendering of semantics, iteration, and legalities* of how an action, style of thinking, or direction of practice are composed by modes of action, questioning if they are exclusive and biased toward some parts of a community. Feminist modes that employ an intersectional critique (Crenshaw 1989) do so to examine the synergistic effects of multiple modalities that are often activated by and through the cultural-political definitions of specific bodies. Communities and their cultural, scientific, and governance institutions engage all modalities—whether or not they connect with all of them. Non- or partial engagement in any mode or modal operation provides its own position, for example in the instance of legal frameworks that enable discrimination against different people, or educational or social communities that exclude certain groups for historical reasons. Differentiated by their modal processes, commonly identified as performative, affective, intensive (etc.), consecutive, and/or transversal, modal descriptors are also what signify and activate domains of meaning, ethical processes, and thus histories of communities, individuals, and their infrastructures.

Mapping the various process that come to define bodies, their internal systems and constitutive infrastructures (organic and/or otherwise) by their modal construction may assist in exposing bias and identifying the social, political, and cultural consequences of the organisation and structure of different types of informational systems. But in addition to identification—which may rely on predicated historical modes—and “classifixation” (Van der Tuin 2015: 28), mapping modalities enable active-points (for exchanges, break, transformations, revolutions!) to be generated—in qualitative and quantitative terms. Active-points are where ethical considerations emerge, evidenced in legal, cultural, social, and political adjustments, visible in changes over time, and charted in shifts in modal processes. In imagining, in fictioning, in describing, testing, recounting, visualising, auditing, performing, making, writing, speaking, intervening in, or actioning matter, we engage in modal practices, bringing concepts, fantasies, ideals to life. The modal is a part of worldmaking. The consequences of modal practices are not always part of the project envisaged. Describing the process of improvising dialogue with the resident actors for a scene in the film *Windjarrameru: The Stealing C*nt\$* (2015), director Elizabeth Povinelli calls the process one of situating the “actual materialities of the land,” from which the discussion about the future (speculation) coupled with the facts of the radiated toxic land (logic), enables a manifestation of a modal sovereignty (2016: 82–91).

The modal sets up the ethical relation between the model and its use. In new materialist practices such as Povinelli's, this is an important point; the question of which type of modality being used, is what determines the ethical parameters in any given system of practice. Shifts in the perception of matter and the conditioning of matter into forms and topologies thus occur when the agency of the information of that matter changes. In the organisation of a community, for example, the focus tends to be reactively situated around the "content," and/or its technological platform (for example, the tactics used by the climate action movement, Extinction Rebellion). Through critical engagement with the modal construction of something, it is possible that the modality of delivery of knowledge can be achieved with a more considered ethos.

Ethical transformation involves not only a change of consciousness but also material social changes. Being attendant to the modalities of behaviour, practice, and expression highlights the political uses of things. A mode of being cannot just be limited to one modality—the engagement of a singular denotes a "normative" manifestation of matter—as in the case of Povinelli's discussion of indigenous Australian deontic modalities. Cultural "norms" shift and change over time, and specific events occurring in generational and infrastructural timespans at specific sites must be factored into the body of knowledge—generative of a multi-modal condition. When Karen Barad notes that "ethics is not a concern we add to the questions of matter, but rather is the very nature of what it means to matter" (Barad in Dolphijn and Van der Tuin 2012: 70), she is expressing the modal "what it means" as agential and material, productive of the political-cultural realm. In methodological terms, to engage a critique of this realm could be at the level of comparative methods, but also needs to address the dualistic, and often contradictory nature of multiple systems logics in play.

Feminist practices across the generations focus on critically examining how modal concepts come to *position* and *situate* domains of knowledge that predicate, control, and thus regulate life forms (Braidotti 2010; Haraway 1991; Haraway 2016). These critiques investigate colonial and epistemic regimes of control, and question the uses of technology to generate and control information (Hayles 1993). Modal concepts are important for feminist thinkers as they refer to the domains of possibility, probability, justification, futurity, and transformation. Second-wave feminist philosophy attentive to the organisation of time in societies critique the *modal patriarchal logic* behind gendered work schedules (Kristeva 1981). The future, as speculative, deontic, and Aristotelian modalities, cannot be all that is promised today, subject as it is to contingency, and the politics of management of resources (see Auge 2014; Beradi 2011). Reading Hegel, Catherine Malabou describes the future as a temporal modality that is contingent on "what is coming," as an "anticipatory structure operating within subjectivity itself." (2005 [1996]: 13) In their attention to the positioning of modalities of difference relating to ability,

obligation, possibility, feminist positions offer a critique of modalities and how they are enacted through different modes of control of subjectivities and resources. The critical work of Félix Guattari (1995, 2013) highlights how collective and individual subjectivities are modelled from a range of deleterious management, technological, and modalities. The work of Rosi Braidotti implores these same subjects to resist their modelisation and find affirmative ways to resist the affects of negative political organisations. Braidotti's ethical modality is one that insists on not just recounting what is (the schizo-modality, as in Deleuze and Guattari 1987), but offers an affirmative modality, a quest for joyful *zoe* (Braidotti 2006, 2010).

What kind of content is being legally allowed is one aspect of discussion of the legality of drugs for example (see Stengers 1997: 221), or, using a critique of a deontic modality, Claire Colebrook questions "are there different modalities of sexual differentiation due to the specificity of different bodies?" (Colebrook 2000: 90). Highlighting the notion of difference—as the *modal feminist position* made visible through feminist actions—second and third-wave feminist theory focusses on the bio-social-techno-scientific changes in the twentieth century and how they enable shifts in the conceptions of the ethics of the material modalities of the gendering of bodies (cf. Preciado 2013; van der Tuin 2015). The problem of articulating the modes of difference is in some part addressed by critical attention to the required "material-semiotic" that Haraway (1988) and Hayles (2010) respectively detail in terms of the situation of a body, in its encounter, connection, and modification through other bodies: biological, technological, nonhuman, etc. In such critiques of the modal logics of an "obligation" of a body (to the conditions of the law), the affects of "historical location" (Braidotti 2006: 130) as a predication of the modalities of body-types are questioned. In addressing the various dispositions of what constitutes "normative" knowledge (Colebrook 2012), second- and third-wave feminists are attentive to the modal conditions that direct bodies, such as the analytic and the deontic. For example, as an expression of the logic of what binds (*deon*), the deontic modality that Povinelli's film engages is invoked in the articulation or performance of experience, expressed as spiritual ethos, or religious ritual, as a philosophical, cultural, political, and social ideal.³ The deontic mode is used as an ideological tool, as well as providing an historical aesthetic registration of its particular mode (such as Indigenous material knowledge). Consideration of the specific modality engaged supplants the material-semiotic analysis, which may just focus on style and form, rather than the existential or infrastructural components to an epistemic position. In theory, one finds many examples of the deontic mode, posited in relation to descriptions of worlds, ontology, and ethics.

In philosophy, Descartes, Leibniz, and Spinoza are some of the more well-known thinkers who use modes to try to articulate the politics of new realms of knowledge generated in their respective worlds (see Knuuttila 2012). In Spinozist philosophy, humans are posited as modes of God (as nature). Feminist theories

attentive the affective modalities embrace the Spinozist body's ethics, generated through encounters with other bodies (Gatens 2000: 61). However, the cultural political gendering of access to those encounters can be critiqued through attention to the political modes of freedom; "the [human] body enacts modes of nature by the multiplicity of its constitution and its thoughts, but women are restricted from full participation of this modality by nature of their social position" (Lloyd 1994: 163; see Gatens 2000: 61).

For many communities, the modal focus has shifted from God/nature to that of technology as the organising modality used to articulate the matter of life. But how should we consider ethics when generated by technological rather than theological modalities? This is the realm that Barad skilfully describes in terms of attention to the "materialisation of reality," through attention to a threefold modelisation of the matter of the world, one that takes into account: 1. the matter itself; 2. the materialisation of that matter (through its lived, technological platforms/apparatuses/sites/contexts); and 3. the discursive epistemological constructions that articulate the "reality" of that materialisation (i.e., who or what is engaging that matter) (Barad 2007: 189–91). This multi-modal approach to engaging with the meaning of matter is generative of what we can identify as the range of modalities of mattering models. Identifying what and where matter is and its modal iterations is generative of new expressions, forms, practices, pathways, worlds, even as in some instances that involves retracing old stories, sites, expressions, and things. In other words, those practices that choose to identify how *meaning in matter* is activated by a number of operative processes (that may be predictable but which are also subjected to a range of contingencies and unpredictable mutations), provides information on the causes of the new iterations of things, the entangled meanings created by multi-modal approaches. Taken together, conglomerates of matter are formed through what Barad refers us to as the *spacetime mattering* of how iterations of matter come into being, such as the feminist and queer push back against the limitations of thinking and acting in a capitalocentric world, and instead advocate for a feminist ethics for future iterations of the world. Ethics in this, its largest sense, is a modal future question of what Grosz calls, "the question of what is to be done" (2017: 1).

Feminist new materialist theory has generated a number of specific approaches and methodological tools for practices that we can identify as an *ethical modality*—in particular through the address of the activity of the onto-epistemological formation of matter through the "intra-action" of entangled matter (Barad 2007: 328; Povinelli 2016: 109). Feminist new materialism focusses on the matter, phenomena, and physical structures and infrastructures of those intra-actions, through attention to agential and mediating modalities. While engaging a range of different modalities, the new materialism differs from an intersectional approach in taking sometimes a diffractive or "interference" approach (described in Geerts and Van

der Tuin 2013), but primarily can be characterised through a creative approach. This uses a range of modalities (affective, logical, sensory, quantum, etc.) that seek to express different worlds, different genealogies, and different possible ways of thinking about life. Challenging historical and culturally devised categories, new materialist modalities aim not to repeat representational histories, but to offer new possibilities and different metaphysical schemas. For example, consider the modal range engaged by Donna Haraway's expression of chthulocenic worlds and kinship forms, Jane Bennett's articulation of the vibrancy of the matter of aleatory models of matter, and in Iris van der Tuin's feminist genealogical method. In Barad's work, the topological dynamics of space, time, and matter are regarded as an agential matter and as such are generative of an ethics of knowing and being (Barad 2001: 1034). In these—and other examples—a certain emergent aesthetic manifests in practices, methods, and vocabularies that engage modal methods to express “what if” as well as the “how it is now.” This new materialist aesthetic is one that seeks to be both *responsive to and generative* of the atomistic, entangled epistemological ontology of things in the world. In being attentive to the matter of things, and their situated behaviours, different vocabularies and sets of expressions have emerged, and new practices are produced. How then to speak of and teach this narrative? New materialist modal forms require a quantum literacy to be expressive of, and to address the active change in metaphysics (Bühlmann et al. 2017). With the requirement for a quantum literacy, new materialist practice instigates a systems-transformation in the ways in which existing models are used, with the introduction of new multi-modal cognisance of things in the world. This multi-modality differs from a modernist refractive position in its emphasis on the cognisance of diffraction and on the non-human ethics of an autonomous technological system, one that might incorporate human processes in its functions, but over which the contingencies of modal futurity have ultimately no control. Broadly, new materialist critiques thus identify, critique, reflect, and are generative of:

1. the modelisation of matter *engaged in making history*, for example the making of a solidifying historical materialist position that is deterministic in its use of technologies; in the use of matter in certain ways for the purposes of the industrial and post-industrial global economy, for example, the mining uranium ore for the weapons industry as well as the use of this ore for civic energy forms; or in the dangerous mining practices of precious metals required for technology imposed upon precarious workforces;
2. the modelisation of matter is generative of *new worlds*; through an *active unmaking* of known epistemic and ontological fields, and disruptive of majoritarian movements, new forms come into being, or into sight;

3. the modelisation of matter can be reproductive of *traditional social and economic forms*; through an *active* disruption of minority-position, collective community movements against classical, traditional value systems, and a reinstatement of them through neoliberal and conservative forms that work using preventative modalities;

4. *ethical modalities* in their political-aesthetic address of the activity of apparatuses that form matter.

With these (and other) forms of modelling that new materialist practices produce, come new methods for the analysis of models—and with any methodological tool there is necessarily a measurement, a value system, and a normative or focal point to be articulated. Consideration of the different types of modalities applied to models of the matter of worlds gives us the means to recognise the new materialist onto-epistemological aesthetic. This aesthetic concerns the nature of information about matter and matter as information that is generated by light and its interactions with the chemicals and minerals of worlds, and their movements and interactions. The composition of the nature of information about matter and matter as information, its materialisation processes, and the ways in which it is and becomes, engages in semiotic, discursive, material practices are generative of its aesthetic.

To summarise: modal concepts attempt to describe the possibilities and contingencies of life, but also are used to address plural worlds, and/or the notion of “reality” and the virtual. Consideration of the methods at work where we can discern how the ethics of the informatics-aesthetic of new materialism is activated; by what modalities is world knowledge being made? This is a media technology question, as much as it is informed by the very matter of informatics, the quantum (physical) and calculus (linear) mechanics of organising and counting matter, which since the 1980s has been coded and organised by algorithmic systems to regulate markets, water sources, transport, food, etc., the results of which are most obviously seen in the rapid changes in the oceans, and the climate of the Earth. We could observe that this is a coding of ecology that has limited ethical direction, but this does not take us any further with solving the problem.

How feminist new materialists describe and engage with the matter of the world is generative of very specific political and aesthetic meanings. These meanings are expressed through particular modalities. Modality is usually described as the category of thinking that allows us to express the legal constraints of life—the laws of what we *must* and *should* do—but it also allows us to express the possibilities of life, both in terms of the paths not taken in the past—what *would have* happened—and in terms of the future—what *could* happen.

These dual lines are of great value for the feminist thinker. One the one hand, *the what could have been* offers a re-visioning of the past and allows engagement

with a masculinist history in a diffractively different way, one that can be productive of different ends: a re-telling of the topologies of place, situation, intensity, and feeling. On the other, *the what could, or the what must, or what should happen* begins to fashion the shapes of the future that is yet to be written; but determined by the actions of those pasts, as well as today, it is in embryonic formation.

To construct an ethical modal critique requires methodological modal reflexivity, which takes multiple forms in practice. These are seen in the projects of rewriting the canons for new ethical intentions (Barad; Braidotti; Colebrook; Gatens, Haraway; Hayles; Van der Tuin). Change, and its measurement, articulates and defines specific political, scientific, and aesthetic regimes. As we learn from every disciplinary sphere that critically examines laws of definition and classification, the governing ethics of these regimes may not always be obvious, but every sphere—even a mathematical formula—has a political action and epistemic or ideological agenda behind its inception, study, and realisation. The ethics of a measurement of things and the forces driving them is something that emerges over time, and is durationally contingent in terms of the timing of its visibility, use, and longevity. As Povinelli reflected on the forces, conditions, things, and knowledges at play in a seemingly destitute space: “No one can foresee what forms of existence can be shaped in this milieu—themselves included—in this small pocket of corruption” (Povinelli 2016: 91).

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NOTES

1. The word *domain* is used in its territorial, disciplinary, and numerical senses.
2. See also Van der Tuin and Dolphijn’s address of the use of the term “cartography” and new materialism (2010: 166–69).
3. See also Laurie Anderson’s 2015 film *Heart of a Dog*.

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