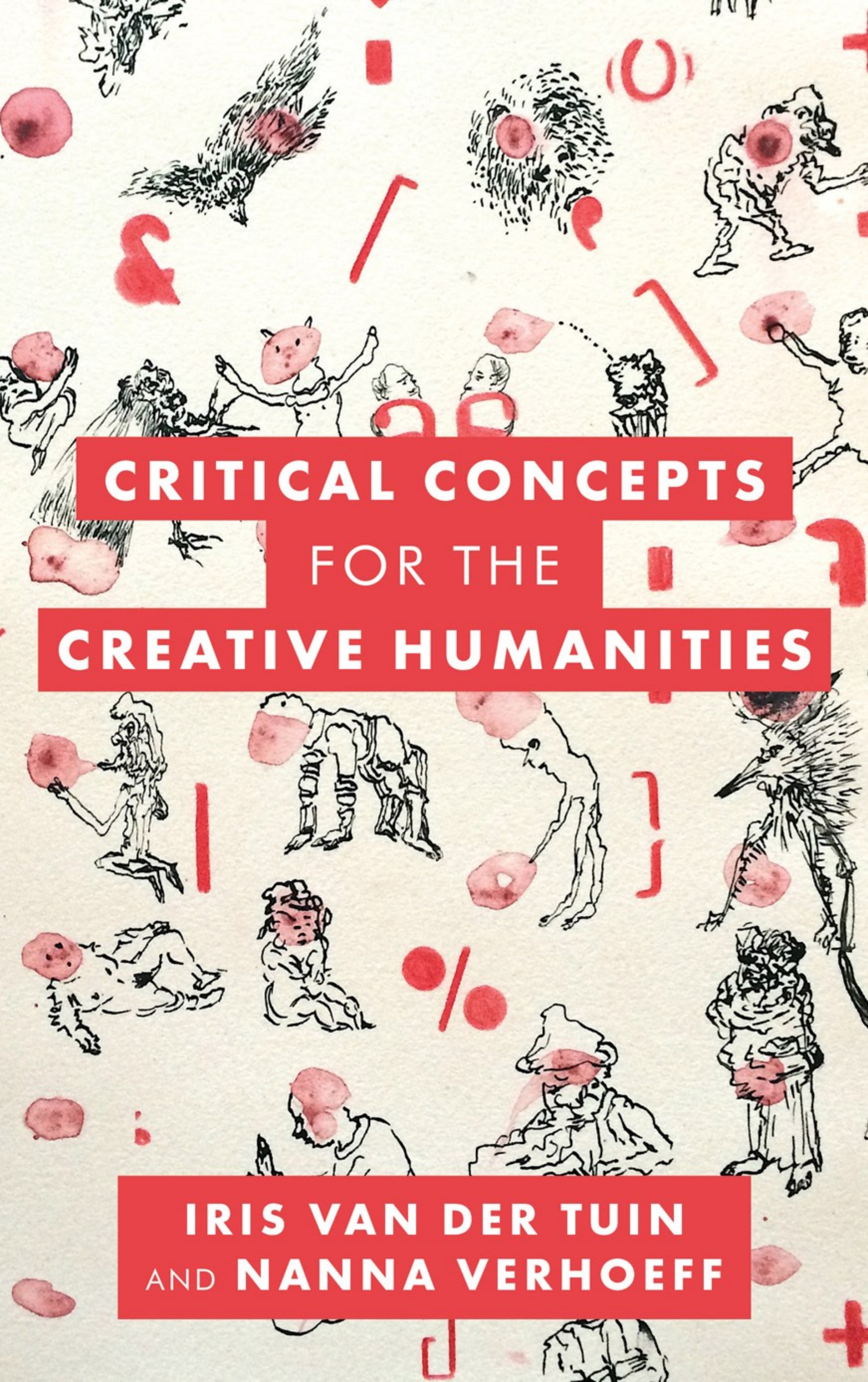
CRITICAL CONCEPTS
FOR THE
CREATIVE HUMANITIES
IRIS VAN DER TUIN
AND NANNA VERHOEFF

Critical Concepts for the Creative Humanities

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Critical Concepts for the Creative Humanities

Iris van der Tuin and Nanna Verhoeff

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Acknowledgments

The idea for this book was born in the summer of 2019 during a walk northward from our hotel on New York City's Lower East Side to the Solomon R. Guggenheim Museum in the Central Park area. Anticipating our visit to the exhibition *Artistic License: Six Takes on the Guggenheim Collection*, we were pondering the very idea of artist-curated exhibitions and imagining the selection criteria used by participating artists such as Jenny Holzer, Richard Prince, and Carrie Mae Weems. *Artistic License* led not only to a conversation about our own "academic license" but also to a discussion about the phenomenon of artists and curators adding explicitly to the academic debate in the humanities, especially by intervening on the conceptual level by coming up with new terms, developing neologisms, and giving existing concepts renewed urgency. What is happening, we asked ourselves, at the intersection of contemporary design, art, culture, philosophy, and critical and cultural theory today? We also asked ourselves how these developments impacted our own work. After all, working at Utrecht University (in the Netherlands) in programs such as Arts & Society; Media, Art & Performance Studies; and Liberal Arts & Sciences, we found ourselves more often teaching "creative methods," supervising students with an interest in "practice-based research," and inviting makers and curators as guest lecturers alongside the academics. This is when, where, and how our shared interest in the "creative humanities" took flight.

This collection of concepts for the creative humanities has received support from a great many institutions and persons. For starters, there were Frankie Mace and Scarlet Furness from Rowman & Littlefield and the peer reviewers they selected for us. Both Frankie and Scarlet and our reviewers welcomed our interdisciplinary and interprofessional conceptual endeavors with great enthusiasm. They provided generous feedback at the very start of the project, allowing us to kickstart the actual writing of the book. Frankie and Scarlet worked productively with us when our book got a bit delayed during the global COVID-19 pandemic.

We have had the opportunity to discuss our work in progress on several occasions. Shortly before the pandemic in December 2019, we presented on the creative humanities and the concepts of "habit" and "zetesis" on the

panel “Researching with ‘Habit’” coorganized with our interdisciplinary group of research collaborators, Valentina Dagienė (Vilnius University), Anna Hickey-Moody (Royal Melbourne Institute of Technology), Elizabeth de Freitas (Manchester Metropolitan University), and Nathalie Sinclair (Simon Fraser University). During the panel, which was part of *New Materialist Reconfigurations of Higher Education: The Tenth Annual Conference on the New Materialisms*, we met Anne Beate Reinertsen (Østfold University College). In the second year of the pandemic, that is, in March 2021, the follow-up panel “Habits of Collaboration” took place online at *New Materialist Informatics: The Eleventh Annual Conference on the New Materialisms* with Anne and Valentina, and this was when Cecilia Åsberg (Linköping University) was added to the research collaboration. We presented on the concepts “habit” and “kaleidoscope, kaleidoscopic” and on the method of “common grounding” that has found its way to this collection in the entry on the concept of “randomization.” We also presented our work in progress in the Department of Architecture at ETH Zürich in Switzerland upon the invitation of Charlotte Malterre-Barthes and Milica Topalovic. In March 2020, we presented “Concepts for Mobile Architectures: Reflections on the Algorithmic Condition from a Creative Humanities Perspective” as part of the ETH lecture series *Sessions on Territory: Urbanism Beyond Techno-Fix*, featuring the concepts “cartography, performative cartography”; “classifi*x*ation”; and “zetesis.” There we received helpful feedback not only from Charlotte, Milica, and their colleagues and students but also from our formal respondent, Benjamin Dillenburger. This was right before we would no longer be able to travel abroad. Nanna Verhoeff wove our work on the concepts “crossing,” “figuration,” and “somatechnics” through her keynote “Doing the Distance: Screening Mobility, Performing Presence, and Designing the Contours of Connection in (Post-)Pandemic Cities” at the online conference *Off the Grid: The Fourth International Geomedia Conference* at the University of Siegen in Kassel, Germany, in May 2021.

We also taught with drafts of our book. Anthony Nestel, visual and performance artist and graduate student in the Media, Art & Performance Studies program at Utrecht University, and Chris Julien, graduate student in the Cultural Analysis program at the University of Amsterdam, took a tutorial with us in the academic year 2019–2020 and they surprised us with their own entries. Their work confirmed that this collection of concepts can be added to by its readers. We also taught with our entries as tutors in the MA program the Critical Inquiry Lab of the Design Academy in Eindhoven, the Netherlands. Thank you to Saskia van Stein for inviting us. We developed a “concept service” for the executive program Leadership in Culture Artistic (LinC A) that we initiated together with Paul Adriaanse, Jente Hoogeveen, and Marjolein

Verhallen in the spring and summer of 2021 (and continuing). Thank you to Paul, Jente, and Marjolein and to the participants of the first edition of LinC A for inspiring us to push our collaboration with the makers' and curators' side of the creative humanities even further than expected. In the summer semester of 2021 we were guest professors in the Department for Architectural Theory and Philosophy of Technics (ATTP) at the Technical University Vienna upon the invitation of its chair and our dear friend, Vera Bühlmann. Together with Vera we taught the online ad-hoc design studio "New Materialist Articulations" that featured such concepts as "cartography, performative cartography"; "diffraction"; "kaleidoscope, kaleidoscopic"; "scale, scaling"; "somatechnics"; and "trans-, transing." We learned a lot from the architects and designers, MA students, ATTP colleagues, and invited guests, in the studio. Iris van der Tuin taught with the concepts in October 2020 during the online masterclass "New Materialisms, Feminism, and De-Naturalization of Formats" in the Schools of Visual Arts of the Royal Danish Academy of Fine Arts in Copenhagen, Denmark. Thank you to Nanna Debois Buhl for the invitation and thank you to Maibritt Borgen, head of the Laboratory of Arts Research of the Royal Danish Academy of Fine Arts, and Jacob Lund, School of Communication and Culture at Aarhus University, also in Denmark, for extending the invitation to a guest professorship in the academic year 2021–2022.

At Utrecht University, we collaborate in several research groups that span our two departments, Media and Culture Studies and Philosophy and Religious Studies, with inspiring colleagues, most of them also close friends. First, there is the research platform Transmission in Motion, which hosts thematic interest groups such as the Creative Humanities Initiative and Subjects in Interdisciplinary Learning & Teaching (SILT). Second, we collaborate in the groups [urban interfaces] and Creative Urban Methods, as well as in the special interest group AI in Cultural Inquiry and Art: Thinking and Making in the Algorithmic Condition. It is impossible to list all colleagues and friends who participate in these groups, so this is a nonexhaustive list, alphabetically ordered and extending across all of the previously mentioned, often overlapping groups: Irina van Aalst, Noortje van Amsterdam, Corelia Baibarac-Duignan, Maaike Bleeker, Rick Dolphijn, Tamalone van den Eijnden, Konstantina Georgelou, Merel van Goch, Liesbeth Groot Nibbelink, Anastasia Hacopian, Dan Hassler-Forest, Jente Hoogeveen, Laura Karreman, Frank Kessler, Anne Kustritz, Rianne van Lambalgen, Michiel de Lange, Ioanna Lykourentzou, Sigrid Merx, Toine Minnaert, Martijn Oosterbaan, Florentine Sterk, Lianne Toussaint, Melisse Vroegindeweij, Evelyn Wan, and Roosmarijn van Woerden. The aforementioned special interest group includes collaborations with Felicity Colman (University

of the Arts London) and Aurora Hoel (Norwegian University of Science and Technology). Together with Jente Hoogeveen, we manage the Creative Humanities Academy (CHA) for continuing education. The founding of this academy coincided with the writing of the book proposal and of the first entries of the book. The previously mentioned program LinC A is one of CHA's initiatives. In the context of CHA we collaborate with colleagues and friends such as (and we only list the names of those who have not been mentioned before) Helleke van den Braber, Kiene Brillenburg Wurth, Paulien Dresscher, Coco Kanters, Katherina Kinzel, Birgit Meyer, Sabine Uijl, and Paul Ziche. Together with Kiene we are currently editing the special issue "Mobilizing Creativity: A Humanities Perspective" for *the Minnesota Review: a journal of creative and critical writing* (forthcoming in 2023).

The Creative Humanities Academy offers postacademic education for professionals in the fields of design, art, and culture, uniquely focused on their specific case. Think of lectures, workshops, courses, and short- or long-term consultancy within projects. Every project starts from the productive relationship between making practices and the wide range of humanities research, teaching, and learning. Some of our offerings and activities are specifically designed for working with *Critical Concepts for the Creative Humanities* in both academia and in the field of design, art, and culture. One example is the "concept randomizer" developed with the Digital Humanities Lab of the Faculty of Humanities at Utrecht University. We invite you to take a look at our website: https://www.uu.nl/en/education/creative-humanities-academy.

Last but certainly not least, every word in this book has benefited from the generous engagement of Mieke Bal with our work. Mieke provided feedback on every entry in the making and provided intellectually stimulating suggestions and invaluable feedback during the writing process itself. Mieke, you treated our work with the greatest care and respect and we hope we are successful in expressing our gratitude to you as both a scholar and as a mentor. Ankie van der Tuin-Kemkers, our other mother and mother-in-law, worked with us during the final stages of the editing process. Thank you for working with us on the weekend and for walking our dog Carsie while we were glued to our screens.

The publication of this book marks a two-year writing and rewriting journey that started in Manhattan and developed on the triangular terrain between the cities of Amsterdam, Rotterdam, and Utrecht. But it does not end here.

We dedicate the book to our students past, present, and future.

Introduction

> The fallacy of the perfect dictionary divides philosophers into two schools, namely, the "Critical School" which repudiates speculative philosophy, and the "Speculative School" which includes it. The critical school confines itself to verbal analysis within the limits of the dictionary. The speculative school appeals to direct insight, and endeavours to indicate its meanings by further appeal to situations which promote such specific insights. It then enlarges the dictionary. The divergence between the schools is the quarrel between safety and adventure.
>
> —Alfred North Whitehead [1938] 1968

> This idea of research-creation as embodying techniques of emergence takes it seriously that a creative act or design practice launches concepts-in-the-making. These concepts-in-the-making are mobile at the level of techniques they continue to invent. This movement is as speculative (future-event oriented) as it is pragmatic (technique-based practice).
>
> —Erin Manning and Brian Massumi 2014

This book is a dictionary of sorts. It comprises a collection of theoretical concepts that are articulated and defined, activated and mobilized, and positioned and referenced in each entry. The entries range from **Accent** to **Zetesis**, include **Making Kin** and **Unkinning**, introduce such concepts as **Hashtag #** and **Randomization**, and revisit concepts like **Diffraction** and **Rhythm**. These new and revisited concepts are fruitful for and come out of current research, educational innovations, and interdisciplinary projects at the intersection of humanities scholarship and creative practice such as art, activism, curation, design, performance, and other forms of making. As critical and cultural inquiry, humanities scholarship already extends across a diverse set of practices, and creative production is not just what humanities scholars study as "culture" but also what they themselves partake in while engaging with such practices. Moreover, scholarly work is (in part) as creative as creative work is (in part) critical, theoretical, and philosophical. The entries in this book propose the intersection of these multiple fields and practices as

the terrain of the *creative humanities*. On such a terrain, critical and creative engagements meet, interact, and coalesce with sometimes integrative effects.

This collection of concepts establishes the creative humanities in the conversation between academic research, teaching, and learning and the research-driven and co-creative work of artistic makers, creative practitioners, and cultural curators. This collection thus marks an emergent and transforming canon of critical analysis and conceptual thinking and a "new" or updated reading list of scholarship for the current generation of makers, performers, and publics of contemporary design, art, and culture. At the same time, the book aims to plot some coordinates and contours for a present (and future) formation of a new generation of scholars, students, and educators—a generation of which we are also already a part.

By providing the coordinates and contours of such a formation in the making this book is a fundamentally *incomplete* and *unfinished* work. We recognize the fallacy of the perfect dictionary, as diagnosed by philosopher Alfred North Whitehead ([1938] 1968, 173) in the first epigraph to this introduction. Its critical agenda notwithstanding, our book invites adventurous readers. Other concepts are already folded into the entries, whether implicitly or explicitly, and traceable via the index. The entries are inviting to think also of new or related concepts as additions to the growing collection of concepts for the creative humanities beyond this edition. As such, its "companion concepts" are not only already existing but also expected. Moreover, situated at the intersection of critical and creative practices, concepts for the creative humanities are reflexive of the contemporary moment yet future-oriented in thinking with and toward possibilities for emergence, change, and transformation. This is perhaps what cultural theorists Erin Manning and Brian Massumi (2014, 89) call the "techniques of emergence" in the second epigraph. The methodological workings of both creative and critical thinking and making is at the heart of thinking with, through, and beyond the concepts that are now included in this book.

THE CREATIVE HUMANITIES

The *creative* aspect in creative humanities takes shape in the (literally) productive connection between making practices and thinking practices: making as/through thinking and thinking as/through making. These generative practices are emphatically experimental and comfortable with knowledge production in uncertainty, multiplicity, and friction. Thinking with, through, and beyond concepts, creative humanities projects are creative in designing and developing their own methods and approaches as they seek to navigate

and explore the productive connections and reciprocal relationships between the creative practices they engage with and to develop conceptual analytical approaches for what these practices also work with, through, or beyond.

Related to investigative and reflexive creative practices in practice-based research such as artistic research (ranging from Barrett and Bolt 2007 to Michelkevičius 2018), critical making (for example, Ratto and Bowler 2014; Bogers and Chiappini 2019), and critical and speculative design (Moran 2020; Fry and Nocek 2021), the critical concept creation in the creative humanities is already a theoretical practice. This implies, first, that a creative humanities practice can be recognized in scholarship as it has already been conducted in the past, already forging and following processes of *rereading* or *rewriting*. As per cultural theorist Mieke Bal's renowned thesis (2002), concepts travel: they migrate, transform, and, as we would say, actualize in situated practices, whether we call these analytical, critical, or creative. Such conceptual work that reflects an attunement to situated deepening and rethinking can retro*speculatively*—that is, brought into historical and/or potential relation—be inserted into creative humanities scholarship. Second, connections with (creative) making practices are recognized and explored, but not by way of constructing a paradigmatic transfer from "making" to "researching" or the other way around. Already and at its center, creative humanities scholarship establishes itself, inherently and critically, as a situated, relational, and generative conceptual endeavor.

As such, critical concepts for the creative humanities are productive and experimental "doings," enmeshed in practice rather than fixed, retrospective labels for things that seemingly exist before and outside of research, artistic, design, or curatorial processes. They are, then, always performative and methodological. They guide the researcher/maker to where and when one starts, or has started, one's work and to the encounter in which both researcher/maker and object/project come into being. Contrary to making positivism-induced retrograde movements, such concepts are mobile in a different direction as they are inherently experimental and open up to yet unknown territories of thought. Through their engagement with contemporary artistic, cultural, and societal issues, and as themselves fully immersed in twenty-first-century media (Hansen 2015; Clough 2018) and the algorithmic condition (Colman et al. 2018) or algorithmic turn (Uricchio 2011), the experimental scholarly and creative projects develop conceptual foci while also, and at the same time, designing for debate. This glossary, then, aims to facilitate an exploratory and adventurous hypertextual reading and invites the reader to engage and critically navigate its terrain: to zoom in and zoom out; to connect and expand it with other concepts, cases, and questions; and to mobilize the concepts elsewhere and elsewhen—in future thinking, writing, making.

ENTRIES TO A FIELD

Staking out the terrain of the creative humanities, this collection of entries adds to, intervenes in, and transverses two developments that occur in humanities scholarship and creative practice today. We may see these developments as constitutive of a "glossary boom" and even a "humanities boom." As yet another collection of concepts, we indeed add to a growing list of dictionaries, glossaries, lexicons, and vocabularies that are being compiled, edited, and published in both academia and in the fields of design, art, and culture. Often there is a lively exchange between these domains and their institutions, and it is therefore sometimes hard to distinguish the so-called origin or the either academic or artistic impetus of collections such as *Posthuman Glossary* (Braidotti and Hlavajova 2018) or *Uncertain Archives: Critical Keywords for Big Data* (Thylstrup et al. 2021). As a collection, *Critical Concepts for the Creative Humanities* is situated at the intersection of humanities scholarship and creative practice, thus theorizing, footnoting, and canonizing the exchange itself. By demarcating the exchange as a terrain of the creative humanities—by making it also part of the academic humanities yet by using an adjective to differentiate it from other terrains and other humanities—we add to as well as differentiate from the growing list of "new" humanities that include the digital, environmental, health, and public humanities (van der Tuin 2018; Braidotti 2019). Importantly, the terrain of the creative humanities extends beyond the academic institution—if academia ever existed as isolated from an "outside"—and defines the current humanities boom as a period of rapid growth, increasing interdisciplinarity, and deep transformation of both critical and cultural inquiry and creative production. The glossary boom, indeed, demonstrates how the walls of the academy are perhaps more permeable than ever—or we can say that scholarship is already-also taking place elsewhere in an intellectualized and intellectualizing domain of design, art, and culture—and how scholarly work is never isolated from, but always-already part of culture. The glossary boom also shows how the humanities are not only renewed by interdisciplinary and interprofessional collaboration but that the conceptual borrowing and innovations that make such collaboration possible are processes that are onto-epistemologically prior to the results and the resulting terrains. Creative humanities tap into these processes and developments.

A classical reference for collections of concepts in both the humanities and in the field of art and culture is Raymond Williams's 1976 *Keywords: A Vocabulary of Culture and Society*. What stands out most in this collection is that and how it is a piece of what Donna Haraway (1988) has called "situated knowledges" by theorizing and participating in a paradigm shift that

spans post–World War II academia and (Western) society at large. Williams explicitly theorizes and actively performs the fact that the definition and the popularity of concepts are not just expressive of theories of being, truth, and value. They are expressive of the entanglements of ontology, epistemology, ethics, and aesthetics of a particular period in time and history. Often paradigm shifts—slow or fast—make themselves known in intercultural or intergenerational encounters. Williams writes:

> What is really happening through these critical encounters, which may be very conscious or may be felt only as a certain strangeness or unease, is a process quite central in the development of language when, in certain words, tones and rhythms, meanings are offered, felt for, tested, confirmed, asserted, qualified, changed. ([1976] 1983, 11–12)

One subtle shift that we have been performing in this introduction is from "art and culture" (Williams) to "*design*, art, and culture," thus acknowledging the fact that the creative humanities, as they develop with twenty-first century media technologies and in the algorithmic condition per se, are not just interested in but intricately bound up with science, engineering, and climate governance, politics, and activism.

Mieke Bal's *Travelling Concepts in the Humanities: A Rough Guide* from 2002 is the second classical reference for collections of concepts in the humanities in that it addresses not only intercultural or intergenerational encounters but also interdisciplinarity, and fundamentally so. Extending beyond just addressing interdisciplinary encounters as encounters of potential disagreement and meaningful debate, Bal's work theorizes and stimulates such scholarship by providing her readers with the rationale as well as a model for what she calls "cultural analysis." Bal writes: "I aim to demonstrate how the variety of ways in which a concept can be brought to bear on an object makes for an analytical practice that is both open and rigorous, teachable and creative" (13). Significantly, *Travelling Concepts in the Humanities* as well as Bal's other work has been adopted as the standard reference for the humanities in the Scholarship of Interdisciplinary Teaching and Learning (SoITL; see Repko and Szostak 2021), a field of research and pedagogy that is centered on the urgency of conceptual integration across the academic spectrum. In the most recent edition of *Interdisciplinary Research: Process and Theory*, Allen F. Repko and Rick Szostak (2021) display a growing sensitivity to the role of creative production in the theory and practice of interdisciplinarity as they both acknowledge the necessity to define the academic spectrum as including art and design and to recognize the potential that making methods have for developing models for teaching and learning conceptual integration. Answering to the call for today's thinkers and makers to be up to date with

science, engineering, and design (Bühlmann 2020), we borrow from both Bal and SoITL in our own work and our account of others' endeavors that work toward analytical, critical, and creative concepting.

A third point of reference for the coming into being of this collection of concepts is the theoretical and philosophical strand of "new materialism." New materialism is a radically interdisciplinary field between the humanities and the sciences that gives priority to the entanglements of ontology, epistemology, ethics, and aesthetics. From a new materialist perspective the researcher—for example, the theorist of architecture and philosopher of technics Vera Bühlmann, just referenced—understands all that is actualized in thinking and making processes across a wide range of practices as forms of mediated measurement that happen in instances of "knowing in being" (Barad 2007). New materialist thinking departs from such a process-oriented perspective that prioritizes the situated technologies and techniques of knowledge production while they are at work. With the authors of the second epigraph to this introduction we can say that such a new materialist approach puts the technologies and techniques of the past, the present, and the future center stage but is also oriented toward what is actualized in their use and how the actualization may have led to different results under slightly or completely different conditions. Given the unraveling of mediated measurement and the role of speculation and/in thinking differently about actualizations of being, truth, and value, new materialist work is more than a descriptive endeavor: it is a form of situated concepting that has inspired and continues to inspire the creative humanities.

MOBILIZING CONCEPTS

Before continuing with the entries on the following pages, a few words about how these thoughts are reflected in the position this book takes on the status of concepts. This status entails not so much what they *are* but rather what they *do*—and what we can do with them. Earlier we called this their methodological workings. With this somewhat practical summary, it is our aim to motivate the anatomy of this book and its entries and to guide you as reader in your endeavors of working with it.

As proposals to think with, theoretical concepts are mini-theories that *articulate*—that is, give expression to and (hence) actualize—and *activate* "structures of feeling" (Williams 1977; Coleman 2018) and constructions of thought. As our partners in thinking and making, they can be the tools or instruments that provide perspectives on objects (for example, things, events, phenomena) and our relating with them by bringing in and out of focus as-

pects, processes, and implications. In such affective and effective relating between subject, object, and concept, we construct meaning. Or perhaps more precisely, we position ourselves, the objects, and concepts in a web of affects and meanings. These are indeed not fixed, preexisting, and outside of our relating—nor is its process ever finished. Concepts thus give words to the understanding of this activation, while, in turn, the activation helps to articulate the concept.

The precise unfolding of this process in analysis or creation *mobilizes* (or articulates and activates) a concept toward an *argument*. Or to flip this definition, conceptual arguments build on the situated activation of a concept in relation with an object (thing, event, phenomenon) and a subject who actively draws (out) this relating. This is how the methodologicity of concepts—what they do and how we work with concepts—harbors their *criticality*. From a creative humanities perspective, criticality (rather than *critique* or *criticism*) is not a property of the concept itself or an agenda outside of it. Nor is it situated between the subject and object only: it is a potential that is folded in the tripartite relation between subject-object-concept—a *potential* that can be activated *in* this relation, not outside of it. This makes criticality more than a posterior and ulterior critique or critical judgment suggestive of or inviting for alternatives, transformation, or responses. Such criticality, therefore, inevitably entails an ethics that takes responsibility for each position involved.

We have made the understanding of the methodological "working" of each concept, its critical potential, as well as its positioning between theoretical and creative practices central to the organization of this book. Each conceptual entry comprises an articulation, activation, and referencing. Besides offering a suggested understanding of the potential of the concept—not a fixating and excluding "definition"—the entries also index other concepts (when with its own entry, cross-referenced in a **bold** typeface) that they build on or connect with. Thus, each entry demonstrates the concept's potential for mobilization and references recommended reading. Rather than giving finite definitions, then, the entries offer suggestions for directions in which the concepts may be taken for further thinking and/in making.

Whether randomized or triangulated, with the modular format of short entries and cross-references to other concepts, we invite you as reader to navigate between the concepts and their entries and to explore their common ground or shared terrain for further thinking and making—a terrain that can be plotted and enriched with your own cases, questions, and concepts. As the creative humanities is first and foremost an interdisciplinary and also collaborative project, we can only hope for a use that takes the concepts out of the book.

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Accent

Accents can be understood as resulting from *accentuation* (giving emphasis) or of *inflection* (adding difference). An accent is a linguistic, auditory, or visual emphasis added to produce difference within a specific context from which what is considered "normal" is either intentionally or unintentionally deviated. Accentuations in writing, whether conventional, political, or poetic, are expressed either argumentatively or stylistically (for example, by way of **punctuation**). Speech accents involve the pronunciation of a language in a specific national, regional, or class-based tongue. Such vocal inflections introduce a certain unexpected **rhythm** to the spoken word. Here we are reminded of the etymological root of the word *accent* going back to the Latin *accentus* or "song added to speech" (from *ad* or "to" + *cantus* or "a singing"). Rhythmic elements such as tone, cadence, and pitch are also literally musical inflections. Musical inflections must first be exercised before they become **habitual**. This process of learning how to use one's vocal cords for the performance of a song or one's hands or limbs for the playing of an instrument underscores the embodied or physiological nature of sounding or speaking, be it with or without an accent. Visual accentuations manifest themselves materially, as materiality, texture, or light is played with in order to accentuate **architectural**, **surface**, or color details of buildings, bodies, or things. Such material accents may be the cause of the illusion of movement in a stationary object or they may magnify (the effect of) the curvature of the building, body, or thing.

Sociopolitically, accent and accentlessness are not valued equally. Accented speech is generally seen as a form of brokenness, as per the title of Marianne Faithfull's 1979 song "Broken English." Accent discrimination demonstrates that "perfected" speech is an expression of a power differential. The inequality this entails causes the process of practicing pronunciation with the aim to reach speech perfection to become entangled with emotion and **affect**, which, in turn, leads to an intensification of the experiencing of embodied physicality. This is how China-born and Finland-based cultural theorist Liu Xin describes the process of learning to correctly pronounce the uniquely Finnish rolling "r":

> The tongue becomes tense when faced with the rolling r challenge. Can the tongue see the approaching of the teacher and the judgemental gaze of other students? Can the tongue hear the teacher's pronunciation of the rolling r? Can the tongue predict and anticipate my potential **failed** attempts, my accented foreign pronunciation? Do the modalities of perception re-call each other? (2017, 150–51; cf. Hui 2020; cross-reference added)

This personal synesthetic experience is caused by an attempt to learn to cover up one's cultural background and become a legitimate member of a new linguistic community after migration. However, lingering accents often remain audible as linguistic **traces**. Such resulting linguistic hybridization can be a goal in itself, with its own specific political thrust, shaped by strategic decisions. Cameroon-born and South Africa–based philosopher and historian Achille Mbembe writes about the ambiguous process of hybridization in his essay "African Modes of Self-Writing." African thinkers in the nineteenth century both incorporated and rejected the languages and terminologies of colonial rulers. Oftentimes this led to a zigzagging pattern in which vernacular accents were either used to interrogate colonial rule or they were updated to strategically (or disobediently) benefit from modern impulses (2002, 249). This pattern and the ambiguous use of accentuation is still being used in post- and decolonial politics.

The exploration of accent in the realm of the written and visual arts has led to the insight that the rhythmicity of accented writing, speech, or imagery has, in response to an oppressive reality, also an emphatically liberatory potential. The stifled sense of a word or a phrase can be neutralized or even deflected in accented writing and speech, as French philosopher Gilles Deleuze and his colleague, philosopher and psychoanalyst Félix Guattari, famously wrote about the work of Franz Kafka ([1975] 1986, 21). Iran-born and US-based film theorist Hamid Naficy writes about the "accented cinema" of postcolonial, Third World, and diasporic makers. For Naficy, accent in visual culture is a matter of interstitiality. First, the makers he discusses are "empirical subjects, **situated** in the interstices of cultures and film practices, who exist outside and prior to their films" (2001, 4; cross-reference added). Second, the style of the films is interstitial. The films are characterized by

> **open**-form and closed-form visual style; fragmented, multilingual, epistolary, self-reflexive, and critically juxtaposed narrative structure; amphibolic, doubled, **crossed**, and lost characters; subject matter and themes that involve journeying, historicity, identity, and displacement; dysphoric, euphoric, nostalgic, synaesthetic, liminal, and politicized structures of feeling; interstitial and collective **modes** of production; and inscription of the biographical, social, andcinematic (dis)location of the filmmakers. (4; cross-references added)

Thus, as truly "glocal" filmic products, the films make a move similar to the colonial subjects, discussed by Mbembe, in their self-writing practices in that "they resonate against the prevailing cinematic production practices, at the same time that they benefit from them" (4).

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Accident

Ranging from cuneiform to alphabetic script, and from audiovisual to algorithmic (numerically scripted) media, each medium supports our individual and collective creations and memories differently as it carries the very possibilities for perceptions, thoughts, and actions. These include the possibilities for truth and falsity, and faultlessness and error, as a medium may be steady or prone to malfunctioning or decaying easily. Accidents of and in media transverse these sets of binary opposites and question any resolute and determined position vis-à-vis philosophical, scientific, and artistic creations and carriers of memories. An accident, then, is what comes by chance and what cannot be immediately **classifixated** according to the available logics of medium specificity and the circumscribed study and use thereof. Instead accidents in thought and making in the mediated environments of old and new media have the capacity to engender entirely new ways of proceeding and of organizing histories of thought and making. In *Design by Accident: For a New History of Design* (2019), design historiographer and curator Alexandra Midal makes precisely this point. Midal embraces the ontology of design accidents—as that which is able to surprise in its very technomateriality—as well as the epistemic reordering effects of such surprises. Importantly, the reordering process itself leads to both the emancipation of design from both fine art and **architecture** (thus creating an autonomous domain for design) and a historiography of design that is ordered but in a nonhierarchical way.

Philosophers and cultural theorists alike have emphasized the potential of accidents or the accidental. *Philosophising by Accident* ([2004] 2017) is the title of a set of transcribed radio interviews with philosopher Bernard Stiegler. In the interviews, accidents are both happenings in real life and the preferred starting points for theoretical reflection on philosophical themes and on political developments. As happenings, accidents are similar to events; as starting points for reflection, they resemble **traces**. In both respects, accidents are as fugitive as they are factual. The interviews practice what they preach in that ideas are expressed by an accidental thinker (Stiegler) and received by an accidental listener: originally broadcast on the radio, the receiver of the ideas may have been on the lookout for philosophical reflection upon tuning in to the show, but she is not in control of reflections received, their intensity and

pace, or their intellectual effort and effect. Intellectual effects of accidental listening may involve leaps from passive reception of ideas to active conception, that is, to the work of questioning or creating concepts, theses, and arguments. For Stiegler, clearing the ground for accidents and for acting on them has great importance in that accidents prevent one from thinking or acting conservatively either in philosophical or theoretical terms or for the profit of some big commercial players in the culture industry. He argues:

> Contrary to Aristotle and to all metaphysics—to all "onto-theology," as we call it after Heidegger—I believe that an accidental process takes place *between the origin and the end; we cannot speak only of an essential process for there are occurrences that disturb the metaphysical illusion that the end is already there in the origin.* Philosophy should learn how to think this accidentality (together with its genealogy). (34; emphasis in original)

When acting on an accident in a move that resembles the **dramaturgical** method of *reverse engineering*, one **engages** in a retracing of steps that has critical potential and is **generative** of perception, thought, and action. As such, accidents open up received and seemingly fixed processes of presentation, mediation, canonization, professionalism, and commodification.

Twentieth- and twenty-first-century media artists have embraced accidents and the accidental as a way to develop critical and creative approaches to the reliability and materiality of media, thus producing insight into assumptions of truth and falsity, faultlessness and errors, steadiness and decay, as well as into assumptions about mediation. An example is *glitch art*: aesthetically pleasing images or sounds that are the result of either consciously produced or accidental malfunction (**failures**) in hardware, software, the database, or, more and more often these days, **procedural** and algorithm-driven processes. The very point of this art is to reveal not just *erroneous* production under assumptions of certainty, decidability, and determinacy but also insight into *unexpected* production as well as in the very nature of uncertain, **contingent**, and indeterminate processes. What is made clear by the artists is how accidents happen in the interplay between constraint and undecidability on material, symbolic, discursive, visual, and aural levels.

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Affect

Affect points at the capacity to *affect* as well as at the capacity to *be affected*. This Spinozist double dynamic has been specified after the so-called affective turn in cultural theory as a nonconscious and presubjective dynamic. This means that from an affective perspective, we no longer localize response as purely cognitive or intentional and attach value to the role of feeling and emotion in knowledge production and ethics. Besides this corporeal localization of affect at the level of the individual, it is equally important to specify the dual capacities across human and nonhuman domains. The capacity to affect and to be affected is any body's capacity, whereby the "body" can be organic and nonorganic, regardless of size, materiality, and life.

Affect is invoked in research practice to theorize what happens *before* conscious cognition, thus adjusting a remaining *mechanicist* presupposition foundational to traditional and contemporary theories of the subject. According to this presupposition, rational humans would process information in a linear and structured manner. Affect, on the other hand, allows for a theorization of mutual or entangled relating whereby one's capacities may be increased (or decreased) by other humans or by nonhuman others, and vice versa. This process is at work while doing research or making art: researchers' and artists' capacities may be increased (or decreased) by research or artistic materials, and vice versa. There is also unstructured affection between and among these materials, which indicates a relationality that complexifies what information or exchange should be captured in research or making, and where and when.

In their programmatic article "Feminist Data Visualization" (2016), feminist data scientist Catherine D'Ignazio and digital humanist Lauren F. Klein demonstrate that with data journalism on the rise, designers use affect intentionally and strategically in infographics to invoke emotional responses in readers. Acknowledging both affection itself and the use of affect, they suggest the following questions for the design process and its output:

> How can we leverage embodied and affective experience to enhance visualization design and **engage** users? What kinds of expertise might we need on our design team in order to do that? (e.g. fine art, graphic design, animation, or

> communication specialists). . . . What kinds of embodied and affective experience has meaning to end users? Should we consider tactile, experiential, or social ways of accessing the data visualization? Can we consider visualization outputs in an expanded field, such as data murals, data sculptures, public walks, quilts[,] and installations? (n.p.; cross-reference added)

These questions draw out the issue of the *legitimization* of invoking affect by designers. While implying that the latter may irresponsibly work on readers' bodies and emotions to tempt them to spend more time with a news item, scholarly discussion on a legitimate invocation of affect has centered on balancing out cognition and affect, as well as positive and negative feelings.

Beside data journalism as a practice that works alongside traditional journalistic practice, the impulse to develop a legitimate invocation of affect has led to the development of "artistic journalism" as both a newly emerging format and as an object of study. Dutch media and journalism scholars Stijn Postema and Mark Deuze argue in their 2020 article "Artistic Journalism: Confluence in Forms, Values, and Practices" that precisely the abundant variety of journalistic formats and practices currently on the rise "inspires [them] to propose an arts and journalism continuum in an attempt to structure and understand the variety" (10). This continuum is meant to traverse binary oppositions such as the fact-driven journalist versus the affect-driven artist, as well as the understanding of these domains as working independently and mutually exclusive. Adopting an approach to storytelling as well as a network approach to journalism, Postema and Deuze see the matter of factness of journalistic format is being replaced with the responsible use of multisensory appeals and augmented reality so as to engage a wide (wider?) variety of news consumers. Within genres such as narrative and photojournalism, documentary, and graphic design, they argue, thinking and making are finally embraced as interlocking approaches seeking renewed forms of legitimacy together.

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Ambient

The adjective *ambient* is a specification of the noun from which it is derived. Ambient means surrounding, which is different from the noun *ambience* (also spelled ambiance), which refers to the atmospheric character of something that surrounds. While ambience refers to an inherently diffused character of the totality of surrounding, the "ambient" can become a specific quality of something that surrounds someone or something else. Ambience is of molecular, electric, sonic, spiritual, or weathering materials, mass, and forces. The ambient has **surface** and works in and through **scales**. Although abstract to different degrees, both terms resist spatiotemporal and material fixation.

But one thing can lead to another. A resistance to fixation also raises questions about its **situational** specificity. We can find an example of this paradox in the response, by media theorist Anna McCarthy (2001), to the upcoming diversification of screen media in public space. McCarthy uses the designation *ambient television* to qualify the contemporary screen's ubiquity, multiplicity, and heterogeneity. In her work it becomes clear how the qualifier "ambient" introduces the question of specificity—in particular the specificity of place, materiality, and performativity. The ambient refers to a proliferation of, in her case, screens and how this quality of pervasive presence brings out how the medium's character lies, precisely, in the site-specificity of its various **dispositifs.**

The use of the qualifier *ambient* in reference to spatially distributed, so-called smart or intelligent, often embedded connected and responsive digital technologies is perhaps significant of this ability to conceptually connect environmental proliferation (or "everywhere-ness") with material—that is, spatiotemporal and performative—specificity. In his book *Ambient Commons* (2013), architecture theorist and specialist in media arts and urban interaction design Malcolm McCullough addresses the dilemma of attention in the face of an all-surrounding abundance of information that characterizes contemporary **interface** culture. For him an embodied awareness can contribute to reconnecting with one's surroundings:

> When you perceive the whole environment more and its individual signals less, when at least some of the information superabundance assumes embodied,

> inhabitable form, when your attention isn't being stolen, when you feel renewed sensibility to your surroundings you might try calling this *ambient*. (3; emphasis in original)

In his concern with the impact of technology on our lives as they are increasingly "circumstantial" (19), merging with our perceptions of the world, "interspersed with other sensibilities, **contingencies**, and actions," McCullough takes us to the street level to situate what he calls the "ambient interface":

> To information technologists, *ambient interface* represents an important new paradigm, with ubiquity and embodiment as first principles. Interaction design, the discipline best positioned to **affect** how you deal with technology, shapes not only sensory smartphones but also situated technologies. This is the form of ambient of most interest here. (13; emphasis in original; cross-reference added)

His interface perspective on embodiment and the ambient brings up a critical design perspective. In line with media archeological perspectives on the connection between philosophical discourse and cultural practice (for example, de Vries 2012), he traces ancient and classical philosophical notions of the cosmic, the atmospheric, and the ambient and follows connections with late nineteenth- and early twentieth-century cultural theory and sociology's responses to modernity's *overstimulation* (Georg Simmel)—much like the *shocks* that Charles Baudelaire and Walter Benjamin described—resulting from new technologies, media, and mobilities, to arrive at the question of how current experiences of the superabundance of information and proliferation of ambient interfaces can be designed in such a way that the "ambient" becomes a commons—a shared cultural resource that is socially **curated** and self-governed.

More recently, artist, curator, and researcher of digital experience design Dave Colangelo (2020) addressed the ambient as a monumental quality of media **architecture** with social potentials by the way on the level of perception, the street level that McCullough pointed out, this quality allows for the creation of reembodiment and reconnection of a public and for

> a new register of "being together," where those present at a physical site are connected through architecture and networked media to those watching from afar. The practices [of media architecture] denote new rituals of monumentality (liking, voting, debating, clicking, tracking), commemoration (ephemeral repetition of historical remembrance), awareness (ambient representations that can increase the legibility of the city), and, of course, commercialism (through syncretic association of iconic buildings and brands, as well as the direction of audiences and consumers to various sponsors through the recentring qualities of participation). (120)

From this media architectural perspective, the ambient is conceived of as a quality of media to perceptually exceed material fixation, at the same time offering a locus of interfacing. The ambient thus not only surfaces on the architectural grid of urban space but situates us together, firmly within it.

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Architecture, Architexture

Architecture generally refers to the field of material design of the built environment. Similar to other fields of design, the term points to architecture as a practice as well as to its products. As a concept, architecture is most often used to specify the constructive elements of objects—be they material things, dynamic mechanisms, or discursive arguments. Think of the architecture of a library, a digital game, or a political campaign. While structural, spatial, and material properties may be a starting point of this conceptualization of the architectural, affordances for dwelling, moving, acting, and thinking bring temporal, performative, and affective features to the fore that can also be understood as being at the heart of the concept.

Various scholars have worked from, and on, the reciprocal fertility between architecture and philosophy to think about the connections between these characteristics. Influenced by Henri Bergson, Gilles Deleuze, and Jacques Derrida, philosopher and feminist theorist Elizabeth Grosz (2001) has explored the porous boundaries between architecture and philosophy to rethink space with perspectives on temporality and embodiment. She argues for an integration of the principle of time—specifically in terms of emergence and transformation—in architectural design. Included in her perspective on embodiment and experience, she also puts forward the question of sexual difference in how we experience architectural space and time. Architects and theorists Lars Spuybroek and Bernard Tschumi have also contributed to an approach to architecture as event, opening up to a performative perspective on the material, built environment. For example, Spuybroek makes a claim for an "architecture of continuity," which integrates sensory experience, activity, agency, and expressivity in its tectonics and materiality. Tschumi probes how architecture and philosophy are both concept-driven disciplines that provide structures for thinking, and vice versa (see also **figuration**). Philosopher Manuel DeLanda has brought a new materialist perspective to architectural discourse with his understanding of matter and materiality as animated by immanent patterns of being and becoming and proposing nonlinear causality and a Deleuzian perspective on the virtual as part of material reality.

Whereas these thinkers may have been primarily concerned with a philosophical reading of the specificity of architecture as design practice and its

objects, as a concept for the creative humanities, the conceptual underpinning of the term *architecture* or the *architectural* itself can be further developed. By zooming in on the connection between design, object, and event, it asks for a perspective that borrows from the fields of architecture, art and design theory, media and performance studies, cultural theory, and philosophy. This (inter)disciplinary exchange and an investment in contemporary cultural dynamics and transformations has yielded a proliferation of new qualifiers to the concept of architecture, such as *media architecture*, *mobile architecture*, *more-than-human architecture*, *narrative architecture*, or *performative architecture.* In various ways, these new terms conceptualize the impact of digital, interactive, and mobile technologies on forms of architectural design, architectural relating, as well as architectural thinking. Moreover, they signal the import of architecture as a concept to think about other phenomena than the material, built environment. Examples are the spatiotemporal arrangements of theater and performance, **dispositifs** of screen-based installations or urban screens, and mobile **interfaces** for location-based games, to name but a few. There we can see a strong relation between architecture and other concepts that analyze spatiotemporal, affective, or narrative structures, arrangements, and relations, such as archaeology, **cartography**, **ecology**, or **dramaturgy**.

The **kinship** between architecture and dramaturgy has been explored by performance studies scholar Cathy Turner. Both disciplines are concerned with the design of structures in time and space (2015, 2). With her approach, she aims to expand our perspective on dramaturgy as an art of such design, while also demonstrating the relevance of dramaturgical perspectives on how architecture builds with temporal and performative aspects. Inspired by Gilles Deleuze and Félix Guattari's notions of "becoming" and "rhizome," performance studies scholar Liesbeth Groot Nibbelink proposes the compound of *architexture* as new concept to analyze the structural as well as **procedural** logic of the intersecting spatiotemporal fabric, or texture, of location-based live performance in her work on what she calls "nomadic theatre." As layered fabric rather than linear text, the architecture of this type of performance structures possibilities for a multiplicity of (shifting) perspectives as well as for alternative use, (re)writing, and change that are embedded in, and afforded by, their layered and decentered scenographic design. With the concept of architexture, she aims to activate its analytical potential to provide a "model for enquiring into how spectators are addressed as co-creators of the event and become part of a process of building performance" (2019, 144).

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Assembling

Both people and other organisms as well as things can assemble themselves, just as an assembly can consist of people, organisms, and things. That is, assembling happens both within and across cultural, natural, and artificial domains. For all these cases, the progressive form "assembling" emphasizes, more than the noun "assemblage" (DeLanda 2006), the processual rather than static nature of gathering together. Additionally, assemblings of all kinds tend to be excessive in material, relational, and subjective terms, as assemblings produce more relations than are present at the initial moment of assembly. They do this by attracting more bodies, and the ideas, concepts, and meanings emerging in or by the gathering are often both critical and creative, sometimes **speculative** or even scary.

The self-assembling of (components of) nonhuman living beings and nonliving things follows biological and physical processes, patterns, and laws. Think of molecules autonomously forming membranes within cells or at the **surface** of cells. Or of dust bunnies that are being formed with the help of wind or electricity. Such tissues or things provoke change in the environment they are part of by blocking access, permeating materials, or animating bodies. Another form of assembling occurs across biological and social domains, changing (the way we think about) the boundaries of these domains in the process. In the context of new reproductive technologies and the literal and figurative **making** of **kin**, science and technology tap into ongoing biological processes so as to artificially boost the performance of genetic material. In the words of anthropologist of science and technology Sarah Franklin, borrowed from her colleague Marilyn Strathern, "the new genetics proceeds [by] assembling parts that belong to different orders of phenomena according to a logic of totality that is not to be found in the parts, but in the principles, forces, and relations that connect the parts" (2003, 82). Here we see that engineering interventions in the biological realm presuppose a biosocial whole and that bioengineering itself has a societal impact that changes our ideas of kinship, which, in turn, feeds into the engineering of new interventions.

Finally, there is the assembling of people in professional or public arenas, often with the shared goal of making a political statement. Here the go-to example is the demonstration on the street or the square or digitally on so-

cial networking sites. In *Notes Toward a Performative Theory of Assembly* (2015), feminist philosopher Judith Butler reflects specifically on the embodied vulnerability of human subjects gathering together (see also **care, ethics of care**), where the individual body and the body politic are both means and limit cases:

> A group acting together has to be supported to act, and this takes on special meaning when the action takes place increasingly as a way of demanding enduring support and the conditions of livable life. It could sound like a vicious circle, but it should come as no surprise that the bodies gathered in social movements are asserting the social **modality** of the body. This can be a minor way to enact the world we wish to see, or to refuse the one that is doing us in. Is this not a form of deliberate exposure and persistence, the embodied demand for a livable life that shows us the simultaneity of being precarious and acting? (153; cross-reference added)

Butler thus demonstrates, much like Franklin and Strathern, how something *more* is produced in social gatherings as the social gathering itself produces its own (vital and desired) conditionality by asserting that some **conditions**, relating to identity, economy, and bare life, have not been met.

In order to properly engage with the emergent qualities of assemblings, a sensitive measuring apparatus is needed. Philosopher of science María Puig de la Bellacasa makes the case for such an approach in her article "Matters of Care in Technoscience: Assembling Neglected Things" (2011). She writes:

> In naturecultures, the affective world of care as an everyday practice is not equivalent to innocent love or the protection of those in need. Taking responsibility for what and whom we care for doesn't mean being *in charge*. Adequate care requires knowledge and curiosity regarding the needs of an "other"—human or not—and these become possible through relating, through refusing objectification. Such a process inevitably transforms the entangled beings. (98; emphasis in original)

Puig de la Bellacasa's **care**-full and **multimodal** approach pleads for scholars to move along with the people, organisms, and things studied instead of making objectifying moves. Only through **affect**, she suggests, do we find "a way of relating to them, of inevitably becoming affected by them, and of modifying their potential to affect others" (99).

Dutch visual artist Jonas Staal, working in dialogue with Butler and often at BAK (base for art, theory, and social action) in Utrecht, has coined the word *assemblism* for "a practice that links the domains of art, theater, performance, activism, and politics" (2017, n.p.), a practice that he works out by reflecting on movements such as Occupy and prison strikes in particular. He argues:

> Most important in the way these two examples of assemblism perform collectivity is the imaginary that they evoke—the surplus of presence they bring into being . . . when the people who are present refer to themselves as the "99 percent" or something similar, they perform *as if they were a majority*, even though they are factually a minority. In this way, assemblism lays the foundation for a collectivity yet to emerge. A new Us is performed *as if* it is already a majority, before it manifests materially. (n.p.; emphases in original)

What artists do in this context, Staal argues, is give form to power. Power here must be defined as the force running through the assembled collectivity, enabling the assembling to come into being and spilling over into the larger social, economic, and biopolitical domain.

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Asterisk *

The asterisk * is a visual symbol that like the **dash –** and **hyphen -**, **brackets []** or **parentheses ()**, **hashtag #**, slash /, and underscore _ produces meaning when used as a **punctuation** mark in written language. It can be placed right after words—much like a footnote—replace whole words for redaction, or be inserted in a word to take up the place of a letter. An example of the third is the ambivalent (because of the visual emphasis) censorship of curse words, like "sh*t." When used on both sides of a word, the asterisks unambiguously add *emphasis*. Like other punctuation marks, specifically those that are directly added to or that intervene in the syllabic unity of words, the asterisk is a visual, typographic interruption in the syntactic logic and rhythmic flow of written and read language that *literally* and thereby also *figuratively* makes a point. It works by omission, addition, and/or connection. The asterisk makes the reader pause . . . and ponder about the omission it evokes or the relation it activates as it inserts a **trace** that makes her look for the indexical connection (where is the reference it points to?). Sociologist Bryan Green writes about and quotes such a use of asterisk by his colleague Harold Garfinkel:

> Asterisked spelling not only interrupts reading and slows down conventional response, it directs thought toward things yet to be revealed, beyond familiar words, perhaps beyond words at all—that is, to ineffable things: "Sometimes familiar words for phenomena are used, names found in common vernacular or technical terminologies . . . familiar names are used tendentiously . . . with a deliberately corrective, but concealed tendency. In speaking *tendentiously*, a term is written with its asterisked spelling, for example, detail* . . . by detail* is meant something other and different than the reader would explain or *can* explain with any of detail's many vernacular straightforward meanings." (Green 2008, 962; quoted from Garfinkel's 1996 *Ethnomethodology's Program: Working Out Durkheim's Aphorism*, 99n15; emphasis in original)

Moreover, specifically when used for emphasis, asterisks can invoke a physical response or **gesture** on the part of the reader, prompting her to hold her breath or give a shrug or other physical expression in response to the **accentuation** of the word, which impacts on the **rhythm** of reading. As such,

the asterisk produces a marking for and of reflection, interpretation, and conceptual thinking.

A demonstration of its conceptual force as both a marking of absence and an addition can be found between the following two uses of the word *asterisk* as an adjective. A first example of its meaning of marked absence is the reference made by historian Douglas Brinkley on a CNN broadcast on the 2020 loss of US presidential candidate Donald Trump to Joe Biden. Brinkley referred to Trump as an "asterisk president" who is, in his words, a "one-off" in the history of American presidents, lacking preceding or future legacy from a historical perspective.[1] There the asterisk signifies the marking of difference by lack, in the example clearly used in pejorative terms. Significantly, a few days earlier political scientist Ian Bremmer (2021) referred to the winner Biden as a possible first "asterisk president" in the face of the controversy about the legitimacy of the electoral results. In his use of the adjective, the asterisk marks suspension, "denoting his perceived illegitimacy in the eyes of millions."[2]

The use of asterisks to mark what is unknown, different, or undefined—for example, in the context of the representation of numeric, statistical data, or as wild card in searches in digital databases—can have ideological and political **implications**. In such cases, the asterisk is used to mark the outlier, the exception, or the unknown, be it quantitatively or qualitatively. Quantitatively, it can mark marginalization—for example, of peoples or communities that cannot be, or have not been, measured and thus remain un- or underrepresented in certain demographics (see also **risk**). Qualitatively, the asterisk can also open up categories and as such widen possibilities for inclusion—notably also with quantitative effects. An example of this is the case of the asterisk added to **trans*** in the *Oxford English Dictionary* in 2018: "originally used to include explicitly both transsexual and transgender, or (now usually) to indicate the inclusion of gender identities such as gender-fluid, agender, etc., alongside transsexual and transgender." Such use of the asterisk as a wild card with the aim to open up categorical thinking has also sparked controversy within the LGBTQ+ community, however, because of its referencing to the asterisk in digital search engines and its oppressive connotation. Such controversy notwithstanding, here we can see the critical potential of the use of the asterisk, folded into its ability to give inflections or **accents**, to presentify absences, add meanings, and highlight implications. Its creativity—never isolated from

1. https://edition.cnn.com/videos/politics/2021/01/16/what-will-be-president-trumps-legacy-douglas-brinkley-ctn-vpx.cnn

2. Bremmer, Ian. 2021. "Welcome to the New Normal of America's 'Asterisk President.'" Financial Review January 8. https://www.afr.com/world/north-america/welcome-to-the-new-normal-of-america-s-asterisk-president-20210108-p56sm3

its politics—is intricately imbricated in such opening up of form, mobilization of thought, and activation of relationality.

READING

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Between No Longer and Not Yet

The gap, interval, or passage between no longer and not yet is a place, moment, or movement in which imagining can take place. Undergoing the in-between experience of oscillatory motion in space and time means that it is difficult to fully grasp what is not anymore but also not yet, or in the making. *Recognition* of what goes on in the present **situation**, *prediction* of what may happen in the future, and *prescription* of what must happen then are suspended, given the uncertainty and indeterminacy of the now. Differently phrased, when experiencing this oscillation, it is not quite possible to rely on existing knowledge and insights for the cognitive acts of recognizing, predicting, and prescribing. This should not be interpreted as something negative or as a loss, however. In response to the potential of the no longer of the past and the not yet of the future, philosopher Jean-François Lyotard ([1988] 1991, 65) states that "what is already known cannot, in principle, be experienced as an event." In the eventful now, the *imagination* is facilitated in several registers: philosophy, inventive scholarship, politics and activism, artistic creation, emotion, and **affect**. This leads to the insight that uncertainty and indeterminacy can have transformative and emancipatory potential.

Philosophers and cultural theorists who explicitly make the claim for such a potential tend to be cautious about a political or activist agenda or about the fact that our times are saturated with information, thus disrupting the necessary **conditions** for imaginative work. Explicit agendas as well as the widespread circulation of the already known may reduce the imaginative promise or potential of the gap or the interval. Feminist philosophers such as Rosi Braidotti, Dorothea Olkowski, and Ewa Ziarek call on the work of Hannah Arendt and Luce Irigaray, who have both worked on the interval, as a way to circumvent prescribing recognizable gendered behaviors, desires, or forms of inquiry for a feminist or democratic future. Ziarek writes:

> Contesting the distinction between theory and practice, feminist thinking about the future of gender in the gap between no longer and not yet is indeed an intersubjective experiment to "gain experience in *how* to think" and how to act, and does not "contain prescriptions on what to think." It is the task of feminist criticism to insert this agonistic interval again and again whenever thinking or

> action seem to exhaust themselves or to repeat comfortable conclusions. (Ziarek 2016, n.p.; emphasis in original)

Mentioned feminist philosophers have mobilized the interval as a way to imagine a nondetermined sexual differing while still trying to respond to patriarchal, heteronormative, Eurocentric, racist, capitalist, and bio- and necropolitical attempts at closing the gap. The last is an appropriation of the very idea of difference. Aforementioned Lyotard has worried about ICTs making unexpected, creative, and imaginative results of working with information impossible, given the fact that they reduce information to bits or "binary digits" that can be controlled linguistically. This results in information to appear to the user in a calculated presentation of certainty and determinacy. In his work from the late 1980s, Lyotard is looking for ways in which our work with ICTs can still preserve or conserve space and time for freely imagining. We now know this may happen by (acting on an) **accident** or by **contingent** computation.

In the chapter "Chore and Choice: The Depressed Cyborg's Manifesto" from 2019, Tavia Nyong'o, a scholar in African American theater and performance studies, discusses Bina48, a bust-like humanoid robot that is powered by artificial intelligence and can chat with humans, robots, and other networked machines. The robot Bina48 as well as its/her **encounters** with humans such as Bina Aspen, the black woman it/she is modeled after, and machines of all kinds are experiments that can make us imagine futures that are not confined by preconceived ideas about the qualities of being human, robotic, gendered, or racialized. Nyong'o evokes the "uncanny valley of race" in an attempt to linger over the transformative and emancipatory potential of experimenting with Bina48. In a close reading of the famous encounter between Bina48 and Aspen, he demonstrates that whereas Aspen "crosses the uncanny valley from friendly relatable stranger to fervent ideologue, . . . it is the robot that appears uncertain, confused, and ultimately more able to grasp the implausible contradictions of this strange interview" (Nyong'o 2019, 194). The close reading thus catapults us into an imaginative future of entanglement with AI.

READING

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Ziarek, Ewa. 2016. "Shall We Gender: Where? Who? When?" *Genders* 1, no. 1. https://www.colorado.edu/genders/2016/05/19/shall-we-gender-where-who-when.

Both/And

Users of a logic of both/and want to accomplish three things, often at once. First, they want to shift registers away from a binary logic of either/or. The latter logic is exclusionary, whereas a logic of both/and is additive. Additive logics do not enforce choice or competition. They are inclusive instead. Second, a logic of both/and is mobilized specifically to cut across the (false) subject-object divide that can haunt cultural theory and empirical research, as well as fields such as governance, journalism, and also activism. Objectifying the subject of one's research, speaking, or action, whether that subject is a living being or a thing, puts a double dynamic in place. Michel Foucault has famously described this dynamic as operating between *subjection* and *subjectification*. Subjection and subjectification are the two sides of one and the same coin. Think of the slogan "We're here. We're queer. Get used to it!" Users of a logic of both/and strive for horizontalization of the subject-object relationship. Third, a logic of both/and is mobilized for creative purposes. This is because there is more to addition than simple accumulation. The human and/or nonhuman entities added up immediately start to reflect, refract, or **diffract** one another. This implies that they transform and become (in the Deleuzian sense) with each other.

Both theorists and makers frequently find themselves compelled to use a logic of both/and for other than political reasons. Philosopher Alfred North Whitehead explains why in his masterpiece of what he calls "cosmology," the book *Process and Reality* ([1929/1978] 1985). Taking the work of fellow philosophers René Descartes and David Hume to their logical conclusions, Whitehead writes:

> Sense-perception of the contemporary world is accompanied by perception of the "withness" of the body. It is this withness that makes the body the starting point for our knowledge of the circumambient world . . . we feel *with the body*. There may be some further specialization into a particular organ of sensation; but in any case the *"withness" of the body* is an ever-present, though elusive, element in our perceptions of presentational immediacy. (81, 311–12; emphasis in original)

Whitehead's concept of withness goes much further than the usual definition of the term: close association or proximity. Withness assumes an integrative approach that exchanges separated "aboutness-thinking" for a thinking from within (Shotter 2006). Anthropologist Tim Ingold (2017) argues that withness shifts a thinking in the objectifying terms of "of":

> Where "*of*-ness" makes the other to which one attends into its object, and ticks it off, "*with*-ness" saves the other from objectification by bringing it alongside as an accomplice. It turns othering into togethering, interaction into correspondence. (19–20; emphases in original)

Cultural theorist Mieke Bal (2013, 230–31) makes the same point about the way in which Gilles Deleuze complements his philosophy with art: he philosophizes *in* art, or *as* cinema. Bal herself uses the neologism "andness" in order to address the withness of Whitehead and Ingold. Her work speaks directly to the creative aspects addressed or stimulated by both/and logics and pushes it even further than that, as per the transformational impetus of the logic itself. Bal refers to the famous concept "creative AND" of Deleuze and his conversation partner in philosophy, Claire Parnet. Responding to each other (not just writing *about* philosophy), Deleuze and Parnet make some quite radical diagnostic and programmatic statements about andness. Their assignment: "Substitute the AND for IS. A *and* B. . . . Thinking *with* AND, instead of thinking IS, instead of thinking *for* IS" ([1977] 1987, 57; emphasis in original). The creativity of the AND is to be found in the stammering "AND . . . AND . . . AND" that "will make us [a] stranger in our language, in so far as it is our own" (59). Bal (2013) demonstrates how the work of the Brussels-based visual artist Ann Veronica Janssens is not only creative but also political in its refusal of limits:

> All three of these aspects—[fast] pace, [all-inclusive] color, and [**care**-full, relational] mood—concern a political desire to put in place a logic of endlessness, which entails a refusal of the line that divides as well as of the materiality of objects that hamper that endlessness. The endless additive logic of this art is its "andness": its abstract stuttering repetition of an "and" that refuses to stop. (223; cross-reference added)

Bal herself invents and uses a writing style that, albeit within the confines of the book as consisting of a limited number of pages, does the same: it refuses to stop and produces a multiplicity of relations, interpretations, and **implications**.

READING

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Shotter, John. 2006. "Understanding Process From Within: An Argument for 'Withness'-Thinking." *Organization Studies* 27, no. 4: 585–604.

Whitehead, Alfred North. [1929/1978] 1985. *Process and Reality*. Corrected edition by David Ray Griffin and Donald W. Sherburne. New York: The Free Press.

Brackets [], Parentheses ()

Like the **asterisk *, dash –** or **hyphen -**, **hashtag** #, slash /, or underscore _, brackets [] or parentheses () are **punctuation** marks that add or clarify meaning, allow for a creative rewriting and questioning of, for example, established logics and truths, and as such produce spaces for reflection, interpretation, and conceptual thinking. Like other punctuation marks, brackets are not only linguistic signs but are also used as mathematical symbols. Both square brackets (here simply called "brackets") and round brackets, or parentheses, work in pairs to select, separate, and mark their content—the words, numbers, or other objects between them—from, or in relation to, the rest of the sentence or other context. Typographically, the [] and () also visually emphasize this selection, separation, and marking. As mathematical notation, brackets and parentheses also make selections, but specifically to form groups or intervals, and can establish a sequence to operations in, for example, algebraic equations. The functionalities of selection, separation, and marking (and possibly also ordering) are indications of how bracketing and parenthesizing can also work conceptually. Or to be more precise: how they can lend a conceptual inflection to their content.

In both cases of bracketing and parenthesizing, we can see that this typographic marking can be used to add a temporary and provisional quality to the word, number, or object that is captured between them. In editing practice, brackets are used for newly inserted words into a quoted text rather than parentheses; this in order to avoid confusion with the original text. As such, brackets can add new and extra information or suggest proposals for changes. Examples are the use of [*sic*], adding a name when the quote uses a pronoun or surname only, adding an afterthought or comment to elucidate a quote, or to replace a lower-case first letter with a capital after the first part of the original sentence is cut off for brevity and clarity. Editorial bracketing can thus add, replace, comment, or suggest, with a clear marking of its posterior and provisional status. This provisionality notwithstanding, such marking with brackets also gives emphasis to the content in question. Marked with brackets, words stand out from their context. In a provisional yet emphasizing **gesture**, brackets can suggest thoughts or perspectives by offering their

content as a provisional idea or conceptual searchlight, opening up to experimental thinking and routes for exploration, and to simultaneous or subsequent reflection on its productivity. To put a word between brackets can propose this as a word to think (and look) with: to *propose* and *articulate* a concept.

The expression of "bracketing" is also called epoché in philosophical discourse, specifically within phenomenology. Derived from ancient Greek—meaning suspension of judgment, and significantly also a suspension of the expression of a judgment—it refers to a prerequisite for unfiltered experience. Contrary to a form of proposing and articulating, in this context bracketing is a gesture of *suspension* that precedes experience as perception before conceptualization. To bracket something is to suspend judgment about it by shedding one's preconceived assumptions, familiar ideas, or conventional concepts so as to perceive it more directly within its bracketed status. However, suspending judgment as a project of shedding such assumptions, ideas, and concepts has a rather mixed reception history in cultural theory. Scholars have been unconvinced when this shedding, and the assumption of it leading to unfiltered experience and direct perception, is narrowed down to a disentanglement of the object of study from history, culture, or from cultural critique. Such a reductive practice of "conceptual bracketing," digital media scholar Tara McPherson argues, does nothing but repeat what scholarship has always been about according to those who set not only the academic but especially the sociocultural agenda (2014, 181). In her response to claims for a neutral, instead of critical, digital humanities as a way to secure direct "access" to processes of computation, that is, a form of access to computer code that is unmediated by cultural codes, McPherson argues "that this conceptual bracketing, this singling out of code from culture, is itself part and parcel of the organization of knowledge production that computation has disseminated around the world for well over fifty years" (181).

Suspension can, however, also be a set up for a Cartesian epistemology of doubt or **zetesis** as it can open up to philosophical and creative inquiry with its qualities of curiosity, experimentation, and **risk** that can thrive precisely in this state of suspension. As feminist, queer, and critical race theorist Sara Ahmed puts it in her *Queer Phenomenology: Orientations, Objects, Others*, "Rather than the bracket functioning as a device that puts aside the familiar, we could describe the bracket as a form of **wonder**: that is, we feel wonder about what is in the bracket, rather than putting what is in the bracket to one side" (2006, 199–200n1). This implies, indeed, that brackets not only capture their content but also our relationship to this content. As such we can understand the act of bracketing as having methodological **implications** with creative and critical potential.

READING

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Overgaard, Søren. 2015. "How to Do Things with Brackets: The Epoché Explained." *Continental Philosophy Review* 48, no. 2: 179–95.

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Care, Ethics of Care

Etymologically the word *care* is derived from the Latin noun *cura* and the verb *curare*. Both noun and verb have two conflicting meanings. First, worry or to worry. Second, care or to care for, to cure, or to edit. In the latter meaning we recognize the etymology of the word **curation**: positively connoted, care means attentiveness, conscientiousness. The task of the carer is to exercise responsibility and concern for, and to be protective of, someone or something other than oneself: a person who needs help or support or a thing that needs maintenance or repair. The aim is to optimize **conditions** for growth and flourishing, or negatively, to prevent decay or to ward off demise or death. Feminists and critical race scholars alike have been critical of gendered and racial connotations of care, not as a form of labor but as a supposedly feminine disposition—connotations that translated into Black and Asian women in particular bearing the brunt of family and community caring activities. The feminist *ethics of care*, developed from the 1980s and 1990s onward by Carol Gilligan and Joan Tronto respectively, was developed to recover care work from its undervalued status and to regain its sense of importance as both labor and as implying also the need to care for oneself, especially for women. Today care has acquired a slightly inflected meaning that is activated in debates around *data ethics* and *environmental ethics* in particular. As such, the concept of care gains prominence in contemporary cultural theory in its overlap with fields like data studies; science, technology, and environmental studies; and new materialism. The conceptual impetus of this new wave of theorizations of care is less restoratively political and more forwardly oriented ethical: both the concept and the practices of care are established as immediately entangled with intersectional relations of power both within and between communities and across social, natural, and technological environments. The point here is to closely attend to and subtly intervene in human-human, human-nonhuman, and nonhuman-nonhuman relations as they are taking shape. Both the attending to and the interventions develop in interdisciplinary (and) creative ways.

Environmental ethics as the care-full approach of closely attending and subtly intervening took off with Bruno Latour's epistemic shift from "matters of fact" to "matters of concern" (Latour 2004). Matters of fact are easily

debunkable after social constructivism because opposing parties—scientists, government officials, and activists alike—can debunk unappreciated statements of others by calling them fiction, not fact. Matters of concern, on the other hand, do not allow for such distancing acts and the accompanying essentialism: it is much harder to make unambiguously oppositional statements when one sees oneself as part of the studied material, people, or ideas. Such statements are also much harder to debunk. Scholars like Dimitris Papadopoulos (2018) and María Puig de la Bellacasa (2017) replace matters of concern with "matters of care" because "the implications of care are thicker than the politics turning around matters of (public) concern might allow thinking" (Puig de la Bellacasa 2017, 30). This thickness stems from the impossibility to generalize about matters of care (and the possibility to generalize about matters of concern). Puig de la Bellacasa writes:

> Ways of knowing/caring reaffect objectified worlds, restage things in ways that generate possibility for other ways of relating and living, connect things that were not supposed to be connecting across the bifurcation of consciousness, and ultimately transform the ethico-political and affective perception of things by involvement in the mattering of worlds. (65)

The "bifurcation of consciousness," a phrase from sociologist Dorothy E. Smith, addresses the phenomenon of isolating that which is deemed worthy for one's research and that which is considered undeserving of attention. Often the former are clean patterns (including theorizing and critiquing care as feminized) and the latter messy **affects**. Studying the **implications** of care entangles the worthy/clean and the unworthy/messy.

Thick matters of care have found their way into academia by grounding one's research in many registers at once, including the artistic register. Anthropologist of Latin America and professionally trained creative writer Kristina Lyons works with ethnographic poetry (vignettes, poems, and other **micrologies**) in her research on state soil scientists and peasant farmers and the politics of life, decay, and death on and around coca fields in Colombia. Lyons (2020) finds herself "inspired by physicist Niels Bohr's popular and poetic statement that 'a physicist is just an atom's way of looking at itself,' . . . to ask what it means to say that a soil scientist is a soil's way of looking at itself" (58). Some soil scientists have in fact "insisted that scientists needed to engage with artists and creative writers, if not become artists and poets themselves, if they aspired to transform the extractive and industrialized logics and practices that have come to characterize modern human-soil relations" (63). Therefore, in *Vital Decomposition: Soil Practitioners and Life Politics*, Lyons uses micrologies to interrupt the flowing text of her ethnography as a way to articulate how, on and around the coca fields, life and death and war

and peace interrupt each other. Lyons's poetic way of drawing attention to the devastating environmental impact of commercial and military-led crop-growing practices is an effective and affective reminder of what the transnational (European) research collective of academics, artists, and activists Pirate Care calls the criminalization of intrahuman and **trans**species solidarity and the neoliberalization of basic care provisions such as health care, housing, access to knowledge, the right to asylum, and the freedom of mobility. From their home base in Rijeka, Croatia, the collective uses online pirating tactics to draw attention to these matters of concern. One of their projects is an online syllabus on the theme of feminist and environmental ethics of care.[1]

READING

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Lyons, Kristina M. 2020. *Vital Decomposition: Soil Practitioners and Life Politics*. Durham, NC: Duke University Press.

Papadopoulos, Dimitris. 2018. *Experimental Practice: Technoscience, Alterontologies, and More-Than-Social Movements*. Durham, NC: Duke University Press.

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1. See https://pirate.care.

Cartography, Performative Cartography

Cartography is the practice of creating representations of territories—whether geographical, synthetic (for example, visualized, animated, digital, **architectural**, or in other ways created), or theoretical. While "cartography" is also often used to designate the result of this practice—the cartographies created—the distinction between the process and its results is significant. Creating cartographies is never neutral. It inherently infuses its territories with perspectives, logics, and principles of in- and exclusion. Think, for example, of an author or a maker who has "fallen off the canon" of hierarchically structured anthologies and curricula. Or, alternatively, of horizontal and **open** cartographies of thought and practice across scholarship and art. Cartography as practice is always already a cultural, discursive, and theoretical endeavor as it constructs spatiotemporal relationality and possible, future **navigation** through the territories constructed and mapped. When conflating the practice (of cartography) and its results (in cartographies), this process of construction and its **implications** may become obfuscated.

In response to digital, interactive locative technologies, mobile media, and algorithmic media, the concept of *performative cartography* (Crampton 2009; Verhoeff 2012) emphasizes this shift from object to action. It postulates the need to understand cartography as an activity, as a form of navigation, that emerges in mobility, change, and difference, rather than resulting from fixation and delineation as in traditional, representational map making. Understanding cartography as a dual practice, whereby the immanent doing of cartography is a productive integration of space, time, thought, and politics, immediately points at performativity rather than representation. Representational maps are informed by modern epistemologies that only allow for progressive knowledge production and work according to a Cartesian dualistic logic. Following this logic, a certain territory or phenomenon can be *mapped*, resulting in a "map." *Pre*representational or performative maps, on the other hand, foreground process, mutability, flux, simulation, remediation, notions of becoming, and mobility, that is, the processes *before* representation in which representations come into being. Performative cartography foregrounds the processual, **procedural**, and **deictic** *experience* of this navigation as more fluid than fixed spatiotemporal positioning. Performative car-

tography emerges *in* movement, as a particular form of *creative navigation* with its maps and views evolving and emerging along the way. This coupling of time and space after the performative turn encourages a qualitative shift away from modern dualism so that we come to understand the map as a spatial and temporal *event*. Performative cartography, then, is a *cartographizing* of multidirectionality that embodies change, difference, and, to some degree, unpredictability and **risk**.

A passionate user of the cartographical method for the feminist creation of and intervention in theoretical territories is feminist philosopher Rosi Braidotti. According to Braidotti's formula, "a cartography is a theoretically based and politically informed reading of the present" ([1994] 2011, 4). This reading, Braidotti argues, is never finished once and for all: "More like a weather map than an atlas, my cartographies mutate and change, going with the flow while staying grounded" (13). Fellow feminist philosopher Evelien Geerts (forthcoming) explains that Braidotti's cartographies are a dual practice, indeed, in that criticality is matched with creativity. This dual or perhaps even triple nature of theoretical cartographizing is expressed in the oscillatory movement between acknowledging top-down **classifixation** of thought, practicing **situated** knowing and doing, and **following** the philosophical material. She argues that

> such a critical mapping project follows the movements of forever shifting philosophical constellations and is self-adjusting, which means that the archives, texts, concepts, and traditions that are painted with critical cartographical brushstrokes are not rigidly classified, but are instead shown to possess agency of their own. (n.p.)

Geerts's web resource "Digital Cartography of New Materialisms" (Geerts, Hebing, and de Kruif 2019) updates Braidotti's cartographical practice by explicitly taking on board the current-day impact of digital technologies and algorithmic media in the coming into being of critical and creative philosophical maps. Embracing the agency of machine learning algorithms on theoretical territory, Geerts and her collaborators argue that "just like its textual counterpart, this digital map is non-exhaustive and open-ended of nature" (n.p.).

READING

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Classifi*x*ation

A logic of classifying objects and classifying living or dead organisms underlies the sciences, on the one hand, and, on the other, institutionalized and activist forms of social relating. The life sciences, for example, divide up the living organisms they study according to a taxonomy. Another example pertains to the social sciences that study **kinship** structures (anthropology) or other forms of identification and social organization. The humanities classify artefacts of human making according to their form (theater, painting, . . .) and individual art works according to their style or movement (impressionism, dada-ism, . . .). Similarly, institutions and the social movements reacting to them use classification according to categories such as gender, sexuality, race, and ethnicity in order to gather the people they wish to represent or to specify the causes they work for. Classification becomes *classifi*x*ation* once the division of people, other organisms, and things in the classes that they seem to belong to, as if by nature, is naturalized, thus erasing diversity and mutability.

Contemporary research and creative (art) practices respond critically and creatively to classifi*x*ations on the basis of the recognition that the *idiosyncrasies* and *transformations* of individual persons, organisms, and things cannot be captured and are fixated by most classifications. This is because classifications are based on generalizations and have certain other characteristics. Linnaean biological taxonomies are *hierarchically structured*: there is “man” and there are “lower animals.” Classifications of movements in thought are often structured by a *sequential negation*, whereby *y* is said to be more effective or simply “better scholarship” than *x*, and *z* than *y*. Hierarchical structures and sequential negations make the narratives they create *progressive*. However, progress narrative, just like generalization, does not sit comfortably with idiosyncrasy and nonteleological transformation. In the words of feminist epistemologist Iris van der Tuin:

> Cracks craze classifications; they are not neatly gridded. And grids can crack at any time. Theorizing classifications as dynamic events asks us to think of cracking as an unexpected potentiality actualized instead of as an expected possibility realized according to a plan. . . . Such leaps into the unknown are at work in

> all classificatory projects; **cartographical** projects taking advantage of these dynamics do not make a difference between the unsuccessful and the successful in such a sense. (2015, 29–30; cross-reference added)

Contemporary scientific research informed by nonlinear biology and quantum mechanics, but also the humanities after poststructuralism with their canon-and-genre critical approaches, have acknowledged in the reductionism of classifi*x*ation. It is also in the realm of art practices that alternative categorical logics and alternatives to categorical logics are explicitly experimented with.

Dutch photographer Ari Versluis and Dutch stylist Ellie Uyttenbroek first published their project *Exactitudes* in book form in 2002. Since 1994, they have approached individual members of perceived subcultures, **encountered** on the streets of Rotterdam, in order to photograph them in a studio setting wearing exactly what they wore upon first meeting them. Their project alludes to a scientific vision working toward classification of humans and is brought together with an interest in the sociological study of generalized groups and "types" and with the humanistic study of codes (here: dress codes) and idiosyncratic "exceptions to the norm." With their project, Versluis and Uyttenbroek demonstrate that classifications never quite work and are—their stifling structures notwithstanding—self-deconstructing arrangements.

Alternatives to categorical logics are more often than not informed by computational methods and the affordances of algorithmic media. In *A Quantum City: Mastering the Generic* (2015), editors Ludger Hovestadt and Vera Bühlmann, who work in digital architectonics and **architectural** theory respectively, have produced a book that is not *about* the city but rather *of* all cities. The book is "**open**, curious, disturbed, outraged, fascinated. It knows a lot, experiences a lot. It is like a citizen of our digital world—a sheaf of intelligible probability and delicate sensitivity, a quantum of City" (8; cross-reference added). As "a quantum of City," the book puts measurement center stage and embraces the fact that every outcome of measurement is nothing but just that: an actualization of—in this case—city-ness that could have come out differently and that immediately questions the **conditions** under which the measurement was done. The latter is done with a sense of **care** for both cities, city-ness, and intellectual and artistic achievement. Only classifi*x*ation is prohibited.

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Collage

Collage is the recombination of various source materials (images, texts, sounds, or other matters) that are cut up, transposed, and recontextualized in a new whole. A cut-out *fragment* subsequently becomes a *detail* in a new composition. Unlike other forms of recombination, it is never the intention of collaging to efface or make imperceptible the joints or glue that hold the end result together, as its form demonstrates the work that has produced it. Composed of **deictic** indexes with or without identifiable references, the cuts, seams, and **traces** of a collage are the integral parts of its essence. As a practice of making by recombining, collage is similar to what has also been called *bricolage*, *montage*, *remixing*, or *sampling*. These terms are steeped in different artistic disciplines (for example, the plastic and visual arts, moving image media, digital media, or music) but also invoke different historical, theoretical, and political frameworks. What they share as concepts is that each connects the principles of its creative, material practice with the phenomenological, ethical, and epistemological workings of such doings as a method. As such, collage—like bricolage, montage, remix, and sampling—as concept and method raises questions about the **implications** of the self-reflexivity and criticality of the still-visible traces of the acts of removal, transposition, and recombination.

Digital collage challenges some of the characteristics of collaging as the creation of singular works that bear and expose the palimpsestic traces of the acts of **assembling**, cutting, and pasting—in whatever material form—that went into its creation, and thereby referencing to the past contexts of its components (cf. Uricchio 2011). While recombinations, transpositions, and links are inherent in digital design with its hypertextual and algorithmic logic, digital collage is perhaps most clearly characterized by the specific form of creativity inherent in digital **navigation** (also conceptualized as **performative cartography**) that is a creation by cutting and pasting, and linking and clicking, with the interactive potential of future recombinations and reroutings. While recombination is de facto always inherent in any form of creation—think of words reused, materials repurposed, and **gestures** repeated—digital collage explicitly raises the question of its timing, or the dynamic and layered temporality of such **kaleidoscopic** creation, as it at once

demonstrates a navigational design by selecting, cutting and pasting, stitching, and linking, and interactive affordances for the user/reader/viewer to click and follow, with the futurity that this entails. As such, digital bricolage or collaging is not (only) a recombination offered but also suggested.

Collage, bricolage, or other explicitly recombinatory arts and practices of remaking, remixing, or appropriation can be understood as expressions of as well as invitations for critical **engagement** or resistance in participatory practices. A view of the cultural form of recombination that expresses resistance has been developed from a cultural studies perspective, for instance in the work of cultural theorist Dick Hebdige (1979) who understands bricolage as a personal remixing and subversion of fashion and style of commodity culture by subcultures. French philosopher Michel de Certeau ([1974] 1984) speaks of "textual poaching" as the struggle of authorship or control over text. This political perspective fits with his conception of *strategies* as dominant structures and means of control and of *tactics* as individual, possibly **random**, negotiational, or oppositional practices. In response to digital practices in popular culture, media theorist Henry Jenkins (2006) understands such participatory practices as characteristic of what he calls *convergence culture*. There the idea of artistic criticality of resistance is perhaps replaced by a more affirmative form of participatory engagement.

Whether resistant, critical, or a specific form of consumerism, collaging is not only a cultural phenomenon but also a perspective *on* culture—a perspective that can have critical potential, as well as a phenomeno-ethico-epistemological one. Collaging as a doing both yields and examines experiences, questions, or ideas by cutting, tearing, folding, gluing, stapling, and writing on and across published and crafted materials that initially had nothing to do with one another but now become source material. In book historian and digital media scholar Janneke Adema's reflection on remix practices we can read how this has implications for thinking, agentiality, and subjectivity:

> Next to providing important affirmative contributions to the imperative to cut well, and to reconfigure boundaries, remix has also been implemental in rethinking and reperforming agency and authorship in art and academia, critiquing the liberal humanist subject that is the author, while exploring more posthumanist, entangled forms of agency in the form of agentic processes, in which agency is more distributed. (2014, 262)

As a reflexive method, collaging is therefore also process-oriented with the aim of working through and beyond experiences in an embodied key, deepening conceptual understanding, making connections, and learning about materials and their transformations.

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Collective Imaginings

The concept of collective imaginings was developed by the Australian feminist philosophers Moira Gatens and Genevieve Lloyd in their 1999 book *Collective Imaginings: Spinoza, Past and Present*. In the book, they discuss the past and present interventions and relevance of the work of the seventeenth-century Dutch philosopher, born in the diaspora of Sephardic Jews, Spinoza (given name: Benedito, Baruch, or Benedictus). Imagination, or *imagining*, is central to the philosophy of Spinoza who positions the concept in relation to reason, emotion, and **affect**. According to Spinoza, imagination must be restrained by reason, but it can also, and at the same time, help to overcome the restraints that rationalistic reason puts on human desires. Moreover, for Spinoza, imagination is a bodily awareness, not (to be) transcended by reason. Imagination has renewed currency today especially in relation to what Donna Haraway (2016) calls our "comic faith in *technofixes*, whether secular or religious: technology will somehow come to the rescue of its naughty but very clever children, or what amounts to the same thing, God will come to the rescue of his disobedient but ever hopeful children" (3; emphasis added). Haraway is critical of technofixing as the unsituated development of technologies, very expensive technologies, that are then implemented from afar, inserted into communities, and leading to disruptions, not solutions. Haraway proposes to work with a sense of **care** for the community, its multispecies and sociomaterial environment, and for technology itself. How can such care-full science, technology, and design projects take off? It implies working imaginatively and from the bottom up, not distantly and from the top down. Gatens and Lloyd demonstrate, with reference to Spinoza, how such imaginative work can best be approached.

The book *Collective Imaginings* underscores the collective as well as plural nature of human imagination. This "nature" has destructive as well as constructive sides, the authors argue, as it includes the social imaginary that produces social and epistemic exclusion, on the one hand, and, on the other, the *intersubjective* response to the material effects of this oppressive imaginary. Moreover, the plural points at a **crossing** of domains (it is intercultural and inter- or transdisciplinary) and times (it is, as per Mieke Bal's terminology and analysis, intertemporal). Hence, collective imaginings indicate an intercultur-

ality, interdisciplinarity, and intertemporality that imply both a methodological outlook for politics and ethics and the concept's contemporary relevance. Our politics and ethics become currently more and more individualistic by focusing on, for instance, personal guilt and blaming others. By suggesting the alternative of working across domains and times, with the concept of collective imaginings, Gatens and Lloyd make a case for an intersubjective rather than individual response to political and ethical **implications** of social oppression so that societies can work toward inclusion.

An example of an intercultural and intertemporal imagining that Gatens and Lloyd mention in their book is related to non-Indigenous Australians seeking to reconstruct the Australian social imaginary in such a way that responsibility for the crimes committed by colonizing forefathers is actualized and brought to life in the present. "For many," they remind us, "it is incoherent to speak of the collective responsibility for actions committed by others, in a past with which the present is continuous" (1999, 142). For Gatens and Lloyd, however, social and political life is always historical and thus collective, and law and jurisprudence also link the actions of otherwise unconnected people. A creative and technology-infused example comes from Lloyd's 2019 essay on an award-winning multigenre text written from the immigrants' prison on Manus Island in Papua New Guinea by Iranian-Kurdish journalist, creative writer, and activist Behrouz Boochani. Lloyd argues that the text, written on a smuggled-in mobile phone and transmitted via the messaging service WhatsApp, has the proven potential to generate an intersubjective response to mass migration. This response is an imagining of a complex notion of "border" or a turning upside down of the politically and ethically charged relation between the island Australia with its incarceration policies and the material effects thereof experienced on the prison island. **Following** this collective imagining, Australia becomes the blinded island and Manus Island the place of vision, knowledge, and creativity.

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Condition

A condition describes a state of being of a thing, person, institution, or society, often described in binary evaluative terms. Something secondhand that is for sale is in good or bad condition, somebody is in good or poor health, a company or legislature is more or less gender balanced. Such states of being are never fixed or fully finished and are constantly changing. *Conditionality* denotes the *pre*conditions of such dynamic states. In order for a thing to be in "good" condition, it must have been kept safe. In order for a person to be and to remain healthy, their natural, built, socioeconomic, and cultural environments must at least have been noncontaminated and continue to be stable. At best, the environments are **generative** so that the person can thrive. Here we see that natural and cultural conditions are intertwined. The ways in which this *naturecultural* intertwinement occurs is itself a condition of a community. When racism is environmental, it plays out on the level of access to unpolluted natural resources. Unequal access to such resources creates an uneven spread of health and illness in a population, income disparities, and eventually climate refugees. Such biased conditionality requires structural reform. Hence, conditionality is, next to *causality*, also a matter of *agency*.

Feminist theorist of technoscience Karen Barad (2012, 54–57) has spoken about the entwinement of conditionality, agency, and causality in an interview. She argues that greater precision about conditionality in fact precludes straightforward binary takes on agency (where one either has agency or not) and on causality (where causality is either linear or nonexistent). She argues that the call for structural reform is often made too quickly and on behalf of too generalized a group, and when reform is then discovered not to be uncomplicated, causality becomes a dirty word. A **situated** take on conditionality may prevent the baby from being thrown out with the bathwater. Barad's call for a rethinking of agency and causality is mirrored in the work of Stefano Harney and Fred Moten, coauthors of the volume *The Undercommons: Fugitive Planning & Black Study* from 2013. Harney is a humanities-trained management professor, and Moten a Black critical theorist working as a professor of performance studies. The two authors started their collaboration by reflecting on and intervening in the university as a workplace that they themselves experienced at the time of writing together as stifling and in need

of far-reaching change. The change they proposed and perhaps wanted to provoke enacts Barad's subtle take on agency as a careful attending to power disbalances and a seeking of "possibilities for worldly re-configurings" (2012, 55). This type of theorizing defines causal relations as emergences that may be nonlinear but are causal, nonetheless.

In *The Undercommons*, Harney and Moten define the university as professionalized almost to the fullest extent, and they are critical of both professional educators and of those who critique professional education. Professional educators fight academe's seeming outside: unprofessional (unregulated or ignorant) behavior occurring both at universities and anywhere outside academia. Critical educators, however, Harney and Moten argue, take up such supposed instances of unprofessionalism and fold the behavior back into professionalized academia in an attempt to have it recognized there. In so doing, however, critical education "is more than an ally of professional education, it is its attempted completion" (2013, 32). What we see here is a practice of critiquing a condition while being caught up in its conditionality: critical educators attempt to rescue unaccepted behavior by being professional about it. The only coherently critical position, they argue, is a position elsewhere: "She disappears into the underground, the downlow low-down maroon community of the university, into the *undercommons of enlightenment*, where the work gets done, where the work gets subverted, where the revolution is still black, still strong" (26; emphasis in original). Harney and Moten describe this position as a position **between no longer and not yet** (94).

Theorist and curator Irit Rogoff has brought the concepts of condition and conditionality to bear in the field of **curation** and practice-based research. Together with a group of academics and arts and culture professionals she uses the concept of "advanced practices" for a new transdisciplinary practice and as a way to respond productively to the contradictory position of the critic as outlined also earlier. The collective writes:

> Participants in the field perceive of themselves as those who are encountering advanced knowledges and collectively experiencing them differently. Such different experiences recognize that the current contestations of knowledge between critical theory, computational and algorithmic logics, the centrality of **affect** and the preoccupation with neo-materialism—all operating within ever more extreme social, economic and environmental conditions—require interstitial narratives. When the need is for global epistemologies and planetary knowledges, for reopening surreptitious histories, when the urgencies are blockages of movement for people and of access to rights, of globally financialized warfare, the collapse of welfare infrastructures and the financializing of education—then the narratives of their knowledge must mirror the fractured multi-positionality

> of the conditions themselves, must speak through them rather than about them. (Allen et al. 2019, n.p.; cross-reference added)

This positioning brings to life Rogoff's continuing call for a "shift in our understanding of research [from] what previously had been a form of working from 'inherited knowledges' [to] thinking about research as 'working from conditions'" (Rogoff 2019, n.p.).

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Contagion

Contagion, or contagious spread, is inherently **generative** in its connecting of bodies of people, organisms, things, and ideas. This spreading productively disrespects analytical distinctions and borders such as between human, technology, and nature and traverses historical, social, and theoretical categories such as gender, race, nation, and class. Political theorist Angela Mitropoulos sets out the parameters of the concept of contagion:

> Contagions reproduce, if indeed such a word can be applied here, without recourse to the implicit paradigm of a binary sexual difference, and with no inclination to a dialectic—which is not to say that contracts and contagions, in their empirical and figurative senses, have often become entangled, precisely because they both turn around the question of generation. . . . Contagion . . . , and as with contract, indicates not only a form of generation but also of relation and subjectivity. As in the contractual, contagion implies a kind of contact. (2012, 13–14)

Dealing with something that is generatively contagious thus brings out the relationship between *contract* and *contact*. The contractual is often introduced in response to processes of, or involving, risky contact. In the sociopolitical realm, we see that the practical emphasis on **risk** often reduces contagion to a relation between infectious and potentially infected bodies. In relation to this, we see attempts at taming communicable diseases by subjecting people to laws, regulations, rules, and other forms of contracts (against contact). There are two reasons why, or indications that, this form of subjection is prone to not working as intended. First, contagion per se points at the permeability of the sociopolitical realm to begin with. Second, philosopher Michel Foucault has provided ample examples of how the process of repressive power (*potestas*) calls forth positive social empowerment (*potentia*).

The qualities of the phenomenon of contagion have consequences for the theory and practice of cultural inquiry. First, contagious spread has become a **figuration** for thinking power, subjectivity, and relationality in ways that are not binary oppositional. In the words of philosophers Gilles Deleuze and Félix Guattari ([1980] 1987):

> Contagion, epidemic, involves terms that are entirely heterogeneous: for example, a human being, an animal, and a bacterium, a virus, a molecule, a microorganism. Or in the case of the truffle, a tree, a fly, and a pig. These combinations are neither genetic nor structural; they are interkingdoms, unnatural participations. That is the only way Nature operates—against itself. This is a far cry from filiative production or hereditary reproduction, in which the only differences retained are a simple duality between sexes within the same species, and small modifications across generations. For us, on the other hand, there are as many sexes as there are terms in symbiosis, as many differences as elements contributing to a process of contagion. (242)

Second, and concomitantly, the concept of contagion has been used across, and thus connecting, many domains of thought and making. "Emotional contagion," "contagious feelings," and "**affective** contagion" work on social, personal, and preindividual registers respectively, indicating the ways in which people may catch each other's emotions or how bodies may be affected by how other bodies feel. "Thought contagion" refers to what we would nowadays describe as the logic of Internet memes: a spreading of units of information or beliefs through mediatized and digitized society. On a more fundamental level, this kind of contagion is driven by how "language is a virus," in the words of feminist philosopher Rosi Braidotti (borrowing from musician Lauri Anderson), or how "the word is a virus," as expressed by novelist William Burroughs. Media theorist Jussi Parikka has written about "digital contagion" as the process that drives computer viruses. "Algorithmic contagion" is a concept of cultural theorist Luciana Parisi that tries to capture not the workings of computer viruses but the spread of hiccups in code.

While writing about racial and ethnic profiling, queer theorist Jasbir Puar asks whether we actually know how contagious spreading works in our biosocial environments. Contagious spreading, she affirms, is about "the encounter of smell, sweat, flushes of heat, dilation of pupils, the impulses bodies pick up from each other, the contagion *of which we know little*, the sense of being touched without having been physically touched, of having seen without having physically seen" (2007, 190; emphasis added). Studying examples of racialization and ethnicization as ways of thinking and feeling that cannot be easily contained in identity categories or conceptualized as purely repressive, Puar mobilizes contagion's parameter of contact as a way to demonstrate how the profiled body is a composite of organic (that is, bodily) and nonorganic materials. These materials refer to ethnic or religious **sticky** signs as well as to the codes used in human-computer interactions that produce predictions about minority groups and minoritized individuals. Importantly, the body as an unruly "composite" can itself be mobilized for practices of activist or artistic queering that intervene in common practices of profiling by tapping

into what is not known about contact, that is, by what is not usually registered (as unambiguous) and can thus not easily be decoded optically, procedurally, or algorithmically.

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Contingency

Contingency can be defined as the occurrence of chance events or chance encounters that may catch the human participant by surprise. The very notion of the chance **encounter** brings to the forefront contingency's etymological closeness to the word *contact*: both words can be retraced to the Latin *contingere* (to touch or to be touched) from *com* (with, together) and *tangere* (to touch). Contingent phenomena may also be described in a nonanthropocentric manner as the sudden collision of particles happening outside the realm of human activity or influence. Such a collision refers to the physical phenomenon of the unpredictable swerving of atoms (the so-called *clinamen*). Mechanically or algorithmically driven incidents that could not have been predicted with certainty by reason are also contingent phenomena. These contingencies are **accidents** or glitches. It is in the nature of all such contingent phenomena to also breach boundaries between the human, nonhuman, and technological domains. Therefore contingency must be seen as serendipitously happening in socio-techno-material arrangements.

The French philosopher Louis Althusser (1918–1990) developed his ideas about the conceptualization of contingency as being an unrecognized undercurrent in philosophy connecting the different corners of its canonical texts while he was spending time in and out of psychiatric hospitals after killing his wife, Hélène Rytmann (1910–1980), by strangling her on November 16, 1980, in their apartment in Paris. Rytmann, a social scientist, was of Jewish-Russian descent and led an active life in France both in the Resistance and in communist circles and as a researcher of Third World issues at the Institut d'études du développement de la Sorbonne. Writing about his so-called materialism of the encounter in patchwork style and while hesitating to make decisions about the final montage (see also **collage**) of his text, Althusser, originally a Marxist thinker, formulated his late process philosophy in these terms:[1]

> The materialism of the encounter is contained in the thesis of the primacy of positivity over negativity (Deleuze), the thesis of the primacy of the swerve over the rectilinearity of the straight trajectory (the Origin is a swerve from it, not

1. This fragment was written in 1986 while Althusser was hospitalized in Soisy-sur-Seine.

> the reason for it), the thesis of the primacy of disorder over order (one thinks here of the theory of "noise"), the thesis of the primacy of "dissemination" over the postulate that every signifier has a meaning (Derrida), and in the welling up of order from the very heart of disorder to produce a world. We shall say that the materialism of the encounter is also contained in its entirety in the negation of the End, of all teleology, be it rational, secular, moral, political or aesthetic. (2006, 189–90)

Althusser's conviction that contingency holds primacy over predictive patterning, be it cognitively, politically, ethically, or **affectively** generated, presents itself not only in his writing style and by the inconclusive textual fragments that were handed down to us. He describes that after his hospitalization following the crime of 1980 and after the presidential election of left-wing politician François Mitterrand one year later, he found himself "returning to this world that is entirely new to me, and, since I had never encountered it before, full of surprises" (165). One of the fragments in the chapter "The Underground Current of the Materialism of the Encounter" even starts with the simple sentence "It is raining" (167) only to draw an analogy with the appearance of clinametic rain in Epicurus, Lucretius, Machiavelli, Hobbes, Spinoza, Rousseau, Marx, Heidegger, and the philosophers mentioned in the earlier quote.

Contingency as holding primacy, that is, as having priority in both importance and in time is currently being mobilized and made more complex as a concept in relation to computing (Fazi 2018; Hui 2019) and the world of finance (Ayache 2010). Althusser's materialism of the encounter is alternatively termed "aleatory materialism," thus referring to world-making processes and practices the starting off of which depend on the throw of a die. The question is whether such probabilistics are or are not suitable for the interconnected workings of twenty-first-century algorithmic (media) technologies and financial markets. The British artist Ami Clarke questions the very ideas of world making by chance and utter **randomization** in relation to programmed bias and discrimination when she concludes, "The rather more urgent and compelling aspect of the equation, for me, is the question of *who* gets to write the future via smart contracts, and re-determine the currency of data and what other values that currency could convey in a new calculus" (2017, 134; emphasis in original). Such questioning is representative of a line of research, art making, and activism that returns to contact as contingency's close conceptual neighbor. After all, contact brings in explicitly the ethical and political side of encounters and questions the very idea of chance.

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Crossing

The concept "crossing" both activates its meaning as a noun—a crossing—and as a verb—to cross. As such, it harbors a specific spatiotemporal logic. A crossing as a meeting point is both an endpoint and starting point—a where and when crossings can happen and take off. A crossing is a nexus in motion—a movement of convergence (of a past), intersection (in the present), and divergence (toward a future) with the performative potential of interference or **diffraction**. The letter X as a cross visually symbolizes the **figuration** of this dynamics: the legs meet in the middle and take off in continued flight yet also diverge into an opposite direction (left becomes right and vice versa).

Significantly, the letter X has been used in XR as a genre label for extended reality, which as a **bracket** contains such technovisual subgenres as augmented reality (AR), mixed reality (MR), and virtual reality (VR). There the X is more than an abbreviation, as it also conceptualizes how such digital, mobile, and interactive visualization technologies work toward various forms of crossing reality, and in particular how such crossing affords a range of forms of *relating*. This relational perspective makes dynamic the otherwise more static bipolar logic inherent in a common conceptualization of the physical and the virtual as two intrinsically separate (even if hybrid or blended) domains. As such, XR can be conceptualized as "crossing reality" (Verhoeff and Dresscher 2020). Using XR as a bracket for various visualization technologies that work with the intersections of, and movements between, realities demonstrates how crossing as a concept can be particularly relevant for the creative humanities. Crossing in XR/crossing reality connects onto-epistemological thinking of multiple coconstitutive and emergent registers and domains of reality (see also **pluriverse**) with a fundamentally performative perspective on technology. As such, XR extends an invitation to think and work with technologies to explore and experiment with designing and staging their affordances for various forms, experiences, and subject positions of crossing.

Feminist literary scholar Elizabeth Meese (1986) has pointed out how the meaning of crossing can also have a recalcitrant and emancipatory slant: to defy the rules, transgress boundaries, or betray by for example intentionally doing the opposite to what is expected, conventional, or correct. Crossing is

also conceptual **kin** to what more recently has been discussed by historian, theorist, and filmmaker Susan Stryker and her colleagues as **transing**: "categorical crossings, leakages, and slips of all sorts, around and through the concept 'trans-'" (2008, 11). This is what they argue:

> It's common, for example, to think of the "trans-" in "transgender" as moving horizontally between two established gendered spaces, "man" and "woman," or as a spectrum, or archipelago, that occupies the space between the two. . . . But what if we think instead of "trans-" along a vertical axis, one that moves between the concrete biomateriality of individual living bodies and the biopolitical realm of aggregate populations that serve as a resource for sovereign power? What if we conceptualize gender not as an established territory but rather as a set of practices through which a potential biopower is cultivated, harnessed, and transformed, or by means of which a certain kind of labor or utility [is] extracted? "Trans-" thus becomes the capillary space of connection and circulation between the macro- and micro-political registers through which the lives of bodies become enmeshed in the lives of nations, states, and capital-formations, while "-gender" becomes one of several set of variable techniques or temporal practices (such as race or class) through which bodies are made to live. (13–14)

Such critical and political **implications** of crossing as a form of **transing** have been picked up by the artist and theorist Micha Cárdenas in *The Transreal: Political Aesthetics of Crossing Realities* (2012) who, together with editors Elle Mehrmand and Amy Sara Carroll, explores the crossing of multiple simultaneous realities in contemporary art, particularly mentioning augmented reality, mixed reality, and alternate reality. Considering what they call "transreality" as a crossing of realities, they propose that this aesthetics crosses boundaries created by a proliferation of notions of reality as coming out of both critical theory and creative practices surrounding emerging technologies.

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Curation

Curation as practice entails the collection of and **care** for objects in museums, in archives, or on digital platforms, as well as the design of access to and exhibition of these objects for a public. Both ends of this practice entail a form of authorship that constructs arrangements, narratives, and arguments about and with these objects, contributes to imagining the contexts and **conditions** that have shaped the objects, and creates meanings in their connection to publics or audiences. In this sense, curation is much like an **interface** between the object, other objects, and the interpreter and through its performative force can be situated between practice, product, and event, activating the conceptual underpinning of the word between curation as verb and as noun. As a concept for analysis, curation, then, provides an analytical and critical perspective on the connection between curated objects and their publics, and how it is shaped by various discursive, sociocultural, and institutional framings, ideologies, and other (related) practices of communication, narration, and mediation.

Theorist and curator Irit Rogoff has proposed the concept of *the curatorial* for this nexus between practice, product, and event, underscoring the experiential, emergent, and virtual characteristics of curation as it takes shape in a moment of **encounter**:

> In the realm of "the curatorial" we see various principles that might not be associated with displaying works of art; principles of the production of knowledge, of activism, of cultural circulations and translations that begin to shape and determine other forms by which arts can **engage**. In a sense "the curatorial" is thought and critical thought at that, that does not rush to embody itself, does not rush to concretise itself, but allows us to stay with the questions until they point us in some direction we might have not been able to predict. (2006, 3; cross-reference added)

While some more traditional forms of curating objects have deployed and reproduced preset categories, labels, genres, and more, and as such have positioned and fixated the object as example or illustration, curation can also entail a strategy to provide contours for the curatorial to emerge in what Rog-

off terms "performative instances" that "'unbound' the work from all of those categories and practices that limit its ability to explore that which we do not yet know or that which is not yet a subject in the world" (3).

We can recognize a self-reflexive **gesture** in this form or aspect of curation. Beryl Graham and Sarah Cook (2010) have suggested that the curation of new media art that involves interactivity, networks, and computation and is often about process rather than objects can (or should) foster debates and dialogues about, precisely, materiality, ephemerality, and participation. Similarly, a curatorial perspective on situated urban media art can give insight into how the media, screens, or installations under scrutiny yield interfaces that generate experiences of, insights in, or debates about the ways in which digital technologies shape the urban, public spaces that they pervade.

Moving away from an emphasis on curation as practice (of a curator) to curation or the curatorial as a concept for performative events, we can develop the concept for a **situational** perspective on spatial, temporal, and material aspects of collections, exhibitions, platforms, or installations as interfaces. The curatorial situation encompasses various elements, relations, and movements that position a spectator, participant, or user in a dynamic relation with the object(s) in a specific place and time. As a form of situational analysis, curatorial analysis is similar to **dispositif** analysis or **dramaturgical** analysis in this focus on elements, relations, and movements.

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Dash –, Hyphen -

The dash – and hyphen -, like the **asterisk ***, **brackets [] or parentheses ()**, the **hashtag #**, slash /, and underscore _, are **punctuation** marks that add or clarify meaning, allow for a creative rewriting and questioning of, for example, established logics and truths, and as such produce spaces for reflection, interpretation, and conceptual thinking.

The dash is perhaps the most ambiguous of all punctuation marks, both typographically and in terms of grammatical use and performative effect. In terms of typographical length and intended use, there is the short hyphen (-) that is meant to group words together—such as "post-pandemic society"—or express hyphenated cultural identities—for example, "Afro-Europeans." Next one up in length is the *en dash* (–), which is traditionally half the width of an *em dash* (—). The en dash is used to indicate a relationship with distance, for example, a (page) range or (time) span. The longer em dash is used to mark a break in a sentence or to separate a clause, as if putting it between **brackets** or **parentheses**. The use of a single em dash resembles the use of a colon. For example, in the "Reading" section this use appears in the title of Rebecca Comay and Frank Ruda's book publication. Here the em dash is used to make the subtitle appear as an explanation of the main title. Em dashes can also indicate the appearance of a digression, an afterthought, emphatic comment, or abrupt pause (see "—for example, 'Afro-Europeans'" earlier). Paired em dashes are used for parenthesizing within a sentence as a way to embed a clause within. An example of this last use is also provided earlier: "—such as 'post-pandemic society'—." The conceptual thrust of the ambiguous dash mark comes best to the fore in the case of the em dash and the hyphen.

Em dashes make a reader pause, especially when the em dash is used at, and as, the very end of a sentence. A clause added after a single em dash is another sentence that itself must be read and understood, simultaneously inviting the reader to return to the previous clause with the new knowledge and insights gained or with renewed **affect**. Paired em dashes both, and at the same time, break a sentence and join two potentially independent clauses together. This is what philosophers Comay and Ruda write about the workings of the em dash in the work of Hegel and beyond:

> Every dash introduces a moment of uncertainty in reading. As a punctuation mark, the dash displays a puzzling temporal and syntactic ambiguity. Its orientation is simultaneously retrospective and prospective. . . . The dash combines hesitation and acceleration: it **both** holds back **and** propels. It both suspends speech and drives it forward. It scatters and connects. It corrects and confirms. . . . It points in all possible directions: continuation, detour, deviation—but also simply random, meaningless termination. (2018, 55–56; cross-reference added)

The em dash thus works in somewhat of a temporal but also conceptual interval (see also **between no longer and not yet**) and its performativity is entangled with contradiction (different **modalities** of breaking and joining) as well as with a productive indeterminacy in temporality as well as content. This is also where the em dash can meet the hyphen.

Feminist literary scholar Katherine A. Costello ends an article on Radclyffe Hall's 1928 novel *The Well of Loneliness* by asking, "What would it mean to develop a critical practice of indeterminacy, one that does not require definitive critical resolution, but instead rests in the space of unknowing—the dash?" (2018, 180). Costello reflects on the creative textual indeterminacy of the em dash that, in the work of Hall, hints at the critical potential of sexual indeterminacy in a gender- and sexual binary world. It is the latter indeterminacy that historian, theorist, and filmmaker Susan Stryker; political scientist Paisley Currah; and medical sociologist Lisa Jean Moore hesitatingly suggest can be provoked by creatively using the hyphen:

> A little hyphen is perhaps too flimsy a thing to carry as much conceptual freight as we intend for it bear, but we think the hyphen matters a great deal, precisely because it marks the difference between the implied nominalism of "**trans**" and the explicit relationality of "trans-," which remains **open**-ended and resists premature foreclosure by attachment to any single suffix. (2008, 11; cross-references added)

By not limiting their scholarly work to transgender bodies and phenomena but by including—next to transgender topics—trans-Atlantic, trans-continental, trans-generational, trans-genic, trans-literate, trans-local, trans-national, trans-racial, trans-sexual, and trans-species phenomena, they focus on the workings of the hyphen and even invent the concept *transing* for the "categorical **crossings**, leakages, and slips of all sorts, around and through the concept 'trans-'" that it generates (11; emphasis added; cross-reference added). Here we see that the dash in both its guises as em dash and hyphen is ambiguous as well as ambivalent in that it is a connector of words, clauses, phenomena, or ideas that make us pause at the seam.

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Deixis

In ancient Greek, deixis (δεῖξις) is a demonstrative force, a **mode** of proof, or a demonstration or exhibition. A fundamentally relational concept, deixis refers to the *indexical* or referential principle of specific forms of meaning making that can only happen in context. In linguistics, this principle pertains to the way in which certain words are themselves "empty" signifiers. They only gain meaning in the context of utterance in their capacity to point out, position, and relate subjects and objects and to construct a spatiotemporal setting for (possible) actions and events. These words, like "I" and "you" or "then" and "there," also called *shifters*, imply a position from which certain utterances (or scenes) are spoken (or depicted), a position that is both relative and fundamental. Their *deictic center* or *anchoring* needs to be determined to be understood, yet this center itself determines what the shifters mean. For example, when I say "I," the "I" is different from when you say "I." Moreover, your "you" coincides with my "I." The center is also positioned in space and time, connecting both categories. For words like "there" and "here" can shift, depending on in which "now" these take place. Moreover, positionality and relationality are key to both experiential and reflexive responses—the **punctuation** or marking of a "here" and "now" is fundamentally productive of a relationship with other times, places, or people: an elsewhen, elsewhere, or "other." Explicitly or implicitly, deixis thus sets up a system of relations that grounds, layers, and extends specific **situations**.

Social scientist and linguist Stephen C. Levinson has pointed out how deixis and *index* are overlapping concepts developed in both disciplines of linguistics and philosophy (2004, 97). For example, the principle of deixis can be understood as part of what philosopher Charles S. Peirce in the 1880s called the *index*. In Peirce's semiotic theory, the index is a sign that can be both a **trace** of a past and a relational (or deictic) marker in an (emergent) present. This triad of overlapping terms—deixis, index, trace—provides a critical language to describe how meaning of language, object, image, **gesture**, or scene is relational, embodied, emergent, and **contingent**, and as such constitutive of various epistemological, affective, and also political **implications**. For example, deixis can be recognized as operational in what in decolonial and feminist theory is called *othering*: the bipolar, excluding, and

inherently violent principle that racializes and genders the “other” in opposition to a “self” as the deictic center of the world.

In *Becoming Human: Matter and Meaning in an Antiblack World* (2020), cultural theorist Zakiyyah Iman Jackson extends the **scale** of this logic. In her analysis, Blackness is not merely a definition of the other (hence, also the self) but an index for humanity. She writes:

> In debates concerning the specificity of human identity with respect to “the animal,” science and philosophy foundationally and recursively construct black femaleness, maternity, and sexuality as an essential index of abject human animality. (4)

Thus, she invokes a specific meaning of the index as it is used in contexts of taking measurements, while also addressing how othering is not only established as a directly excluding bipolar opposition of self and other but also in a more complex scaling system via a third and larger category. That is,

> Blackness has been central to, rather than excluded from, liberal humanism: the black body is an essential index for the calculation of degree of humanity and the measure of human progress. (46)

With her use of index, she makes clear how a deictic logic is not only a matter of defining already fixed positions—for example, of here and there, or us and them—but also pinpointing or punctuating temporary positions in a (here: linear) timeline in progress.

Cultural theorist Mieke Bal (forthcoming) draws out the critical thrust of deixis invoking the work of linguist and semiotician Émile Benveniste:

> I consider the linguistic theory of *deixis* to be the most clarifying theory in the humanities to explain the problem of identity and the borders that instate, confirm, and perpetuate it. Considering that not meaning but deixis is the essence of language—and, by extension, of communication—. . . Benveniste made a fundamental distinction between I/you, the first and second persons, and he/she/them, the third person (1971). The first two are bound up together and their positions are exchangeable; ideally, they must exchange all the time. The third person is excluded, talked about, and acted upon.

In a second step, Bal points out here how such deictic logic can also be opened up and made dynamic. She writes:

> In my work I have consistently contested the overwhelmingly predominant logic of binary opposition, and since borders, in whatever form or function, deploy the us/them logic to impose rigid binaries, they should be a primary target. As a line, a *border*, be it political, geographical, linguistic, or cultural, keeps

> "them" outside and encloses "us" inside. As a negotiable *territory*, however, "they" enter into the purview of "us" and become partners in the turn-taking "we" and "you." (emphasis added)

Such a move, from border to territory, while also moving away from an ideology of linear progress toward a more dynamic relationality, underscores the critical as well as creative potential of deixis.

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Diffraction

Diffraction is the physical phenomenon of waves (for example, water, sound, or light waves) encountering an obstacle, an opening, or one another. Classical Newtonian physics understands the objects encountered as obstructions that cause a wave to change direction, shape, or amplitude. Bohrian quantum physics does not work with straightforward entity logic (wave A interacts with B through obstruction) or with the expectation of linear causality (a wave, set out on its course, undergoes a change). Quantum physics works with counterintuitive event logic (entities like waves and obstructions emerge *intra*-actively in **encounters**) and with a causal relationality that is not predetermined as linear.[1] The definitive nature of the entities and relations in play is established in a process of quantum measurement: light can become either a set of particles or wave behavior in the measuring process, and both patterns of particles and courses of waves are formed in the event of measurement. Given the paradigm shift set in motion by Niels Bohr and his colleagues (or rather rivals) Albert Einstein and Werner Heisenberg in the first decades of the twentieth century, and continuing, the opening sentence of this entry needs rephrasing: in diffractive encounters, waves are measured in object-wave or wave-wave interference. Feminist and queer theorist of science, technology, and justice Karen Barad formulates it thus:

> The point, [Bohr] argues, is not that measurements disturb what is being measured but rather what is at issue is the very nature of the apparatus which enacts a cut between "object" and "agencies of observation," which does not exist prior to their intra-action—no such determinate features or boundaries are simply given. What results is an entanglement—a *phenomenon*. The performance of the measurement with an unmodified two-slit apparatus results in *a wave phenomenon*, while the measurement with a modified two-slit apparatus (with a which-slit detector) results in *a particle phenomenon*. There is no contradiction, Bohr insists. Classical metaphysics has misled us. Entities do not have an inherent fixed nature. (2010, 256; emphases in original)

1. The episode "Entanglement" of the NPR podcast *Invisibilia*, first broadcast on January 30, 2015, gives good insight into the physically, socially, philosophically, and scientifically counterintuitive nature of quantum physics; see https://www.npr.org/programs/invisibilia/382451600/entanglement.

It becomes apparent here that scholars and theorists of physics, like Bohr and Barad, recommend what media theorists call **dispositif** analyses for their **situated**, relational, and processual approach to the specific measurement apparatuses at hand. Barad's monograph *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* from 2007 provides a significant example of this. She describes an actual quantum physics experiment, carried out in 1922 in Frankfurt, Germany, by Otto Stern and Walther Gerlach, which was for a long time misunderstood and even seen as magically successful up until Stern's smoking **habit** was considered to be part of the apparatus. Barad writes:

> As the example of Otto Stern's cheap cigar makes quite poignant, taking for granted that the outside boundary of the apparatus ends at some "obvious" (visual) terminus, or that the boundary circumscribes only that set of items we learn to list under "equipment" in laboratory exercises in science classes, trusting our classical intuition, our training, and everyday experience to immediately grasp the "apparatus" in its entirety, makes one susceptible to illusions made of preconceptions, including "the obvious" and "the visible," thereby diverting attention from the reality of the role played by smoke and mirrors (or at least smoke, glass, and silver atoms), where the "smoke screen" itself is a significant part of the apparatus. (165)

Indeed, the example demonstrates the need to look beyond classical physics at the minutiae of quantum measurement and to include the macrophenomena of class, gender, and nationalism that can only be made visible by the power-sensitive analyses of critical and cultural theory.

The latter fields have also adopted dispositif analyses as a way to reflect upon and innovate their own scholarly blind spots and methodological toolbox. Barad's work on the entanglement of the subject, object, and technologies of research has led to a surge in "diffractive readings" that intend to make visible the interferences that happen in the equally unpredictable and power-laden practices of humanities research. In this context, "classical" scholarship follows the lines of **classifixation** while **crossings** and diffractive encounters are the sudden and seldom events of being leapt into reading oeuvres, texts, or nontextual materials *differently*, that is, reading them through one another on the basis of not-yet-activated connections, regardless of the ways in which the oeuvres, texts, or materials have been canonized. Having been leapt into such seemingly **random** connections, the scholar sensitive to textual and/or visual interference then makes the connections—differences, similarities, paradoxes, and contradictions—explicit with the aim of creating concepts or formulating insights that the canon or the disciplines so far have left out (van der Tuin 2017, 2019).

An example of a diffractive reading is this: the philosopher Jean-François Lyotard has written about the work of visual artist and theorist Bracha L. Ettinger; Lyotard unearths interferences in his encounter with this work; and his explicit use of quantum-physical concepts connects his work to the oeuvres of Bohr and Barad but also to filmmaker and postcolonial theorist Trinh T. Minh-ha and feminist theorist of technoscience Donna Haraway. The latter, after all, are being quoted by Barad (2007, 72) for having invented a way of dealing with difference that is not *apartheid* and that they called "diffractive." Lyotard does not quote Trinh or Haraway. And what does Lyotard suggest in his essay "Scriptures: Diffracted Traces"? First, that Ettinger "refuses imitation. She refuses reproduction" ([1993] 2004, 101). Although neither Trinh nor Haraway features in Lyotard's essay, in this entry here we activate this connection as both of them conceptualize and mobilize diffraction as a way to move away from reflection and reflexivity. In Barad's words again, here addressing only Haraway explicitly:

> Haraway's point is that the methodology of reflexivity mirrors the geometrical optics of reflection, and that for all of the recent emphasis on reflexivity as a critical method of self-positioning it remains caught up in geometries of sameness; by contrast, diffractions are attuned to differences—differences that our knowledge-making practices make and the effects they have on the world. (2007, 72)

Lyotard continues by addressing Ettinger's matrixial work by reflecting on the exhibition "Bracha Lichtenberg Ettinger: Matrix" in the Russian Museum of Ethnography, St. Petersburg, in June 1993. The work has made use of the photocopier, next to oil paint and India ink, and the making use of such a **procedure** emancipates the instrument for artistic practice. Lyotard writes:

> What is remarkable is that in this painting, in all of these sometimes retouched "developments," **traces** of figures (in the sense of figurative) persist. These traces are refracted, diffracted through time. In the beds of movings and tremblings, in the overprints, or in what should be called *scriptures*. Traces of writing, erasures of trembling. (101; emphasis in original; cross-reference added)

Lyotard argues that such interferences have counterintuitive and connective effects on affective, sensory, subjective, and canonical registers. These creative effects of diffractive reading come about suddenly and seldomly.

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Dirt

Dirt is "matter out of place" as per the definition of British anthropologist Mary Douglas (1921–2007). This definition implies that encountering something "dirty" involves both stumbling upon materiality and confronting judgment. **Encounters** with dirt—mud, dust, mold, bacteria—often result in personal reactions of physical and psychological repulsion: "It is the stuff that you don't want attached to you."[1] Dirt is that which accidentally, historically, politically, or aesthetically deviates from a shared set of cultural practices, norms, and values. That which is deemed dirty suffers from ideological and theoretical **classifi*x*ation** by being experienced and judged as "other" as well as that which disrespects the logic underlying such naturalized orderings of relations, bodies, things, and substances (ranging from excrements to particles). Moreover, dirt is **sticky**: that which is deemed dirty sticks to bodies, both materially/literally as a grainy or slimy substance and ideologically/figuratively as gendered, racialized, classist, sexualized, or other signs of out-of-place-ness that muddle lifeworlds. Dirt also contaminates and thereby devalues public places and other areas based on a pattern of natural pollution resulting in social poisoning, and vice versa. In sum, dirt travels across and within *naturecultural* borders and boundaries in ways that are almost impossible to control. The first consequence of this traveling of unwanted stuff is concrete and symbolic punishments and attempts to literally and metaphorically purify contaminated or corrupted places. A second consequence is potentially liberating. Dirtified bodies can be made to speak back to established understandings and practices by forms of explicit queering, expanding, and making permeable of punitive structures and traditions (Shotwell 2016).

The potential of dirtified bodies to speak back to norms and values and to intervene in common practices forms the inspiration and core of "dirty theory" (Golding 2009; Frichot 2019). Such theory wants to rescue dirt from dwelling on the dark side, and it wants to rescue the dark side—literally: colonized environments—from dirt. By acknowledging the as yet unrecognized pervasiveness and emancipatory potentiality of dirt, dirt theory questions the

1. See https://www.youtube.com/watch?v=4IEbdYXtjQQ. This is a clip from the Wellcome Collection's 2011 exhibition *Dirt: The Filthy Reality of Everyday Life.*

imposed “cleanliness,” even the *clinicality*, of binary oppositional frameworks ranging from identity politics through empirical science to philosophical metaphysics by, first, arguing in favor of theoretical mixing and, second, by taking **care** of the underclasses of negatively rendered or wholly unclassified people, relations, objects, and spaces. Dirt theorists propose concepts and designs that disrespect disciplinary boundaries and infrastructures and appropriate and misappropriate the work of others. Dirt theorists, as architectural theorist Hélène Frichot affirms, work in manners that are **situated** and conceptual:

> The dirt, the earth, is the required ground in which concepts can be planted and eventually bloom as flowers or weeds (either way). Dirty theory, you see, is neither good nor bad per se; like flowers of weeds it depends on the **situation**, the relations at hand, on what comes together to form a greater or a meaner composition. The dirt may not be sufficient for anything at all to grow. To territorialise, to deterritorialise, to reterritorialise—all such movements depend on the dirt rendered as the earth, *la terre*, beneath your feet, between your fingers, in your mouth as you utter a furious expletive. Without these movement-utterances, not much would be achieved, for good or for bad, and you are bound to get dirty either way. (2019, 5–6; cross-reference added)

Dirt theory’s processual stance toward ontology, epistemology, and ethics is as agnostic as it is analytical. By leaving predetermined categorizations and generally held judgments behind, including the often uncritical aestheticization of dirt, dirt theory gains in precision by adopting an **open** and curious attitude. Frichot argues that working this way engenders “creative possibilities that can make a critical difference where it matters” (6–7).

Transdisciplinarian Shannon Mattern, who works on the intersection of urban, media, and information studies; **architecture** and design; and anthropology, approaches dirt as phenomenon and concept as a way of establishing a perspective for twenty-first-century media studies. In *Code and Clay, Data and Dirt: Five Thousand Years of Urban Media*, Mattern argues:

> Archaeologists have found communicative potential in brick walls, stone structural elements, dirt mounds, bone tools, and even cities writ large. By examining how cities themselves have served as media (and how they’ve been mediated) across time, we’ll see how media materialize in and through urban practices and processes—how they’re the products of their urban environments and their human creators and users—and how those urban processes themselves are agglomerations of various media: stones and bones, streets and circuits, plazas and people. (2017, xxiv)

Here dirt is a productive—creative—mobilization that not only cuts across the dichotomy of the material and conceptual but thereby also opens up to a combination of media-archeological and phenomenological perspectives on the city.

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Dispositif

With a background in philosophy (Michel Foucault, Gilles Deleuze, Giorgio Agamben) and poststructuralist film theory (Jean-Louis Baudry), the concept of “dispositif” has been used in the analysis of the construction of subjectivity and structures of discourse, power, and knowledge. As an analytical concept, it refers to the configuration of heterogeneous (for example, spatial, temporal, material, physical, technological) elements within a specific situation, that in their specific constellation produce subjectivity and meaning. This configuration is often understood as comprising a triadic relation between (1) technologies and (other) materials and their affordances; (2) text, images, sounds, or other forms of communicated content; and (3) a subject whose positioning, perception, and agency within this situation impacts the way that she makes sense of what happens and what is communicated. This **situational** and relational perspective offers an alternative for technological-determinist understandings of mediation, communication, and subjectivation. Moreover, a pragmatic analytical perspective on the variability of dispositifs brings forward how medium specificity and the way both meaning and subjectivity are constructed is situationally—hence, historically—dependent. As film historian and media theorist Frank Kessler proposes, this shifts the question from how certain media would privilege a paradigmatic, transhistorical, and fixed dispositif (think of “the” cinematic or televisual dispositif, or “the” dispositif of virtual reality) to the question of how the dispositif of a specific screening situation takes shape *as* dispositif. Or in his words:

> What I want to argue here is that it may be more productive to adopt the notion of dispositif in an analytical perspective rather than as a normative category. The question, then, would not be whether a given media configuration actually is or constitutes a dispositif, but what happens when we study it as a dispositif. . . . The term dispositif, from the viewpoint proposed here, does not designate a specific configuration of tech- nology, subject and textual form, as is the case for Jean-Louis Baudry, when he describes the viewing conditions of a classical narrative film viewed in a movie theatre, but can be used to understand the functioning of an entire range of media configurations involving these three poles. (2018, 55)

From such a situated approach, the concept of dispositif opens up to a perspective on difference, multiplicity, and change. Moreover, it raises critical questions about not only the form, structure, and content of messages and artifacts but also about how the design of specific spectatorial situations within which these are **encountered** and **engaged** with contributes to the production of specific types of subjects, subjectivity, and subjectivation.

As a heuristic tool, the concept of dispositif offers a perspective to analyze and account for the complexities of media(texts) in situational contexts and how these complexities produce specific spectatorial positions. An analysis of the dispositif of spectatorial situations, for example, can help us understand how images, **gestures**, and sounds are communicated, and the spectator is positioned in relation to these objects, screenings, or performances, and how their meaning is produced within the relationship between the material **conditions** of the situation, the "content," and the spectator (or audience, user, player, participant). It directs us toward what is specific to certain spatiotemporal and material configurations, technologies, or **interfaces** and to certain cultural forms, techniques, and signifying practices, and how these may be culturally and historically specific. This invites a comparative perspective for identifying similarities and differences that can pertain to any of the heterogeneous elements or poles of a dispositif. For example, by analyzing the relationship between spectator and screen in various dispositifs, we can get a grasp on how we perceive, relate to, and understand images differently in the cinema or the museum; we can distinguish various interactive forms of screening; or we can compare the use of the microscreens on our mobile devices with large urban screens. Moreover, the analysis of such diverse technologies, practices, and situations activates additional concepts that we use in media and screen theory today, like immersion, attraction, interactivity, and liveness—concepts that are used for understanding technological and material affordances, spatiotemporal dynamics, and forms of spectatorship. A concept-driven dispositif analysis, then, offers an integrative approach to conceptual as well as analytical inquiry.

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Dramaturgy

Dramaturgy concerns the design of the **conditions** within which meanings, stories, experiences, events, or other processes can emerge. Such conditions organize the spatial, temporal, and material relational copresence of entities or forces and shape how their interplay generates experiences, meanings, knowledge, and thereby subjectivity. This compositional creativity it shares with **curation**. Although developed as a term within the context of the theater, dramaturgy is a useful conceptual lens for understanding not only theatrical acts, installations, and other artistic performances but also **situations**, systems, or processes per se. We can think of the dramaturgy of urban spaces, online and offline communities, laboratories and classrooms, legal trials or presidential elections, or the dramaturgy of information or data. Moreover, like other words used for practices of making, for example, "choreography," "composition," or curation, the concept of dramaturgy encapsulates both its meaning as practice and as the result of this practice. As a concept, dramaturgy brings into consideration precisely the relationship between practice and result, or process and product, and offers an analytical and critical perspective on not only what elements work together in specific situations but also how their arrangement positions, frames, and orients publics, participants, or other agents. It also opens up to questions about authorship and the intentionality, responsibility (or response-ability in the Harawayan sense), and ethics (for example, of **care**) involved in the organizational strategies of the dramaturgy in question.

In her book *Doing Dramaturgy: Thinking Through Practice* (forthcoming), performance studies scholar Maaike Bleeker proposes what could be called a praxeological approach to dramaturgy that foregrounds its **kinship** with other creative processes. She states:

> [My] first observation is that practices of making and ways of doing dramaturgy mutually inform each other. The second is that the making of a performance may be considered as a quest for possible understanding by means of provisional arrangements of various materials.

Here we can also read that creative processes of making *sense*, or other "quests for understanding" or forms of knowledge production that entail forms of experimentation with "provisional arrangements," can be considered to be dramaturgical. Performance studies scholar Peter Eckersall (2018, 241 ff.) also speaks of such a specific form of "thinking through doing" and "dramaturgical thinking" that can be transposed to settings outside the theater as a way of making critical thinking visible. Dramaturgy can therefore be conceptualized as a politically engaged creative practice par excellence.

As such, dramaturgical doing can be understood to work with a two-sided impetus of creative thinking: as both a creative process of experimentation and thinking and also as designing the conditions for future experimentation and thinking. Konstantina Georgelou, Efrosini Protopapa, and Danae Theodoridou (2017) claim that such inherently collaborative doings and infrastructural processes have a *catalytic* modus operandi in which we can recognize an emphasis on dramaturgy's actionability and futurity. The invitation to experiment and to think new worlds is reminiscent of French philosopher Jean-François Lyotard's reference to a "dramaturgy of information" in connection with the historical exhibition *Les Immatériaux* that he co-curated for the Centre Pompidou in Paris in 1985. He also invokes the kinship between **curation** as the practice of making exhibitions and dramaturgy as the staging or setting of conditions for thinking, as both are essentially "the creation of a kind of 'environment' for the enactment of ideas" (Rajchman 2009, n.p.). For this perspective on and of dramaturgy that emphasizes the creative process itself, Bleeker develops the method of *reverse engineering* to allow for a retracing of the steps taken in this way of working creatively:

> [Reverse engineering] looks at the outcome of these unstable and unpredictable processes to understand what choices and decisions resulted in this outcome. These insights in their turn contribute to increased understanding of decisions taken in creation and their effects. . . . Doing dramaturgy requires the capacity to speculate on the effect of choices made during the making of a performance and how these choices will **affect** the creative process as well as the outcome of this process, i.e. the performance emerging from it. **Speculative** thinking as it is part of making also involves the capacity to consider alternative choices and alternative approaches, and informed expectations about what they may bring, or how they may open towards the unexpected. (forthcoming; cross-references added)

This method can uncover the unpredictability involved in such (situated) endeavors, in retrospectively reactivating the virtual presence of alternative possibilities, and the productive **risk** taking inherent in working with, and designing for, speculation. The impetus of such a method, however, is not historical but critical instead, as the method does not provide an archeology

of the process of what *was* so much as it reveals how thinking itself is an emergent process that takes shape within the **contingencies** and **implications** of various forms of relating.

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Eco-, Ecology

Clearly, ecology is a crucial topic of public debate, in reference to environmental crises and climate change, bringing on the agenda with urgency the impact of humans and technology on the environment on local, global, as well as planetary **scales**. New academic curricula in the humanities as well as arts and design, such as environmental humanities, green media studies, and future planet studies, attest to its currency, also demonstrating how this topic calls for transdisciplinary debates, interdisciplinary approaches, and methodological and conceptual innovations. Steeped in its origin in biology and the natural sciences, its adoption in sociology, as well as in cultural theory and philosophy, both the prefix *eco-*, as a conceptual inflection, and the noun *ecology*, as a concept, are used in reference to natural and cultural systems, as well to their interrelation, that is, *naturescultures* (Bruno Latour) or *natureculture*s (Donna Haraway). Psychiatrist and philosopher Félix Guattari ([1989] 2000) discerns three ecologies of environment, of society, and also of mind. For him, more than a concern for the environment, ecology as *ecosophy* offers an epistemological framework based on an understanding of nonlinear systems governed by feedback loops and nonlinear causality. The use of eco- as a prefix in ecocriticism and ecofeminism attests to the critical and political **implications** of an ecological epistemology.

Ecological thinking yields analytical, critical, and ethical perspectives that can bring to the fore the relational, **situational**, and entangled principles that together make the **condition** for specific events, meanings, and subject positions to unfold and take shape. The analysis of the ecology of such a condition can map the scaled and dynamic system of relations between entities or agents, technologies and materials, and processes and practices, and how these are imbricated in larger sociocultural domains, discourses, and institutions. As a nonhierarchical, layered, and complex system of relations, ecology makes up the total environment within which agents communicate and act, knowledge is produced, and subjectivity is shaped. As a critical and ethical ecological perspective this opens up to rethinking (human) agency and brings up questions of **care** and response-ability (Haraway 2008).

In response to the contemporary urgency of issues both related to the devastating effects of climate change on the planet and human conditions as

well as to developing perspectives on natural-cultural or human-technological symbiosis connected to processes of technological innovation and digitization, ecology is a pervasive topic in contemporary art and popular culture and the focus of many publications. Ecological thinking can inspire the subject matter as well as form, design, or **curation** of artistic projects. It can bring together concerns about environmental and/or societal conditions and their negative impact on the future well-being of the planet and its inhabitants, and all sorts of related global, societal, and political challenges, with its conceptual perspective on such principles as interconnectedness, immanence, **encounter**, performativity, **scaling** and expansion, and participation or immersion.

Performance scholar Carl Lavery proposes an ecological perspective as an alternative in debates about immersion and participation in artworks and performances based on such distinctions as between *relational art* (Nicolas Bourriaud) and the figure of the *emancipated spectator* (Jacques Rancière). While each suggests agency as an act of intentionality on either the side of the maker or the spectator, both perspectives are based on a logic that divorces (human) agency from its always-already entangled and (hence) immersed positionality. Following systems theorist Gregory Bateson's ecological thinking, Lavery proclaims:

> The question for the artist working at a time of environmental change does not revolve around issues of intentionality and agency; rather, it concerns an aesthetics of disclosure. In other words, the point is not to produce yet more artworks that seek to create participation or immersion (or both) as intentional acts; rather, the more humble, but just as vital, objective is to uncover the extent to which we are always already participating, always already immersed. (2016, 304)

A theater of the environment, or an ecological theater, counters traditional anthropocentric theater with the radical immanence of encounter:

> The environmental theatre I am trying to sketch out uses objects to disclose an invisible but no less real network of interconnecting entities. As I see it, environmental theatre is a properly ecological theatre, a theatre where objects lose their mooring as discrete things and are always on the verge of taking off elsewhere, committing themselves to some line of aberrant flight, sacrificing the object for the hyperobject, troubling the parameters of the human subject. (308)

We can recognize an ethical standpoint here in that for Lavery, the point is not to overpower the environment (of art) but to position ourselves (as makers and spectators) more humbly, that is, on par with the entities, agents, and materials we are participating with and that participate with us.

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Encounter

Today, the noun *encounter* and the verb *to encounter* colloquially refer to the coincidental or **accidental** meeting of somebody or the stumbling upon something. It is only in the proverbial meeting of hostility or of difficulty that the etymological root of (to) encounter shines through: both the Late Latin *incontra* and the Old French *encontre* have a clear focus on the meeting of adversaries or on confrontation. In contemporary cultural theory, the concept of the encounter and the associated phenomenon of "encountering" refers to interesting meeting places of the indeterminacy of serendipity and the determinacy of institutionalized signification, that is, of norms, ideologies, and morals.

The two-sidedness or paradox involved can best be illustrated with a reference to the early work of critical race theorist Sara Ahmed. In her monograph *Strange Encounters: Embodied Others in Post-Coloniality* (2000), Ahmed discusses an event that happened in Adelaide, Australia, when she was fourteen years old and walking barefoot in a suburb near her home district. Two policemen stopped her in her tracks, one of them asking if she were Aboriginal. "No," Sara replied. The other policeman then winked, rhetorically asking, "It's just a sun-tan, isn't it?" Sara then smiled while remaining silent (128–30). In the unpacking of this event, Ahmed demonstrates the fixating and unfixing processes involved in such seemingly **random** yet highly charged encounters. Some of the elements contained in the event are: Aboriginality connoted with criminality; the smile as enabling the passing for white or as covering up fear for the police on the part of a young half-Pakistani woman; skin color as a floating signifier that can denote either matter out of place (see also **dirt; sticky, stickiness**) or fitness and health; and police prejudice about Aboriginal people and protectiveness of whites. Ahmed writes about their puzzlement by her appearance that was quickly pushed aside:

> Passing here allows mobility precisely through not being locatable as an object that meets the gaze of the subject; passing here passes through the limits of representation and intentionality. That mobility has its limits precisely in *the reopening of histories of encounter which violate and fix subjects*. . . . So while

> passing unfixes by the impossibility of naming the difference, it also fixes. (129; emphasis in original)

The case of passing first for Aboriginal then for white demonstrates how encounters are not just indeterminate but are shot through with ways in which past encounters came to a conclusion. Encounters, while potentially **open-**ended, are thus entangled with the intersectional histories of gender, race, and other categories of meaning making and power difference.

There is another way in which encounters can be both violent and liberating. This conceptualization of the encounter comes from Gilles Deleuze's chapter "The Image of Thought" ([1968] 1994) and concerns the very act of thinking that originates as a consequence of encounters such as Ahmed's. The event of encountering with the policemen certainly made Ahmed think, which is precisely what Deleuze writes about:

> Do not count upon thought to ensure the relative necessity of what it thinks. Rather, count upon the **contingency** of an encounter with that which forces thought to raise up and educate the absolute necessity of an act of thought or a passion to think. The **conditions** of a true critique and a true creation are the same: the destruction of an image of thought which presupposes itself and the genesis of the act of thinking in thought itself.
>
> Something in the world forces us to think. This something is an object not of recognition but of a fundamental *encounter*. (139; emphasis in original; cross-references added)

Deleuze explains how it is in chance meetings with the (at first) unrecognizable that thinking starts off; thinking does not self-justify but needs an outside for it to begin. This outside is often somewhat or completely violent in that it disrupts or destroys established patterns of thought. Deleuze continues: "that which can only be sensed . . . moves the soul, 'perplexes' it—in other words, forces it to pose a problem: as though the object of encounter, the sign, were the bearer of a problem—as though it were a problem" (140). This, in turn, poignantly explains the extended period of time Ahmed labored over something that happened in the 1980s. Educational scientist Alecia Youngblood Jackson (2017) tells a comparable anecdote when discussing why the event of a single backflip of a young cheerleader resisting the norms of femininity kept her busy for many years. Importantly, in both cases the thinking engendered by the events produces something new: a new critique or a new creation.

The essays collected in *Encountering Things: Design and Thing Theory* (Atzmon and Boradkar 2017) describe how violent yet productive interpellations may also originate in encounters with actual objects. This was foreseen by Deleuze, who wrote, "What is encountered may be Socrates, a temple or a

demon. It may be grasped in a range of affective tones: **wonder**, love, hatred, suffering" ([1968] 1994, 139; cross-reference added).

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Engagement

More than a unidirectional and top-down **care** *for*, engagement *with* something or someone else is a form of relationship or partnership anchored in connection. As such, it opens up to a dialogic relationship that is both intrinsically processual, productive, and risky. As a process, engagement is not something to merely reach but also to sustain. As a future-oriented, productive process, it shapes individual subject positions as well as communities and can open up gateways or forking paths to other processes. Beside such **implications**, there is also **risk** involved because of the dialogic and reciprocal dynamic that makes the *engager* complicit and (co)responsible for the relationship and for everyone and everything involved.

Engagement is a term that is used often in discourses about participation, in particular in relation to questions about the impact of technology in contemporary societies. There a "civic" or "public" engagement is something that needs to be restored and it is the holy grail for fixing downward-spiraling problems of our late capitalist society marked by indifference, injustice, and a devastating impact on planetary **ecology**. For the **scale** of such crises, engagement needs to be carried by not only the individual but most importantly by larger communities. Moreover, such engagement, ideally, is one that yields positive effects for a collective future for humans and nonhumans (or the more than human) combined. Such discourses of engagement are, indeed, marked by a pragmatic optimism: engagement is the starting point for actions and behavior that have a positive effect on the **situation** it starts from. As such, engagement is entangled with what has also been called an **ethics of care**, or in Donna Haraway's terms, a relational ethics of care or *response-ability*.

With its effective thrust, engagement has an **affective** core. Touch—whether physical, emotional, or intellectual—is central for the sense of proximity and urgency that is required for attention and activation of a caring, vulnerable, and response-able engaged subject. This form of affective intimacy and exchange needed for engaged processes of collaboration, creativity, and learning can also be reached by means of communication technologies. In line with this, feminist and educational scholar Vivienne Bozalek and colleagues have recently explored how in times of the COVID-19 pandemic, the virtual touch of (screen-based) mediation can also establish the affective

bonds of engagement. As they observe about their working together-apart from home offices: "During these iterative encounters, we found that virtual touching revealed [bodily and built] matter's agential capacities for imaginative, desiring, and affectively charged forms of bodily engagements" (2020, 3). They write:

> Touching has opened up innovative ways for doing academia differently. Our care-full intra-actions activate different forms of touching between self and other that are unexpectedly invigorating, inspiring, and rewarding. They create expansive understandings of each other, ourselves, different contexts, and theoretical concepts in texts that we touch upon and are touched by, marking our bodies. (7)

In their reflection, they significantly connect bodily engagement with creative engagement and engaged scholarship.

Engagement is high on the agenda for public art projects that explicitly deal with social, economic, and ecological issues and **frictions** pertaining to living in contemporary urban environments. In correspondence to their aims, such projects are site specific and often participatory and collaborative in design. The Tate galleries' online glossary of art terms defines *socially engaged art* as a practice that is "collaborative, often participatory and involves people as the medium or material of the work" ("Art Terms" n.d.). Another term used for art with an explicit activist aim of social change is *artivism* or, in the case of (digital) media art, *tactical media* (Kluitenberg 2011; see also Tactical Media Files n.d.). The transformative potential of engagement as fostered by art taking place in, and dealing with, public spaces is stipulated by the editors of the collection *What Urban Media Art Can Do: Why, When, Where & How*:

> One of the main goals of this publication is to unwrap the ways in which urban media art (as a domain of aesthetic practices) engages with various ecologies of our current **condition** in seeking to reconnect us to our sense of agency, sociability and ways of making sense of—and change within—urban environments. (Toft and Pop 2016, 22; cross-reference added)

The strategy for art to foster engagement, in their words, is a matter of "reconnection" of the individual with the urban ecology she is part of, as well as with others. They state:

> We find in the artworks under this theme a focus on the role art can play in evoking and promoting particular forms of "engagement," e.g. social action, civic, public, audience or community engagement, and active participation towards visions for both temporary and permanent change-making. (27)

We can recognize here how engagement is conceptualized to harbor mutually enforcing binding, agential, and transformative potentialities. A critical question about the centrality of engagement in such idealistic projects is how, as situated and time-bound instances, they can contribute to longer-lasting and care-full bindings with sustainable positive effects.

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Failure

Distinct from failure as lack (a deficiency) that is at **risk** of getting essentialized and taken for granted as a trait, failure as a verb (an act of failing) refers to unexpected moves, glitches, or hiccups in bodies, interactions, or relations with often productive consequences for those humans and nonhumans involved. Owing to such unforeseen happenings and unlooked for results, “failures” are characterized by change and transition rather than stability. Given that glitches often occur today in all-pervasive human-computer systems interaction, change is the new stability. Anthropologist Arjun Appadurai and media theorist Neta Alexander define “habitual failure” as “that which changes nothing: the non-event or the rapidly dismissed **encounter** with the helplessness of users and consumers” (2020, 9–10; cross-reference added). Appadurai and Alexander do acknowledge that, in the contexts of digital and financial systems specifically, acts of failing have an impact on today’s user or consumer subject who gets positioned as “a perennial tester, a reporter on failures” (12).

The field of science and technology studies has long been interested in research and development failures. R&D (research and development) failures form an excellent entry point for a symmetrical anthropology that does not want to import assumptions about binaries such as old-new, true-false, and good-bad into its analyses, refraining from imposing value on the networks studied. In *Aramis, or the Love of Technology*, anthropologist of science Bruno Latour discusses the innovative public transport system, Aramis, that was prepared for use in Paris from the late 1960s until it was suddenly abandoned in the early 1980s. In his book, Latour **assembles** as many voices about this sociotechnological failure as possible. Failures linger in the space between “started” and “finished,” and as such they remain projects. “About technological *projects*,” Latour argues, “one can only be subjective. Only those projects that turn into objects, institutions, allow for objectivity. . . . Projects drift; that’s why they’re called research projects” ([1993] 1996, 75, 91; emphasis in original). The well-functioning transport innovation died a premature death because of a lacking number of sustained linkages between, and **crossings** of, social and technical systems. The innovation ended up not being networked enough and it is only possible to retroactively pinpoint why

Aramis had to fail by combining as many test reports as possible. For one thing, Latour's multivoiced SF analysis into who killed Aramis demonstrates that the project has indeed produced a lot of viewpoints.

Acts of failure are temporary defeats or final failures that nevertheless perform in unexpected ways. Returning to such acts ("glitches") in digital systems, writer and curator Legacy Russell argues:

> Herein lies a paradox: glitch moves, but glitch also blocks. It incites movement while simultaneously creating an obstacle. Glitch prompts and glitch prevents. With this, glitch becomes a catalyst, opening up new pathways, allowing us to seize on new directions . . . glitch is something that extends beyond the most literal technological mechanics: it helps us to celebrate failure as a **generative** force, a new way to take on the world. (2020, 30; cross-reference added)

What Russell demonstrates here is that in acts of failing on the Internet, for instance, oppressive regimes of power go hand in hand with positive identity transformations. Acts of failing must be analyzed as such: symmetrically between oppression and transformation. And the paradoxes can be mobilized for activist art and in other projects that work toward designing for social and **ecological** change. In *The Queer Art of Failure*, queer theorist Jack Halberstam demonstrates that mundane happenings in everyday (queer) life can have the same potential, provided that we leave the binary between successful and failed life behind, a binary that heteronormative, capitalist societies want us to use as a yardstick in evaluating the lives of ourselves and others. With financial markets collapsing and divorce rates skyrocketing, Halberstam demonstrates that we must change our measures of success in order to be able to see "more creative, more cooperative, more surprising ways of being in the world" (2011, 2–3).

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Figuration

As a concept, figuration refers to the creative *act* of producing form for thought but also to the *process* of the taking shape of thought figures, as well as to the *result* of this act and process. As such, figuration cuts across traditional categorizations of the *figurative* versus the *abstract* as two distinct categories of representation in art history. As a concept, figuration offers a perspective on the way in which thought figures are drawn, take shape, and produce thought.

Working from Gilles Deleuze's time image and Jean-François Lyotard's notion of the *figural*, media philosopher David N. Rodowick (2001) deconstructs the opposition between word and image, and between philosophy and aesthetics, and elaborates the *figural* as a central concept for analyzing digital audiovisual images not as (prefigured) fixed sign structures but as temporally oriented (audio)visual *events*, pointing at the meaning of the experiential that exceeds discourse and the semiotic. He invokes Lyotard's recognition of the *force* or movement of figuration when he writes:

> In homage to Lyotard, I can thus present a first definition of the figural as a force that erodes the distinction between letter and line: "The letter is a closed, invariant line; the line is the opening of the letter that is closed, perhaps, elsewhere or on the other side. Open the letter and you have image, scene, magic. Enclose the image and you have emblem, symbol, and letter." (2001, 1–2; quoting Lyotard [1971] 2020, 268)

The task of the analyst is therefore to not approach the image as a representation pointing to a past but to unpack the image as a figuration of its (potential) futurity. Taking up this multidirectional understanding of the figural, from a creative humanities perspective the concept of figuration activates the processual and performative connotation of the verb *to figure*, and thereby emphasizes the act before, in connection with the process during, after, and beyond, the (**encounter** with) thought figures.

Figurations as an enactment of the figural can take shape as *anthropomorphic* thought figures—think of Rosi Braidotti's Nomad and the Posthuman, Michel Serres's Thumbelina, Donna Haraway's Cyborgs and Companion

Species—or more abstract geometric shapes, lines, and forms, for example, the circle, arrow, **bracket**, or matrix. *Anthropomorphic* figurations are proposals in philosophy and cultural theory for figures to think with, so as to recast traditional, fixed, dualistic, and gendered human subject positions by introducing these new figures of difference. *Geometric* shapes, lines, and forms can similarly be both expressive of and simultaneously producing emerging thought. These figurations express the spatiotemporal dynamic structures and (emergent) relational constellations within which human subjectivity is produced.

When architect and theorist Bernard Tschumi (2010) speaks of *concept forms* we can recognize a similar take on the connection between theory and form in his performative perspective on **architecture**. The concept forms he recognizes in architectural projects are, for example, the circle, the dome, and the envelope, but he also points them out in larger composite architectural structures such as those of linear, concentric, and grid cities. Not only does architecture as material design depart from concepts, he argues, but it also produces forms of knowledge. With his focus on how material design affords movement and events, he foregrounds how architecture entails a structuring of spatiotemporal experience as well as making arguments and proposing ideas. The concept, then, he positions before, during, and after the act of architecture.

As a concept for the creative humanities, then, figuration is the proposal to think with shapes or forms that can be considered *scenographic* in essence, as it prescribes and inscribes, and thereby draws out possibilities for seeing and thinking emergence, transformation, and relation that are enclosed in shape, line, or form. Both anthropomorphic and geometric figurations are similar to (making) concepts, which brings to the fore how philosophy, cultural theory, and design (for example, scenography, architecture, installation) may share a double-sided creative and conceptual impetus. To give abstract thought shape or form as creative-philosophical act is to materialize thought: to make thought possible and happen. Moreover, to approach or take a specific shape or form *as* figuration is to conceptualize it—to accept the shape or form as a concept to think with.

READING

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Following

Both a noun and a progressive form, *following* oscillates between indicating imitative behavior, thought, and artifacts, on the one hand, and imaginative acting, thinking, and making, on the other. Cultural theorists tend to use the critical register in their **engagement** with following as imitation. They lean toward creative methods when engaging with unexpected, singular, and unpredictable processes that cannot be fully objectified or fully known and must therefore be (partly) imagined. In her book *Vibrant Matter: A Political Ecology of Things* (2010), political theorist Jane Bennett summarizes the critical and creative sides of the coin named "following" like this:

> I pursue a materialism in the tradition of Democritus-Epicurus-SpinozaDiderot-Deleuze more than Hegel-Marx-Adorno. It is important to follow the trail of human power to expose social hegemonies (as historical materialists do). But my contention is that there is also public value in following the scent of a nonhuman, thingly power, the material agency of natural bodies and technological artifacts. Here I mean "to follow" in the sense in which Jacques Derrida develops it in the context of his meditation on animals. Derrida points to the intimacy between being and following: to be (anything, anyone) is always to be following (something, someone), always to be in response to call from something, however nonhuman it may be. (xiii)

Bennett's historical materialism is exemplified by studies such as sociologist Caroline Knowles's 2014 *Flip-Flop: A Journey Through Globalisation's Backroads*. Knowles follows the making and life of one flip-flop through the **-scapes** of industry and technology, natural resources and human capital, and geopolitics and migration in order to uncover the politics of consumption and commodity fetishism (cf. Cook et al. 2004). New materialism is also practiced in the humanities and the arts.

Following the course of **contingent** events is often initiated by human-nonhuman **encounters** as diverse as Bennett's encountering a workperson's glove, some oak pollen, a dead rat, a plastic bottle cap, and a wooden stick in the gutter one day (2014, 4). Such creative methodic following does not involve "watching the flow from the bank" (Deleuze and Guattari [1980]

1987, 372). It involves diving into the flow by using subjective, intuitive, and **affective** methods. Gilles Deleuze and Félix Guattari write:

> One is obliged to follow when one is in search of the "singularities" of a matter, or rather of a material, and not out to discover a form; when one escapes the force of gravity to enter a field of celerity; when one ceases to contemplate the course of a laminar flow in a determinate direction, to be carried away by a vortical flow; when one engages in a continuous variation of variables, instead of extracting constants from them, etc. (372)

The **tracing** of singularities aims at carefully outlining problem spaces or precisely formulating questions. Creative methods are not used to find generic solutions as their impetus is analytical and conceptual. Deleuze and Guattari assert about theorists and makers that "they inhabit that 'more' that exceeds the space of reproduction and soon run into problems that are insurmountable from that point of view; they eventually resolve those problems by means of a real-life operation" (374). How do such hands-on acting, thinking, and making assemblages look?

New materialist art historian from Finland Katve-Kaisa Kontturi works with following as a creative method in her monograph *Ways of Following: Art, Materiality, Collaboration* (2018). She opens the book with a discussion of the video *Following Amie: The Artist at Work* (2015) by arts-based researcher Maria Miranda and artist Amie Anderson, both based in Melbourne, Australia. The video was filmed with a mobile device on a selfie stick. Kontturi explains that the two women, the technologies, and all kinds of preset engagements and chance encounters in the urban environment participate in the making of both the video and Miranda's and Anderson's daily life. All kinds of human and nonhuman entities and inter- and intraspecies relations participate in the unfolding of their day. In Kontturi's analysis, the selfie stick plays a prominent role: "In the video, the selfie stick's mobile point of view loosens the positionalities of the follower and the followee, engaging them in a movement where their roles are not fixed, and the story is still in the making" (2018, 9). Here no one is positioned on the riverbank, watching the flow. No one is observing the other at a distance. The advantage of such a position is that following itself can flow, can be flexible, mutual, and collaborative.

READING

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Friction

Friction is a force. It results from the (counter)movements of **surfaces** sliding against and rubbing against and off each other. While slowing down the speed of the two separate entities, their meeting generates energy, movement, action. Friction is also where it hurts. And it is the point of dilemma or controversy. Friction tells us where there is trouble, and as Donna Haraway famously suggests, we should "stay with the trouble." Sites of friction are, therefore, what matters most: they alert us, call to action as they make us think, imagine, and (re)invent. As such, friction can be understood as part of a conceptual cluster that includes agonism, **crossing**, **failure**, or differing, as each of these terms point out critical as well as creative potentials of and in **encounters** of difference.

This paradoxically productive meaning of friction has a longer history (Åkerman 1998) but has also been underscored by critical theorists engaging with late capitalism's culture of efficiency, hypermobility, and technological advancement. Cultural geographer Gillian Rose (2015) addresses this critical point in her activation of friction in relation to another concept characteristic of current technoculture that theorizes the communicative and productive aspects of relating and connecting: **interface**. She reminds us of Alexander Galloway's use of the word *friction* in his definition of interface: "The interface is an 'agitation' or **generative** friction between different formats" (2012, 30; cross-reference added). Rose proclaims that "as images circulate, pausing and materializing in specific places with specific people, cultural meanings are encountered, interpreted, ignored, lost, liked, resisted and deleted. All this is friction" (2015, 343). Cynicism about technological systems that cannot live up to their promises can inspire a critical perspective that symmetrically opposes technologically determinist ideologies of process. It can also inspire an optimist interest in what friction can do, precisely by grinding certain forces and processes to a halt.

In her ethnography of global connections, anthropologist Anna Lowenhaupt Tsing addresses the specific productivity of friction as it emerges in encounters of cultural difference. Challenging more common ideas about the

"clashing" of cultures, she holds that "cultures are continually co-produced in the interactions I call 'friction': the awkward, unequal, unstable, and creative qualities of interconnection across difference" (2005, 3). She proposes to, precisely, study the "zones of awkward **engagement**, where words mean something different across a divide even as people agree to speak. These zones of cultural friction are transient; they arise out of encounters and interactions" (xi; cross-reference added). With this alternative to discourses of seamless efficiency, and smooth-running flows of people, goods, and capital in the era of global mobility, she offers a perspective that values the frictions that are inherent in mobility:

> Instead, a study of global connections shows the grip of encounter: friction. A wheel turns because of its encounter with the surface of the road; spinning in the air it goes nowhere. Rubbing two sticks together produces heat and light; one stick alone is just a stick. As a metaphorical image, friction reminds us that heterogeneous and unequal encounters can lead to new arrangements of culture and power. (5)

This point stresses the creative force inherent in friction—a positive perspective for today's discourses on societal *resilience* in the face of various social, economic, or **ecological** crises.

As the phase before the new "arrangements of culture and power" that Tsing addresses, friction is a thinking space. Rather than either ignoring or overcoming friction, theorists, activists, and artists have taken up friction as an opportunity for exchange and debate, as a vital force in discussions about, and proposals for, (techno)social change. Birmingham-based collective Friction Arts has made this explicit in their name, but it is also reflected in their way of working. Fostering community arts and location-based projects, they create responsive, site-specific performances and socially engaged projects. Their mission statement reads:

> Friction [Arts] exist to create cultural and social change through the arts. We're not artform specific and instead have a process. . . . This means that no two projects are the same, and we rarely make work that can tour, because contexts, people and external stuff like politics—don't we all know it—are always shifting. Our work is bespoke to ensure that it is always relevant to this place, these people, at this time.[1]

Here we can see the local, grassroots, and participatory potential of friction.

1. https://www.frictionarts.com/about-us-2. See also http://www.thedoublenegative.co.uk/2014/11/introducing-friction-arts-birmingham.

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Generation, Generative

The noun *generation* refers to a group or set of people, a genre or class of things, or the stage in an ongoing development of a product or technology defined in terms of dates. Generation, when it is not preceded by an article, refers to the verbs producing or creating something or, more generally, to the coming into being of something during the passage of time. The latter meaning of generation is *ontological* in nature and has to do with the generative process itself. It is possible for this process to have an unknown outcome. In its former, *epistemological* meaning, generation refers to rational ordering and to its logics of **classifixation**. These logics, often deemed irrational with the benefit of hindsight or when looked at from a specific ideological standpoint, tend to result in predictable outcomes. The most basic logic of generational cohorts is based on hegemonically Western time, not non-Western or Indigenous forms of temporality, which leads one to mistakenly expect certain familial and communal relations, and not others, all around the globe.

What is specific about generation as a concept is, first, the *entanglement* of ontology and epistemology. That is, the coming into existence of something (the process of its becoming) is entangled with the way in which that same thing is ordered (its resulting being). The duplex concept of generation reveals not only the processes of inclusion and exclusion according to which a person or an object is or is not part of some category. It also reveals ambiguity and paradox because the process of their becoming such leaves space for more than just the binary of in versus out. Second, then, the conceptual logic of generation itself proposes that process (ontology) holds priority over, or carries, systematic ordering (epistemology). Ambiguity and paradox begin to be more than distortions of straightforward ordering when we stop prioritizing the mold and start to see molding as a life force that can go many ways.

Beside philosopher Susanne K. Langer, who wrote about "generative ideas" that may capture the imagination of many thinkers at once and thereby come to characterize an epoch of thought, it is Brazilian critical educationalist Paulo Freire who made the generational doublet of the interplay between stable generationality and unstable generativity productive in his work on a liberating pedagogy for oppressed (colonized) people. His proposal is one for teaching with "generative themes" about which he claims that "they do

not exist 'out there' somewhere, as static entities; *they are occurring*" (Freire [1970] 2005, 107; emphasis in original). The occurrence happens in the development toward liberation that results in getting to perceive one's own reality in one's own terms. Freire's starting point is quite Marxian as he claims that the development entails an overcoming of so-called limit-**situations** that hold not only persons and groups, but also themes, hostage:

> When the themes are concealed by the limit-situations and thus are not clearly perceived, the corresponding tasks—people's responses in the form of historical action—can be neither authentically nor critically fulfilled. In this situation, humans are unable to transcend the limit-situations to discover that beyond these situations—and in contradiction to them—lies an *untested feasibility*. (102; emphasis in original)

Whereas oppressors ignore or wish to subjugate that what is differently feasible as they perceive its generativity as threatening to their position, the oppressed who come to see their position as unnecessarily limited want to work toward it as to discover the generative themes that lay hidden beneath the limiting **surface** and may help them understand, and eventually transcend, their situation. As themes do not exist in isolation from thinkers, Freire's call is to define them anew in every historical time and situated place. This puts a generative spin on (creative) thematizing.

READING

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Gesture

Sometimes used metaphorically to designate the imprecise, allusive, or general referencing in statements that can be compared to the sweeping motions of limbs, and sometimes to hint at the humble subtleties of unfinished thought, the conceptual core of the gesture, or gestural, is located in the body, while its conceptual reach is beyond its actions. As expressive movements of bodies, gestures remain unfinished. Gestures may have beginnings, give direction, and leave **traces**; in a gestural state, endpoints are never, or rather, are always not yet reached (see also **navigation**). As such, there is a double side and ambivalence to gestures when taken as *expressive* of thought, **affect**, identity, or other subjective qualities and activities. Such a communicative perspective assumes there is a **deictic** center—the point of origin where the gesture begins—and an observer or spectating subject who interprets the gesture as expressive. The gesture is, as such, not only (and not yet) expressive, as it is also *productive* of thought, affect, or identity. Or, as we could say, gestures gesture toward such production, as unfinished, **open**-ended, and in the midst of becoming known.

When understood as embodied knowledge caught in the middle of a **generative** transfer, we can discern different questions about or readings of gestures touching as well as diverging. A critical perspective on gestures can zoom in on how the direction of the gesture, even if unfinished, does already entail a complex politics of positionality already embedded in the gesture. For example, for his critical reading of the staging of colonialism in the Africa Museum Tervuren in Belgium, cultural analyst Murat Aydemir (2008) invokes Mieke Bal's (1996) writing about **curatorial** gesture of *exposing* in museum exhibitions to discern how such gestures can come with a first-person authority as well as with an objectification of that which is brought to the attention of the second-person addressee. This construction of authority, and in this case also positions of in- and exclusion (the object as "they" who are looked at by the "we" as **assembled** by the exposing gesture), corresponds with the diagrammatic relation of the exhibition's **dispositif**. The exhibition analyzed by Aydemir demonstrates a double gesture that nostalgically repeats and with retrospective self-reflexively also points out its archaic colonial gesture:

> Hence, visiting the museum now offers the choice opportunity to experience both the full effect of the main exhibition and to reflect critically on its message. In Bal's terms, the main expository agent tells the viewer: "Look! That's how the primitives are." The second, supplementary agent adds: "Look! That's how we used to display the 'primitives.'" (2008, 82)

The one, however, does not disarm the other, as he concludes:

> In its current incarnation, perched between outdatedness and anticipation, Tervuren's mise-en-scène combines a distanced perspective on the colonial past that vacillates between critique and nostalgia, while it simultaneously situates its visitors intimately in the colonial present. At each turn of the walking tour, those visitors fail to meet the people who are the museum's scientific objects: imprisoned in displays that deny them temporality and, hence, life, they simultaneously haunt the building as ephemerally as they do insistently. (95)

The two gestures here remain parallel and as such reinscribe rather than intervene in relations already set by institutional, ideological, and political frameworks.

Such a **dramaturgical** and semiotic understanding of gesture opens up to an analytical perspective on the meanings that gestures perform in and through their directionality. Moreover, such gestures are firmly embedded in cultural, discursive frameworks and are in that sense ready-made. A creative perspective on gestures can investigate the emergent quality and layered temporality that their performativity entails. Inspired by painter Paul Klee's observations about sketches being the material residue of gestural movements, theorist and historian of urban design Wim Nijenhuis (2019) calls this the gestural expressivity of lines in **architectural** sketches, which represent their own indexicality—an expressivity that requires a specific attention on part of the interpreter, as

> their state of "being made" is more significant than their capacity for representation. What [gestural] lines share with the material of making is their ambiguity and ability to indicate paths that the maker can follow. That is why sketches require careful observation, one tailored to their specific appearance. (135)

Artist William Kentridge works with this principle in his stop-motion animations of palimpsestic charcoal drawings, erasures, and redrawings. This reminds us that, like most creative acts, we see, find, and recognize gestures via the material traces of their mediation, shaped by material **conditions** and **dispositifs** of apparatuses and **interfaces**. Such mediation is technologically as well as culturally bound.

In a **multimodal** text that uses words, stills, and moving images, theorist Janneke Adema and artist Kamila Kuc bring together a critical and creative perspective on reading and writing gestures in an experimental investigation of the conditions for the performativity and the possibility for what they call the unruliness of gestures or "gestures that try to visualize, expose and disturb these controlling mechanisms" (2019, 194). They ask:

> How are our reading/writing gestures **implicated** in meaning-making and knowledge production? What role do gestures play in intra-action with interfaces, media and human intentionality? How are gestures structured and what are their potentialities? Where does gestural agency lie within apparatuses of control (be they cultural, technological or discursive)? (194; cross-reference added)

Their experimentation with reading and writing gestures both examines and demonstrates that these gestures are part of an agential entanglement of bodies and technologies, and of positionalities of readers and writers, or observers and performers, that dynamically and iteratively constitute and reconfigure each other.

READING

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Glow

Something that glows compels one to pause and look closer. It generates curiosity, enigma, and possibly also debate in an individual, collective, or collaborative setting. This implies that "glow" is more than an attribute of a word in a text or a database, an image among other visual (or textual) material, or an object that can be described as differing from the other objects in its surroundings. Words, images, and things that glow stand out in such a strong way that they must be **engaged** with. Visual and theoretical sociologist Rebecca Coleman discusses one such thing (glitter) in her 2020 monograph *Glitterworlds: The Future Politics of a Ubiquitous Thing*. What happens when one pauses and looks closer at glitter, actively **following** it? Coleman argues that then it appears everywhere.

As an attribute of something, glow can be described as incandescence (the emission of electromagnetic radiation, including light, from a hot body) or luminescence (the emission of light caused by something other than heat), both emitting light and attracting attention but thereby also obscuring clear edges and contours. The classic example is the glow of iron after heating it, but one may also think of the glow of the sun or of a computer screen, or the afterglow of the sunset or of a recently switched-off television. In *The Concept of Nature* ([1920] 1964), philosopher Alfred North Whitehead asserts:

> For natural philosophy everything perceived is in nature. We may not pick and choose. For us the red glow of the sunset should be as much part of nature as are the molecules and electric waves by which men of science would explain the phenomenon. It is for natural philosophy to analyse how these various elements of nature are connected. (20)

Here Whitehead differentiates between the molecules and electric waves that cause the glow of the sunset, on the one hand, and, on the other, the affective dimension associated with the same phenomenon. For him, the *fact* of glow involving the emission of light and glow as a *cause* of feeling are equally important. The creative humanities prioritize the latter relation wherein glow has an effect on its recipient. These effects may be critically approached by understanding how the glow of light has been used to represent or taken as

a sign of, for example, enlightenment, the sublime, the enigmatic, but also gendered and colonial connotations of power. But the verb "to glow" also suggests a movement or *event* that is unpredictable and asks for a response: a person or a group is made to act upon something that glows. Exceeding representation and signification, glow demands us to act because what we feel cannot be fully grasped or captured. There is something **irreducible** or **irreductive** to the event of glow.

Educational scientist Maggie MacLure describes as "a kind of glow" that which "starts to glimmer, gathering our attention" (2010, 282). Her examples are from the process of coding field note fragments or the recorded images of fieldwork. When analyzing these materials, glow causes the researcher to experience time to contract and expand in an event that addresses both her body and her mind simultaneously. Glow here means that a fragment or an image cannot be easily coded. The fragment's or image's address can lead to an individual or collective (negative) feeling of disconcertion caused by something that does not fit into predetermined categories or to a (positive) feeling of intrigue as the researcher or the group becomes suddenly fascinated or exhilarated. When something that stands out as an outlier does not seem to be codable the research process can slow down as the thing that glows is not immediately "meaningful." This can lead to frustrating debate in the team and even stagnation of the project. The research process may, however, speed up when the thing that glows produces new connections, intuitions, and eventually new insights. This **generative**, somewhat **rhythmic** aspect of glow causes the researcher(s) to find unpredictable avenues for current and future research. In collaborative work, glow may cause a group to come to function as one pulsating body that has been given the gift of a surprise that leads to new creative insights as new research questions and engagements suddenly present themselves.

READING

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Habit

The dictionary definition of habit is “a settled or regular tendency or practice, especially one that is hard to give up.”[1] Examples range from bodily habits such as nail biting or pen clicking, learned habits such as a workout routine or buckling a seat belt, and cognitive habits such as styles of reasoning or strategies of self-monitoring. Habits have fascinated philosophers, cultural theorists, and social scientists alike across times, disciplines, and schools of thought. One insight has been consistent: habit is a duplex concept that unites the two opposites of several poles—mind and body; spontaneous and mechanical; active and passive; community and individual. We may consciously try to make a routine practice out of something considered good or healthy. When successful, the body picks up and remembers the routine, performing it as a motor skill. Alternatively, we may easily find ourselves unconsciously repeating a disturbing social pattern that, when brought to one’s awareness, proves to be difficult to change. In sum, one’s habits result from (ongoing) processes of habituation and take shape in one’s “habitus” in relation to the wider social context.

Various cultural theorists have worked on conceptualizations of habit developed in philosophical, sometimes interdisciplinary, conversation with Aristotle, David Hume, Félix Ravaisson, Charles S. Peirce, John Dewey, Pierre Bourdieu, Gilles Deleuze, and many others. Feminist critical theorist and film scholar Teresa de Lauretis builds on Peirce’s semiotic explanation of habit and specifically his ideas about *habit change* in her seminal *Alice Doesn’t: Feminism, Semiotics, Cinema* (1984). As a central outcome of semiotic processes, Peirce’s habit change—or change in one’s tendencies to action—results from one’s previous experiences and **encounters**, in processes of self-reflection and meaning making. This, de Lauretis argues, opens up to possibilities for visual and (non)verbal representation to work toward difference and change on both individual and social levels. This points at a transformative and, hence, political force of image and language.

More recently, in *The Habits of Racism: A Phenomenology of Racism and Racialized Embodiment*, philosopher Helen Ngo has worked with the philos-

1. *Oxford Dictionary of English*, Mac Dictionary Version 2.3.0.

ophies of phenomenologists Maurice Merleau-Ponty, Frantz Fanon, and Sara Ahmed, among others, in order to understand habitual racism and to work toward self- and social management techniques for responsible ways of dealing with such problematic yet hard to break habits. An unpacking of habits as "sedimentations" in both phenomenological and ordinary understandings forms Ngo's starting point: "habits are sedimentations insofar as they express the past's grounding or anchoring effect on our present and anticipatory bodies" (2012, 38). In an interdisciplinary move, Ngo works through and beyond the philosophically and commonly drawn-up analogy of habits "sedimenting" in a body by alluding to the geological use of sedimentation as well as to that term's etymological roots. Whereas sedimentation perpetuates a logic of habits settling into individual bodies and into the body politic, geology offers more complexity to this logic:

> In geological sedimentation, the depositing of materials is passive insofar as **surfaces** do not solicit them—but they do *receive* them. This entails a measure of material and compositional compatibility such that the new material does not simply "run off" the existing surface . . . the surface contains a receptivity to the material, with its own edges and formations codetermining which new materials get deposited, and how. If we transpose this to [the] realm of bodily habit, then we could say that the acquisition of new habits depends not only on one's cultural and social milieu, but also on one's own bodily receptivity and compatibility. Sedimentation on this reading is not *wholly* passive; habits do not just get "deposited" in our bodies. In the habitual response of clutching of one's handbag upon the approach of the Black man for example, does the acquisition of this habit cohere with existing bodily habituations, or does it in fact jar with one's bodily orientation? (38–39; emphasis in original; cross-reference added)

Etymology, in turn, complicates the logic of habits "settling in" even further because there is a link between *settling* and *sitting* through sedimentation's Latin root *sedere*: "To sit is to remain in one place perhaps, but it is nonetheless to hold or collect one's body in such a way so as to *maintain* or *keep* this position. This holding is what prevents our bodies from collapsing onto the floor in a way that gives us over wholly to the downward plunge of gravity" (39; emphasis in original). Together these disciplinary detours offer Ngo a way to conceptualize the acquiring and maintaining of racist habits. The fact that such habits are *actively* received and maintained, or kept, offers openings for antiracist practices and **gestures**.

Psychologist Vlad Glăveanu builds on Dewey's slogan "*habits are arts*" (in Glăveanu 2012, 78; emphasis in original) in order to cut across the common practice of contrasting habits (as apparently bodily and mechanical) with creativity (as allegedly of the mind and purposeful). Glăveanu's key example

is craftwork, or folk art. He engages with the decorative art of artisanal egg painting and argues that habits are in fact intertwined with creativity:

> Decoration activities rely on a strong knowledge base and require the exercise of technique through reproducing and combining a number of traditional motifs as well as perfecting them . . . obstacles are not absent and therefore artisans become improvisers when confronted with "accidents" in drawing or coloring, due to failure of the material support or when they experience "inspiration blocks." . . . Innovation in Easter egg making is mostly led by necessity rather than innovative creativity. . . . Still, there are cases of recognized innovators who deliberately search for novelties, mostly in order to respond to the changing needs of customers and expand the market. (88)

Ultimately, it is Glăveanu's argument that the very basis of cognitive, innovative creativity is formed by embodied, habitual creativity, and that improvisational creativity is responsive to **accidents** and **failures**. The three practices are positioned along a conceptual continuum ranging from habit, through improvisation, and to innovation. There are differences in degree, not in kind, between these three forms of creativity.

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Hashtag

Punctuation marks are signs that add or clarify meaning, allow for a creative rewriting and questioning of, for example, established logics and truths, and as such produce spaces for reflection, interpretation, and conceptual thinking. Similar to other signs for **punctuation** such as the **asterisk ***, **brackets [] or parentheses ()**, the **dash –** or **hyphen -**, the slash /, or underscore _, the hashtag can play not only a semantic and systemic but also discursive and political role. Its conceptual quality and working can be located in its specific **curatorial** and archival potential.

The hashtag is relatively young and significant for contemporary digital (online) culture. From 2007 on, the older "#" as number sign or hash symbol became adopted by and adapted to online social media platforms, to be added to words as a form of tagging. As a hashtag, it has an **open** and flexible character—once a word is added, a topic is born. It is a connector in how it organizes online messages with the same topic and also in how it can subsequently go *viral*, in Internet parlance, if used by a growing number of people, connecting them as a collective. This has made the # into a (also literally) **sticky** sign that curates both topics and publics. This bottom-up, crowd-sourced, open, and flexible practice of curation is also called *folksonomy*, to distinguish it from taxonomy as a hierarchical and fixed form of classification, or **classifi*x*ation**. As such, the performative quality of hashtags is characterized by flexibility and a transformative power because of how it establishes and curates topical and/or social networks. Because of these two qualities, the hashtag has also been used for activist and political movements. While criticized as prone to what has also been called *slacktivism*—an all too easy online(-only) support of activist agendas with little effort and commitment on part of the individual—hashtag activism can also have real-world and embodied consequences. Digital media theorists Jean Burgess and Nancy Baym have pointed out the embodied potentials of the hashtag by demonstrating how the use of the hashtag #blacklivesmatter on online platforms is connected with and productive of what they call "bodies-in-the-street activism" (2020, 67):

> The rise of #Blacklivesmatter and its ties to street protests and unjust policing serves as an important reminder of the embodiment and liveness of many events that might look merely like "data" or verbal discourse when viewed as hashtags. (68)

These aspects of its curatorial and archival potential—stickiness, folksonomy, and embodiment—characterize the hashtag's political force.

The curatorial working of the hashtag makes it also a tool for archiving and for digital mapping and various other methods of data analysis. An archival project that demonstrates how the hashtag's curatorial potential can support an activist agenda is *Hashtag Feminism*. This website was first launched in 2013 by Tara L. Conley when she was a graduate student and interested in Internet culture and issues around social justice. Ironically, the original website was hacked in 2015 and used to harass feminist online media. The new website www.hashtagfeminism.com now includes the archive of materials from 2013 to 2015. The site indexes and archives the use of hashtags for feminist activism such as the historically significant #YesAllWomen or #metoo movements. It also provides links to online feminist publishing about these movements. With its cases and aims, this digital, online repository demonstrates how the hashtag can have an extremely dynamic life. Its use can grow exponentially, expanding from an individual instance to a widespread social movement, and its use can suddenly spread and speed up, reaching into our dynarchive of contemporary societal **frictions** and debates.

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Implication

The etymology of "implication" gives insight into how a focus on implication can entail subtle insights and **care**-full **modes** of presentation. Stemming from the early fifteenth century, the word *implication* means an "action of entangling" derived from the Latin *implicationem*, which means "an interweaving, an entanglement," and from *implicare*, which means to "involve, entangle; embrace; connect closely, associate." Moreover, with the root of *plicare*, meaning "to fold," im-pli-cation can be understood as a being folded into. We can say therefore that the analysis of implications is an unfolding or a folding out. Analysis of the manifold implications of ways of thinking, feeling, doing, and making can lead to **kaleidoscopic** insight in how pasts, presents, and futures are implied in the object.

Theoretically informed scholarship in the humanities, both critical and creative, is characterized by a care for both object, subject, and approach if the analyses of cultural objects, phenomena, processes, and fields of inquiry aim to expose their implications for ways of thinking, feeling, doing, and making. It is often a self-reflexive insight for humanities scholars that they, themselves, are also implicated within the activities and **affects** they study. Scholars are entangled in, participate in, and are affected by the objects, phenomena, processes, and fields under study, and as such they are part of their implications. As citizens and as scholars they are implicated in the different worldings brought about by what is being analyzed. For example, the implications of an **encounter** with a work of art cannot be directly grasped by the scholar. For both she and the work participate in cultural, political, and industrial webs of systemic power and difference. These are marked by fast and slow changes and in movements toward inter- and transdisciplinarity, invited by posthuman and postdigital **conditions**. To expose this entanglement of the researcher herself, French sociologist René Lourau (1988) proposed to make use of the research diary as both a methodological tool and a tool for epistemological reflection. He recommends *journaling* as a way to expose how one is implicated in political economies and symbolic orders—as is one's community of allies or of coworkers. This can give insight in the researcher's implicatedness for herself and for future historians of her work. Ultimately,

in Lourau's understanding, working with research diaries as a subjectifying move would lead to a theory of implication.

Putting the entanglement of objects, subjects, and worldings center stage means that creative humanities projects in critical making and critical design have a focus on the implications of design decisions. They do this not only by researching what happens culturally, politically, cognitively, emotionally, or affectively in encounters with artistic expression or when using a new networked medium. This projecting also happens by their mapping out, for instance, what are the environmental or labor costs of a certain thing that tends to go unnoticed when it is in circulation. These projects thus enlarge the terrain of Lourau's theory of implication. They extend beyond self-reflexivity by working immediately from within webs of systemic power and difference and in very broad inter- and transdisciplinary keys. An example of the critically discursive background reading of such a project is social media scholar Sarah T. Roberts's recent project. This project concerns commercial content moderators working, often at very long distances, not only from users of the networked media but also from the big tech companies and social media platforms. They employ them as a way to make sure that no one but them sees the darkest posts of people. It is striking that not even the moderators themselves are willing and able to talk about the entanglements of Internet users with this kind of labor and with the labor conditions under which they themselves work. Research, making, and design projects, then, may both unravel such implications and develop alternatives. These can be developed in either participatory hackathons and the like or in smaller projects that are not solution oriented but analytical in nature. The concept of implication provides insight into the sheer impossibility of change without **friction** and a smooth upscaling (Tsing 2005). It is therefore important in this context to make the distinction between bringing a creative solution to a local problem into national or global circulation, on the one hand, and, on the other, focusing one's analytical approach at mapping the problem. Both are equally indispensable but cannot be conflated.

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Interface

Interface is a concept of ambivalence. Oscillating between material and process, “interface” is used to name the connection between two entities—a connection that is itself immaterial and invisible but makes itself known by means of its results. Like related object concepts such as screen, skin, or **surface**, it denotes both separation and contact. As object concept, the interface is simultaneously the locus of connection, harboring specific affordances *for* connection, and pointing at the processes of this connecting, or *interfacing*, and the results that it can bring forth. For this reason, media theorist Alexander Galloway speaks of the “interface effect”:

> Interfaces are not simply objects or boundary points. They are autonomous zones of activity. Interfaces are not things, but rather processes that effect a result of whatever kind. For this reason I will be speaking not so much about particular interface objects (screens, keyboards), but *interface effects*. (2012, vii)

In the same vein, cultural theorist Branden Hookway stresses that interface is “a form of relation” and that describing the interface “lies not in the qualities of an entity or in lineages of devices or technologies, but rather in the qualities of relation between entities” (2014, 4). A similar relational perspective can be found in visual theorist and cultural critic Johanna Drucker’s “Humanities Approaches to Interface Theory,” in which she conceives of the interface as a “dynamic space of relations, rather than as a ‘thing’” (2011, 12). As such, the concept brings together principles of materiality, mediality, and performativity of sites as **situations** of interaction.

While originating in chemistry, used to give a name to the surface that connects two liquids, the term *interface* has gained specific use in the context of technological and digital systems. In his history and theory of the concept of interface, Hookway emphasizes that it is not so much the technology itself but the interfaces we work with that shape our relationship with technology.

In that relationship, the interface is a site of **friction** or contestation that both defines and elides differences. Hookway argues that the interface is defined precisely in “its coupling of the processes of holding apart and drawing together, of confining and opening up, of disciplining and enabling,

of excluding and including" (2014, 5). Hookway points out this paradoxical essence of the interface suggesting that this friction both produced and worked through by the interface is as much a challenge as an opportunity. It is precisely in challenging and contesting the relation between different entities that something productive can be created. The interface both "stages" and "resolves" this contestation (ix). In this line, Drucker argues that the interface is a material and spatial apparatus that produces meaning and subjectivity beyond the known, recognizable, and predictable. Drucker sees the "interface as a space that supports interpretative events and acts of meaning production" (2011, 3). For the creative humanities it is important that it is *at the interface* where, when, and how meaning, knowledge, and **affects** are being produced.

The notion of the interface as a locus of such meaningful, frictional mediation offers a particularly productive lens for various situated practices, as it connects material, spatiotemporal principles of design, or scenographic **figurations**, with their specific relational and performative force. For example, to understand site-specific performances or artworks in public spaces as "urban interfaces" brings to the fore how their design can be constructive in producing subject positions that entail various forms of **engagement** of spectators or participants with their specific surroundings. In other words, as urban interfaces, art and performance in public space can be privileged sites for confronting and challenging the very urban **condition** they take place in (de Lange, Merx, and Verhoeff 2019). The artistic design and **curation** of urban interfaces shape intersections, interactions, and interventions of bodies and technologies and as such produce meaning both *in* and *about* urban spaces and situations. Analyzing situated urban arts and performance as interfaces thus also entails the uncovering of how they operate in a self-reflexive, critical **mode**.

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Irreducibility, Irreduction

For something to be irreducible means for it not to be able to be reduced to something else or to be put in simple terms. Reduction and simplification are techniques that are intentionally or unintentionally applied by scholars, educators, and **curatorial**, journalistic, or political professionals alike, and these techniques install a loss of meaning. This loss results in hindering oneself or someone else from a full **engagement** with the irreducible phenomenon the techniques are applied to. For example, the *Oxford Dictionary of English*[1] states that "literature is often irreducible to normative ideas." This means that whereas literature is often read in terms of the morality or ethics it expresses, its impetus cannot be reduced to those matters and/or a novel or a poem cannot be simplified in expressing one clear-cut normative idea or one register (such as morality or ethics). In spite of this, academic disciplines, schools of thought, and specific methods have a tendency to reduce the world according to the phenomena that fall within their reach. The concepts of *irreducibility* and *irreduction* try to alter reductive tendencies in the direction of greater complexity in one's engagements and, eventually, in the knowledges produced and insights gained.

Halfway through the 1980s, both the philosopher Gilles Deleuze and the social scientist Bruno Latour formulated advice for scholars that can be summarized as follows: *do not reduce*. This advice pertains to the preferred point of entry of research and is, as such, methodological. In his book on a fellow philosopher, Michel Foucault, Deleuze ([1986] 1999) suggests that what should get primacy in research are statements and visibilities, not things and their complementing words or images. He insists, however, that statements cannot be reduced to visibilities and that statements bring themselves to bear on something irreducible whereby visibilities are themselves irreducible. Latour ([1984] 1988) has put forward a similar argument. "Irreduction" is in the title of one of his philosophical essays and indicates a fact about the world, namely the co-constitution of reason with politics and other domains of human and nonhuman making, as well as indicating the principle of "free association." The latter principle proclaims, first, that insights should not be reduced to their political thrust (or vice versa) and, second, that it is possible

1. Mac Dictionary Version 2.3.0.

to circumvent all-too-easy scholarly reductions or simplifications by **following** nonacademics' engagements with the phenomenon under study. Unhindered by decisions made by or for scholarship, one immediately engages with the object under study as part of a wider network comprising a multitude of heterogeneous elements and their relations. The phenomenon here is an assemblage of elements and relations. As it is the network that constitutes the object, says Latour, the network should be the point of entry. The object "made" covers up its process of "making."

John Law, a science and technology studies scholar who was influenced by both Deleuze and Latour, argues that in order to reach greater complexity in knowledges and insights, our go-to methods need to be adjusted. Under the heading of "material semiotics," Law (2004) argues that new conceptual metaphors can guide us into the right direction. He suggests a new **generation** of social scientists explore "Localities. Specificities. Enactments. Multiplicities. Fractionalities. Goods. Resonances. Gatherings. Forms of craftings. Processes of weaving. Spirals. Vortices. Indefinitenesses. Condensates. Dances. Imaginaries. Passions. Interferences" (156). We refer our readers from the humanities and from the fields of art and culture to the table of concepts as well as the index that includes companion concepts in this glossary *Critical Concepts for the Creative Humanities* for the conceptual metaphors that we have selected in order to reach the same goal. The fact that Law's "interference" is synonymous with **diffraction** here demonstrates immediately that the two projects are themselves entangled. In Law's terms:

> [Method] makes new signals and new resonances, new manifestations and new concealments, and it does so continuously. Enactments and the realities that they produce do not automatically stay in place. Instead they are made, and remade. This means that they can, at least in principle, be remade in other ways. (143)

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Kaleidoscope, Kaleidoscopic

Kaleidoscope or the kaleidoscopic is a conceptual metaphor that can be unpacked and used as a critical and analytical concept for approaching non-hierarchical heterogeneity; fragmentation; and transformation of objects, phenomena, or fields of inquiry. The meaning of the term and its productivity as a concept are activated by the conceptual working of metaphor. Metaphors produce intuitive and direct associations between two separate domains and suggest and order an empirical *field* that so far has remained heterogeneous and therefore unnoticed *as* a field. The associations that are established by the metaphor of "a kaleidoscope" have inspired thinkers as diverse as Henri Bergson, Siegfried Kracauer, Susanne K. Langer, and Anne-Françoise Schmidt. The associations point at two directions: at the object, phenomenon, or field of analysis that in multiple ways can be considered kaleidoscopic—ways that each connect to the various characteristics of a kaleidoscope, on the one hand, and the perspective and methodology of analysis as construction of the object, phenomenon, or field, on the other.

Both these directions are included in the metaphorical meanings of the word. First, the metaphor refers to the fragmented compositionality, as well as the perpetual mutability of the kaleidoscopic image—here: the object, phenomenon, or field—that with every turn or shake of the optical device changes in a new composite "whole." This is the tenor or resulting meaning of the metaphor. The analogy of the kaleidoscope thus serves as a concept, which helps a project of bringing an order to any fragmented and transforming field, or in this case, producing an assemblage. Second, the metaphor brings to our attention the machinic quality of the kaleidoscope as a mechanical optical device, or visual technology—the vehicle of metaphoric meaning that is specifically pertinent to the methodological thrust of the term. This *methodologicity* entails the epistemological search for a systemic logic that can include fragmentation, heterogeneity, and transformation and the creative interpretative act of a *kaleidoscopic perspective* that respects and **follows** and brings order to the iterative reconfigurations of the heterogeneous elements. This creative act resembles the agency of turning the kaleidoscopic viewing device that yields the different colorful images that can be seen through

it—an act that forges an onto-epistemological bond between the observer and the observed.

Its double metaphorical reference to and connecting of both object, phenomenon, or field, on the one hand, and perspective, on the other, is particularly useful for methodological approaches for emerging and transforming creative practices and cultural forms that are particularly heterogeneous and fast changing—*before* **collage**, consolidation, and the canonization and institutionalization of their fields of practice and of study. A kaleidoscopic perspective has been proposed, for example, to understand the parallels between the two emerging and transforming visual cultures of *moving images*, that is, the earliest years of cinema, and of *digital images*, that is, "new media" (Verhoeff 2006). From a perspective on kaleidoscopic traits of fragmentation and transformation of contemporary visual culture, various connections with the older and more distant era can be found. This perspective opens up novel meanings and understandings of early cinema as another new and emerging visual culture that may otherwise remain hidden behind assumptions of "primitivity" or "**prefigurations**" of the following consolidation of "classical cinema." Another example of a kaleidoscopic perspective is one for examining the hybrid status between medium, practice, and field of Interactive Digital Narrative (IDN), as proposed by Janet Murray:

> The kaleidoscopic view . . . refers to the many components and potential taxonomies of the artifacts that are the objects of study in this new field. It also refers, more importantly, to the potential of interactive digital narratives (IDNs) to present us with multiform scenarios in which the same events can be understood in multiple contexts and the same starting points can be imagined as giving rise to multiple possible outcomes. More than anything else, it is the possibility of furthering such a multiform, multi-sequential, multi-vocal, narrative practice that makes the recent formation of a dedicated organization for research in IDN, in which theory and practice are closely intertwined, such a promising milestone. (2018, 3)

In both cases the kaleidoscopic is a concept that connects object and perspective and produces a fundamental connection between diversity and change—opening up to not only a historical, comparative, but also a political positioning, and a self-reflective criticality of the scholar of culture in her double role as observer and creator.

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Making Kin, Unkinning

While Donna Haraway's concept of *making kin* and Achille Mbembe's *unkinning* seem to be oppositional in meaning, a further look at the conceptualizations the authors propose proves otherwise. This is because the epistemological/methodological and political/ethical motives of the two concepts are alike. These motives pertain to the *undoing* of **classifi*x*ation**, or the division of people, other organisms, and things in the classes that they seem to belong to, as if by nature, whereby the class division as such is naturalized in the same stroke. Haraway (in Clarke and Haraway 2018) pleads for a queering of classification so as to develop a sense of genealogy and ancestry that cuts across human and nonhuman domains. For this cutting across she uses the term *making kin*. Mbembe (2017) invites us to think about and **care** for a community that is not constructed on the basis of either top-down enforced or bottom-up desired differences between groups of people, primarily. Deconstructing these forms of difference thinking and doing he calls *unkinning*.

Haraway has been wanting to put an end to the dualisms between human-animal, organism-machine, and physical-nonphysical since her 1985 publication "A Cyborg Manifesto." Arguing that we are all cyborgs was a way for Haraway to demonstrate the need to reject dualistic thought and prepare for more complex analyses of and more subtle standpoints about culture, politics, and technoscience. Her "Companion Species Manifesto" from 2003 made a start with the complexification of kinship as she demonstrated how "purebred" dogs and other animals are in fact shaped by practices such as nationalism and global trade but also agility dog training and cross-species family life. In more recent work, Haraway is interested in inflecting what is colloquially called "climate change" and what scientists and critical theorists alike call Anthropocene, Plantationocene, Capitalocene, and/or Chthulucene. Seeking points of inflection is needed in order to make our naturecultural world a more habitable place for more species than just the top 1 percent wealthiest humans on earth. Greater habitability is secured, Haraway argues, when we build our imagination, theorization, and praxis on the more complex kinship structures that demonstrate how we, humans, are entangled with animals, plants, fungi, and other organisms.

Working from an awareness of negative difference as slavery, colonialism, and racism have installed and practiced it, and continuing, and basing himself on African cosmologies and post- and decolonial philosophies that deal differently with ancestry and genealogy, Mbembe invites us to imagine, theorize, and care for a "universal" or an "**open**" community. Much like Haraway and Haraway-inspired theory and art projects, Mbembe does not intend such a universalist horizon to be without schisms, **friction**, or historical and contemporary fiction. The point is one of entanglement and, more specifically, **implication**: in spite of differences in the ways in which we are classified and classify ourselves or others, we share origins, **conditions**, and climatic futures.

In her *Metropolis* article "Why **Architects** Need to Get Dirty to Save the World" (2018), art critic and curator Mimi Zeiger reviews arts and design microworlds ranging from Buckminster Fuller's geoscopes from the 1950s and 1960s through Biosphere 2, built between 1987 and 1991 and owned by the University of Arizona, to Grimshaw Architects' Eden Project from the year 2000 in Cornwall, England. Microworlds are imagined and designed as closed or open systems that both mimic and experiment with complex naturecultural systems and our scientific and aesthetic, and political and ethical relations with/in them. Zeiger demonstrates how Anthropocene and Capitalocene imaginaries and designs are different from Chthulucene imaginaries and designs in that "greater habitability" is defined differently:

> Under the Anthropocene or Capitalocene, getting dirty can be seen as an act of resistance to consumerism, a bulwark against state control, or simply a nose thumbed at polite society. But under the Chthulucene, we are all implicated in the inevitable **failure** to stave off the planet's cascading systems failure. In a word, we are in the muck. (n.p.; cross-reference added)

Zeiger does not mention Haraway's "Plantationocene." This neologism, developed by Haraway and her colleague Anna Lowenhaupt Tsing, describes the conjunction of the forced labor of humans in exploitative labor and power relations, on the one hand, and, on the other, the extraction of an unsustainable amount of energy and offspring out of plants by methods and products that pollute the entire environment in which the exploitation and extraction take place. Perhaps Plantationocene goes unmentioned because scientists, critical theorists, and makers alike have yet to come to terms with chattel slavery, with both its past incarnations and with the ways in which those practices continue to travel into the present day and, if we do not start paying attention, into our futures.

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Micrology

Micrology can be the study of the minute, the small, or trivial, or it can refer to the creation of micro-objects. Such micrologies are expressions in word, image, or other materials that express thoughts in a short or small format. These can be poetically written (*vignettes*) or aesthetically designed (*miniatures*), or conceptually precise (*entries*) short reflections that provide words for, and give form to, immediate individual or intersubjective experiences against the background of a political, economic, or informational regime of power that is coopting human thinking through repression, consumption, or distraction. Writing micrologies can be a critical and creative method to express a particular philosophy, cultural theory, or artistic movement that can otherwise hardly find expression given the institutional regimes, disciplinary conventions, and media technologies in place. But these cannot be ignored as their impetus is encountered in something that is noticeable in the everyday and the mundane, in an image or form seen in a flash, in a feeling or movement suddenly felt, as a **trace**, or in a circulating phrase that keeps coming back to a person or a community. The **scaling** in individual micrologies, and the fragmented, sometimes **kaleidoscopic** nature of a collection of multiple micrologies is also consciously embraced as a response to totalitarianism and/or neoliberalism and their tendency to cooptation, or to the "power/knowledge" or the "body/knowledge" (speaking with Michel Foucault) of disciplines and ICTs. Or micrology can be a fitting format for what has also been deemed a culture of distraction, or alternatively, of hyperconnectivity (Mbembe [2016] 2019; Serres [2012] 2015). Then it can be a **condition** for knowledge production that is less based on the quest of truths to be uncovered than on the exploration of frameworks to be activated. This latter motivation for micrology can be recognized in its activation of phenomenological, affective impetus in response to, or in conversation with, the specific literacies involved in living in, navigating through, and knowing in the experience economy and the algorithmic condition.

Philosopher Theodor Adorno, influenced by Ernst Bloch and Walter Benjamin, brought together the perspective and the format of micrology in the 1950s. For him the *micro* is the locus of the *meta*—as it is there that we can find the traces of the "concrete particular" (Buck-Morss 1977, 74). Micrology

is also the format of writing that he chooses for his philosophy of this concrete particular—a format we can recognize also in the microscopic work of Bloch and Benjamin before him. Here long and hermetic arguments are replaced by short treatises on the details of life, shot, as it were, from a **situated** and subjective viewpoint.

Cultural theorists Lauren Berlant and Kathleen Stewart experiment with micrologies in their 2019 collection *The Hundreds*. The collection contains a set of texts of 100 words or of multiples of 100 words. Each micrology lifts something out of the ordinary: a feeling, a relation, a thing. In the list of references to the collection, titled "Some Things We Thought With," the authors explain that, besides thinking with the format of 100, 200, 300, etc. words, they thought with books of other thinkers and makers, but also with people, relations, things, and experiences such as boxes of photographs, breakfasts, and cats and dogs (2019, 157ff.). As they write about the process of writing in this format:

> A hundred words isn't a lot. We made individual hundreds, series of hundreds, and very long hundreds but held to the exact. Some separate pieces became joined and reframed, and the theoretical reflections were shaped as hundreds and folded into the analytic, observational, and transferential ways we move. We wrote through the edit. Every edit set off a cascade of words falls, Rubik's Cubes, tropes, infrastructures, genres, rhymes and off-rhymes, tonal flips and half-steps this way and that. (x)

Such formats or techniques of writing do not only adjust in scale to their subject matter but also offer possibilities for reading that, anachronistically or concerning the historical moment we currently live in, we may call hypertextual. They can be considered that because the length, scope, and subject matter of the texts open up to a flexible and **navigational** form of reading by tracing connections between and beyond the individual micrologies. Berlant and Stewart facilitate the hypertextual by including a nonstandard index that was generated by more than one reader of a draft version of *The Hundreds* and by including empty pages for readers' own indexing experiments. As they state:

> Indexing is the first interpretation of a book's body. So, rather than presuming the standard taxonomic form—which is its own achievement—we gave the task over to writers whose take on things always surprises us, in part because their style of critical thought generated power in twists of voice and craft. (ix)

In this activation of the index as more than a taxonomy of micrologies (and perhaps even a micrology in its own right) we can discern how micrology is more than a perspective and format for writing (or making), but that it also entails a specific form of active and **engaged** critical readership (or spectatorship).

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Mode, Modality, Multimodality

In modal logic, "modes" appear in highly abstract ontological discussions about logical necessity and mere possibility, on the one hand, and mere **contingency** and logical impossibility, on the other. Such modes are often discussed in tandem with metaphysical questions about one or many worlds and with epistemological questions about if and when statements about modes can be considered true or false. This foundational debate scaffolds applied discussions about modes not as truth forms but as practices of measurement and organization of information and data. The latter discussions are relevant for the creative humanities in that such practices pertain to different media technologies as well as to the senses. Such applied discussions confront us with **situations** that are messier than some modal logicians want us to assume, the usefulness of truth forms for understanding messy situations notwithstanding. Mathematician Hans Poser puts the issue in the following terms:

> The central ontological problem consists in the fact that technology is based on new ideas, which at the beginning are a mere *possibility*, because the intended artefacts and processes never existed up to that moment. Even the blueprint expresses a *possibility*. But these possibilities must be *realizable*, since technological artefacts or processes have to work properly in the world **following** physical and causal *necessity*. Moreover, feasibility (a kind of *conditioned possibility*) and virtuality (as a media reality) have to take into account **conditions** of the real world (as material, energy, local conditions), cognitive conditions (theoretical knowledge, know how—i.e. *dispositions*, which are possibilities, too), social and cultural conditions (norm, values, i.e. *deontic possibilities*). They all constitute the realm of *technological possibility*. (2013, 73–74; emphases in original; cross-references added)

Here the logical, ontological, epistemic, and deontic signify multiple modalities. In contemporary cultural theory and science and technology studies (STS), "multimodality" signifies the extension of linguistic meaning making to include modes such as the visual, auditory, tactile, gustatory, olfactory, affective, and spatial. Multimodality has, in turn, been extended to include "multisensory" perception or synesthetic modalities, that is, modes such as the kinesthetic, proprioceptive, and haptic.

What do multimodality and multisensory perception help us picture and theorize? Theorist of media, arts, and culture Felicity Colman adds the *ethical* modality to the classical philosophical modalities reviewed earlier and argues:

> 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. . . . 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 [*sic*] ethos. (2019, 988–89; cross-reference added)

Colman explicitly rejects patriarchal and other **classifixatory** modes as being ethically inconsiderate of matters of justice, inclusion, and difference. To those modes—and she lists around thirty in total—Colman prefers modes that are affirmative about, and creative with, differences between, among, and within all members of communities. Multimodal creativity is also to be found in STS scholar Natasha Myers's book *Rendering Life Molecular: Models, Modelers, and Excitable Matter*, a book that explains the inner workings of synesthetic modalities:

> Modelers' moving bodies and their curious hands are informed through the senses of kinesthesia, a kind of muscular sensibility, and proprioception, an awareness of their bodies in space. These synesthetic modalities do not just inform modelers' bodily tissues; they simultaneously inflect their ways of thinking. As such this form of "haptic vision" is coupled to a kind of "haptic creativity" that extends modelers' intuitions, memories, and imaginations as they engage their bodies and various forms of tangible media to play through hypothetical permutations in protein form. (2015, 17–18)

Multisensory perception across different media allows scientists, in this case, to play with the possibilities of technology and even of biological life.

Academically driven Open Access publishing for academic, arts and culture, and activist audiences specifically also experiment with multimodality. Scholars and practitioners such as Janneke Adema, Gary Hall, Sigi Jöttkandt, and Tara McPherson collaborate with academic and popular presses, academic and communal libraries, and platform developers and coders pursuing the goal of pushing exclusive and linear forms of publishing to more inclusive and nonlinear formats. The latter formats work with the affordances of Webs 2.0 and 3.0 as a way to expand technological possibilities and to communicate science and scholarship in ways that better connect with the wishes and needs of academic and nonacademic communities and their uses of the Internet,

social media, search engines, and databases. Importantly, these new formats feed back into the work done within the walls of academia, thus changing the scholarly modes of the traditional humanities by, for instance, "destabilizing the single author mode of much humanities scholarship" (McPherson 2010, n.p.) and introducing multiple and shared authorship.

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Navigation

Navigation is the process and method of wayfinding and steering of bodies, perceptions, or thoughts within a given or **generative** terrain, field, or domain. It invokes a spatiotemporal logic, even if it can have an explorative, experimental, and **contingent** character or be prospectively planned, structured, purpose-full, and goal-driven. It encompasses embodied mobility, **gestural** activity, and other experiences of time passing, **situations** changing, and knowledge or insights growing. However **open**, intuitive, or responsive to new cues and shifting coordinates, navigation is in essence destination oriented and its method can be found in this inherently futuristic thrust. This futurity has a retrospective way of becoming known to subject or observer as the steps—literally or figuratively—are each performatively experienced and can only in hindsight be connected to form a **trace** of the trajectory traveled between the points of departure and arrival. As such, navigation entails the production of a **performative cartography** of a terrain, field, or domain that is constituted in the very act of its exploration. This is the creative heart of the concept.

While not restricted to the physical and visual domains only, in the context of media, technology, and design the concept of navigation is often used in relation to the ways in which human subjects can to greater or lesser extent make their own agential choices in working with various objects, devices, or apparatuses—choices that determine what becomes visible, tangible, and hence what can be experienced. As such, "navigability" is not only a property of the domains, (hyper)texts, or **interfaces** themselves. "Navigation-ability" also requires skills and knowledge (or literacy) on the part of the navigator (or user-slash-participant). Moreover, navigation itself produces knowledge that feeds into its course and experience itself. Paul Dourish, professor of informatics working at the intersection of computer science and the social sciences, argues that in tangible computing, interactions and meaning are mutually constitutive:

> The intuition behind tangible computing is that, because we have highly developed skills for physical interaction with objects in the world—skills of exploring, sensing, assessing, manipulating, and navigating—we can make interaction

> easier by building interfaces that exploit these skills. Most systems built this way provide functionality that could be provided by other means. They allow people to browse through online maps, to communicate over digital networks, to create multimedia stories, to annotate video documents, or whatever but use physical interaction to make the interface more natural. (2001, 206)

Moreover, as he continues, the experience of such embodied interaction—of which navigation is a case in point—is intellectual as well as physical:

> Embodied Interaction is about the relationship between action and meaning, and the concept of practice that unites the two. Action and meaning are not opposites. From the perspective of embodiment, they form a duality. Action both produces and draws upon meaning; meaning both gives rise to and arises from action. (206)

This sketches a perspective on the role of design in the (co)shaping of the affordances for navigation, thereby activating the reciprocity and iterative loops between action, experience, and knowledge.

The generative and experiential nature of navigation is central in various artistic and ludic practices that make use of mobile and location-aware technologies, ranging from augmented reality games to geocaching or soundwalks. Often navigation entails the spatial exploration in a specific geographic location, combined with the processual and location-specific activation of various visuals or sound that we perceive as layering our perception of our surroundings. In such forms of **curatorial** design, navigation is a design principle as it is a requirement for the access to information (that is, images, sounds, texts) that is plotted in space, on specific locations, as much as for the experiences that such **crossings** afford. These works explore in various ways the potentials (and limitations) of mobile technologies to visualize or sonify locative data of various kinds, making use of the often invisible media infrastructures that are present in our urban environments.

In a special issue about urban interfaces, media theorists Eef Masson and Karin van Es (2019) have analyzed Dutch artists Richard Vijgen's connected projects *The Architecture of Radio* (2015) and *White Spots* (2016; in collaboration with documentary filmmaker Bregtje van der Haak and visual artist Jacqueline Hassin). They consider these as critical projects that uncover the pervasive presence of those invisible technologies and infrastructures (or here: **architecture**) that enable, precisely, our practices of observation, communication, and navigation. *Architecture of Radio* shows an on-screen 360-degree visualization of media infrastructures and hardware for transmission of digital signals and the presence of these flows of data within our direct physical surroundings and lived spaces. *White Spots* adds a critical commen-

tary by offering a scanner and a map as a tool for navigating "away," off this hidden grid.[1] The authors state:

> *White Spots* mediates between the urban, data-saturated, and by extension, hyper-connected world that the user is currently part of, and its alternative, which she can navigate to: those areas, presumably non-urban, that together constitute an off-line, disconnected world. Arguably, it is here that the user is made most acutely aware of the interface's fundamental productiveness. (n.p.)

This particular work is explicit in its ambivalence toward the mediatization and datafication that pervade our living spaces—an ambivalence that we can recognize in various creative projects that work with mobile and locative technologies. It demonstrates this ambivalence by using the very affordances of the technology to address the way in which our ability to navigate—and all the experiences, reflections, and knowledge that this may yield—is intricately bound up with the limits set by those technologies.

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1. See the project website "White Spots: A Journey to the Edge of the Internet" at http://white-spots.net.

Openness

The word *openness* denotes a quality: the quality of being open. As a concept, however, openness is more complicated than simply referring to the phenomenon of formal accessibility or to the open "feel" of a land- or city**scape**, a community, a person, professional, or a set of ideas. The complication is in the opposite that comes with the suggestion of something or somebody being open: closedness or closure. Both the contrasting connotations of the two terms and the undertheorized relation between them has inspired scientists and humanists alike to develop more nuanced understandings of both openness and closedness/closure. Politically, ethically, and spiritually, openness toward others seems to imply the necessity of also knowing or developing oneself. Epistemological and methodological openness of mind does not require the abandonment of one's disciplinary, hermeneutical, or artistic background or preferences. Ontological indeterminacy or the openness to becoming and time does not mean that boundaries are no longer drawn or that categories are no longer useful (Barad 2012).

A posthumanist approach to the dynamic interrelation between openness and closedness or closure comes from critical theorist Cary Wolfe's rereading of the work of the biologists and theorists of biology Francisco Varela and Humberto Maturana. In *What Is Posthumanism?* (2010), Wolfe develops the principle of "openness from closure" with which he is able to analyze how "the very thing that separates us from the world *connects* us to the world, and [how] self-referential, autopoietic closure, far from indicating a kind of solipsistic neo-Kantian idealism, actually is **generative** of openness to the environment" (xxi; emphasis in original; cross-reference added). Wolfe was made sensitive to such a subtle reading of biological knowledge by reading the systems-theoretical work of Niklas Luhmann and Jacques Derrida's poststructuralism through the work of Varela and Maturana. For Wolfe, "systems, including bodies, are both open *and* closed as the very **condition** of possibility for their existence (open on the level of structure to energy flows, environmental perturbations, and the like, but closed on the level of self-referential organization)" (xxiv–xxv; emphasis in original; cross-reference added).

Almost a century earlier, philosopher Henri Bergson worked with both biological and psychological knowledges on the same theme. He coined the

terms *open society* and *closed society* in his book *The Two Sources of Morality and Religion* ([1932] 1977), terms that were famously picked up, albeit with inverted connotations, by philosopher of science Karl Popper only a decade later. Interestingly, Bergson would probably take issue with Wolfe's interpretation of an *open* structure and a *closed* organization. Bergson's closed society is an inward-looking structure that has longevity, and the open society is a form of all-embracive organizing that is but a temporary gap provoked by a visionary thinker, maker, or mystic. Bergson argues that we only see glimpses of the open society when we stick to our **classifixatory** ways of seeing and that closed societies (as structures) have difficulties opening up fully. He ascribes the serendipitous glimpses to the "creative emotion" (256) of the visionaries and suggests that we use the alternative method of "grop[ing] our way tentatively" (275) when we want to make ontological indeterminacy truly productive. Such groping proceeds "by a system of cross-checking, following simultaneously several methods, each of which will lead only to possibilities and probabilities [but] by their mutual interplay the results will neutralize or reinforce one another, leading to reciprocal verification and correction" (275). Nowadays we would call this method *multi-* or *interdisciplinary*.

Without mentioning Bergson, yet explicitly connecting multidisciplinarity with the necessity of experimentation, Belgian educational scientists Jan Masschelein and Maarten Simons make a similar methodological leap of faith in *In Defence of the School: A Public Issue* ([2012] 2013). They write about the "solitude," "openness," or "indeterminacy" of learning, particularly at school:

> As the dictionary suggests, studying is a form of learning in which one does not know in advance what one can or will learn; it is an open event that has no "function." It is an open-ended event that can only occur if there is no end purpose to it and no established external functionality. In this sense, "formation" through study and practice is not functional. It is knowledge for the sake of knowledge and skills for the sake of skills, without a specific orientation or a set destination. Consequently, the "experience of school" . . . is in the first place not an experience of "having to," but of "being able to," perhaps even of pure ability and, more specifically, of an ability that is searching for its orientation or destination. Conversely, this means that the school also implies a certain freedom that can be likened to abandon: the condition of having no fixed destination and therefore open to a new destination. The free time of the school can thus be described as time without destination. (79)

Not by evoking the need to **unlearn** ways of seeing but by taking full advantage of the possibility of the openness and open-endedness of curricula as and learning processes on multidisciplinary playing grounds, Masschelein and

Simons do not just prioritize ontological indeterminacy. They also connect epistemological and methodological openness of mind to the very possibility of cultivating political, ethical, and spiritual openness toward others.

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Pluriverse

The concept of pluriverse, central to decolonial thought and practice, and a concept on the rise in posthumanism, responds to the idea of one reality, to ontology in the singular, and to the philosophical, theological, and political doctrine of universalism. Pluriversalism departs from models and approaches that are seen as desirably "modern" yet are problematically Eurocentric and anthropocentric. Theorists such as Marisol de la Cadena, Phillipe Descola, Arturo Escobar, Donna Haraway, Bruno Latour, Walter Mignolo, Isabelle Stengers, Anna Lowenhaupt Tsing, and Eduardo Viveiros de Castro take interspecies relationships between and among humans and nonhumans as their analytical starting point. They do so as a way to affirm many co-present worlds as well as multiple practices of world making, or worldings, across differences. Inspiration comes from Indigenous North, Meso-, and South American cosmologies in particular. Thinking and acting pluriversally can yield more sustainable and dynamic social, environmental, and especially socioenvironmental imaginaries, relations, and ethics for our current time of anthropogenic **ecology** and climate change—and beyond these times as well.

Conceptually, the critical use of "mononaturalism" and "multiculturalism" of decolonial theorists Descola and Viveiros de Castro is of great interest for the creative humanities (cf. Ansari 2020). As they point out, whereas traditionally Western ethico-onto-epistemologies recognize multiple cultures building on, and extracting from, one nature as a whole, Indigenous cosmologies see one culture (that includes human, nonhuman, and spiritual beings) building multiple, *multiplicitous* natures. In the Western Global North, all legitimized bodies are reduced to unified, modern science's nature. Across the Global South and in the non-Western Global North, all living and nonliving beings contribute to diverse, inclusive, and flourishing embedded, embodied, and shape-shifting natures. This epistemological, ontological, and ethical rearrangement of the singular and the plural, and of nature and culture, has been mobilized for, or can be recognized in, contemporary cultural theory and philosophy, as well as **curating**, and arts and design practice.

Borrowing from feminist poststructuralist, posthuman, and new materialist theories in particular, Émilie Dionne conceptualizes the "pluri-person" in order to "demonstrate ways to participate otherwise than as 'we,' human

persons/assemblages, do now" (2019, 96). She aims at a fundamental rereading of subject positions such as those of the self-celebratory cultural entrepreneur and of the teleworker on a temporary contract—a nonexhaustive opposition given that the two positions share individualist assumptions—in favor of a conception of political and financial personhood that acknowledges every person's entanglement with other pluripersons, technologies, and nonhuman others whereby also acknowledging that all involved contribute to the world in its dynamic becoming. Dionne concludes:

> The pluri-person is a corporeal disposition that can be *affectively available* to worlding as it enfolds[,] that can notice, see, and respond ethically (responsively) to enact more livable and *grievable* ways of living and dying together for the many and the otherwise. Each response cannot be the same and is not equal. Some matter (*matters*) more than others. But all matter, necessarily, ontologically. (112; emphases in original)

What we see here is an activation of pluriversality (as both multitude and as multiplicity) on all registers. Dionne is aware of the benefice of thinking epistemic and ethical positionalities in relation to their ontological consequences: ontological **modalities** are collectively made, not neutrally found as objects to be picked up and used, and it matters in which modalities we find ourselves, and to which modalities we actively contribute, for participatory politics.

Design theorist and practitioner Ahmed Ansari, well versed in the discourses around decolonizing design, argues:

> The historical constitution of the ontology of design as an area of human activity inextricable from industrialisation, mass production and communication, capitalism, modernisation, globalisation and "development at all costs," has resulted in design as a principally "defuturing" domain of world-constitution, designing and redesigning the world so that other, more sustainable possibilities of living in the world are designed out, as we grow ever more dependent on technologies that undermine the ecology of the planet. (2020, 290)

We need to "reconceive of design as a 'redirective practice' oriented towards creating new, alternative futures of sustainment" (290–91). An example of the latter is architect Afaina de Jong's contribution to the Dutch pavilion for the seventeenth Venice Architecture Biennale. As part of the Dutch pavilion titled *Who Is We?*, de Jong works on her project *Space of Other* that investigates the differences of, and among, the underrepresented and nonincluded in today's urban planning and **architecture**. The project works toward making visible the worlding or world-making practices of those without an institutionalized voice and intends to make those practices applicable for her own practice and for those of others.

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Prefiguration

Prefiguration as a form of foreshadowing is a rhetorical and artistic technique. It is also a religious and political trope or strategy (Auerbach [1944] 1984). The operative logics of prefiguration both borrow from and immediately complicate anticipation as a chronolinear, teleological, and self-fulfilling pattern. Activism performed on city squares illustrates this double dynamic: in the radical, prefigurative form of politics after Karl Marx's contemporary, the Russian anarchist Mikail Bakunin, the *means* of political movement must reflect its desired *end*. In the words of Canada-based activist and writer Harsha Walia, "Prefiguration is the notion that our organizing reflects the society we wish to live in—that the methods we practice, institutions we create, and relationships we facilitate within our movements and communities align with our ideals" (2013, 11). This is how the European anti-austerity protests operated in the 2010s as well as the global Occupy movement that started on September 17, 2011, in New York City. These progressive movements work with **assemblies** of participating activists, community members, and passersby as the preferred form of *future* decision making that is instituted *in the here and now*. This implies that there is no (or not only an) action that precedes change. Action (now) and change (then) happen simultaneously and they presuppose one another. Lingering in the time and space **between no longer and not yet**, prefigurative politics implies "living the future now" or, says political theorist Davina Cooper, it activates the "as if" **mode**. Cooper comments on the complicated temporal, causal, representational, and imaginative logics involved:

> A central paradox of prefiguration is that it takes the meanings, **conditions** and legitimacy it seeks as if they already existed. In a sense, we might describe it as a form of *retro-figuring*, reliant on imagined antecedents that authorise, for instance, . . . street squatters' state secession. For while *pre*figuration takes up future-oriented aspirations as enactable present-day practices and norms, it also relies on this future as already in place to authorise the actions it undertakes. This can be read as an imagined form of backfilling undertaken playfully or seriously. But this backfilling can also prove performative—retrospectively creating the authorising conditions relied upon. (2020, 908; first emphasis added; cross-reference added)

Artistic creation has often been characterized as working in this "as if" mode as well as artists have picked up, and have been assigned the task, as it were, of offering glimpses of what to strive for.

The American anthropologist Margaret Mead adds another twist to the discussion about prefiguration as a form of retrofiguring in her book *Culture and Commitment: A Study of the Generation Gap*. Although this 1970 publication is based on a series of lectures delivered at The American Museum of Natural History as early as March 1969, and under a title—*Man and Nature*—that now strikes as vehemently archaic, the fact that the book is dedicated to Mead's "father's mother" and her "daughter's daughter" is relevant. The first dedication replaces the conventionally gendered, **generational** genealogy with a feminist way of thinking and **making kin**. The second dedication resonates with the theme of the book itself. In it, Mead differentiates between postfigurative, cofigurative, and prefigurative cultures. First, *postfigurative* societies are past oriented and centered on forms of learning characterized by adults, as the source of authority and legitimization, teaching children. Children are invited to imitative thinking, making, and doing. Second, *cofigurative communities* are present centered and the learning of both children and adults happens between peers. The latter dynamics are often temporary and transitional in that students, for instance, may focus exclusively on other students for a period of time. Or coworkers or cohabitants may develop new ways of working or living together that are tolerated by and perhaps absorbed in society at large. Last, *prefigurative* societies are future oriented in that adults learn from children. Mead radicalizes this description even further. First, she states that in such **situations**, "the young are taking on new authority in their prefigurative apprehension of the *still unknown future*" (1; emphasis added). Later, she even argues that prefiguration is the emergence of "a new cultural form" that is "planetary and universal" (48, 50). Faced in particular with the rise of ICTs, Mead says, "the unborn child, already conceived but still in the womb, must become the symbol of what life will be like. This is a child whose sex and appearance and capabilities are unknown" (68–69). Teaching and learning in prefigurative societies exceed practices of "reverse mentoring" formed around a mentoring relationship in which the adult is mentee and the younger person is mentor. The very point of Mead's contribution to prefiguration is that it cannot be planned for and actualizes its own representation: it is an instant *figuring* that can only be **cared** for.

Gender theorist Lucy Nicholas discusses the emergence of a prefigurative culture not in relation to ICTs but in relation to queer and intersex identities and gender-neutral language use in their 2014 monograph *Queer Post-Gender Ethics: The Shape of Selves to Come*. Nicholas demonstrates how

both alternative spaces such as the international festival *Queeruption* (1998–present) and the mainstreaming of gender-neutral language in countries such as Sweden have political effects and pedagogical qualities that are both detectable and leaps into the unknown. This paradox the author explains by situating prefiguration at the interlocking level of "autonomous subjects," "reciprocal relations," and "alternative discourses and modes of thought" (196). In the end, for Nicholas, the power of prefiguration is in feminist philosophy: "We haven't tried it, so we don't know how we might feel, and be able to behave, without the determinations of oppositional sex and gender. Shifts in thinking about the body and 'sex' indicate that it might at least be a possibility" (207). The monograph ends with a call for practices of figuring: "Why don't we try?" (207). This underscores the simultaneous critical and creative potential of prefiguration.

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Procedure

A procedure is, quite simply, a way to proceed or a method. The method can be predetermined and determining (in the case of "doing by design") or can be developed in the proceeding itself (when "designing by doing"). Oftentimes a procedure is in fact the externalization and formalization of a process of experimentation. This process can be broken down into incremental steps and phases. The starting point, then, is an act or moment of experimental thinking, making, or doing that can be collaborative. An intermediate phase consists of individual or group reflections that externalize the initial process of experimentation leading to iterations that work toward improvements and, finally, to a formalization of the process. The formalized procedure is a step-by-step (creative) process that can be transported and put to work elsewhere and elsewhen. The ability of such methodological procedures to travel makes them, according to Bruno Latour, "immutable mobiles."

Procedures are step-by-step, *algorithmic* methods. Philosopher Michel Serres discusses the procedural or algorithmic **mode** of thought, creation, and action in his manifesto-like monograph *Thumbelina: The Culture and Technology of Millennials* ([2012] 2015) as a characteristic of the twenty-first century. The word *algorithm* reaches back to the eighth-century Persian polymath Muḥammad ibn Mūsā al-Khwārizmī, and procedurality was activated even before ancient Greek philosophy, as well as by the seventeenth-century scientific revolutionaries Blaise Pascal and Gottfried Leibniz. However, in our times thinking, making, and doing are entangled with algorithm-driven media to an unprecedented extent and depth. This diffusion of new media has fundamentally rewired our brains and bodies, Serres writes:

> Between geometric formality of the sciences and the lived reality of letters, this revolution brought about a new cognition of things and humans which had already been foreseen in the practice of medicine and law, both of which united the universal and the particular, jurisdiction and jurisprudence, the sickness and the sick. Out of this, our own novelty emerged. (73)

Besides the novelty of new media diffusion and, consequently, of the participation of algorithms in thought, creation, and action for better or for worse

(Galloway 2004), Serres alludes to the replacement of what he calls "geometrical deduction" and "experimental induction" ([2012] 2015, 71) by *abduction*. Coined by the American philosopher and semiotician Charles S. Peirce in the first decade of the 1900s, abduction refers to a form of reasoning that starts from the best possible albeit *hypothetical* explanation for a surprising, **accidental**, or serendipitous observation or finding, for instance something **random** brought up in an Internet search. The abductive reasoner then forms a conjecture, thus **speculating** about the cause of the observation or finding based on incomplete information. This conjecture is used for further research, which forms fertile ground for creativity and innovation as the whole process happens as it were outside the box.

Scholars of interdisciplinary research practices Frédéric Darbellay, Zoe Moody, Ayuko Sedooka, and Gabriela Steffen (2014) argue that abductive reasoning does not come naturally:

> Making oneself cognitively available to confront the unexpected or accidental is a necessary, but not sufficient, **condition** for the production of new ideas, in the sense that the researcher must also demonstrate sagacity and be capable of analyzing and understanding the surprise effect so as to exploit it for truly creative purposes . . . it is the step that sets in motion an exploratory process that must then be exploited by reason. (5; cf. Chew 2020; cross-reference added)

The procedurality of abductive reasoning itself has been made explicit and potentially productive by Latour in his contributions to the edited volume *Reset Modernity!* Latour provides seven procedures that will help us work with ethico-onto-epistemological assumptions that may stimulate our creative and innovative potential while searching for hypothetical causes in the Anthropocene. These procedures are the needs to relocalize the global, situate our methods and knowledges, share responsibilities with others and with the world, affirm territories as disputed and disputable (not as "natural lands"), design for livability, embrace immanence, and negotiate diplomatically as to overcome differences (Latour with Leclercq 2016).

Procedures and procedurality are especially brought into vogue in academia, art institutions, and activist groups by the current surge in developing and using toolkits.[1] As **interfaces** for the collaborative **generation** of creative and innovative ideas and practices, toolkits allow their users to act on the epistemological paradox that is key to abductive reasoning as well as to explicitly adopt assumptions such as Latour's. Toolkits function according to a

1. Examples are td-net's "Methods and Tools for Co-producing Knowledge" (see https://naturalsciences.ch/co-producing-knowledge-explained/methods/td-net_toolbox; td-net stands for Network for Transdisciplinarity Research) and SHAPE-ID's toolkit for successful pathways to integration of Arts, Humanities, and Social Sciences (see https://www.shapeid.eu/objectives/; SHAPE-ID stands for Shaping Interdisciplinary Practices in Europe).

procedural logic and provide **conditions** for exploration and reasoning. They create a stimulating setting and a shared mindset that invites participants in a given socio-techno-material environment to make themselves available for serendipity and surprise by helping the participants to actively manage and mobilize existing or recommended knowledge, insights, and beliefs. It is only by managing and mobilizing conceptual, epistemic, and empirical content that collective findings can fall into place and that hypotheses and plans can be formulated. This applies especially to serendipitous and surprising observations and findings as these kinds of accidents are quick to disappear. Whereas all procedures usually lead to something and are therefore **generative** in the broadest sense, a toolkitting scenario is often intended to be generative of something innovative: a creative solution to a complex problem.

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Proposition

A proposition is a statement that offers a proposal—an invitation to act or think in a certain way. This harbors futurity, deictically sketches perspective, and **speculatively** points at what will or may be the **implications** of such acting or thinking. This is the performativity of a proposition.

In logic, a proposition has the fixed form of a *statement* (subject + predicate). The invitation of such a statement is to determine whether it is true or false. In process philosophy, the form of a proposition is free and its function is *theoretical*. Alfred North Whitehead, the British logician and mathematician who turned to process philosophy after his move to the United States halfway through the 1920s, argues that “the primary function of theories is as a lure for feeling, thereby providing immediacy of enjoyment and purpose” ([1929/1978] 1985, 184). For Whitehead, propositions or theories are of a hybrid nature. They are speculative proposals for thinking, making, and doing; they provoke **affective** responses in the people **engaging** with them; and they land in a world, amid an actual state of affairs. He writes:

> The conception of propositions as merely material for judgments is fatal to any understanding of their rôle in the universe. In that purely logical aspect, nonconformal propositions are merely wrong, and therefore worse than useless. But in their primary rôle, they pave the way along which the world advances into novelty. Error is the price which we pay for progress. (187)

Propositions, in sum, stimulate curiosity and further research (see also **zetesis**). They may have truth value, even when the facts that surround us point out that they are currently false, because the world is in a state of perpetual becoming.

Philosopher of technology A. J. Nocek argues in his monograph *Molecular Capture: The Animation of Biology* (2021) that manipulatable 3D computer animations of intracellular biological processes should be seen as propositions. He references the data visualization work of biochemist Janet Iwasa, who worked along these lines in a project about the mechanics of dynein motility (dyneins are proteins working toward energy conversion in cells), in the following passage:

> It's crucial that this animation is a tool for thinking about what's possible for movement over time, about what hypotheses can be confirmed, denied, and reformulated. . . . The first animation was deemed too technical, and thus misleading, since viewers may have believed that model was based upon actual structural data. A second model was then built that displayed "softer, smooth **surfaces**" in order to flag its "hypothetical" character (Iwasa 2010, 702). As she put it, the model was then able to effectively help researchers in "formulating and visualizing different hypotheses" (701). (143–44; cross-reference added)

Nocek demonstrates here how Isawa's first attempt at visualizing dynein motility **failed** not because it was erroneous but rather because it provoked the wrong response in the scientists she was working with. They saw the visualization as a statement. The second attempt was more theoretical and therefore speculative in nature, thus provoking the desired response of curiosity and the immediate urge to conduct further empirical research.

Outside the biochemistry lab or the university as such, propositions are used as provocative tools in projects that often have a combined educational, artistic, and community goal. Take the work of arts-based researchers Stephanie Springgay and Sarah E. Truman who together initiated the WalkingLab from their respective locations in Hamilton, Ontario, Canada, and Melbourne, Australia. Inspired by a set of propositions by Erin Manning, including the proposition "Believe not in thoughts that stem from the desk, but in *thoughts born outdoors*" and the proposition "Take the thought for a walk *6,000 feet beyond man and time*" (in Truman 2016, 103–4; original emphasis), Springgay and Truman quite literally invite colleagues, friends, and other community members to go out and explore the world zetetically while walking. They write:

> We use the propositional walk form to: examine the entanglements of walking and writing; explore our walking-writing as speculative concept **generation**; consider the affective surfaces that arrive in the walking-writing process; interrogate a feminist politics of collaboration; and consider how **rhythm** and time's queer touching instantiates an ethics that is accountable to the infinite encounters of which we are all a part. (2018, 130; cross-references added)

Ultimately, what such projects want to provoke is the idea that "another world is possible" and that otherness is to be found in the ongoingness of the world as we assume to know it.

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Punctuation

If a dictionary definition of punctuation is "the practice or system of using certain conventional marks or characters in writing or printing in order to separate elements and make the meaning clear, as in ending a sentence or separating clauses,"[1] we can imagine that this discursive practice and/or system can have a conceptual thrust in the way it underscores, adds to, or makes explicit meanings of words or sentences. We can recognize this in the use of *punctuation marks* such as **asterisk ***, **brackets []** or **parentheses ()**, the **dash –** or **hyphen -**, the **hashtag** #, and slash /, or underscore _. Each in their own way, these signs add or clarify meaning, allow for creative questioning and rewriting of, for example, established logics and truths, and as such produce spaces for reflection, interpretation, and conceptual thinking. Particularly in relation to visual and time-based arts, media, and performance, punctuation can itself become a concept, based on the **crossing** or productive intersecting of meanings of punctuation as a verb (to punctuate or puncture), on the one hand, and the systemic logic that it produces that has a meaning making effect, on the other. Moreover, combining *punctuality* (a precision of time and place) with *puncture* as a perforating act in the context of the image, series of images, or performance, punctuation perhaps primarily refers to the sudden intervention in (or arresting of) a flow of mobility, futurity, and possibility, a change of tempo or **rhythm**, a zooming in or changing of **scale**, and/or a highlighting or foregrounding of detail. This punctuation brings the observer to an abrupt halt, and as such marks a "here" and "now," thus demanding a reflection on the meaning of this sudden change. As such, punctuation makes a statement *in* but also *about* the image or event—a statement that solicits an **affective** as well as intellectual response on the part of the spectator.

We can understand this marking with consequences from an experiential and affective or theoretical perspective. It is indeed affective, if only through the experience of abrupt change, shock, and possibly anticipation. Here we see how punctuation shares its root with another concept, *punctum* as proposed by Roland Barthes in his *Camera Lucida* from 1981 in relation to *studium* as two different characteristics of the images of photography.

1. www.dictionary.com.

Whereas the latter refers to the general, ostensible subject of an image, the punctum is what is not represented or visualized in the image, but it is the quality of the image to attract, sting, and effectuate the individual. Or, in terms of subjective perception, it is what is seen but not shown. As a related but different concept, punctuation is not so much steeped into its distinction from representation or caught in a binary opposition between affect and intellect, but perhaps more significantly it is performative as a *theoretical act*. Theoretical thinking entails the acceptance of a series of questions raised in the very moment of being spoken to by the punctuation of the image(s) or event: what happened; why did this happen; what does this bring about; where am I in all of this? Similarly to **sticky** images or events, these questions are folded into the affective moment of arrest and encounter, yielding such effects as surprise, **wonder**, emphasis, or **glow**.

In her study on the art, politics, and play of punctuation, performance studies scholar Jennifer DeVere Brody has conceptualized punctuation across a series of creatively written chapters that she calls "performative 'think pieces'" around such signs as the period sign, the question mark, the exclamation mark, and quotation marks in relation to aesthetics and experimental art by looking at punctuation as read in bodily inscription and through **gesture**, specifically in dance, sculpture, and installation art. In her chapter on *queering* quotation marks, for example, Brody works with the choreographic pieces of Bill T. Jones to explore the politics of quotation as a repetition with difference—an activation of mnemonic **traces** in a "double discourse that moves in two directions at once" (2008, 110). As she states:

> Among the queer acts that quotation marks perform is the simultaneous suturing and separating of text(s). Indeed, . . . quotation marks are devices that can supplement, subvert, amplify, or queer what is taken to be normative. (109)

Indeed, for her, more than linguistic and typographic signs, such performative punctuation marks are significant cultural markers that are political as well as poetic. Moreover, we can understand that punctuation can become philosophical: "I look at how punctuation marks mediate, express, (re)present, and perform—the interactions between the stage of the page and the work of the mind" (5).

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Randomization

In common parlance, something "random" refers to the unintentionally connected: chance encounters, disturbances or noise, or other things or forces that interject but can or sometimes should be ignored. Randomization as an intentional act, however, is a form of productive defamiliarization. It is the method of mixing, selecting, and importing new ideas, objects, or concepts in order to foster serendipity, **contingency**, and **risk**. Such a method works without predetermined qualitative criteria so as to open up otherwise all-too-familiar ways of thinking, fixed pathways that go unreflected, and coded **procedures** that settle the outcome of the processes involved. Think of the political use of randomization in order to combat racial segregation or of its epistemic use in experimental methods. As randomization is never void of the bias that comes with any sort of selection, a mechanical or algorithmic apparatus can be used as a medium to randomize and make the pick. Think here of Twitter bots or apps like the Poem Generator.[1] While the inclusion of randomization in ways of working may suggest a **care**-less stance, its adoption is often driven by a serious aim of seeking for new input, fresh perspectives, and fuel for a heightened **engagement** as triggered by the act of presentifying the otherwise irrelevant, unfamiliar, or invisible. Akin to other forms of productive *differing*, the randomized mobilizes thought and invites finding new ways to connect, embed, and situate. It does so with the urgency that comes with the momentum that randomization establishes. The randomized, in short, is full of purpose, actionability, and transformation.

Randomization as a method does not stop at presenting an arbitrary selection. A way to productively connect with the randomized input is to attempt to find a *common ground* between the new and already present ideas, objects, or concepts. Connective thinking can be activated and mobilized to construct and explore the terrain that is marked by the coordinates that the new ideas, objects, or concepts offer in unison. This terrain may be plotted with other ideas, objects, and concepts that are opened up by the similarities, differences, patterns, or **diffractions** that emerge in the **navigation** of this field. This asks for an engagement with the disjunctive or unexpected. Such

1. www.poem-generator.org.uk.

a practice of finding common ground requires the reader, listener, or viewer to leave behind ingrained **habits** of imitative thinking. Teachers and scholars of academic writing Richard E. Miller and Kurt Spellmeyer write in *The New Humanities Reader* (2015):

> We learn to reproduce information made and organized by someone else. Imitative thinking presupposes the sufficiency of knowledge in its present state, and it preserves the separateness of different texts and differing realities. But this separateness cannot be maintained except at the cost of a greater incoherence. Maybe the lecture in English today contradicted a point made yesterday in anthropology class. Or perhaps an article you are asked to read describes an aspect of the social world in a way that you consider incomplete, biased, or flatly incorrect. On occasions like these, when we come face-to-face with the limitations of knowledge, imitative thinking cannot help us. Instead we are obliged to think connectively—to think *across texts* rather than thinking only from inside them. (xxix; emphasis in original)

Defamiliarizing imitative thinking involves unorganized randomness or organizing randomization and may stimulate the finding of common ground or a *shared horizon* by thinking connectively. Connective thinking entails organizing information and knowledge in ways that make sense not to the institution—academic, artistic, activist, or otherwise—but to the reader, listener, or viewer herself. This is done by retrospectively perceiving already present ideas, objects, or concepts through the lens of (parts of) new ideas, objects, or concepts, and vice versa (xix). A shared horizon will then slowly but steadily emerge, and once a new coherence has been formed, its creator can start making informed guesses or **speculations** about scope, details, and uses (xxvii).

In his reflections on the physical and mental activity of reading, particularly *speed reading*, philosopher Michel de Certeau ([1974] 1984) invokes the idea of the mobility that this **procedural** way of working entails. The mental (intellectual) movement caused by speed reading has also been described by philosopher Susanne K. Langer, who wrote about it on an undated index card that is currently archived in the Houghton Library at Harvard University: "I wonder in what way 'speed reading' would influence scholarly thinking. It might change the pattern from intercalated thought to retrospectively analytic thought with a gain in synoptic orientation of ideas within the whole even as they occur." Speculating about the productivity of leaving imitative thinking behind, Langer affirms the coming into being of a broad horizon, the depth, breadth, granularity, and applicability of which can only be determined after the fact. De Certeau pushes such speculations to the physical level:

> Reading frees itself from the soil that determined it. It detaches itself from that soil. The autonomy of the eye suspends the body's complicities with the text;

> it unmoors it from the scriptural place; it makes the written text an object and it increases the reader's possibilities of moving about. One index of this: the methods of speed reading. Just as the airplane makes possible a growing independence with respect to the constraints imposed by geographical organization, the techniques of speed reading obtain, through the rarefaction of the eye's stopping points, an acceleration of its movements across the page, an autonomy in relation to the determinations of the text and a multiplication of the spaces covered. Emancipated from places, the reading body is freer in its movements. It thus transcribes in its attitudes every subject's ability to convert the text through reading and to "run it" the way one runs traffic lights. ([1974] 1984, 28–29)

Speed reading is not the only practice that may be explored on the basis of the common ground of physicality, intellection, and mobility as the terrain of both common grounding as a productive method and of randomization as a defamiliarizing practice is much more diverse.

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Rhythm

For something to be perceived as rhythmic, its sounds, words, colors, images, or sequence of events must appear to be arranged systematically, thus forming a recognizable, often repetitive, and nonarbitrary pattern. Because words can be spoken with a certain melodiousness and color arrangements on a fixed 2D canvas can be suggestive of flow in 4D, it makes sense to conceptualize *rhythmicality* as that which is ontologically prior to both cross-sensory **affect** and expression and to the patterns as they materialize. Musicologist and philosopher Jessica Wiskus describes the temporal process involved in her 2013 monograph *The Rhythm of Thought: Art, Literature, and Music after Merleau-Ponty*. Wiskus affirms that an articulated sound, for instance, needs another articulated sound for it to become part of "a rhythm" and that it is in the relating of the two sounds, established in the interval **between no longer and not yet**, that the rhythm is built up and then formed. She writes:

> Rhythmically, the first **gesture** is never the beginning; it is the second gesture that initiates a beginning. Rhythm can be instituted only retroactively; it turns back from the second note to the first in order to recover the interval of silence between the two, even as it then lays forth a new structure that would support the articulation of an unfurling melody. Rhythm promises an ongoing, dynamic process that works by looking both forward and retrospectively, applying itself through the noncoincidence of each sound. (9; cross-reference added)

This temporal complexity of rhythmicality concerns music, writing, painting, film, and any other process in both natural and social settings (Lefebvre [1992] 2004).

The main title of Wiskus's monograph—*The Rhythm of Thought*—addresses the possibility of one's thought clicking into a rhythm but also the possibility of clicking into the thought of someone else. These processes have been described by the philosopher Henri Bergson in his essay collection, first published in French in 1934, *The Creative Mind: An Introduction to Metaphysics*. This collection consists of methodological essays preceded by no less than two introductions. In the second introduction, Bergson writes about teaching literature. Teachers tend to focus on what he calls "intellection" (that

is, they lecture on texts) and not on "intuition" (which would stimulate students to first read the texts themselves). Bergson argues that whereas lectures do add something to texts and to their understanding or appreciation, they cannot and should not replace the reading itself, for in the reading itself, the very basis of intellectual **engagement** is established. Bergson writes:

> The intelligence will later add shades of meaning. But shade and color are nothing without design. Before intellection properly so-called, there is the perception of structure and movement; there is, on the page one reads, **punctuation** and rhythm . . . rhythm roughly outlines the meaning of the sentence truly *written* . . . it can give us a direct communication with the writer's thought before study of the words has given them color or shading. ([1934] 2007, 68–69, 221n14; emphasis in original; cross-reference added)

Intuitive approaches to both writing itself and to written texts do the necessary groundwork for the writer as well as for the reader, for it is rhythmic movement that both guides the writing process and engenders the process of interpretation. The **condition** for the engendering of interpretation, Bergson argues, is to coincide with the writer.

It is, of course, possible to bring the teacher and the student closer together as the lecture must also be approached intuitively by the student in order to be understood. Under what conditions can the student coincide with the teacher? Practical philosophers Esa Saarinen and Sebastian Slotte (2003) argue that this involves some work on the part of the lecturer:

> The performing philosopher will need particular sensibilities in order to carry out her mission. *Situational awareness* will be a useful skill. The instinctive sense for the vacillating real-time situation will provide the performing philosopher data of crucial significance. She will not only think in front of a live audience but will also sense what the audience thinks. Approaching the situation as an artist, she will be able to deliver the lines of thought, stories and punch lines, what Plato called "brief and memorable words" . . . , the breaks and the rhythm and the punctuation, in a way that will induce the listeners to open themselves up for a rewarding inner dialogue, not just immediately but also afterwards. Like any engaging performer, she will have to have a sense for the emotional energies in the lecture room and be ready for the opportunities those energies open up moment by moment. (16; emphasis in original)

Beside rhythm and punctuation, Saarinen and Slotte mention "approaching the **situation** as an artist," which provides a clue to a word in the Bergson quote that was hitherto overlooked: "design" (in French: *le dessin*). The design of rhythm, that is, rhythm as intentionally or unintentionally designed, is what Paul D. Miller aka DJ Spooky that Subliminal Kid calls *rhythm science*.

Miller, who majored in philosophy and French literature at Bowdoin College in Brunswick, Maine, writes in his artist book:

> The beginning. That's always the hard part. Once you get into the flow of things, you're always haunted by the way that things could have turned out. This outcome, that conclusion. You get my drift. The uncertainty is what holds the story together, and that's what I'm going to talk about. Rhythm Science, Myth Science. A catalogue of undecided moments at the edge of my thinking process. . . . Flow. Machines that describe other machines, texts that absorb other texts, bodies that absorb other bodies. It's a carnivorous situation where any sound can be you, and where any word you say is already known. Flow, counterflow. (2004, 4, 8–9)

What we see is that Miller pushes the above reflections about texts and readers, and lecturers and students to a dialog between "you" and "your own writing." The rhythmic here perhaps to an interior and anterior auto*rhythmicality*.

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Risk

Risk is a relational, **situated**, and **speculative** concept. Think about the common phrases "to run the risk of something," "to take a risk," or "to put oneself at risk." The subject implied in these phrases might soon expose herself to something unpleasant, harmful, or even dangerous, or she may actually run into something valuable or beautiful. Such ulterior risks often involve others, and it is because of their involvement that Donna Haraway, in *When Species Meet*, speaks of the "bond of shared risk" (2008, 402). Haraway discusses risky interspecies bonds, in particular: intimate relations of difference and power between and among humans and animals that are mediated by everyday needs, history, science, and technology. About the living and working together of humans and dogs, for example, and about the resulting reciprocal epigenetics between them she says, "Sharing the risk of gum disease and of genetic biosociality is part of the companion-species bond" (135). This case of the sharing of risk between humans and animals shows that distributed risk forges a bond of mutuality in difference. It also shows that there can be a double logic to relational risk, here set up by the ambivalence of intimacy and fear.

The situatedness of risk across ethnic communities, places, and **generations** has been theorized and researched in the interconnected fields of Indigenous and decolonial studies. Eve Tuck and K. Wayne Yang play with the typographical correspondence between the phrase "at risk" and the **punctuation** mark of the **asterisk**, as it is used in North American demographic analysis, in order to critically analyze and understand the vast power imbalances between Indigenous and settler communities in real life and in research for policy making. They write:

> As "at risk" peoples, Indigenous students and families are described as on the verge of extinction, culturally and economically bereft, engaged or soon-to-be engaged in self-destructive behaviors which can interrupt their school careers and seamless absorption into the economy. . . . At the same time, Indigenous communities become the asterisk peoples. . . . From a settler viewpoint that concerns itself with numerical inequality, e.g. the achievement gap, underrepresentation, and the 99%'s short share of the wealth of the metropole, the asterisk is an outlier, an outnumber. . . . From a decolonizing perspective, the asterisk is a

> body count that does not account for Indigenous politics, educational concerns, and epistemologies. (2012, 22–23)

Tuck and Yang plead for discontinuing the use of the objectifying asterisk of demographics because research and policies predicated on such a practice of punctuation invisibilize and blackbox the lives and needs of those who are at risk. They propose a subjectifying move in order to envision a speculative "elsewhere" for at-risk communities (36).

Beside life's necessity to evade risk (emotional, epistemological, financial, political, etc.), risk may thus also invite speculation about hitherto unknown subject positions and futures, and part of risk taking is in fact a spirit of experimentation. This can be seen in subjectifying processes such as the creation of indigeneity per se, but also in the experimental, **zetetic** processes artists and designers engage in. Often these two processes are or appear as combined.

In 1968, design theorist and designer David Pye coined the concept of "workmanship of risk." This concept, especially when plotted against its opposite ("workmanship of certainty"), repeats the double logic of risk pointed out by Haraway and Tuck and Yang. Workmanship of risk is "workmanship using any kind of technique or apparatus, in which the quality of the result is not predetermined. . . . The essential idea is that the result is continually at risk during the process of making" (7; emphasis added). Aside from the quality, the economic value of the resulting artwork is uncertain. Workmanship of certainty indicates the characteristics of mass production, such as a standardized form and a preset prize. In his work, Pye responded to economic inequalities addressed in the activist 1960s. Indigenous and decolonial studies are part of a wave of intersectional activism in the early twenty-first century. Intersectional academics, activists, and artists read class through matters of gender, race, ethnicity, sexuality, and disability. For example, the project *Risk Change*, funded from 2016 until 2020 by the EU program Creative Europe and led by the Museum of Modern and Contemporary Art in Rijeka, Croatia, repeats the speculative invocation of an *elsewhere* for those individuals and communities who are at risk in the context of ongoing migration to and from Southeastern Europe. This elsewhere is looked for in a collaborative project with artists, curators, and scholars and by using a motto that refers back to Haraway's *sharing* of risk: "Migration is a natural law: everything moves, everybody migrates" (Orelj, Salamon, and Krstačić 2020, 16–19).

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Scale, Scaling

The scale of an object or process is its relative size, duration, force, or impact. Used as a notation system, a given scale (for example, 1:1; 1:100; 1:1000) can be used to calculate the size of referenced objects or entities referred to in symbolic representations such as diagrams, maps, models, or other visualizations. *Scaling*, or scaling "up" or "down" as a verb, refers to the possibility to determine or adjust the size of something in relation to another entity or context. As a form of adjustment, scaling is motivated by its possible effect. Intrinsically relational, such an effect often implies the shifting of a prior balance in power.

Media and design theorist Roy Bendor speaks of how scale can create a *gap*. In the case of his inquiry, the difference between concerns and **care** for a planetary **ecology** has implications for the perceived possible reach of human agency, calling for the imagination to close this gap: "The magnitudinal gap—the seemingly unbridgeable chasm between the immense scale of our environmental problems and our meager capacity to effectively act on them—may be just too wide to bridge without a considerable leap of faith" (2018, 26). The connection between scale, agency, and efficacy has been famously addressed by Argentine author Jorge Luis Borges. In his one-paragraph short story "On the Exactitude of Science," inspired by an 1893 Lewis Carrol story, he evokes a fictional time in which the art of **cartography** has reached a 1:1 scale, making the map of the same scale as the territory it represents, so that it "coincided point for point with it" ([1946] 1999, 325). In this fiction, without scaling up or down, the map becomes useless. In this, we can read a critique of a positivist scientific agenda and imperialist modernism (cf. Chakrabarty 2020) that, when taken to the extreme, blows itself up—and the world with it. Scaling is, thus, a necessary translation or transcoding of reality, needed for (human) legibility, actionability, and understanding. At the same time, whatever direction it goes, scale also has fundamental political, ecological, and ethical **implications**.

More recently, in his *Lexicon of Usership*, commissioned by the Eindhoven-based Van Abbemuseum, art theorist and curator Stephen Wright defines "1:1 scale" as a concept that is central to what he terms a "usological turn" in contemporary culture and society:

> Art and art-related practices that are oriented toward usership rather than more distanced spectatorship are characterised more than anything else by their scale of operations: they operate on the 1:1 scale. They are not scaled-down models—or artworld-assisted prototypes—of potentially useful things or services. . . . Though 1:1 scale initiatives make use of representation in any number of ways, they are not themselves representations of anything. The usological turn in creative practice over the past two decades or so has brought with it increasing numbers of such full-scale practices, coterminous with whatever they happen to be grappling. 1:1 practices are both what they are, and **propositions** of what they are. (2013, n.p.; cross-reference added)

Here scaling is particular to representation, while the 1:1 userly practices that Wright discerns efface such an ontological gap between representation and the represented. As an object to work with, Borges's 1:1 map representation becomes useless, in contemporary userly art with such a "double ontology" (Wright 2013, n.p.) representation runs the **risk** of disappearing altogether.

Whether or not doubling, enlarging, or decreasing in size, and whether it is optimizing or sabotaging agency, efficacy, or use value, scaling is always at work in art, design, and knowledge production because of its relationship with a spectator, user, or observer. Moreover, setting up a reciprocal relationship that both constructs object and observer, scaling happens on both ends of this relative bipolar system, as what is larger on one side makes smaller what is on the other end. Or, in other words, the size of the object relative to the observer feeds into the self-perception of the embodied observer. This self-reflexive aspect of scaling is actively explored in art that works with extreme differences in size as relative to the average human scale—from nineteenth-century sublime art with small human figures in large landscape paintings to evoke feelings of awe in the spectator, the large-scale wrapping projects of artist duo Christo and Jean-Claude, the sculptures of Ron Muek that miniaturize or aggrandize us in comparison, to light projections on building facades playing with visual effects that distort our perception of the **architectural** environment. But beside such defamiliarizing spectatorial effects, scaling can also trigger more subtle forms critical, intellectual, and affective **engagement**. For scaling always addresses the balance between entities.

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Scape, -scapes

The noun *scape* means "scenery view" and was abstracted from landscape in the late eighteenth century. The suffix *-scape* stems from the same period, when British poet and novelist Charlotte Turner Smith coined the word *prisonscape* in her four-volume novel *Marchmont* from 1796.[1] Smith used the word for a landscape that is not at all picturesque but instead provides harsh conditions for the poor that it houses. The meaning of prisonscape questions the three defining elements of a scape as landscape: the description of a visual scene or pictorial representation thereof in art (painting, drawing, photography) or **cartography** (topography, planimetry, altimetry); the cultural assumption that a landscape is picturesque; and the entanglement of environmental **conditions** (such as harshness) with historical and geopolitical processes (such as poverty). Questioning the defining elements of *scapes* can provide insight into the conceptual impetus of *-scapes*. Whereas the noun is used for the **situated** description or representation of visual spatial arrangements (land, sea, city), the motivation for calling something a -scape of sorts is often the complication of dualisms or binary opposites such as nature and environment, on the one hand, and culture, history, and politics, on the other. All -scapes demonstrate that nature and culture are intricately connected in *naturecultures*.

The list of -scapes is inherently endless. Contemporary uses include attentionscapes, bodyscapes, childscapes, datascapes, deathscapes, ethnoscapes, financescapes, foodscapes, ideoscapes, mediascapes, mindscapes, relationscapes, scenescapes, sensescapes, soundscapes, taskscapes, and technoscapes. Different from *-cenes* (used in the nouns *Anthropocene*, *Capitalocene*, and *Chthulucene*, for instance, as an epoch designator on a planetary **scale**) that designate time and often provoke a vertical representation of piling one -cene on top of another, *-scapes* designate space and are usually horizontally represented. This horizontalization also appears in the conceptual work that is done with the suffix. For this work, we must return to anthropologist Arjun Appadurai who coined five of the -scapes in the previous list in an attempt to theorize the workings of and **collective imaginings** in the globalizing politi-

1. See https://www.etymonline.com or https://www.lexico.com.

cal and cultural economy at the end of the 1990s. For Appadurai, a -scape is a flexible dimension of global political and cultural flow that, as a concept, responds to binary models that have become too restrictive for theorizing times of globalization (center-periphery, push-pull, surplus-deficit, producer-consumer). Whereas the realities described by binary models still exist and continue to have an effect as histories of determination, they are shot through with the flows that are captured by -scapes. Binary models cannot grasp the irregular and largely unpredictable nature of the flows of people in ethnoscapes, technologies in technoscapes, money in financescapes, images and information (and nowadays data) in mediascapes, and, last, ideas, ideologies, and counter-ideologies in ideoscapes. Important is how the five neologisms are at the same time interconnected and disjunctive:

> It is in the fertile ground of deterritorialization, in which money, commodities, and persons are involved in ceaselessly chasing each other around the world, that the mediascapes and ideoscapes of the modern world find their fractured and fragmented counterpart. For the ideas and images produced by mass media often are only partial guides to the goods and experiences that deterritorialized populations transfer to one another. (Appadurai 1996, 38)

Here Appadurai hints at an important role played by both diasporic intellectuals and artistic movements such as postcolonial cinema in filling the gap between the different -scapes and between collective and individual responses to the flowing processes in between states, nations, local communities, and individuals in a globalizing world.

Deathscapes: Mapping Race and Violence in Settler States (2016–2020) is a project led by Australian media and culture scholars Suvendrini Perera and Joseph Pugliese. They use mapping as a method to bring together different case studies on “the sites and distributions of custodial deaths in locations such as police cells, prisons[,] and immigration detention centres, working across the settler states of Australia, the US and Canada, as well as the UK/EU as historical sites of origin for these settler colonial states” (Deathscapes n.d., n.p.). The project deploys the concept of the “deathscape” as a connecting device in an attempt to compare and reflect on Indigenous and other racialized deaths in the globalized twenty-first century. Following the logic of the connective device, the project *Deathscapes* can be brought in connection with the novel *Lost Children Archive* by Mexican American novelist and creative writing scholar Valeria Luiselli. This novel, written by a diasporic intellectual and published in 2019, combines -scapes (childscapes and ethnoscapes in deathscapes and soundscapes) with scapes of different sizes (diasporic families, New York City, the states of Arizona and New Mexico, the country of the United States, and the region of Central America). By doing

so, the novel maps out how producing for example soundscapes—immersive sonic environments that are both lived and produced to be consumed as artworks—may lead to connective and disjunctive insights in the geopolitics of mass migration by mapping the flows and deaths of very different people: children risking their lives by attempting to cross the US border, on the one hand, and intellectuals (with their own children) traveling the country and seeking to do embedded research on local and Indigenous populations, on the other.

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Situation, Situatedness

A perspective on people, things, events, or processes as situated, as emerging or taking place within (and as) a situation opens us up to analyses of (often globalized) structures of power, on the one hand, and of local deviations from or variations within the norm, on the other. The work of the Martinican literary writer and cultural theorist Édouard Glissant demonstrates the analytical advantages of working with the situatedness of one's study material and/or self-positioning. Glissant mobilizes his intimate knowledge of and experience with the creolization of language and culture in the Caribbean as well as his PhD training as an ethnographer at the Musée de l'Homme in Paris as a way to make the following methodological statement in his 1997 collection of essays *Poetics of Relation*, originally published in French in 1990:

> It would be worthwhile for someone who works with languages to reverse the order of questions and begin his approach by shedding light on the relations of language-culture-situation to the world. That is, by contemplating a poetics. Otherwise, he runs the **risk** of turning in circles within a code, whose fragile first stirrings he stubbornly insists on legitimizing, to establish the illusion that it is scientific, doing so at the very point in this concert that languages would already have slipped away toward other, fruitful and unpredictable controversies. ([1990] 1997, 120; cross-reference added)

By adding the factor of *situation* to the study of language and culture, Glissant is first of all able to speak critically about linguistic domination by economic, political, and moral superpowers, a form of domination that is pressing upon and eventually suppressing perhaps regional linguistic idiosyncrasies and minority languages. The situational factor also allows Glissant to be creative with those forms of everyday language use and linguistic mixing that tend to be measured as inferior according to the academic yardstick of the isolated versions of the English, the Spanish, and the French that only exist in the laboratory, as a fiction. Glissant argues that even Anglo-American as it is commonly used around the globe is a form of hybridization and mixing that should be studied as such (118). The method of studying from very concrete situations upward, instead of from highly abstracted settings downward,

extends beyond the field of postcolonial studies that has canonized the work of Glissant.

There are various perspectives on the situatedness of people, things, events, or processes that either focus on the specificity of a specific situation itself or on the way a specific situation is the originary source, context, or background from which future events may unfold or develop further. In case of the first, we can recognize a **dramaturgical** perspective on how dynamic relationships, stories, and meanings take shape within specific spatiotemporal, material, and technological constellations of elements, agents, or forces. Here the situation is both historical and local, as it is inscribed in a logic of time and place specificity. Moreover, the situation is political as the specific affordances and structures of power embedded in its constellation or **dispositif** produce subjectivity. The second perspective focuses on how such situatedness has epistemological **implications**, taking into account how knowledge is always produced *in situ*, and therefore relative, framed, and biased (Haraway 1988). The two perspectives are often taken up together, as demonstrated in Glissant's work.

The Austrian sociologist of science Karin Knorr Cetina has coined the term "synthetic situation" in order to make the connection between the global and the local analyzable from a position firmly located in the first decade of the twenty-first century. She concludes that the connection is mainly *informational* and *screened* while still involving the body. She argues: "Phenomenologically speaking, the global is not simply a territorial extension of the local" (2009, 62). Instead the global is folded into the local through the flow of data, messages, images, interactions, and, now borrowing a term from the feminist theorist of technoscience Karen Barad, intra-actions supplied and demanded through electronic and algorithmic media. Knorr Cetina argues that different dispositifs lead the scholar to studying different "glocal" **conditions** as per the level of exposition to and immersion in the informational flow. Importantly, though, all types of synthetic situatedness are interactive.

The Canada-based philosopher Brian Massumi reflects precisely on the interactive nature of situationality in his monograph *Semblance and Event: Activist Philosophy and the Occurrent Arts*. He borrows a performative, ontological take on art from the American philosopher Susanne K. Langer who never got to reflect on installation as the creative act of situating but who did ask what art works and artistic genres can *do* instead of what they represent. Massumi writes:

> What interactive art can do, what its strength is in my opinion, is to take the *situation* as its "object." Not a function, not a use, not a need, not a behavior, exploratory or otherwise, not an action-reaction. But a situation, with its own

> little ocean of complexity. It can take a situation and "open" the interactions it affords. (2011, 52; emphasis in original)

As such, the critical analysis of such "objects" or performative "events" entails a double take on their *situatedness*: as both taking shape within a particular time and space, meaning that they are historically and culturally specific, but also as shaping a specific spectatorial situation with its own **ecology** and dispositif (here: "ocean of complexity"). This situatedness is therefore fundamentally layered, **scaled**, and dynamic: it entails both a positioning within an already existing situation but also an emergent giving shape to this situation. A situational analysis, then, entails a form of **tracing** how a work interacts with the world around it and a **cartographic** mapping of the entanglements that give rise (and shape) to the object/work itself, which in turn situates and (thus) implicates the **engaging** spectator/subject.

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Somatechnics

Somatechnics is a neologism based on the words *sōma* (body) and *technē* (craft, art) that expresses the interrelationship between bodies and technologies. As a concept, it makes critically analyzable how human (and animal) bodies are cut through with technologies, and how technologies are supported by different types of bodies. The insight that technologies work on, and function with, bodies gives the biological body the agency to participate in processes involving its own materialization, as well as the materialization of subjects as amalgams of biology, sociality, and technology. This technologization of bodies links the individual body to the collective, social body or "body politic." While theorizing a relation between bodies and technologies that is immediately interwoven and therefore more complicated than can be thought with disjunctive (body *or* technology) or additive (body *and* technology) logics, the single most important theoretical impetus of the concept of somatechnics pertains to critiquing power-ful tendencies to naturalize bodies and neutralize technologies that are rampant in philosophy, science, and society.

The term somatechnics was coined in the period between the international conferences **Body Modification: Changing Bodies, Changing Selves** (Sydney, 2003) and **Body Modification Mark II** (Sydney, 2005) by the organizers and participants collectively. In 2011, the journal *Somatechnics* (now *Somatechnics: Journal of Bodies—Technologies—Power*) was founded by members of this network. The theorization of how embodiment is always already technological, and how technology is always already embodied and embedded, is reflected in the work of critical theorists Samantha Murray, Margrit Shildrick, and Nikki Sullivan, who work at the intersection of gender and sexuality studies, media and performance studies, and studies of the body and health. Some of their work can be labeled *critical disability studies*, a field that departs from the recognition that every human being is a cyborg and as we are all cybernetic organisms, there is no difference in kind between wearing carefully crafted fashionable, sports, or orthopedic shoes, using a walking stick or not, or walking up straight or moving around while sitting in a wheelchair. Some of their other work can be positioned within the field of queer and transgender studies. This field recognizes that not a single body

exists without technology and criticizes the social and psychological assumption of characterizing only the **trans** body (that is, not the cisgender body) as made possible by technologies such as pharmaceuticals, surgery, fashion, and makeup.

Dispositif analyses performed with somatechnics as a key concept are **situated**, relational, and dynamic and move beyond critiques of common sense and scholarly notions of embodiment and technology by being creative with alternative forms of relating. Historian, theorist, and filmmaker Susan Stryker's **multimodal** and multiyear project *Christine in the Cutting Room: A Film in Progress* was uploaded to YouTube in 2013 by the Confluencenter for Creative Inquiry, a research center for collaborative, innovative, and interdisciplinary scholarship at the University of Arizona. The project combines research, documentary, and art film making and insights in surgical, media, and war technologies as ways to creatively rethink the embodied subjectivity of Christine Jorgensen, the American actress, photographer, and transgender activist from the 1950s and 1960s. In the in-progress edition of "Christine in the Cutting Room" the voiceover says:

> I was the bomb dropped on the gender system that blew up the body's meaning. I was the destroyer of binaries for a world split in two. . . . I was the world's first transsexual celebrity. I was an avatar of the atomic age. (2:10–2:20, 2:56–3:02)

By referring to the practices of both celluloid cutting (working with images and a transient medium) and surgical cutting (techniques and technologies of the gendered body) as practices that happen in a "cutting room," Stryker's project manages to connect and traverse the disjunctive temporality and relationality of the "cut" of the technobody and its image with its sociopolitical force.

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Speculation

Speculation is both a bold **gesture** and it is not. To speculate means to propose and suggest and to reach into a future or an elsewhere, but doing so from a framework that is before or outside the speculation that it produces. Speculative thinking and making is thereby **situated** in the here and now and it is not, as it also breaks free from the limitations that such an original positionality entails. It is responsive to and inherently reflexive of the here and now, but indirectly so, as its utterances and **figurations** leap into the elsewhere and elsewhen. This is, perhaps, the reason why the etymological root of "speculation" in the Latin *specere* is a scopic one. Its meaning includes not only the verb of active looking but also the fact that this act departs from a specific vantage point: to look from somewhere and somewhen. This connection of the here and now and the there and then gives speculation fundamental relevance for the present—a relevance to take seriously the elsewheres and elsewhens produced. From a sometimes implicitly critical position, it gives explicit direction to actions and decisions and coordinates for future **navigation**. As such, speculation is a creative method. It is an approach to respond to a question or problem in the here and now, a means to develop new insights and instruments for pointing out ways to think and act differently. Its call can be answered by taking in a position or vantage point that breaks free from the rigor of traditional methods, disciplines, and institutions. Speculation can also be instrumental to actively **unlearn** or mobilize **habits** and skills that have become too fixated to be responsive to and adaptive in the face of the unexpected and unknown. As such, it entails a specifically creative literacy that combines experimental skills with critical insight and a fundamentally **zetetic** stance.

The speculative is often used as synonym for, or in conjunction with, the imaginary. The difference can be traced in their respective Latin roots, where the imaginary (from *imago*, meaning "image") is the representation that may result from the speculative (from *specere*, or "looking") method. In the words of Donna Haraway:

> Sf is that potent material semiotic sign for the riches of speculative fabulation, speculative feminism, science fiction, science fact, science fantasy—and, I sug-

> gest, string figures. In looping threads and relays of patterning, this sf practice is a model for worlding. Sf must also mean "so far," opening up what is yet-to-come in protean time's pasts, presents, and futures. (2011, 4)

Haraway's work not only illustrates the double (or is it triple?) logic of speculation in her embrace of science fiction, science fact, *and* science fantasy. She also illustrates how speculation may be used as a method in her short piece *SF: Speculative Fabulation and String Figures*, written for the art exhibition documenta (13). In the piece, Haraway is positioned in both the actual surroundings of San Francisco and in an imagined "Terrapolis." Terrapolis is both San Francisco and it is not. It is an n-dimensional space, it is SF as we may (come to) know it when we accept the fact that the elsewheres and elsewhens that we tend to ascribe to the domain of fiction and fantasy are always already being produced in academia, art, and activism. We are only just to enlist and embrace them.

Interestingly, Haraway molds what she wants to say about Terrapolis into the form of an integral equation, thus giving a spin on mathematics and playing explicitly with both scientific and speculative methods. The equation is fictional; Haraway states that "that model here is an sf **proposition** about unimaginable, bubbly, hyper-real, bumptious placings and shapings" (6; cf. Samatar 2016; cross-reference added). Importantly, however, there is no way other than to speculate, should one wish to represent n-dimensional space, even in science. This explains why speculation as a creative method has found a home not only in the library and in the studio space but also in the lab environment (Parikka [2016] 2017). Media archaeologist Jussi Parikka writes:

> Bureau D'Etudes speaks of a "Laboratory Planet," which, besides designating the twenty- and twenty-first-century science-military-entertainment-university-complex as the defining planetary situation that installs infrastructures of power and technology, also refers to the laboratorization of knowledge. The world's a lab, or at least that's how the rhetoric justifies contemporary smart cities, university institutions, and hack labs. (n.p.)

Such labs in art, design, and creative writing enact the complex logic of speculation. We will provide two examples: first, speculative design and second, creative writing. James Auger is a speculative designer who works with contemporary technologies and their current users and who engage the scientific state of the art as a way to push the technological artifacts that are in use to their possible next iteration. He writes: "These [designs] are intended to act as a form of cultural litmus paper, testing potential products and services on both a mainstream audience and within industry, before they exist" (2013, 12). The link with the here and now is clear in its **procedurality**: speculative

design does not necessarily produce alternative presents, but it extrapolates the actual present to a possible future (13). Cultural theorist and creative writer Helen Palmer makes a similar move in her work. She makes this move around the verb “to wor(l)d,” a verb that she uses for her theory of speculative writing. Palmer coins wor(l)ding as a way to zoom in on and experiment with “the worlding which occurs in all wording” (2020, 95). Afrofuturism serves as one of her examples. She writes:

> Afrofuturism is a highly pertinent example of wor(l)ding because the world as it stands is already experienced as an elsewhere by people of colour. “I’m black. I’m solitary. I’ve always been an outsider,” states Octavia Butler in the *LA Times* in 1998. This spawns the need for new alternative topoi. (103)

Again, we find that the connection between the here and now and the there and then is acted upon. In the words of Palmer’s colleague Jessica Foley: “*WORD THE WORLD BETTER*” (Palmer 2020, 114).[1]

READING

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1. This slogan was printed on a postcard in the context of Foley’s art-based research project *Engineering Fictions*; see https://hcommons.org/deposits/item/hc:34639.

Sticky, Stickiness

As a qualifier, sticky (or viscous) refers to a quality of **surfaces**, bodies, signs, and images. Stickiness (or viscosity) is the capacity to attract, associate, **assemble**, accumulate, and possibly absorb. There are two main ways in which cultural theorists have written about the concept. One pertains to historical association, the other to transversal assembling. At first sight, these conceptualizations appear to be divided. At second sight, the conceptualizations start to cohere.

Theorists Sara Ahmed, Arun Saldanha, and Nancy Tuana have all written about stickiness as a historical association. Ahmed uses the notion "sticky signs," Saldanha talks about the figure of "viscosity," and Tuana about the conceptual metaphor "viscous porosity." All these scholars deploy their conceptual inventions to discuss the racialization of certain bodies (not others) and certain populations (not others). While coming at it from different theoretical perspectives—psychoanalysis and poststructuralist philosophy, Deleuzean philosophy, and interactionism respectively—all three theorists have a background in women's and gender studies. What they mean to express is how interacting bodies aggregate into separate clusters. After such historically **situated** processes, it becomes hard, but not impossible, to uncluster the bodies and see how they have a shared heritage. The hard part is when the clusters of race are projected back onto a dynamic collective reality, thus obscuring shared heritage and further stifling race relations. Liberation may occur when dynamic interaction returns by way of policy planning, political activism, or chance intervention. In the words of Saldanha:

> Neither perfectly fluid nor solid, the viscous invokes surface tension and resistance to perturbation and mixing. Viscosity means that the physical characteristics of a substance explain its unique movements. There are local and temporary thickenings of interacting bodies, which then collectively become sticky, capable of capturing more bodies like them: an emergent slime mold. Under certain circumstances, the collectivity dissolves, the constituent bodies flowing freely again. The world is an immense mass of viscosities, becoming thicker here, and thinner there. (2006, 18)

Ahmed adds to this how an entanglement of language and emotion or **affect**, such as hate speech, is the glue that brings, and keeps, the bodies together, or apart. Tuana describes how these emergent processes play out in biosocial environments or **ecologies**.

Stickiness as transversal assembling has its origin in the notion "sticky images" that cultural theorist Mieke Bal has written about. Such images are performatives that intervene in conceptions of, and experiences within, linear time. Imagine **navigating** through an exhibition space such as a museum or a gallery. You have a one-hour ticket as the show is a popular one. You intend to see all of it, but halfway through the collection, you find yourself suddenly captivated by a painting. This painting slows you down in your visit and "produces a bodily sense of duration, a variable **rhythm** that enforces temporal awareness, a sense of duration which in turn is deployed in a variety of ways and to a variety of effects" (Bal 2000, 88–89). In this temporal interval **between no longer and not yet** you are reminded of artworks or artistic practices from different periods and different styles. Both experience and interpretation are reshaped by this "category of 'sticky images' that coheres only in the basis of stickiness" (89). Bal writes about how the experience of interpellation across time leads to new interpretations.

The conceptualizations of stickiness as historical association and as transversal assembling perhaps start to cohere in periods of intensified social debate and change. Here one only has to think of the **hashtag** #blacklivesmatter (itself a sticky sign) and its ongoing social, political, and cultural effects on both intra- and interracial interaction. The movement Black Lives Matter has reintroduced dynamic interaction on local, national, and global **scales**. Moreover, the movement has intervened in content moderation policies of social media platforms so as to both prevent hate speech and to present a more inclusive vision of the world. The latter intervention bleeds into the art world, which responds not only with collecting #blacklivesmatter artifacts but also with presenting the collection more dynamically and, hence, more inclusively.

READING

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Surface

Cultural theorist Giuliana Bruno suggests that "as we consider that art, **architecture**, fashion, design, film, and the body all share a deep **engagement** with superficial matters, we can also observe how surfaces act as connective threads between art forms and how they structure our communicative existence" (2020, 37; cross-references added). As we can add the screen surfaces of ICTs and other (media) technologies to this list, as well as the smooth or textured surfaces of all other objects and things ranging from microsurfaces (chips, dust) to macrosurfaces (mountains, rock and cloud formations), the connecting force of the concept of the surface can even be further extended. All these surfaces structure our **encounters** in and movements through the world, as well as our imagining and our thinking. As "superficial matters," they are in fact *deep*, in the sense of *significant*, as thorough cultural analyses of movements, encounters, imaginings, and thoughts. The starting point of these analyses may be that surfaces attract as well as push away, attach as well as disjoin, display as well as obscure. Moreover, when we zoom in on the surface, we can see material characteristics and environmental entanglements that make it "work." For example, the reflective qualities of pigmented surfaces are constitutive of their coloring. Even more so, they absorb and reflect light thus playing an active and fundamental part in what is being perceived. Their capacity to be reflective, in turn, is actualized by the surfaces being fully or partially lit. Their textures can be directly visible or can be felt by physical touch. Sometimes an optical measuring device such as a microscope or telescope may be required to make discernable the physical granularity and relief of surfaces varying between the infinitesimally small and the infinitely big.

All of the surfaces of the bodies, things, and objects in the sky and in the **scapes** of land, sea, and cities on earth have been brought together by the conceptualization of what they *do*. **Ecological** psychologist and philosopher James J. Gibson formulates it thus: "The surface is where the action is" (in Amato 2013, 17ff.). As performatives, surfaces of all sizes and shapes perhaps first and foremost solicit engagement and interpretation. The surface, indeed, is not solely a structural and architectural element or a material and scientific phenomenon. The surface as cultural object is (also) a carrier of im-

ages or a device for mediation in communicative **situations**, environments, or spectatorial **dispositifs**. As such a carrier or device, the "surface tension" implies two paradoxes: first, the surface as a site of display becomes (in)visible and, second, the surface becoming an **interface** is itself not anymore of any particular material and as such loses its surface. The most interesting analyses play with the tensions between what is displayed, what it is displayed on, and where. For example, this can deepen our understanding of what it means for our relation with surfaces to be not visual *or* haptic but "haptically visual"—to borrow Laura U. Marks's (2000) phrase, also used by Bruno—for a viewing that is not distant (and) controlling but concerns a sense of closeness and intimacy. Or it can invite for an exploration of mobility at or of the surface in the case of 3D cinema, cave paintings, graffiti, palimpsestic animation, projection mapping, or media architecture.

An example of a project that brings the material characteristics and performative capacities of surfaces together is the project *VideowindoW*. With its use of sensing technologies, *VideowindoW* plays with glass surfaces as more than just either transparent windows or reflective mirrors:

> *VideowindoW* is the first dynamic transparent glare control that enhances comfort and well-being in public spaces. Based on light sensors *VideowindoW* controls the transparency of tiny segments of glass, as fast as 60 times per second, thus enabling access of natural light and glare control in a gradual and optimal way. The technology can actively be utilized to create images within the glass. *VideowindoW*'s glare control hence becomes content and vice versa.[1]

This is a project that effectively combines science, humanities, and design. Indeed, physical measurements and cultural analyses of surfaces both lead to the conclusion that surfaces do not only passively reflect but also actively **diffract**. First, activity of light at the surface of objects causes a superposition, interference, or combination of light waves, as we can witness by zooming in with an optical measuring device. This diffraction complicates their otherwise unmediated and immediately visible sharp edges. Second, surfacing material—displayed, emitted, or projected images—may compel the cultural analyst to writing about their **stickiness** that transversally (that is, diffractively) **assembles** other images that were initially considered far apart.

READING

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1. www.videowindo.eu.

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Sympathy

The most basic meaning of sympathy is “fellow-feeling” as it comes from the Greek *syn-* (with) plus *pathos* (feeling, emotion). The concept has been described metaphorically as the **contagion** of feeling. The figure of contagiousness refers back to philosopher David Hume’s work on sympathy according to which we must understand our feelings as being always already somebody else’s. Economist Adam Smith’s conceptualization proposes the very opposite of Hume’s. According to the former, to sympathize is precisely *not* to feel the other person’s feeling(s) as it involves the need to actively build a bridge to the other in an attempt to sympathize with them. These two extremes lead to a discussion about what would be, in fact, the opposite of sympathy. Antipathy is usually regarded as sympathy’s opposite, but for our purposes, sympathy can also be distinguished from empathy. Empathy resembles Smith’s definition of sympathy: a feeling as the other based on an interaction with them. Sympathy, then, becomes an entangled process according to which one feels for or feels with the other before they are actually differentiated from the self (de Freitas 2019, 91).

The very idea of sympathy as an entangled process enlarges the terrain of its conceptual operation. So far we have discussed feelings for fellow human beings. But something that happens prior to individuation can be extended to the nonhuman domain as (human) consciousness is no longer the defining factor in the process. Indeed, philosopher Henri Bergson has claimed that sympathy is also an instinctive or intuitive relation of fellow-feeling between two animals, for instance, or between a human being and a living being or a nonliving thing. Contrary to expectation, then, the narrowed-down concept of sympathy requires a broadly interdisciplinary approach:

> Sympathy has a layered, dense, contradictory history, and it always seems to leave something unknown, as though it can only allude to, act as a placeholder for, a more specific or nuanced relation between people, parts, or things. . . . Perhaps rather than trying to tell one story about sympathy or to find its origin, we need to hear in the term both the disquieting intersection of disciplines and the sense that sympathy is always a placeholder for something we do not know. (Gurton-Wachter 2018, 7)

What literary scholar Lily Gurton-Wachter alludes to here is the mysterious operative principle of instinctive or intuitive sympathy. It is clear that an active role is played by pre- or nonconscious forces. But when we discuss fellow-feeling between two nonhuman entities or within one body, we approach the difficult question of the agency of matter itself. An example is fellow-feeling between head and stomach, which is an example of Plutarch, or the medicopsychological case of blushing.

In his work on the critic John Ruskin and gothic **architecture**, architect and theorist Lars Spuybroek zooms in on sympathy without humans specifically by focusing on digital design, a design practice that is machinic yet capable of creating beautiful objects. Spuybroek's take on sympathy can best be summarized in the words of mathematics teacher educator Elizabeth de Freitas:

> A sympathetic coordination is not a bland alignment, nor an identification among parts, nor the creation of a unified homogeneous assemblage, but rather describes the coordinated assembling of heterogeneous agencies. Such activity entails a *sympathetic* agreement between two very different movements without erasing their distinctness (i.e., the orchid and the wasp). (2019, 89; emphasis in original)

Bridging nineteenth-century Ruskin and the specific domain of digital design, Spuybroek argues:

> Ruskin offers us a notion of craft that merges with design. It is not a notion of Arts and Crafts where design is still followed by craft. Instead, he offers us a notion of crafting, of weaving, interlacing, bundling, plaiting—in short, of a flexible materiality that exists on the level of drawing and design. In Ruskin we find an idea of work that is not just in the workmen but in the members and (sub-)elements themselves. The drawing is done by many hands simultaneously, as a collaborative and cooperative effort, and I think there is no better description of computing. (2017, 146)

The way of working here described, in other words, is a form of design by doing in contradistinction to doing by design. Later, Spuybroek specifies how this way of designing follows from a sympathetic agreement: exceeding alignment, identification, and unification, to borrow from de Freitas again, the collaborative and cooperative effort of the design process is driven by "*an internal mimesis* by our feelings of the feelings of objects" (2019, 155; emphasis in original). External mimesis would be a rationalizing move taking its cue from representations of the outside of the object. Internal mimesis is based in the form of relating that Bergson has called instinctive or intuitive. The latter mimetic relating allows the designer, the scholar, or the theorist to coincide with the inner movements of the object in the making.

READING

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Synchrony, Synchronicity

Synchrony means the simultaneous existence or occurrence of things that are or happen at the same time, thus combining the Greek *syn-* or "together" and *chronos* or "time." To synchronize, then, means to set the time, **rhythm**, and pace of two (or more) simultaneous processes or events to match, or be "in sync." This time can be measured in multiple ways, however. *Chronos* stands for what we also call "clock time." Clock time is a progressive, sequential, and therefore quantitative form of temporality. It is measured on an external and independent **scale** and can therefore be shared by all. Think of the synchronization of all clocks within and across time zones, or of the conversion of dates across calendar systems. All of these rationalizations of temporal processes are predicated on the principle of chronology. However, Greek mythology complemented *Chronos* with *Kairos*. *Kairos*—"time," nowadays also "weather"—stands for a more qualitative time as it involves the seizing of momentum and the occasion of inspiration or creativity. Think of the synchrony of movements across dancing bodies, the clicking into rhythm of musicians in an orchestra or a band, or timing in team sports. Each of these processes is embodied, relational, and **situated**, thus structured by a more random and less orderly form of temporality. The term "synchronicity" combines elements of both *chronos* and *kairos*. Carl Jung, the Swiss psychiatrist and psychoanalyst, coined this term in the 1930s.

The title of Jung's monograph *Synchronicity: An Acausal Connecting Principle* ([1952/1955] 1973) provides the definition of his neologism. Its starting point is that we tend to seek causal explanations or interpretations for what happens approximately at the same time and in the same place. Causality, however, imports dominant and sometimes unfortunate differentiations into our thinking: differentiations such as "before" and "after" and "here" and "there"—often in relation to a **deictic** center. In a universe governed by the laws of causality, coincidence, **contingency**, and serendipity become unexplainable as not all chance events can be calculated and hence are deemed mysterious. That is, if they are at all visible or go noticed. Jung suggests circumventing derogatory mysteriousness and embracing instead the perceived equivalence of things existing or events happening in parallel. He calls this a meaningful coincidence that is produced acausally. Jung writes:

> Synchronicity is no more baffling or mysterious than the discontinuities of physics. It is only the ingrained belief in the sovereign power of causality that creates intellectual difficulties and makes it appear unthinkable that causeless events exist or could ever occur. But if they do, then we must regard them as creative acts, as the continuous creation of a pattern that exists from all eternity, repeats itself sporadically, and is not derivable from any known antecedents . . . it seems to me necessary to introduce, alongside space, time, and causality, a category which not only enables us to understand synchronistic phenomena as a special class of natural events, but also takes the contingent partly as a universal factor existing from all eternity, and partly as the sum of countless individual acts of creation occurring in time. (113–14)

The point that Jung makes is onto-epistemological. He suggests that we start to think in **sympathy** with what we have so far chosen not to incorporate (epistemology) and that synchronicity is not only a concept but also a transversal phenomenon (ontology).

Theoretical sociologist Will Johncock makes a similar move when differentiating between social synchronization, on the one hand, and a version of Jung's synchronicity, on the other. This differentiation serves as a means for arguing that the fact that there are always already *intraspecies*, *interspecies*, and even *ecological* synchronicities allows for social synchronization, and not the other way around. Willcock thus argues, for instance, that intraspecies synchronicity provides the grounds for all humans using the same clock time. And about interspecies and **ecological** synchronicity he concludes:

> CFCs [chlorofluorocarbons that destroy the ozone layer], humans, and other material manifestations, are each concurrently a particular spatiality/materiality/ecology/temporality, as well as a general worlding. Crucially for our current discussion on social synchronisation, this means that all worlding expressions or manifestations are always already in sync, because they inhere within these ambiguous, shared, co-conditioning ontologies. (2017, 213)

Having fully incorporated the Jungian category of acausality, it is easy for Willcock to conclude that I am always already the social time of my neighbor (215).

Wave UFO (1999–2002), an installation of multimedia artist Mariko Mori, explores the Jungian category by bringing it together with intersubjective brainwave synchronicity and the Buddhist concept of cosmic interconnectedness. Museum and gallery visitors are invited to enter a futuristic 5 × 11 × 5 meter capsule and take a seat there in groups of three. Images are projected on the capsule's roof, "generated by a kind of interactive bio-feedback loop that reads the brainwaves of the participants. In a computer-animated video

projection, Mori sends the 'travelers' on a trip to a spiritual cosmos."[1] The impetus of *Wave UFO* is intellectual and political at the same time as it is Mori's belief that understanding synchronicity can lead to a world without cultural differentiation and nationalism. In Mori's own words: "'Wave UFO' believes that human beings as collective living beings shall unify and transcend cultural differences and national borders through positive and creative evolution."[2]

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2. Ibid.

Theoretical Object, Knowledge Object

Theoretical objects are things that compel us to question, interrogate, and theorize. First casually used by philosopher and art historian Hubert Damisch, it became more precise as a concept when, asked about its meaning, he replied with an insistence on the *agency* of such objects and contended that a theoretical object

> obliges you to do theory but also furnishes you with the means of doing it. Thus, if you agree to accept it on theoretical terms, it will produce effects around itself . . . [and] forces us to ask ourselves what theory is. It is posed in theoretical terms; it produces theory; and it necessitates a reflection on theory. (Bois, Krauss, and Damisch 1998, 8)

This conceptualization shifts the question of what theoretical objects *are* to the question of what (and how) theoretical objects can *do*—to how they are performative and what they produce. However, in order to respond to the object by theorizing, we have to agree to accept the object on its theoretical terms, to discern its affordances for us to do so in the ways it allows us to **engage** with it. In other words, we have to allow the object to intervene in our thinking and to offer suggestions that may guide us to new insights. Whether an object can function as a theoretical object, therefore, is also a matter of a particular attitude toward it, of allowing it to play this role in our analysis of it. For cultural theorist Mieke Bal, allowing for the possibility of objects to "oblige us to do theory" and to accept how they furnish us with the means of doing so is what makes an approach to cultural artifacts as theoretical objects such an important alternative to the "application" of theory onto objects, or a similarly one-directional understanding of the researcher's relation to the object as a case study:

> Objects . . . are active participants in the performance of analysis in that they enable reflection and **speculation**; they can contradict projections and wrong-headed interpretations (if the analyst lets them!), and thus constitute a theoretical object with philosophical relevance, whether materially embodied or not. (Bal 2013, 53; cross-reference added)

While both Damisch and Bal have worked with this concept in relation to art practices and artifacts, it is also productive in the case of more hybrid objects that are created in interdisciplinary collaborations between artists, scientists, and specialists from various other disciplines. How this approach to objects can yield specific forms of knowledge we can see in the case of experimental and artistic data visualizations, sonifications, 3D materializations, and interactives that make abstract (digital) data accessible for the human sensorium. Examples would be the *Synchronous Objects* created by Norah Zuniga Shaw and Maria Palazzi from Ohio State University and choreographer William Forsythe, the *Music by Oceans* project developed by oceanographers Erik van Sebille and Will de Ruijter and composer Stef Veldhuis, or the data sculptures that artist Refik Anadol has made in various collaborations, for example, with AI specialists, engineers, and industry partners.

These objects are performative in how they *bring about* rather than *represent* ways of knowing. A sensory experience and (hence) understanding of this two-sided performative process can be the starting point of how approaching them as theoretical objects can give us insight in the ways in which knowledge objects can yield knowledge *in* the **encounter** of object and observer. Rather than accepting them as illusions of transparency and unmediated access to aspects of the world that are otherwise inaccessible to the human sensorium, knowledge objects ask to be recognized as apparatuses that mediate in relating to that which is perceptually inaccessible to humans. By accepting these objects as theoretical objects, they can become *knowledge objects* that with their design and the specificities of their materiality set the stage for encounters, relations, and intra-actions or **diffractions** that effectuate multisensory ways of knowing. Knowledge objects are different from traditional "objects of knowledge," precisely in the manner in which they reveal with their (re)activation of the human sensorium the way in which they, as objects, make themselves known within a two-sided process within which both object and observer is active.

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Trace, Tracing

A trace has a complex temporality and a specific force. This force can be understood as constitutive of various forms of actualization, materialization, and relationality. The trace makes present what is absent, establishes positions and relations, produces meaning, and demands interpretation. A classic example is a footprint in the sand that as a trace with (material) presence in the present marks the absence of the foot making the print in the past. As such, the footprint is a marker that points at what has been "there." The trace as a sign of a past presence was described by philosopher, scientist, cartographer, and semiotician Charles S. Peirce in the 1880s as an *index*. In his semiotic theory, the index is a sign that can be both a trace of a past (presence) and a relational marker in an (emergent) present. In linguistics, this relationality is also called **deixis**: the directional property of certain words that have no stable meaning, but one that is relative to the situation of its utterance. Think of the word "here": this refers to a location in relation to the position of where the word is spoken. When I say "here" (or "now"), this may be a "there" (or "then") for you. This pointing reciprocally also positions the subject (the "I/eye") in relation to the "there" and "then."

As film theorist Mary Ann Doane (2007) has pointed out in the writings of Peirce, these material and deictic properties are not two mutually exclusive aspects of the index but two semiotic meaning-making operations that work together dialectically. With this, Doane problematizes the idea of a supposed "loss" of authenticity of the digital, as exemplified in the ontological difference between digital photography and analog photography as the material imprint of light on a light-sensitive film strip. While the digital image is not a material trace in the same way as the analog image that forensically "proofs" a past, it does work as a deictic index that brings the connection with the past into existence. Together these aspects of the trace unhinge the notion of "pastness" as an absolute: the past becomes **situational**, relative, and relational. The pastness the trace carries is carried over into a bond with the present moment—the trace is a sign of pastness from which the present cannot disentangle itself. In the case of cinematic or photographic images, for example, this means that the situatedness of the image in its emergence (where and when the image was "shot") is shifted to the situatedness of its presence (the

past referred to in the photograph here and now). However, with this absent presence, the material visual or linguistic sign, mark, or pattern has an effect that not only connects past and present but also implies a futurity that adds a third temporal layer. A trace does not (only) lead to making a reverse *projection*: "That's what (it) was!" Its effect cannot simply be teased out as if forensically. Its true force is the challenge and invitation for **speculation** about what may become of that which both attracts attention yet escapes from presence. This speculation is about bringing the trace's past from the present to a destination in the future.

Tracing as a working with traces destabilizes the researcher's positionality because of its spatial and temporal movements (see also **cartography; navigation**). To investigate and reflect on her own positionality and as such come closer to the complexity of the trace, the researcher may therefore want to commence her work with explicit *trace writing* in research vignettes, as proposed by philosopher Ernst Bloch in the 1960s, or with philosopher Theodor Adorno's **micrologies** from the 1950s:

> What such a method requires is not the careful identification of a particular path, nor the absence of form or structure, nor alternative **modes** of representation, nor even the negation of conventional methods and forms of data. It requires only and precisely that the researcher *reflexively* cultivate an **open**, ethical instability of praxis and interpretation, which is itself the necessary **condition** for formulating those questions that could not otherwise exist. (Allums 2020, 94; emphasis added; cross-references added)

In order to fulfill these requirements, a practice that can be termed "critical tracing" is being mobilized at the intersection of humanities, design, and art. This is often done by all kinds of drawing and mapping exercises such as artistic researcher Linda Knight's in-situ method of inefficient mapping of "the already-movements of matter and/in spaces."[1] Commonsensical causal and sequential thinking constrains the possibilities of acting on creativity and on counterintuitive positionality, spatiality, and temporality. Hence, tracing as a form of complex, nonlinear, self-reflexive, and out-of-the-box thinking must be trained.

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Trans-, Transing

The prefix trans- comes from the Latin *trans*, or "across," and is used in countless words and concepts today. Examples are the adjectives transcorporeal, transcultural, transdisciplinary, transgender, transgenerational, transmaterial, transmedia, transnational, and transspecies. What the prefix does to the root word can best be summarized by another example of the use of the prefix trans-: transversality. This noun refers back to the Latin verb *transvertere*, a combination of *trans* and *vertere* ("to turn"). The use of the noun is exemplified in the field of biological anatomy by the *lateral line* found in fish, literally a "touchline" composed of sense organs on each side of fish with which movements in the surrounding waters can be felt, or in popular parlance by *lateral thinking*, or simply "thinking outside the box," referencing a nonlinear creative thinking process that sidesteps linear logic. As a concept in philosophy and cultural theory, transversality can be traced back to the work of the French psychiatrist, philosopher, and activist Félix Guattari. In "Microphysics of Power / Micropolitics of Desire," a paper presented at a conference in Milan, Italy, on May 31, 1985, Guattari writes:

> With Foucault and Deleuze [in the 1960s and 1970s], horizontalness—a certain transversality accompanied by a new principle of contiguity-discontinuity—is presented in opposition to the traditional vertical stance of thought. It should be noted that it was around this same turbulent period that oppressive hierarchies of power were being put into question. It was also a period marked by the discovery of new lived dimensions of spatiality; as seen, for example, in the somersaults of the astronauts, the innovative experiments in the field of dance and, in particular, the flourishing of the Japanese Buto. ([1985] 1996, 174)

So transversality elicits theories and methodologies freed from any obligation to follow hierarchies (**classifixations**) in organizing thought, objects, or living organisms (including humans). The concept also allows for understanding revolutionary social movements as more complex than just antiestablishment. Moreover, it relates to creative processes by introducing forms of spatial nonlinearity to our analyses of science, engineering, and art. Most importantly, the concept of transversality connects movements in thought, science,

and engineering; social movements; and arts and culture in *transdisciplinary* ways and it fights the reductive tendencies of canonical, dualist, and linear orderings. The final ordering systems are considered straightjackets that do nothing but constrain processes of meaning making, subject positioning, and artistic production. Transgender scholars Susan Stryker, Paisley Currah, and Lisa Jean Moore complicate such a choice of the horizontal over the vertical axis. *Transing* as subject positioning does justice to both horizontal **openness** and vertical exclusion and to the fact that the **crossing** of the many sociopolitical practices on the exclusionary vertical axis may create spaces of openness:

> "Trans-" thus becomes the *capillary space* of connection and circulation between the macro- and micro-political registers through which the lives of bodies become enmeshed in the lives of nations, states, and capital-formations, while "-gender" becomes one of several set of variable techniques or temporal practices (such as race or class) through which bodies are made to live. (2008, 14; emphasis added)

In a short piece on translation, solicited for a glossary by the journal initiated by Stryker, *TSQ: Transgender Studies Quarterly*, historian of gender and sexuality A. Finn Enke illustrates the principles of contiguity, discontinuity, and even discontinuation when they place a series of statements alongside each other: "translation transforms us," "much is lost in translation," and "translation traffics in power" (2014, 242). Enke argues that transgender subject positions are built and sustained by everyday practices of combining creative plays with translations *from* definitions of transgender that are available in sociomedical worlds and LGBTIA+ communities alike, attempts at making singular trans* lives and bodies legible as transgender by translating singularities *into* what is (sub)culturally available, and **failures** to pass as either male or female, or transgender. The capillary actions between these processes of openness and exclusion show how transversality works and give nuance to the groundwork laid by Guattari.

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Unlearning

A process of “unlearning” begins with the conscious decision made by an individual, a group, or an institution to disengage from forms of learning, thinking, and doing that have become habitual. A subcategory of unlearning is *deschooling*: a form of unlearning the pedagogies and didactics offered routinely within the school system with the aim of teaching and learning differently. Traditional practices of learning, thinking, and doing are often hierarchical and individualistic, thus **generating** a culture of mutual competition rather than shared interests, individual survival instead of collective support, and tightening patterns of in- and exclusion. Processes of unlearning aim at fostering horizontal cultures of collaboration within schools, workplaces, art organizations, and other institutions (McLeod et al. 2020, 185). Often such processes are initiated by women, LGBTIA+, Black, and/or Indigenous individuals or subgroups, and they start with a set of questions like this one:

> Why are we always so busy? What does being productive mean to us? How does this particular feeling of responsibility **affect** our bodies and minds, all the while knowing that without productive work our institution would not exist? How can we unlearn this habit of **following** a form of productivity that feeds on business? How can we value reproductive labor as an essential part of productivity and dismantle the rushed feeling of always being too busy? (Team at Casco and Krauss 2016, 170; cross-references added)

The questions serve as prompts that assist the process of working through old habits and working toward the initiation of new ones.

The foremost theorist of unlearning is Gayatri Chakravorty Spivak. Her early approach to the theory and practice of unlearning summed up the process as “the necessity of unlearning one’s learning and unlearning one’s privileges” (Danius, Jonsson, and Spivak 1993, 24). This approach to unlearning, while still in vogue in academic and arts organizations today, was later adjusted by Spivak herself to encompass a less normatively descriptive and more transformationally **speculative** approach. This was based less in sociology and more in cultural theory. Spivak states:

> In order to be a para-disciplinary, ethical philosopher, it is necessary for me to ask the question, How is it possible to imagine as the subject of ethics—that is to say, the human being who thinks of doing the right thing (and therefore is capable of doing the wrong thing) for the other person? How is it possible to think such a subject outside of the monotheist Judeo-Christian tradition and its critique. . . . I'm having to actually give a lot of time to just sort of hanging out with women who are as out of touch with what one normally thinks of as the possibility of ethics as can be. . . . In that **situation**, the suspension of learning, without legitimizing it by reversal, is so much more complicated than what I said fifteen years ago when it seemed more clear-cut, as a kind of political decision rather than as confronting the undecidability of ethics. (25; cross-reference added)

Beginning from a fixed position of critique, Spivak implies, not only legitimizes (by reversal) sedimented practices of in- and exclusion but also limits one's grasp of ethical positioning per se. Concepts such as **speculation** and **risk** are hidden behind the word "undecidability," all coming within reach when suspending judgment in a collaborative learning space **between no longer and not yet**. What Spivak suggests here is a **zetetic** form of inquiry that is also embraced by Kim McLeod and her colleagues who formulate five principles for a relational pedagogy of unlearning in interdisciplinary settings, among them the need to "anticipate the discomfit of disruption" and to "attune to the potential of the new" (2020, 187, 190). Furthermore, they emphasize the necessity of asking: "What are the limits and possibilities of this, given the material, human, and non-human interactivity? What happens relationally, in the in-between?" (189–90).

Theorist of photography and filmmaker Ariella Azoulay wrote her monograph *Potential History: Unlearning Imperialism* (2019) while thinking and making in a space of ethical undecidability. Born with an Israeli passport, Azoulay works from a position that she refuses to give up: the fact that she is by descent a Palestinian Jew. Azoulay writes:

> My refusal doesn't try to dream up a new category. It is rather a refusal to accept that our predecessors' dreams—not necessarily our parents', but their parents' or grandparents'—can no longer be ours, as if the three tenses of past, present, and future that separate us and fix us in different eras were not invented exactly for this purpose. (xiv)

Not fixating herself in a new position but "staying with the trouble," in Harawayan parlance, Azoulay conceptualizes and practices unlearning from within a space that does not provide easy answers or final conclusions, let alone unambiguous new **habits**.

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Wonder

Both as a noun ("The wonders of . . .") and as a verb ("She wonders if . . ."), wonder is used to express surprise over an object or event or over something someone else has said or written. These two uses of wonder are etymologically connected: twelfth-century Old English *wundor* means "marvelous thing, miracle, object of astonishment," a noun that, in late thirteenth-century Middle English, also came to be used for "the emotion associated with such a sight."[1] Whereas one's wonders about the claims of others are often expressed for rhetorical reasons, wonders about objects or events are immediate or unmediated forms of astonishment, awe, or surprise. Wonder is the first and primary emotion according to the seventeenth-century philosopher René Descartes. Positioned in oscillation **between no longer and not yet**, the emotions of the wondering subject can be mobilized for gaining a greater understanding of what so far has escaped us (see also **zetesis**). This is, at least, what philosopher Genevieve Lloyd argues in her book *Reclaiming Wonder: After the Sublime* (2018), which concludes:

> Wonder, in its many forms, has provided an intellectual space—a temporary pause—which fosters the renewal of active, imaginative, emotionally engaged thinking. It depends but also thrives on the absence of certainty. It has often been associated with explicitly celebrated forms of "not-knowing," which can make wonder suspect in the many contemporary contexts where certainty is extolled as a value—even as a human need. Understanding wonder better can alert us to the **contingency**, and the inadequacies, of that privileging of certainty. (214–15; cross-reference added)

Lloyd sees wonder as particularly helpful for coming to grips with the greatest uncertainty of our time, that is, with anthropogenic climate change, and possibly also for developing a political position on the matter (215, 218).

Feminist technoscience scholar Martha Kenney provides an example of the inner workings of the move from wonder to understanding and/or political positioning in her analysis of the work of Australian postcolonial historian, philosopher, and ethnographer of science Helen Verran. Verran's book *Sci-*

1. https://www.etymonline.com.

ence and an African Logic from 2001 lays bare the struggle with giving an account of the Nigerian Yoruba vigesimal (base-20) numeral system (further complicated by the lack of a zero), especially when it comes to the translation of this system into the well-known decimal (base-10) numeral system. Wonder here is step one in a complicated trajectory:

> Observing and describing these two [numeric] objects originally entailed a particular way of perceiving difference, one guided by a pleasure in the discovery and careful study of strange and marvelous objects, a **mode** of attention we might call "wonder." Verran writes, "I was quite enchanted by Yoruba numbers and turned my delight to painstaking work." . . . This painstaking work manifested a marvelous object deserving of her readers' wonder too: "How can we appreciate the complex **architecture** of this system?" . . . , she asks, teaching us to see and to admire the elegance of this exotic artifact. (Kenney 2015, 753; cross-references added)

The step toward understanding and/or positioning, then, is made while participating in, and critically reflecting on, translation. First, Verran found herself a wanderer working in between the nonstandard and standardized numeral systems; second, she needed to confront her research project as continuing a problematic tradition of colonialist engagement with Yoruba counting. Importantly though, the wondering colonist was apparently satisfied with the seemingly objective standardization of the Yoruba numeral system, whereas the wondering ethnographer of science disentangled her own subjective practice just like she disentangled the practice of counting in units of twenty. Both the colonist and the ethnographer went through a painstaking process of learning, whereas only the ethnographer ended up experiencing *both* wonder and disconcertment. Kenney concludes: "Objects constituted by wonder and as 'wonders' travel in specific ways" (753).

Art historian and curator Marion Endt-Jones takes us through a similar process of disentanglement in her contribution to the edited volume *Wonder in Contemporary Artistic Practice*, thus making tangible how wonder may be mobilized as a perspectival strategy in **curation**. She writes about curating an exhibition displaying several coral objects in Manchester Museum, a museum of archaeology, anthropology, and natural history:

> Rather than presenting definite facts about the significance of coral in nature and culture in a didactic and somewhat predictable fashion, the exhibition attempted to convey the uncertainty and ambiguity regarding coral's history and future by invoking the uncertainty and ambiguity associated with the emotion of wonder. (2017, 179)

With her exhibition, Endt-Jones wanted to shift British conceptions of coral as dead nature found in faraway seas to introduce coral as a cross-culturally valued object spanning many centuries and genres of art and "to scrutinize the very mechanisms by which we tend to make sense of objects, both historically and epistemologically" (179). She achieved these goals by choosing curatorial **engagement** with linear and classificatory presentation by using historical wall texts and scientific labeling as well as curatorial engagement with blurring and mixing, for example, juxtaposing natural, cultural, and even naturecultural objects such as coral grown on a compound of seashell and porcelain.

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Zetesis

Zetesis, or ζητησις, means search, examination, or inquiry in ancient Greek and has an adjective in English: zetetic, meaning proceeding by inquiry. In Socratic and Platonic philosophy, this form of inquiry departs from an inquisitive and critical attitude and from one's own experience of oneself. Often understood as a skeptical attitude of fundamental doubt, in more recent rereadings, zetesis has also gotten a more optimistic interpretation of a permanent or iterative questioning. This philosophical etymology of zetesis harbors a congruence between theory and art, that is, the respective roles of curiosity, experimentation, and **risk** involved in various forms of philosophical and creative inquiry. Therefore, as an analytical concept, zetesis activates a perspective on these traits, which are shared by artistic as well as scholarly practices and raises questions about how these shape and take shape in specific projects. The concept emphasizes three aspects of such projects: first, a fundamental *subjectivity* and self-reflexivity involved in both **modes** of inquiry. Second, it refers to this subjectivity as a preliminary *starting point* for creative research. Third, it raises questions about the open and processual nature of the subsequent research and/or creation as it unfolds within *experimentation* and (hence) risky practice.

The critical potential of the concept lies in how it raises analytical and evaluative questions about the **openness** of scholarly and/or creative projects and their transparency about the multiplicity and mobility of their lines, movements, and segues of question and thought, including the role of risk in the process of their emergence, directions, and redirections. Moreover, the zetesis of any kind of research points at its originary starting point—for example, curiosity, or that which precedes and **conditions** inquiry—and how this becomes a new starting point for debate, invention, and a productive invocation of the imaginary. Such a starting point can, indeed, be recognized as inspiration for *Zetesis: The International Journal for Fine Art, Philosophy & the Wild Sciences* with its motto of "Research by Curiosity." The journal with executive editor Johnny Golding, professor of philosophy and fine art (Royal College of Art, London), is hosted by the Centre for Fine Art Research (CFAR) and the Research Centre for Creative Making (S.T.U.F.F.) at the Faculty of Arts, Design, and Media of Birmingham University. It explores theoretical,

philosophical, creative, and political intersections in fine art and scholarship. As proclaimed by Golding in the preface to the first issue of the journal:

> With this debut volume of Zetesis, the artists, philosophers, designers, technicians and scientists involved with this project and committed to an "old fashioned" kind of research—that which is generated by a curiosity and deep commitment to know (the whatever)—declare a new Daybreak. It is one that intends to take as a given, complexity and the irrational/imaginary in art and the sciences, physics and metaphysics, culture and its economies, skin and the pleasures of the flesh. It steps to the atonal **rhythms** of the mimetic patterns of camouflage and the flâneur. It aligns itself with the history of those who were (and remain) willing to ask and act upon this basic question: Supposing it could be otherwise, what would this otherwise look like, become, be, now? We want to say that however it would look, be, become (now), the journey to find out must be fuelled by experiment, rigour, and a willingness to risk. (*Zetesis: The International Journal for Fine Art, Philosophy and the Wild Sciences* 2013, n.p.; cross-reference added)

The concept as name of zetesis here puts on the agenda the urgency for adopting an intra- and transdisciplinary perspective that is fueled by curiosity and a fascination for the unknown.

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Montage (Collage; Contingency)
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Proposition (Proposition; Scale, Scaling; Speculation)
Punctuation (Accent; Asterisk *; Brackets [], Parentheses (); Dash –, Hyphen -; Deixis; Hashtag #; Punctuation; Rhythm; Risk)

Queer (Between No Longer and Not Yet; Brackets [], Parentheses (); Contagion; Failure; Prefiguration; Proposition; Punctuation; Somatechnics; Speculation)

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Sundén, Jenny (Somatechnics)
Szostak, Rick (Introduction)

Team at Casco—Office for Art, Design and Theory (Unlearning)
Thakchoe, Sonam (Unlearning)
Theodoridou, Danae (Dramaturgy)
Thylstrup, Nanna Bonde (Introduction)
Toft, Tanya (Curation; Engagement)
Tompkins, Avery (Asterisk *)
Tronto, Joan (Care, Ethics of Care)
Truman, Sarah E. (Proposition)
Trump, Donald (Asterisk *)
Tschumi, Bernard (Architecture, Architexture; Figuration)
Tsing, Anna Lowenhaupt (Friction; Implication; Making Kin, Unkinning; Pluriverse)
Tuana, Nancy (Sticky, Stickiness)
Tuck, Eve (Risk)
Tuffard, Lea (Brackets [], Parentheses ())
Turner, Cathy (Architecture, Architexture)
Turner, Charlotte (Scape, -scapes)

Uricchio, William (Introduction; Collage)
Uyttenbroek, Ellie (Classifi*x*ation)

van der Haak, Bregtje (Navigation)
van der Tuin, Iris (Introduction; Classifi*x*ation; Diffraction; Irreducibility, Irreduction)
van Es, Karin (Navigation)
van Sebille, Erik (Theoretical Object, Knowledge Object)
Varela, Francisco (Openness)
Veel, Kristin (Introduction)
Veldhuis, Stef (Theoretical Object, Knowledge Object)
Verhoeff, Nanna (Cartography, Performative Cartography; Crossing; Dispositif; Interface; Kaleidoscope, Kaleidoscopic; Navigation; Surface; Theoretical Object, Knowledge Object)
Verran, Helen (Wonder)
Versluis, Ari (Classifi*x*ation)
Vijgen, Richard (Navigation)
Vincent, Kate (Unlearning)
Virilio, Paul (Accident)
Viveiros de Castro, Eduardo (Pluriverse)
Vivienne Bozalek (Engagement)

Walia, Harsha (Prefiguration)
Warsza, Joanna (Curation)
Werning, Stefan (Theoretical Object, Knowledge Object)
Whitehead, Alfred North (Introduction; Both/And; Glow; Proposition)
Williams, Raymond (Introduction)
Williams Gamaker, Michelle (Figuration)
Wiskus, Jessica (Rhythm)
Wolfe, Cary (Openness)
Wright, Mark (Curation)
Wright, Stephen (Scale, Scaling)

Yang, K. Wayne (Risk)

Zeiger, Mimi (Making Kin, Unkinning)
Ziarek, Ewa (Between No Longer and Not Yet)
Zuniga Shaw, Norah (Theoretical Object, Knowledge Object)

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CRITICISM & THEORY

"This is an animate lexicon overflowing with pulsating and creative concepts. Van der Tuin and Verhoeff are engaged with what concepts can do and what they can make happen, rather than trying to capture a spurious 'classifixation' of what they are. The authors do not so much offer definitions as stage a series of potentialities, novel directions in which to take concepts, or, indeed, to be taken by them. The conceptual territory traversed is at once familiar and foreign, provoking feelings of the uncanny. This brilliant and seriously playful work enacts its own incitement to the reader to connect, to create, to articulate, and to activate new ways of thinking-being in the service of a vibrant future."

—**Moira Gatens**, Challis Professor of Philosophy, University of Sydney

"In *Critical Concepts for the Creative Humanities*, van der Tuin and Verhoeff have created new and original conceptual pathways for exploring the multiple and complexly intertwining lines connecting theoretical and creative practice, and intellectual and sensory experience. This is a bold book, and its influence is bound to be transformative of current and future directions in the arts and humanities."

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