Chapter 1

**The Lure of Possible Futures: On Speculative Research**

*Martin Savransky, Alex Wilkie & Marsha Rosengarten*

# Introduction: Beyond the Impasse of the Present

Is another future possible? It appears that we inhabit a peculiar time, somewhat suspended in its own frantic movement, where the future has never been more present, yet the present keeps prolonging itself, insisting, with its own order of continuity, on a time that does not quite seem to pass. The world is witness to a proliferation of crises of diverse orders and scopes, from the financial crash of 2008 that plunged it into a global economic crisis that still persists and threatens social, political, and economic futures today (Mirowski 2014), through new and ongoing global health challenges, to the proliferation of environmental disasters and the planetary problem of climate change in an age that some refer to as the ‘Anthropocene’ (Crutzen & Stroemer 2000) and others as the Capitalocene (Moore 2015), to name but some of the most obvious ones. Despite this, the dominant modes of response to the futures that these transformative events generate still largely privilege a ‘business-as-usual’ approach that reduces futures to matters of anticipation, calculation, management and preemption of risks and uncertainties in the present. An approach, in other words, that cannot engage possible futures without simultaneously submitting them to the logics, rationalities, and habits that govern the problematic of the present.

In some respects, there is something anachronistic about the impasse that characterises what we may nevertheless call our ‘contemporary’ situation (Savransky, 2012). For the sense of an immutable present, whereby knowledge of what has been, and anticipation of what is yet to come, remain connected through a kind of temporality ‘in which nothing essentially new could occur’, was a central feature of what conceptual historian Reinhardt Koselleck (2004: 58) calls the ‘horizon of expectation’ of the West before the French revolution. In this understanding, it is the revolution itself, as an inaugural event of European ‘modernity’, that marks ‘the start of a future that had never before existed’ (ibid.: 59). One whose most distinctive signature was that of an ever increasing *acceleration* of social, political, economic, and natural life that contracted the horizon of expectation and abbreviated time by exposing the present to ever new, and unexpected, historical events. Perhaps it is true, then, that we have never been modern (Latour 1993)?

And yet what is distinct about the current impasse, modern or not, is that what restores linearity to the present is, paradoxically, a pervasive concern across all fields of practice and knowledge with anticipating the future. The immutability of the present, in other words, is no longer a taken-for-granted historical experience, but becomes the achievement of complex, laborious and uncertain human and other-than-human practices aimed at knowing and securing the future. It is in relation to the dominant modes of futurity involved in what we have associated with the impasse of the present, that *Speculative Research* seeks to make an intervention.

This edited collection constitutes an attempt to offer some conceptual, methodological, and practical tools that can contribute to confronting the challenge of articulating a response, however partial, to this suspension of time and, in doing so, may enable social and cultural researchers to be lured by the possibility of futures that are more than a mere extension of the present. Gathering together a range of engagements by social and cultural researchers with questions of speculation, possibilities and futures in contemporary societies, *Speculative Research* responds to the pressing need to not only account for the role of calculative logics and rationalities in managing societal futures, but to develop alternative approaches and sensibilities that take futures seriously as possibilities that demand new habits and practices of attention, invention, and experimentation.

# Modes of Futurity: Risk, Temporality, Speculation

As the poet Paul Valéry (1988: 192) famously put it, the problem with our times is that ‘the future, like everything else, is not what it used to be.’ We have, he said, ‘lost our traditional means of thinking and foreseeing: […] our deepest habits, our laws, our language, our sentiments, our ambitions, have been engendered and sedimented in a time that admitted *longue durées*, that was founded and thought over an immense past, and which pointed to a future measured in generations’. The future has indeed become problematic. Indeed, the question of how heterogeneous actors engage futures, what intellectual and practical strategies they put into play and what the implications of such strategies are, have become crucial scientific, technological and societal concerns (e.g. van Lente 1993, Brown et al. 2000, Adam & Groves 2007). Nevertheless, as Valéry (1988: 195) also noted, our attitude towards the future remains fundamentally inadequate, for ‘we enter the future backwards.’ In the social sciences, much of the concern with futures testifies to Valéry’s diagnosis. Until recently, futures had been largely addressed from the point of view of the ways in which societies deal with their threats and uncertainties. According to sociologists of risk (Beck 1992, 2008), for example, risk analysis, calculation and the management of uncertainties have become the defining features of late modernity, where hazards and risks have proliferated as an upshot of modern ideals of progress notably including social and economic processes of industrialisation, urbanisation and globalisation. In this view, and in contrast to early modern era where threats and dangers posed to societies were largely the outcome of natural causes, human practices and inventions now figure as the primary sources of risk-generation as well as the primary sites of responsibility for their coordination, minimisation and amelioration (Rosa et al. 2014).

Other theoretical approaches to social futures have challenged both the epistemological and historiographical assumptions that underpin the concept of the ‘risk society’ (Adam et al. 2000). In addition to socio-cultural (Douglas 1992) and systems theories of risk (Luhmann 1993), the critical social constructivism of the ‘governmentality‘ school has approached the question of risk and the calculation of futures not as a logic inherent to an age of proliferating uncertainties, but as a neoliberal rationality of government that displaces its focus of attention from the disciplining of individuals to the management of entire populations. In this view, new modes of neoliberal governance operate through the institution of, and reliance on, an indefinite number of precautionary factors that seek to measure, organise, tame and influence the conduct of the population (Baker & Simon 2002, Miller & Rose 2008, O’Malley 2004). Notwithstanding their theoretical and historiographical differences, such approaches seem to share the sense that ‘risk’ and ‘uncertainty’ –but also unacknowledged ‘indeterminacy’ (Wynne 1992)– constitute the defining keystones by which contemporary societies conceptualise and negotiate the relationship between present and futures. Risks are said to pervade all aspects of life, from financial and insurance practices (Baker & Simon 2002, de Goede 2004), the politics of security and war (Ericson & Doyle 2004, Larner & Walters 2004), environmental forecasting, regulation and disaster prevention (Lash et al. 2000) and scientific and technological innovation and governance (Flynn & Bellaby 2007, Kerr & Cunningham-Burley 2000), to processes of governmental and individual decision-making and regulation regarding health (Petersen & Wilkinson, 2008), education (Brynin 2013) and everyday life (Tulloch & Lupton 2003).

The lesson that such accounts yield, however, is more paradoxical than might appear at first sight. As many of their proponents also attest, and as has become particularly salient in Science and Technology Studies (STS) and in the so-called ‘Sociology of Expectations’ (Brown et al. 2000, van Lente 1993), techniques of forecasting and risk-management do not operate merely to represent and know the future. Such studies detail how, for instance, the hopes and expectations associated with biotechnology and genetic engineering, the institutional deployment of future forecasting techniques such as Delphi and Foresight (De Laat 2000), the financial commoditisation of the future and the identification and indemnification of risks and uncertainty associated with modern industrial society, and even the routine material practices of the designers of computational technology (Wilkie 2010), such as prototyping, become part and parcel of routine scientific, technological and policy practices. Insofar as they inform decision-making processes through authoritative knowledge-claims (Selin 2008) or through the construction of expectations about futures (Brown & Michael 2003, Michael & Rosengarten 2013, Wilkie & Michael 2009), such practices orient social action in the present. Thus, more than providing reliable knowledge of the future, these practices become *factors* in the constitution of what a yet-to-come, a not-yet that, as we have intimated above, too often strives to coincide with the ‘already’ on which it is based.

Part of the reason for this is that the logics and practices by which futures are reduced to forecasting and risk-management themselves presuppose that futures are ultimately a prolongation of the present. In effect, we are bound to a logic of anticipation whereby future uncertainties and contingencies are calculated, represented and said to be tamed through statistical and modelling techniques that make predictions about likely future scenarios based on knowledge of the present (Adam & Groves 2007). What allows for these probabilistic modes of forecasting is the presupposition that time moves linearly, along a modern arrow of progress, such that the present conditions upon which calculation are drawn will be conserved in the future state which calculative inferences are supposed to provide information about. Crucially, however, as historians and philosophers of science and time have shown (Bergson 2002, Grosz 2004, Hacking 1990, Whitehead 1967), when engaging with futures, it matters what we take *time* to be. It matters whether we think of time as extending over a metrical arrow of progress, or whether we engage with it, for instance, in the manner of a handkerchief, to be spread, crumpled, and torn, forming a topological image of time (Serres & Latour 1995: 60). Resisting the modern arrow of time matters because it enables us to consider temporality as it is formed through its own patterns of becoming rather than through the imposition of a preformatted geometry. It matters, moreover, because it enables us to pay attention to, and experiment with, the very *processes* of crumpling, folding and ‘tearing’ time, and not just to their culmination.

This edited collection takes stock of many of the lessons afforded by the aforementioned traditions of social and cultural research on ‘futures’ and temporality, but it simultaneously departs from them in a fundamental dimension. While such studies evince a preoccupation with the temporal patterns and dynamics at play in shaping developments in science and technology, in politics and economics, in education and art, and so on, common to their preoccupations is an approach to futures that regards them as yet another (past) empirical object, to be illuminated through the customary methods and techniques of ‘social’ and ‘cultural’ analysis and explanation. S*peculative Research,* by contrast, is *not* primarily about how ‘others’ imagine, manage, calculate, preempt, secure, know, or speculate about, the future. Throughout the different chapters that compose this collection, possible futures are never simply ‘objects’ of knowledge, to be conquered by the conceptual and practical tools and methods of the various disciplines and approaches they espouse. To the extent that these diverse approaches share a common concern, it is the sense that, to paraphrase Marilyn Strathern (1992), *it matters what futures we use to cultivate other futures with*. In other words, it matters how we enter the future, what senses of futurity we bring into play, which modes of relating to the not-yet we enable knowing and thinking practices to nurture. Thus, rather than objects of knowledge or thought to be captured by a backward-walking present, possible futures are here engaged as vectors of risk and creative experimentation. It is futures themselves that, whenever one takes the risk of cultivating them, can escape the impasses of the present, and lure our own practices of thinking, knowing and feeling to unforeseeable possibilities. Thus, what each of the chapters in this collection attempts, with the means and challenges of its own situated engagement, is to take the risk of experiencing a mutation of the commitments, sensibilities and constraints that characterise their own research practices – as well as other practices with which they are concerned – as they become *lured* by the possibility of futures that be more than the mere extension of the present.

# The Politics of The (Im)Possible: Reclaiming Speculation

Choosing to characterise this lure as speculative is not, to be sure, without risks of its own. Born of the perplexing and poetic capacities of mirrors (*specula*) both material and conceptual tools –for *speculum* was also the name for medieval encyclopaedias– to provoke modes of knowing and thinking that brought together the visible and the invisible and thereby served as a ‘testing ground, providing the clues with which man rises beyond the known to the unknown’ (Melchior-Bonnet 2001: 113), the notion of “speculation” enjoys a long and complex history in philosophical, theological and artistic imaginations at least since the Middle Ages (see also Hunt 2011). Nowadays, moreover, such histories are themselves witness to a dramatic explosion, as the term ‘speculation’ proliferates through our contemporary imagination across an impressive range of registers and fields of practice.

In one notorious sense, for example, ‘speculation’ might be seen precisely to conjure up many of the ‘evils’ that have endowed this impasse with a tragic character. For nowhere is speculation currently more present in the media and in popular culture than in it its association with the irrational, and irresponsible excesses of contemporary high frequency financial trading practices, market dynamics, and stock exchanges (MacKenzie 2006). Such practices, which seek to bring about and profit from the highly volatile fluctuations of markets and their uncertain futures (Pemmaraju 2015), are now understood to be acutely implicated in the recent global financial meltdown, as well as in generating ongoing disasters such as algorithmically induced flash crashes (eg SECC 2014). In this sense, speculation seems tied to its modern history as a term of abuse, as that which borders on the suspect practices of those who exploit uncertainty and undertake actions often in the absence of any ‘reliable’ evidence (Ericson & Doyle 2004).

High finance, however, is not exceptional in its harnessing and exploitation of logics commonly associated with the speculative. Across fields as diverse as security and insurance, product development and marketing, environmental and health forecasting, as well as policy and governance, the very agencies and organisations that create regimes of ‘evidence’ are actively and productively incorporating what some would refer to as ‘speculative’ forms of data analysis. These are applications that, informed by new developments in consultancy and information studies, operate alongside (if not beyond) logics of probabilities by incorporating algorithmic logics. Unlike conventional probability-based forecasting, algorithms rely much less on past historical data and bell curves in order to extrapolate probable futures, and instead operate by making multiple associations and correlations among contingent and mutable events seeking to anticipate ‘low probability-high consequence’ future events (Amoore & Piotukh 2015).

The seeming association with such practices makes the choice of the word ‘speculation’ a dangerous one, to say the least. It poses the danger that a cultivation of speculative thought and practice in social and cultural research be seen as making a contribution, however small, to those who, in the face of ‘uncertainty’ as a constraint upon their engagements with futures, would turn such uncertainties into profit. But to reject speculation because of its associations with financial and security practices poses a different kind of danger, namely, that of falling into a form of obscurantism that denies the importance of other modes of speculation due to the dangers that the aforementioned practices pose. In our view, thus, it is not a matter here of seeking a morally and politically immaculate position from which to craft a critical stance. Such a strategy would quickly leave us wordless. Rather, it is about reclaiming this discredited word by drawing sensitive, and hopefully productive, contrasts with those practices by which it has been captured, such that a different sense of the speculative may become possible, and a different, more creative and responsible sensibility may be cultivated.

An important contrast to be drawn between these different senses of the speculative, therefore, lies in the fact that, even when these financial and security practices have radically changed the forms of data they operate with, their infrastructures, and the ways in which such data is analysed; even when they have loosen the constraints informing judgements on which actions may be enforced; they still participate in the modern dream of a form of ‘objective’ knowledge that be precise enough, accurate enough, comprehensive enough and reliable enough to anticipate the future. As social researchers have made apparent, the speculative in speculative finance and security practices is understood as an ‘invitation of the intuitive […] within the calculation of probability that characterises the contemporary authorization of algorithmic judgments’ (Amoore 2013: 44).

While often referred to as acting on possibilities, algorithms do in fact seem to act upon ‘a form of probability that is highly sensitive to rapid change, ‘embraces the subjective [and] allows for discretion of choices on the part of the observer’ with the purpose not just of preventing but of *preempting* the becoming of unwanted futures (Amoore 2013: 45, Uncertain Commons 2013). Consequently, the notion of ‘possibility’ that is employed in such practices by and large acquires its meaning as the shadow of probabilities, and thus remains premised upon them. The possible still designates here an image of the future, however uncertain, however volatile, however ‘unlikely’ from the point of view of a statistical curve, that can be rendered calculable, manageable, knowable, and actionable*.* It is still a possible that, as Henri Bergson (2002) would critically argue, is projected from, and belongs to, the order of what is actual, and thus prolongs the order of the present.

By contrast, the attempt made in *Speculative Research* is to cultivate a sense of the possible that concerns, but does not owe its existence to, the ways in which the actual determines the distribution of what is probable, either statistically or algorithmically. As philosopher Isabelle Stengers (2010: 17) has proposed, this alternative sense of the speculative constitutes nothing other than ‘a struggle against probabilities’. And not because of some humanist prejudice against quantification *tout-court,* or because of a metaphysical commitment that would denounce the experience of any regular pattern of order as a mere human illusion. To the contrary, speculation constitutes a struggle against probabilities in the sense that, while it acknowledges and affirms the existence of such patterns, it *also* affirms the existence of what any attempt to determine the probability of a future must set aside, or deem irrelevant– namely, the becoming of novel and unexpected events that, against all odds, transform the very order of the possible, the probable, and the plausible (Deleuze 2007, Savransky 2016). From this viewpoint, then, rather than partake in the problem-space of the normal, the probable and the plausible, speculative possibilities emerge out of the eruption of what, from the standpoint of the impasse of the present seems, in all likelihood*,* to be *impossible.*

As we proposed in the previous section, whenever futures are at stake, it matters what senses of futurity we bring into play. Throughout the pages that follow, the many futures to be engaged belong to a temporality that is neither calculable, manageable, nor foreknown. Rather, the futures to be experimented with are those made perceptible by cultivating a sensibility to a temporality we shall refer to as ‘eventful’: a time marked not by presuppositions of linearity, or by arrows of progress, but by the unexpected eruptions of the (im)possible*,* of social, political, economic, philosophical, and ecological events that can not be anticipated and open up possible futures that cannot be managed in advance.

Participating in an eventful temporality forces us to come to resist the temptation of reducing futures to presents, of entering futures backwards, and requires that we come to terms with irreducible futures that come into existence through processes of path dependency (Sewell 2005), temporally heterogeneous and emergent causalities (Connolly 2012), and global contingencies (Serres 1995). In other words, an eventful temporality assumes that ‘contingent, unexpected, and inherently unpredictable events can undo or alter the most apparently durable trends of history’ (Sewell 2005: 102), enabling a swerve of possible futures and creative alternatives to be explored and harnessed. In this way, futures are fundamentally underdetermined with respect to present actualities, but inhere in the latter in the form of potentialities to be actualised in practice.

Thus, the ‘speculative' in *Speculative Research* does not designate a practice of subjective anticipations of futures, nor is it a substitute for ascribing unwarranted meanings to uncertainties when scientific evidence is lacking. Speculating is not a matter of determining what is, and what is not, possible, as if possibilities could always be ascertained in advance of events, that is, from the impasse of the present. By contrast, speculation is here associated with a sensibility concerned with resisting a future that presents itself as probable or plausible, and to wager instead that, no matter how pervasive the impasse may be, it can never exhaust the unrealised potential of the present. It wagers that, despite its obsession with securing the future, there are futures that the present could never anticipate, and these already inhere in it as (im)possibilities to be actualised (Savransky 2016). In this way, speculating demands the active taking of risks that enable an exploration of the plurality of the present, one that provides resources for resistance, one out of which unexpected events may erupt, and alternative futures may be created.

# Thoughts That Are Creative of the Future: Cultivating a Speculative Sensibility

In contrast to its capture by contemporary financial and security practices, then, the sensibility *Speculative Research* seeks to cultivateis more akin to that nurtured in a field where speculation has enjoyed a much longer and productive history – namely, in literature, and most notably, in the genre of SF (which stands variously for Science Fiction, Speculative Fiction, Sci-Fi, Slipstream Fiction, etc.). SF constitutes in itself an immensely heterogeneous field, within which any single definition of ‘speculation’ remains perennially under dispute, when not *impossible* (Gunn & Candelaria 2004). SF includes traditions of fiction writing that, in the words of Margaret Atwood (2011: 6), ‘descend from H.G. Wells’s *The War of the Worlds,* which treats of an invasion by tentacled, blood-sucking Martians shot to Earth in metal canisters–things that could not possibly happen’, as well as others that would ‘descend from Jules Verne’s books about submarines and balloon travel and such–things that really could happen but just hadn’t completely happened when the authors wrote the books.’ In this literary world, it is not so much the case that the possibility of a future is ascertained from the point of view of the present, but that reality is always already entangled with the ‘not-yet’, the ‘yet-to-come,’ the ‘what-if,’ the ‘already-here,’ that is, with a sense of the (im)possible. As Atwood (2011: 5) stresses, ‘the future is an unknown: from the moment *now,* an infinite number of roads lead away to “the future”, each heading in a different direction’. SF is singularly sensitive to the fact it is *impossible* to know in advance just in *which* direction any of those roads may lead. The task, therefore, is to experiment with them, to see their ground materialise as one travels through them, as one explores their contours, landscapes, and horizons, as one witnesses such impossibilities be realised.

As the long history of SF reveals, creating (im)possibles, making possibles perceptible and experimenting with them, is a collective, transdisciplinary task. In recent years, such a task has also surfaced with considerable force in the fields of architecture and design. Forms of visual and material speculation provide an alternative way of conceptualising and directing the role of aesthetic and technological design practices, urban visions, propositions and outcomes (Zegher & Wigley 2001; Lang & Menking 2013; Dunne & Raby 2013, Rao et al. 2015, Wilkie et al. 2015). In challenging dominant user-centered and functionalist assumptions, and rational planning in the case of the built environment, that have long guided such practices, the speculative emerges here as a different sensibility in devising aesthetic and technical processes, propositions and outcomes. Here, the function of the speculative is not to provide techno-aesthetic solutions to pre-defined problems or to ‘domesticate’ technical inventions, but rather to mobilise design as a ‘catalyst for social dreaming’ (Dunne & Raby 2013: 189), the complex genealogies of which can, in part, be traced to experimental post-war architectural design practices (e.g. Gilman & Riley 2002).

In contemporary continental philosophy, a small but expanding number of scholars grouped under the label of ‘Speculative Realism’ have recently gained notoriety in debates around ontology, metaphysics, aesthetics, and the philosophy of science (see Bryant et al. 2011). While the members of this group openly disagree with one another on key and fundamental issues, they share a commitment to metaphysical speculation against the modern, Kantian culture of thought that Quentin Meillassoux (2008: 5) has called ‘the correlationist circle.’ In short, this refers to ‘the idea according to which we only ever have access to the correlation between thinking and being, and never to either term considered apart from the other.’ In an attempt to break away from the anti-realist circle where ‘we cannot say that the world either exists or fails to exist outside human thought’ (Harman 2013: 23), speculation operates here as a line of flight into a realm of metaphysical investigation and invention where it is possible to think the ‘in-itself’ of entities and objects without the need to posit them always already in relation to knowing subjects.

While sharing a common point of departure with the speculative realists in resisting the bifurcation of the world into subjects and predicates, many of the chapters in this book engage with a sensibly different tradition of speculative thought. A tradition that can be traced back to the work of William James and Henri Bergson (see Debaise 2009), and was subsequently expanded and systematised in the speculative metaphysics of Alfred North Whitehead, the philosophy of Gilles Deleuze, and more recently, through Stengers’ philosophy of science. It is such a genealogy of speculation that the chapters of *Speculative Research* seek to make resonate. Making it resonate, however, is not so much about introducing it to others as it is about finding new and productive ways of appropriating it, connecting it with other traditions with which it had not been associated, and above all, experiencing some of its possible implications by putting some of its concepts, ideas, and proposals, to the test of practical encounters. Thus, while some contributions explore the speculative through sustained theoretical engagements with the works of Whitehead (Debaise, Halewood, Thomas), Stengers (Bell, Schillmeier), William James and John Dewey (Savransky), as well as by making connections to the phenomenological existentialism of Hannah Arendt and Maurice Merleau-Ponty (Diprose); others are conversant with some of these thinkers while seeking to engage with speculation in more practical terrains. In so doing, they also invite further conceptual and philosophical contrasts – by way of discussing the work of William Connolly (Bell), Deleuze (Coleman), Donna Haraway (Halewood), Michel Serres (Rosengarten; Wilkie & Michael), Marilyn Strathern (Deville), and Gabriel Tarde (Schillmeier & Schultz) amongst others – to infiltrate the collective site of experimentation that constitutes the collection as a whole.

More than a uniform ‘school’ of thought or philosophical tradition, thus, a transversal reading of the chapters of this collection discloses, we hope, a plethora of situated engagements, pregnant with interesting contrasts, diverse textures and undertones. At stake here is not so much a common approach or an unwavering allegiance to certain philosophical influences, but the crafting of what perhaps is a common *gesture* (Debaise & Stengers, 2015). One way of characterising such a gesture is by paying attention to the manner in which the contributors to this collection seek to make speculation relevant not only to abstract thought, but also to the *empirical* challenges of social and cultural research. Unlike much of the work done under the umbrella name of ‘Speculative Realism’, for instance, the explorations in this edited collection seek to sidestep the Kantian problem of correlation not with the aim of affirming the ‘in-itself’ of things, which must necessarily keep experience at arms length, but with the aim of cultivating what might be called a ‘deep empiricism.’That is to say, an empiricism concerned not only with isolated and discrete facts but also with their relations and forms of togetherness; one for which the world is never finished, once and for all, but always in the making (James, 2011 [1907]). An empiricism for which each experience, both human and other-than-human, simultaneously constitutes a perspective of the world while operating as novel component *of* a world that transcends it (Whitehead 1967: 228). In this way, speculative practices themselves become active factors and ingredients in the becoming of the world. They make thought not the *correlate* to fact but ‘a factor in the fact of experience [such that] the immediate fact is what it is, partly by reason of the thought involved in it’ (Whitehead 1958: 80). This common gesture, then, might perhaps be best captured by Whitehead’s (1958: 82) famous formulation, when he proposed that ’the business of speculation is to make thought creative of the future.’

# The Process of Speculative Research: Organising the Collection

To speculate, then, is to take the risk of developing practices that, by engaging inventively with (im)possibilities latent in the present, can disclose, make available and experiment with possible prospects for the becoming of alternative futures. It is, in Stengers (2015: 19) words, to ‘respond to the insistence of a possible that demands to be realised’. In so doing, it seeks to furnish social, cultural and natural histories and practices with new contrasts and propositions that may enable them to resist, and move beyond, the plausible and probable tendencies that besiege the impasse of the present.

This is certainly easier said than done. From the beginning, this collection grew out of a collective, transdisciplinary process of cultivating forms of speculative research, which began with a workshop on ‘Speculation and Speculative Research’, in May 2014, and another on ‘Thinking Through Possibilities’ in May 2015, both under the auspices of the Unit of Play in the Department of Sociology, Goldsmiths, University of London. In organising these workshops, we chose to experiment with formats that could allow for a greater space for exchange and experimentation than one would otherwise normally expect to obtain in academic settings. This involved bringing together an international group of scholars and practitioners from a variety of disciplines (including philosophy, social theory, sociology, science and technology studies, and design) and theoretical, methodological, and practical backgrounds and concerns.

During the first workshop, we asked each participant to submit, in advance, a paper-in-process that would allow for their own concerns to resonate with the following questions:

Can social and cultural research become speculative? What do practices of speculation consist of and what modes of speculation are there? What are the implications of allowing for speculation to ingress into the practices of researching social and cultural change? What might speculative research offer to the re-invention of otherwise seemingly intractable ‘problems’? How can speculation become a productive mode of thinking, feeling and knowing, and not just a practice of conjecturing and managing uncertainties?

Rather than structuring the event around individual presentations and the typical turns of questions and answers upon reception of the papers, we assembled a programme structured entirely around *responses* and discussions*.* That is, each one of the participants was assigned with the task of constructively responding to two other papers, such that each paper received, in turn, responses by two other contributors. After each round of responses, the entire group would join in for an expanded discussion on the emergent questions, possibilities, challenges and connections that they saw emerging from the propositions that the papers developed.

The second workshop, by contrast, involved no papers at all. Smaller, more experimental still, this forum gathered a number of participants from the first workshop and some others in an informal setting, to spend an entire day freely discussing the stakes of cultivating a speculative sensibility to the possible, and of thinking of research in terms of possibilities, prompted by the following questions:

What does it mean to undertake research in terms of possibilities? What do possibilities ‘open up’ and what do they ‘close down’? In what ways are possibilities ‘real’, and what might it mean for speculation to ‘make possibles’? What ethical, political, and epistemological questions might possibilities pose to practices of knowledge-making?

*Speculative Research* is thus the result of a process of thinking collectively through the possibilities, difficulties, opportunities and challenges, the hopes, dreams, and fears, of cultivating a speculative sensibility to research. Indeed, the many chapters that compose this collection explore, by way of their own situated engagements, diverse aspects of the process of nurturing speculative research. It is thus by attending to such questions and concerns, to both the requirements and obligations of such a process, that we have decided to organise this collection in four sections, each consisting of three chapters.

The first section, titled *Speculative Propositions,* gathers together chapters that, in different ways, open up and explore the stakes of a constructive reappraisal of speculative practices as modes of thought that may animate experimental engagements with (im)possibilities inherent in the creative dynamics of social and cultural change. In so doing, a series of pressing questions come to the fore: how can speculative thinking be pressed into the service of empirical research despite its anti-empirical associations? How can the speculative help to understand the novel interplay and emergence of interests and the transformation of habits of those concerned with the question of how to think, imagine, and act for the future? If the speculative is not to be reduced to what is merely groundless, far-fetched or fanciful, then what are the constraints of the speculative and how can these be grasped for the purposes of research? The chapters in this section take these, and other, questions up in different ways by devising propositions for speculative practices of thought, action, and care.

Unlike other future-oriented modes of thought, the aim of speculative practices is not that of evoking an abstract, normative future that could finally be rid of all compromises, of everything that inheres in the present from which a concrete form of experimentation with possibles might seek to depart. Speculative propositions, Whitehead (1978: 256. emphasis added) suggested, are ‘tales that perhaps might be told about particular *actualities*.’ It matters what those actualities are. The second section, *Speculative Lures,* takes up this challenge, andasks what might act as a lure for speculation in actual, empirical situations in the fields of global health, commercial design, and in debates about the origins of money. Contesting the need for a framing of research where knowledge is determined in advance and where political, ethical and medical achievements risk becoming insensitive to the rich differences that may afforded by the open practice of inquiry itself, the chapters in this section wonder about how to tell alternative tales about particular actualities, tales that could make available ways of resituating and relating to the empirical. In this way, this section take up the challenge of intervening speculatively in a situation with the aim of shifting the intensities with which a future may be felt in the fugitive present.

Engaging with speculative thought also entails questions around what exactly comprises and counts as the empirical and the methods, instruments and ‘devices’ used to relate to it (cf. Adkins & Lury 2009). The third section, *Speculative Techniques,* takes up this challenge. Recently, the social sciences have become preoccupied with the constitutive, ‘performative’ and ‘non-representational’ dimensions of research methods as well as the acknowledgement and inclusion of non-human agency (Law 2004; Back and Puwar 2012; Lury and Wakeford 2012; Wilkie et al. 2015). Much of the work and debates in this area have also touched upon questions around interdisciplinarity and the broadening of the techniques through which the ‘social’ may be grasped as a relational, processual and indeterminate reality. This section explores how, on the one hand, approaches inspired by speculative thought resonate with contemporary methodological debates in social and cultural research. On the other hand, it describes how a shift to the speculative register forces to come to terms with the constructive nature of a process that resists pre-defined research questions and actively formulates and risks asking alternative questions and devising research techniques anew. The chapters in this section, then, detail how the speculative can inform inventive approaches to the tuning of research techniques through three interdisciplinary empirical cases.

We have said that, in a sense, this collection constitutes the *outcome* of a process of responding collectively, and experimentally, to the insistence of the possible by seeking to cultivate forms of speculative research. Simultaneously, however, our hope is that this collection may also serve as an *opening*, an invitation for other social and cultural researchers to engage their own questions, problems and research situations with a renewed curiosity, and with new challenges that seek to take seriously the (im)possibilities latent in the present. The forth section, *Speculative Implications,* takes up the task of exploring the possible consequences that these engagements with speculative research and possible futures may enable for rethinking broader political, ethical and aesthetic questions. What might, after all, be the function and role of speculative propositions, and what are the implications of cultivating a speculative sensibility to the world? Indeed, what might it mean to ‘live speculatively’? By returning to some of the philosophical sources that provide inspiration for the development of more practical and empirical forms of speculative research, and engaging with their more general, philosophical implications, the chapters in this section provide a series of meditations on the relation between speculation and the art of life: that is, the political, ethical, and aesthetic task to live, to live well, to live better (Whitehead 1958). As such, the chapters in this section offer important and wide-ranging insights on what may be at stake in cultivating speculative orientations to thought, to research, to the future, and to the world.

Finally, the collection ends with an afterword by Monica Greco, who reflects on the collection as a whole, and contributes to the opening it seeks to create by wondering about the double challenge, at once ethical and political, of speculative research. That is, that of developing propositions that take the (im)possible seriously –and may thus risk sounding ludicrous, even outrageous, to those who do not– while simultaneously caring for what Isabelle Stengers (2000: 14) calls ‘The Leibnizian Constraint’– the one that demands that philosophy, as well as social and cultural research, ‘should not have as its ideal the “reversal of the established sentiments”’. A constraint that ties together ‘truth and becoming and assigns to the statement of what one believes to be true the responsibility not to hinder becoming: not to collide with established sentiments, so as to try to open them to what their established identity let them to refuse, combat, misunderstand.’ (ibid.)

It is under the sign of such a constraint, then, that we hope *Speculative Research* may itself constitute a proposition to our readers. A proposition whose only chance of inducing a becoming of the established patterns of thinking, knowing and feeling that affect our practices must be not that of a general denunciation of what it addresses, but that of a risky attempt to attract their interests– to become capable of luring them to the adventures that possible futures open up.

# References

Adam, B.; Beck, U. & Van Loon, J. 2000. *The Risk Society and Beyond: Critical Issues for Social Theory*. London: Sage.

Adam, B. & Groves, C. 2007. *Future Matters: Action, Knowledge, Ethics*. Leiden & Boston: Brill.

Adkins, L. & Lury, C. 2009. Introduction: What is the empirical?. *European Journal of Social Theory,*

Amoore, L. 2013. *The Politics of Possibility: Risk and Security Beyond Probability.* Durham, NC & London: Duke University Press.

Amoore, L. & Piotukh, V. 2015. *Algorithmic Life: Calculative Devices in the Age of Big Data*. London & New York, NY: Routledge.

Atwood, M. 2011. *In Other Worlds: SF and the Human Imagination.* London: Virago.

Back, L. & Puwar, N. 2012. *Live Methods.* Oxford: Wiley-Blackwell.

Baker, T. & Simon, J. 2002. *Embracing Risk: The Changing Culture of Insurance and Responsibility*. Chicago: Chicago University Press.

Beck, U. 1992. *Risk Society: Towards a New Modernity*. London: Sage

Beck, U. 2008. *World at Risk*. Cambridge: Polity Press.

Bergson, H. 2002. *Key Writings*. London: Continuum

Brown, N. & Michael, M. 2003. A Sociology of Expectations: Retrospecting Prospects and Prospecting Retrospects. *Technology Analysis and Strategic Management*, 15 (1), 3-18

Brown, N.; Rappert, B. & Webster, A. 2000. *Contested Futures: A sociology of prospective techno-science*. Farnham: Ashgate.

Bryant, L.; Srnicek, N. & Harman, G. 2011. *The Speculative Turn.* Melbourne: re.press.

Brynin, M. 2013. ‘Individual Choice and Risk: The Case of Higher Education’. *Sociology*, 47 (2), 284-300

Connolly, W. 2012. *A World of Becoming.* Durham, NC & London: Duke University Press.

Crutzen, P. J., & Stoermer, E. F. 2000. ‘The 'Anthropocene'’. *Global Change Newsletter,* 41, 17–18

de Goede, M. 2004. Repoliticizing Financial Risk. *Economy & Society*, 33(2), 197-217

Debaise, D. 2009. ‘The Emergence of Speculative Empiricism: Whitehead Reading Bergson’. *In:* Robinson, K. ed. *Deleuze, Whitehead, Bergson: Rhizomatic Connections.* Basingstoke & New York: Palgrave Macmillan, 77-88

Debaise, D. & Stengers, I. 2015*. Gestes Spéculatifs*. Paris: Presses du réel.

Deleuze, G. 2007. *Two Regimes of Madness: Texts and Interviews 1975-1995*. New York, NY: Semiotext(e).

De Laat, B. 2000. Scripts for the Future: Using Innovation Studies to Design Foresight Tools. *In:* Brown, N., Rappert, B. and Webster, A. eds. *Contested Futures: A sociology of prospective techno-science*. Farnham: Ashgate, 175-208.

Douglas, M. 1992. *Risk and Blame: Essays in Cultural Theory*. London & New York: Routledge.

Ericson, R. & Doyle, A. 2004. Catastrophe, Risk, Insurance and Terrorism. *Economy & Society*, 33(2), 135-173

Flynn, R. & Bellaby, P. 2007. *Risk and the Public Acceptance of New Technologies*. London: Palgrave.

Gilman, H. and Riley, T. 2002. *The changing of the avant-garde: visionary architectural drawings from the Howard Gilman collection*. New York, NY: Museum of Modern Art.

Grosz, E. 2004. *The Nick of Time: Politics, Evolution, and the Untimely*. Durham & London: Duke University Press.

Gunn, J. & Candelaria, M. 2004. *Speculations on Speculation: Theories of Science Fiction.* Lanham, MD: The Scarecrow Press, Inc.

Hacking, I. 1990. *The Taming of Chance*. Cambridge: Cambridge University Press.

Harman, G. 2013. ‘The Current State of Speculative Realism’. *Speculations: A Journal of Speculative Realism,* IV, 22-28

Hunt, M. 2011. *Shakespeare’s speculative art.* Basingstoke; New York, NY: Palgrave Macmillan.

James, W. 2011 [1907]. *Pragmatism and The Meaning of Truth.* Milton Keynes: Watchmakers.

Kerr, A. & Cunningham-Burley. 2000. On Ambivalence and Risk: Reflexive Modernity and the New Human Genetics. *Sociology*, 34 (2), 283-204

Koselleck, R. 2004. *Futures Past: On the Semantics of Historical Time*. New York, NY: Columbia University Press.

Lang, P. and Menking, W. 2003. *Superstudio: Life without objects*. Skira Milano.

Larner, W. & Walters, W. 2004. *Global Governmentality*. London: Routledge.

Latour, B. 1993. *We Have Never Been Modern*. Cambridge, MA: Harvard University Press.

Lash, S.; Szerszynski, B. & Wynne, B. 2000. *Risk, Environment & Modernity: Towards a New Ecology*. London: Sage.

Law, J. 2004. *After Method: Mess in social science research*. London & New York, NY: Routledge.

Luhmann, N. 1993*. Risk: a sociological theory.* New York: A. de Gruyter.

Lury, C. & Wakeford, N. 2012. *Inventive Methods: The happening of the social*. London & New York NY: Routledge.

MacKenzie, D. 2006. *An Engine, Not a Camera*. Cambridge, Mass; London: MIT Press.

Meillassoux, Q. 2008. *After Finitude: An Essay on the Necessity of Contingency.* London: Continuum.

Melchior-Bonnet, S. 2001. *The Mirror: A History.* New York, NY; London: Routledge.

Michael, M. & Rosengarten, M. 2013. *Innovation and Biomedicine: Ethics, Evidence and Expectation in HIV*. London: Palgrave.

Miller, P. & Rose, N. 2008. *Governing the Present: Administering Economic, Social and Political Life*. Cambridge: Polity Press.

Mirowski, P. 2014. *Never Let a Serious Crisis Go to Waste: How Neoliberalism Survived The Financial Meltdown*. London: Verso.

Moore, J. 2015. *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*. London & New York, NY: Verso.

O’Malley, P. 2004. *Risk, Uncertainty and Government*. London: Routledge –Cavendish.

Pemmaraju, S. 2015. ‘Hedge/Hog: Speculative Action in Financial Markets’. *In:* Rao, V. et al. eds. *Speculation, Now: Essays and Artwork.* Durham, NC & London: Duke University Press, 52-59

Petersen, A., & Wilkinson, I. 2008. [Health, Risk and Vulnerability](http://www.amazon.co.uk/dp/0415383080/ref=rdr_ext_tmb). Oxon: Routledge

Rao, V.; Krishnamurthy, P. & Kouni, C. 2015. *Speculation, Now: Essays and Artwork*. Durham, NC & London: Duke University Press.

Rosa, E.; Renn, O. & McCright, A. 2014. *The Risk Society Revisited: Social Theory and Governance*. Philadelphia, PA: Temple University Press.

Savransky, M. 2012. An Ecology of Times: Modern Knowledge, Non-modern Temporalities. *In:* Lawrence, C. & Churn, N. eds. *Movements in Time: Revolution, Social Justice, and Times of Change*. New Castle: Cambridge Scholars Publishing, 264-271

Savransky, M. 2016. *The Adventure of Relevance: An Ethics of Social Inquiry*. Basingstoke & New York: Palgrave Macmillan.

SECC 2014. *Equity market structure literature review part II: High frequency trading*.

Selin, C. 2008. The Sociology of the Future: Tracing Stories of Technology and Time. *Sociology Compass*, 2(6): 1878-1895

Serres, M. 1995. *The Natural Contract*. Ann Arbor: University of Michigan Press.

Serres, M. and Latour, B. 1995. *Conversations on science, culture, and time*. Ann Arbor: University of Michigan Press.

Sewell, W. 2005. *Logics of History: Social Theory and Social Transformation.* Chicago: The University of Chicago Press.

Stengers, I. 2000. *The Invention of Modern Science*. Minneapolis, MN: University of Minnesota Press.

Stengers, I. 2010. *Cosmopolitics I*. Minneapolis, MN: Minnesota University Press.

Stengers, I. 2015. L’insistence du possible. *In:* Debaise, D. & Stengers, I. eds. *Gestes Spéculatifs*. Paris: Les Presses du Réel, 5-22.

Strathern, M. 1992. *Reproducing The Future: Anthropology, Kinship, and The New Reproductive Technologies*. Manchester: Manchester University Press.

Tulloch, J. & Lupton, D. 2003. *Risk & Everyday Life*. London: Sage.

Uncertain Commons. 2013. *Speculate This!*. Durham, NC & London: Duke University Press.

Válery, P. 1945*. Regards sur le monde actuel et autres essais*. Paris: Gallimard.

van Lente, H. 1993. Promising technology: The dynamics of expectations in technological developments. PhD Thesis (PhD). University of Twente.

Whitehead, A. N. 1958. *The Function of Reason*. Boston: Beacon Press.

Whitehead, A. N. 1967. *Adventures of Ideas*. New York: Free Press.

Whitehead, A. N. 1978. *Process and Reality: An essay in cosmology*. New York: Free Press.

Wilkie, A. and Michael, M. 2009. Expectation and Mobilisation: Enacting Future Users. *Science Technology Human Values*, 34(4), 502-522.

Wilkie, A. 2010. User assemblages in design: an ethnographic study. (PhD). Goldsmiths, University of London.

Wilkie, A., Michael, M. and Plummer-Fernandez, M. 2015. Speculative method and Twitter: Bots, energy and three conceptual characters. *The Sociological Review*, 63(1), 79–101.

Wynne, B. 1992. Uncertainty and environmental learning: reconceiving science and policy in the preventive paradigm. *Global environmental change*, 2(2), 111-127.

Zegher, M. C. d. and Wigley, M. 2001. *The Activist Drawing: Retracing Situationist Architectures from Constant's New Babylon to beyond*. Cambridge, Mass.; London: MIT Press.