

Routledge Companion to Objects and Materials: An Introduction

brick
body pure object rubber spoon
floor pure object rubber salmon
pen script teddy bear
biobrick synthetic cell wall
place legal record printer
swatch Nike swoosh
wood commodity powder document
PREP pill patent
data footprint shaman's gown
teapot piano cadaver metronome
coin radium rubber doll mummy
books building aluminium gold
irrigation canal city plastic meerkat
monument axe
flesh stuffed yellow dog statue
prototype car
behavior boat infrastructure
clock
image vehicle to vehicle communications system
printed sheet digital model
threat washing machine

Objects and Materials – Collaborative Relations

The array of objects and materials with which we open this companion volume deliberately echoes the imaginary encyclopedic listing that Foucault draws from the work of Borges to show how things become intelligible through the relations that surround them. An encyclopedia, traditionally, does the job of revealing what a thing is by mustering and representing the relations deemed most relevant, and thus most useful to readers. Borges was working in the opposite direction. His fantastical encyclopedia revealed the unsettling effects of things grouped as if there were connections, when those connections are unfathomable to the reader. The effect was to un-do the certainties, the habitual modes of classification and to open things up to strange alternative possibilities. Foucault's (1970: xxiii) interest in *The Order of Things* was to track back through western intellectual history to reveal that the apparent certainties and stabilities of the modern social sciences were a mere 'wrinkle in our knowledge', a recent invention of the modern *episteme*.

Our introduction does not claim, nor does it aim, to provide an integrative overview or an account of a twenty-first century episteme. Rather it builds on the incidental nature of the objects and materials presented in this volume to uncover some of the preoccupations and philosophical questions regarding the heuristic promise of objects and materials in the contemporary social sciences and humanities. The chapters gathered here suggest that there is a general agreement across the humanities and social sciences that *things* are relational, that subject/object distinctions are produced through the work of differentiation, and that any specific material form or entity with edges, surfaces, or bounded integrity is not only

provisional but also potentially transformative of other entities. At the same time, our array of objects holds no categorical promise. It is rather a set of empirical starting points for exploring just what the nature of such material or object relations might be, how differentiation occurs, and what the implications might be for seeing objects in terms of their transformative potential. All the objects and materials listed above are drawn from the work of our contributors. They are things that provoked reflections on the insistent presence of object forms in everyday life. And they open us to what objects and materials, separately and/or together, can draw attention to, or teach us about the worlds in which they appear.

This companion thus sets out to accompany those who are interested in exploring how objects and materials actively participate in the worlds that we research or otherwise engage as artists, practitioners, and/or activists. Our primary objective is to interrogate the terms of our collaborations with objects and materials, and to consider how these become integral to how we engage each other

From the beginning, our approach to bringing this book into being has been as an exercise in inter-disciplinary engagement. Our editorial collective grew out of a particular experiment in cross-disciplinary social science which has, since 2006, gone under the name of CRESC – the ESRC funded Centre for Research on Socio-Cultural Change. Within CRESC different research groupings have emerged and each has worked in its own particular way. We have not systematically compared or drawn together our diverse disciplinary approaches to a common topic. Objects and materials were not our starting point. Rather, we came together as a group of people with a general interest in issues of politics and cultural value. Our presence in CRESC suggested an openness to other ways of working – but at the same time we each continued to work on these themes in our own way. The objects of our research focus

were diverse. Periodically we came together and listened to what others were absorbed by, we read each other's work, and took up suggestions of what to read. We began a reading group on Deleuze, we organized seminars on topics of common interest, and slowly the mutual influences grew until – at one of our annual residential meetings – we realized that a powerful common preoccupation was how to approach the presence of objects and materials at a time when, theoretically at least, the self-evidence of such things was overtly in question. We recognized that there were important differences in the way we were approaching the challenges posed by objects and materials. But we were reluctant to explain such differences in purely disciplinary terms. The differences seemed to have as much to do with the specificity of our empirical concerns as they did with the overlapping theoretical and analytical approaches that we brought to our work. We thus set about choosing, each from our own perspective, who we would like to introduce each other to – to read, to talk and listen to. The invited contributors to two key events in 2009, became the core of this collection.¹

Our model of inter-disciplinary engagement thus did not focus primarily on specific disciplinary histories and preoccupations. We were already in an intellectual space where the objects and materials that engaged us were challenging any easy disciplinary containment. Working within the explicitly interdisciplinary space of CRESC, we were all reading across established canons and all looking for ideas and approaches from a variety of sources.

This is not to say that our awareness of disciplinary tendencies was not important. Rather we approached disciplines not as contained collectivities, but as

¹ These events were a workshop on '*Materialising the Subject*', and the CRESC annual conference on the theme of '*Objects. What Matters?*'.

particular, institutionalised gatherings of conceptual resources, as intellectual spaces where particular theories, philosophies and empirical findings shape research questions and the ways in which scholars go about answering them. We were interested in how disciplines change over time, diversifying, fragmenting but also consolidating around particular concerns and interests. It is for this reason that we have chosen not to rehearse here any specific history of disciplinary configuration. Instead, in this introduction we draw attention to the ways in which a collection such as this demonstrates that while different disciplinary histories shape the ways in which scholars apprehend the empirical, they can never fully account for the routes that specific research trajectories will take. Patterns can be found, and they can be disrupted. Rather than taking our lead from a teleology of disciplinary thought, we start instead with the engagements with objects and materials as they appear in this volume.

Objects and Materials – Similarities and Differences

There is no *apriori* resolution in this volume as to the nature of the distinction between objects and materials or the relationship between them. For some authors the distinction between objects and materials is fundamental to their argument. Others treat the terms as more or less synonymous. Some authors work with a strong distinction between things and objects, others are more concerned to distinguish objects from artefacts. Some focus on processes of materialisation and the material condition or materiality. Some allow materials to take pride of place. Still others are drawn to conceptual objects.

It is perhaps useful at this stage to note that it is the category of the ‘object’ that emerges as particularly contentious for our authors. The reader will find

materials, things, artefacts and concepts deployed across the range of contributions (and they can be tracked through the index). But these terms are all far less controversial than the category of the ‘object’. Materials and artefacts are generally understood in terms of a distinction between matter and a fabricated form. Materials are consistently used to refer to the constituent fabric of things, while artefacts denote specific constructions. Similarly, those who choose to talk about things rather than objects are connecting to a well rehearsed and influential philosophical debate stemming initially from the rejection of the Kantian distinction between the thing as perceived by human beings, the passive object of human appropriation, and the thing as subject of its own movements and capacities, existing independently of human beings, unknowable and autonomous. There is a general agreement amongst our contributors that the value of the ‘thing’ concept in contemporary scholarship derives from an interest in attending to how things act back on the world, manifesting resistances, capacities, limits and potential, and thereby challenging the normative subject/object dichotomy. Concepts can also, in this sense, manifest thing-like qualities, which several authors explore. But whilst some authors are at times concerned about the objective qualities of concepts, the conceptual nature of abstract ideas is not particularly brought into question, although they materialise in unexpected ways in different contributions.

Where the trouble starts is with objects. And it is perhaps objects above all that reveal the need for a companion guide to their diverse permutations. Objects are sites of intellectual dispute: there is no agreement on what objects are. Are they active or passive? Are they living or inanimate? Are they complete or in process? Are they material or immaterial? Do they shut you out or invite you in? In this volume it seems that objects can be all these things. This confusion or profusion is exciting to

think with and about. Indeed, the force of this debate appears to offer the potential to shed light not just on objects themselves but on broader questions about why objects have become so contentious in the current moment.

Objects and Materials – Why Now?

Objects and materials do seem to have gained a particularly powerful purchase in the contemporary social sciences and humanities. A number of encyclopedias, readers and edited collections have been published in recent years which provide an introduction to the place of objects and materials in different disciplines, including anthropology, archaeology, sociology, and across the social sciences and humanities more generally (Graves-Brown 2000; Buchli 2002; Latour and Weibel 2005; Meskell 2005; Miller 2005; Tilley 2006; Henare, Holbraad et al. 2007; Candlin and Guins 2009; Cooper, King et al. 2009; Hicks and Beaudry 2010).

In the recent *Object Reader* (Candlin and Guins 2009), Grosz explains the current interest in objects by suggesting that they seem to straddle a ‘great divide’ in philosophical approaches, allowing people to think in concrete terms about what is implied by the move from the Enlightenment traditions of Kant and Descartes to the thinking of those ‘pragmatist philosophers who put the questions of action, practice, and movement at the center of ontology. What these disparate thinkers share in common is little else but an understanding of the *thing as question*, as provocation, incitement, or enigma’ (Grosz 2009: 125). Grosz associates philosophers as diverse as Nietzsche, Peirce, James, Bergson, Rorty and Deleuze in this philosophical move, which suggests that they in turn were motivated by provocations from beyond philosophy, from a world where developments in science and technology were blatantly disturbing established paradigms. Sloterdijk has written of how the use of

poison gas in the first world war reconfigured military awareness of where danger might lurk, the previously abstract atmospheric conditions becoming a source of threat and potential harm, in turn pre-configuring new types of warfare where the enemy is unseen, and potentially unidentifiable by traditional means (Sloterdijk 2009). Bio-technologies, to cite another example, opened new questions about life itself (Franklin 2007), while research in cellular technologies developed techniques that depended on ‘making cells live differently in time, in order to harness their productive or reproductive capacities’ (Landecker 2007: 212). Technological changes also provoked the law to assert new forms of ownership. Strathern (1995), for example, discusses a case brought to the Supreme Court of Justice in California in which a surrogate mother seeks to claim ‘ownership’ of the child to which she has given birth. Social studies of science and technology have repeatedly shown how material processes actively participate in the formation of philosophical and political constructs.

We cite several examples here to emphasise that we are not trying to produce a singular narrative that signals linear epochal change. We are simply wanting to point out how many contemporary objects destabilise object categories. We could add many more examples of objects emerging from specific sites of innovation, such as: the linking of biology, computer sciences and cognitive sciences; advances in theoretical physics; the importance of virtuality in contemporary art and design; the design paradigm itself as it emerges via synthetic chemistry to produce new smart materials; the new markets and trading possibilities that have enabled the development of knowing capitalism, and have driven financial booms and collapse; the possibilities for mass production and mass consumption – for global branding and commodity circulation, and the forces of nostalgia for the non-modern that in turn

becomes another commodity. Computing is central to these new configurations, as is the rise in awareness of systems and networks, and of the inter-connectivity (planned and unplanned, consequential and inconsequential) of all things. These relational paradigms combined with the increase in the volume and rhythms of informational circulation, storage and retrieval underpin many contemporary concerns – with climate change, pollution, food security, population trends and movements, and political and financial futures.

There are, moreover, other things that entities conceived as overtly relational draw attention to. Synthetic objects, and all those objects that are explicitly informational, such as those driven by algorithms which have the dynamic capacity for self-transformation, have provoked scholars from many different backgrounds to revisit objects that have been there all along. Thus it is that this *Companion to Objects and Materials* sets out to re-introduce archaeological artefacts, political tools (coins, records, patents), infrastructures, human bodies, carved statues, and domestic technologies alongside dynamic data objects, synthetic pharmaceuticals, driverless cars and digital models. Overall we are less interested in whether objects are ‘new’ or ‘old’, and agree with Edgerton’s warnings of misplaced futurism (Edgerton 2008) What we are more interested in is how contemporary conjunctures render objects problematic in new ways, and provoke us to look again at familiar things: patent law, mummified bodies, ontological differences, technological artefacts, animal behaviour, financial systems. Although these things have some kind of ‘object’-ive continuity through time, their histories and effects at different times have sometimes been so radically different that we might even argue that they are not the same ‘things’ at all.

The capacity of seemingly stable objects to radically change over time, is a key preoccupation of many of the contributors to this volume, and perhaps one of the

central reasons why all of the pieces gathered in this collection are focused on the possibilities afforded by a relational understanding of objects and materials. An awareness of the paradoxical way in which objects both seem to change and endure through time, requires a form of analysis that draws attention to the way in which objects are constituted by, participate in and push at the limits of particular relational configurations. One effect of this attention to the relational properties of objects, is to introduce the relation as itself a particular kind of analytic object. The relation accompanies all our objects and materials, is intrinsic to all our contributions, and central to the ways in which objects, materials, artefacts, things and concepts are variously configured by our authors. Some celebrate these relations, and work to make them explicit. Others experiment with forms of narrative description to evoke the relational properties of objects which cannot be easily explicated. Some are even worried that the contemporary enchantment with relations threatens what they value most about objects, namely their capacity to stand alone. It is to these relational concerns that we now turn.

Relational affordances

In this section our aim is to locate the chapters in relation to a broader theoretical conversation about the relational dynamics of objects and materials. While the relation accompanies all of the objects and materials presented in this Companion, the kind of relations that objects are understood to partake in varies in relation to specific objects, materials and the theoretical arguments put forward by different authors. Although this variety is highly generative analytically, it also risks having the effect of destabilising objects and materials to such an extent that it becomes difficult to compare their appearances across the chapters. Without attempting to explain away the productive tension that the variety of relational approaches to objects produces,

then, we offer in what follows an alignment of this variety of object-relations into three broad categories. We identify these as 1) relations between objects, 2) objects as relations and 3) excessive objects. These three kinds of relations are not easily reduceable to discrete theoretical traditions or to particular thinkers. Nor do they neatly demarcate the different chapters presented here. Nonetheless, they do seem to lie at the heart of many of the discussions, questions, analytical choices, and political objectives that the contributors to this book are pursuing. Our hope is that by addressing each category of relation in turn, this introduction will provide a navigational device which will assist in drawing lines of association across what at first might have appeared a disparate and disconnected array of objects and materials.

Relations between Objects

As we have argued above, a general awareness of relational thinking in the humanities and the social sciences has made it commonplace to think in terms of how objects become meaningful, useful, or in some way significant via their relations with other entities. Take, for example, this book. We might want to approach the book as an object which participates in relationships with other things. From this perspective we could trace how the book connects or mediates relations between authors, publishers and readers, but also paper, ink, computers and printers, and even more abstract 'things' such as ideas, memories, images and expectations. In such studies of material culture, each such relation can be taken as a point of departure for tracking further webs of relations, allowing us to trace what have come to be known as the social lives of things, in which objects, like persons, have particular biographies of circulation (Appadurai 1986; Kopytoff 1986).

Equally, in a particular project, such as the production of a book, we could take any of these related objects as elements that actively propel the process. No longer simply objects in a passive sense, institutions, technologies and artefacts play an active role in bringing our book into being. The book would not exist without the involvement of publishing houses and their key distributors, bookshops, libraries, postal services, printing firms, computers, websites, software systems, kindles and ipads, cardboard and paper. Latour (1988) referred to these helpers, human and non-human, as ‘allies’ in his concern to highlight the active force of material things. The agency of things, in this respect, requires no intention or human-like quality, it simply refers to the ways in which specific material configurations are actively engaged in shaping relations and in that sense are social actors. Thus, for example, he describes how the concrete ‘sleeping policeman’ compels drivers to slow down in residential areas, the Berlin key ensures that residents lock the door behind them, or the automated door closer guarantees that drafts are avoided (Latour 1991; Latour 1992) – that is, as long as it doesn’t break down. Such breakdowns are of course also part of social life, and another dimension within which objects make and are made by their relations with other entities (Graham and Thrift 2007).

Once we start to attend to the relations that specific objects engage in, we also become attuned to the way in which objects acquire different significance under different sets of relational conditions (Thomas 1991; Miller 2009a; Miller 2009b; Miller 2012; Miller and Woodward 2011). Thus for our contributing authors this book may be a more or less significant achievement as part of a personal history of academic and social reproduction. For people who buy the book it may hold the promise of answering particular questions. It may also of course serve more unexpected purposes – a doorstep for example.

In a somewhat different theoretical vein we also want to acknowledge the relations that objects themselves appear to call forth. James Gibson discussed the ways in which objects shape relations by reference to their affordances, that is the particular qualities of things through which an object lends itself to specific relational possibilities according to whether it is hard or soft, sharp or blunt, liquid or solid, pliable, malleable or rigid. However, as Ingold (2011 (2011) has recently pointed out, Gibson oscillated between two quite different ways of approaching object relations. On the one hand he seemed to propose the relational dynamic as mutually constitutive, with things and persons formed in processes of engagement; but yet he also writes about more stable relations between pre-existing objective entities. That is, Gibson tried to have it both ways, as demonstrated by the following passage:

An important fact about the affordances of the environment is that they are in a sense objective, real, and physical, unlike values and meanings, which are often supposed to be subjective, phenomenal and mental. But, actually, an affordance is neither an objective property nor a subjective property; or it is both if you like. An affordance cuts across the dichotomy of subjective-objective and helps us to understand its inadequacy. It is equally a fact of the environment and a fact of behaviour. It is both physical and psychical, yet neither. An affordance points both ways, to the environment and to the observer. (Gibson 1979: 129, cited in Ingold 2011:78).

For Ingold, in his sympathetic adaptation of Gibson's insights, it is the sense of the pre-figured 'object' that gets in the way. Rather than approach the world as a place filled with such things, which humans perceive as external to themselves, and then build relationships to those things according to their specific qualities (or affordances), he suggests that we might think instead of how the life-worlds of

persons and things are entangled from the start. Thus rather than attending to how persons relate to things – we might think instead of environments as spaces of action and experience in and through which persons and things take on significance, uses, possibilities in relations of mutual specification. What something is, what its qualities are is then figured as an outcome not a precondition.

In the first section of the book, on *Material Qualities*, some of these possibilities are explicitly addressed, and the themes resonate through other sections, particularly in the final section on *Becoming Object*. At this point however we find that we have reached the limits of our discussion of relations between objects, or what from now on we will refer to as ‘extensive relations’. The tracing of extensive relations between objects reveals objects as active participants in social networks. However the limits to this approach concern the ways in which the objects themselves, while engaged as fully social, nonetheless tend to be understood as singular and stable. They move and engage but do not otherwise transform. Other approaches to which we now turn are more concerned with how it is that objects and materials can come to seem so stable. Starting from an interest in the intrinsic multiplicity of things, those who approach objects and materials in this way are more likely to ask how it is that objects and materials can achieve this sense of stability. It is to this aspect of relationality that we turn in the following section, moving from a focus on relations between objects to an understanding of objects as relations (Strathern 1995).

Objects and Materials as Relations

Asking what things are made of is the most basic question to pose with respect to objects and materials from some disciplinary perspectives. Archaeological research for example has traditionally started from an analysis of material composition, but so too would research into things whose chemical properties are active and in question, or indeed the investigation of all kinds of objects and materials that are known to be unstable, to transform or mutate. Anthropologists have frequently drawn attention to the way in which some people routinely question what things are, secure in the knowledge that outer form or appearance is no guarantor of inner substance. In the Peruvian Andes, for example, malign forces are said to disguise themselves in human forms, which the cautious would do well to be alert to. It is hard to tell the difference between a human and a spirit body, and people look out for small signs of non-human composition, a straw waist, or a fleshy crown hidden under a human-style hat (Harvey 2001).

Understandings of material composition may thus be important in specific circumstances, and more importantly the things we are told or shown by those we engage in the course of our research may well indicate significant ontological differences to which we might wish to attend. However, our understanding of objects and materials as relations is not primarily directed at this notion of material composition, and still less at the correlate understanding of ‘objects’ as detached units of volume or containment. On the contrary we are interested in moving beyond the categorical distinctions between insides and outsides that the container metaphor holds us to, in order to explore in a more open way how entities, conceived as collectives, can manifest continuity in time and space, despite the mutations in form that living process necessarily entails. We find it useful to call the relations that go into making objects in this way, ‘intensive relations’. Drawing attention to intensive

relations allows for an increased sensitivity to ontological instability and the related sense of ontological multiplicity, that encourages a move away from a preoccupation with ontological difference per se.

This topic animates the discussion of many of the objects and materials which our authors attend to in the chapters that follow: such multiple, mutating objects include waste matter, stone carvings, human cadavers, bio-digital objects, brands, money, algorithms, fish, meerkats and many more. Scholars of science and technology studies have invested considerable energy in explicating the intrinsic multiplicity of things, and in looking at the practices through which mutating entities can appear stable, and multiple entities can appear singular. Annemarie Mol's account of how atherosclerosis is made to cohere as a singular medical condition is the subject of her renowned work on ontological multiplicity (Mol 2003). Fieldwork in a Dutch hospital revealed how fragile this disease object was in practice – meaning different things to different people, manifesting as quite divergent conditions, and thus drawing forth and enacting a whole range of different relations. Living with atherosclerosis in this framing involves not simply living with 'a disease', but living within the networks of persons and things where what atherosclerosis is, is never settled but constantly under negotiation. Mol sets out to explore in this case what she needs to understand in order to grasp how atherosclerosis can be both singular and multiple. In the STS approach advocated by authors such as Mol, Law, Haraway and Latour, there is no assumption of any meaningful distinction between human subjects and non-human objects, indeed the human and the non-human are taken as axiomatically entangled. All entities in this respect are ontologically heterogeneous. Haraway expresses this condition with her trade-mark verve: "I think we learn to be worldly from grappling with, rather than generalizing from, the ordinary. I am a creature of

the mud, not the sky. I am a biologist who has always found edification in the amazing abilities of slime to hold things in touch and to lubricate passages for living beings and their parts. I love the fact that human genomes can be found in only 10 percent of all the cells that occupy the mundane space I call my body; the other 90 percent of the cells are filled with the genomes of bacteria, fungi, protists, and such, some of which play in a symphony necessary to my being alive at all, and some of which are hitching a ride and doing the rest of me, of us, no harm” (Haraway 2008: 3-4).

Thus while our previous focus on relations between objects (extensive relations), might encourage the analyst to bring context into view, this focus on intensive relations, or on objects as relations encourages us to think about the ways in which entities are never unitary or stable. Their intrinsic multiplicity implies constant work of care and repair if things are to hold some integrity even when changing. This also implies processes of decay or growth, the possibility of unexpected outcomes or the sudden activation of relational dynamics which were not previously apprehended. These uncertain relational dynamics are the subject of our third relational configuration – that of the excessive relation or relational happening.

To conclude this section however we return briefly to our example of the book you are currently reading. In what sense is this book ontologically multiple and unstable? How is it transforming and mutating – when it actually seems to be fairly unexciting in this particular respect? To enliven the book, and to become aware of its intensive relations requires attention to the practices through which it comes to appear so stable. The fact that this book exists at all is already a manifestation of the relationship between readers, authors and a publishing company (with all the relational entities contained in each of these entities), and in a more distributed sense

we should also fold in our areas of empirical concerns and the theories and traditions we each draw on. These relations might not appear to be that different to the ones described previously – contextual relations that include relations with publishers, authors, readers, printers, distributors, paper makers, etc. But the shift of focus to intensive relations is a shift to thinking about how all these distributed relations come together – how they materialise as a book – how the book enfolds these relations, exists only through them, and in that sense exists differently depending on the practices through which any particular person is engaged in the process.

Our exploration of intensive and extensive relations has enabled us to clarify that the objects and materials to which we refer in this Companion are variously assembled. The reader should now expect the objects and materials discussed within these pages to defy any straight-forward distinction between subjects and objects, and look forward to meeting things that mutate, travel and unsettle. In the final section of the introduction we look in more detail at how an attention to intensive relations comes to reveal the ontological instability of things. For as suggested above, the notion of ontological instability points us towards the limits of what we can know (for sure) about the things we study. This dynamic engagement with uncertainty and with the unknowable, or the barely known, is what we turn to in the following section.

Excessive Objects

There is a persistent unease in many of the chapters of this volume, regarding the degree to which objects and materials are amenable to descriptive closure. There is, it seems, an important quality to the relations we have just described which cannot be captured through the work of mapping these relations as either extensive or intensive,

but which is nonetheless essential to understanding these relations and the politics of their effects. As we have seen, an attention to the intensive relations through which objects come into being, necessarily produces the object as ontologically highly unstable. Objects appear not just as socially entangled or materially and socially constituted, but also as crystallisations of histories, projections into the future, powerful forbearers of that which is to come and painful reminders of that which has been. It is perhaps unsurprising then, that the authors of the papers in this volume frequently find themselves struggling with a certain quality of being in the objects and materials that they address, that appears to escape the describable or representative dimensions of the objects that they are concerned with. The power of objects and materials that our contributors have chosen to attend to often appear to exceed that which can be explained through attention to either the relations that are established between things, or the tracing of the relations that brought them into being. Instead objects draw out questions of a certain quality which constantly escapes their description, of the complexity that always accompanies them, and of event-like nature of their presence in particular situations.

For those who take a pragmatic approach to understanding objects in terms of the extensive and intensive relations that we have described so far, excess poses a problem. Some approaches attempt to contain the apparently excessive qualities of the relational object by explaining excess as a containable side-effect of the relations that they aim to describe. We might look to the externalities of economics as an example of this kind of excess (Callon, 1998). Excess in this mode becomes the new ground which a desire for descriptive containment then attempts to colonise. In contrast, others choose to see excess as the limits of their (social) science. For Latour, excess exists in the figure of 'plasma' (Latour, 2005). For positivist natural science it must

lie in entities such as god, spirit, and magic that are not generally considered understandable through experimental method. However what is striking about many of the contributions to this volume is the desire not to stop at the point where the excessive qualities of objects rear their heads, but rather to find ways of holding onto the importance of the excessive qualities of objects. Rather than trying to relocate these excesses via practices of categorisation, or denoting them as outside the purview of social science, many of the chapters in this volume make an explicit attempt to hold on to that quality of the object which cannot be captured by the mapping of relations in the intensive or extensive modes or the reduction of object effects to the descriptive closure of human interpretation. We term these relations which escape relational mapping in this way, ‘excessive relations’.

An example of attention to the excessive quality of an object occurred during the writing of this introduction when one of the editors of this edition recounted a story she had been told by a friend. The friend had been alone at home when she had heard the footsteps of an intruder at the bottom of the stairs. Grabbing the nearest heavy item she took hold of her husband’s thesis and hid behind the door ready to assail the burglar with the heavy tome. On recounting the incident later to her husband, the friend commented that he had been less disturbed by the trauma of the possible burglary than the fact that she had chosen to defend herself with his PhD. He was horrified at the idea that his thesis on which he had lavished so much care, over so many years, could be used as a weapon. As an object, at the moment of the event, the thesis stood for more than the relations which went into its production or the nexus of relations in which it now circulates. The mutual specification of heavy book, scared woman and potential burglar had, indeed, transformed the thesis into a potential weapon, however it was a weapon that could not entirely shed its symbolic

status as a work of scholarly endeavour. It is this quality of inbetweenness or irresolution that the idea of ‘excessive relationship aims to draw attention to. Similarly as readers pick up and flick through this volume, we cannot imagine how the ghosts of past thinkers and the spirit of the objects and materials that they will encounter in this book may produce unexpected juxtapositions, uncanny coincidences or unsettling reactions which cannot be explained through a descriptive stabilisation of relations.

For several of the contributors, the language of ‘affect’ offers a powerful way of attending to this tense awareness of instability which it is hard to capture through ‘normal’ social scientific description. The work of Gilles Deleuze has been hugely influential in providing a theoretical resource for our authors, in exploring those qualities of relations which resist or escape the representational tendencies of social science. Deleuze’s (2005) analysis of Francis Bacon’s oeuvre (cited by Woodward in chapter xx), for example, depends not so much on mapping the artwork as a network of constitutive relations in the vein of Alfred Gell (1998), but instead articulates the relational effect of the artwork in terms of what Deleuze terms a ‘logic of sensation’, with a focus on the force of relations of shape, form and non-form for accounting for the power of Bacon’s art. It is this attention to force, to sensation and to the rhythmic qualities of the artwork that allows us to reconceive of the painting less as an object defined through constitutive or contextual relations and rather as an ‘event’. Deleuze explicates the artwork’s eventual qualities, by dwelling on the power of form and non-form to act dynamically to produce sensation. In this respect, Deleuze moves the analysis of the artwork from a form of cartographic description to a topological invocation, which stresses the sensory intensities of the work rather than its ‘meaning’.

Law and Mol's (2002) writing on complexity offers a helpful articulation of a broader preoccupation with how social analysis can deal with the complexity which defines the world(s) in which we live in a way that neither reduces that complexity through representational techniques of simplification, nor attempts the potential folly of tracking the entirety of all the complex relations that constitute the kinds of objects we address in this book. Law and Mol are not writing about affect, though their analysis of complexity is helpful in thinking about the techniques available for keeping some of the more affective qualities of objects in view, and the politics entailed in doing so. They explicitly disavow themselves either of an interest in what we have called extensive relations 'As you read this, where are you? Are you sitting at a desk or on a sofa, on an aircraft perhaps, or on a train', or intensive relations 'how many versions did this text go through, and what was added or deleted along the way', in favour of the question 'how might a text be where it is while also acknowledging that it is not everywhere – how might a text make room for whatever it also necessarily leaves out' (2002: 6).

Law and Mol find a provisional resolution to the problem of complexity in three ways. Firstly they appeal to the value of non-systematised lists, not unlike the collection of objects we began this introduction with. This suggestion is reminiscent of another thinker who has been influential for many of our authors - Walter Benjamin. Benjamin was also interested in the possibilities of the collection, though as Thoburn's chapter shows his preoccupation was more with the question of how to wrench objects from their utilitarian position within capitalist social relations, rather than dealing with the problem of complexity as such.

Secondly, Law and Mol suggest the use of empirical cases, with the proviso that the case is conceived not as an illustration of a general principle but as something

that might ‘seduce the reader into continuing to read...may act as an irritant, destabilizing expectations’... and ‘may act allegorically, which means that they may tell not just about what they are manifestly telling but also about something else, something that may be hard to tell directly’ (2002: 15). Given this description, the chapters collected in this volume might usefully be thought of as a series of cases, whilst many of the chapters construct their own narrative precisely by bringing a number of discrete cases into contact with one another in a way that generates analytical surprises for the reader.

Finally Law and Mol make a case for walking, as a ‘mode of covering space that provides no overview’. Like Ingold’s argument for a ‘dwelling perspective’, Law and Mol suggest that walking is a way of drawing out the dynamics of encounter which are key to understanding. As the case of the thesis used as a weapon illustrates, the notion of encounter offers the possibility of evoking some of those more affective dynamics associated with object relations, or what Law and Mol would call those ‘other possibilities’ which necessarily disappear in the act of creating a comprehensive understanding of the object of enquiry.

Returning for the last time to the figure of the book, these analyses which draw attention to the object as an unstable encounter work to open up a sensibility to dynamics that would conventionally escape a descriptive account of a book as representational form. The temporal quality of, for example, the torpidity of boredom or the thrill of a new idea would be seen to inhere neither in the content of the text, nor in the mind of the person reading the book but might rather be found in what Deleuze might call the ‘becoming’ of the book/reader assemblage.

This generative potential of objects and materials as moments of becoming, which focuses on the part that they play in bringing into being new social formations is another dimension of what we have termed the ‘excessive’. The moment of becoming appears as an important limit to the possibility of defining or describing object relations. In an effort to escape some of the commitments entailed by attempts to describe objects in terms of either their intensive and excessive forms of description, many of our authors draw on artists, whose creative and embodied engagement with materials provides inspiration for thinking about the co-emergence of human, social and material formations, and for exploring the limits of each of these categories. Others find that their engagements with objects require experimental and performative modes of description in order to access the particular qualities which would be erased by more conventional forms of academic writing.

In addition, the issue of the emergent co-becoming of social and material worlds raises key questions within the volume about the relationship between the excessive qualities of objects and materials and their temporal dimensions, in particular in relation to the way in which objects index traumatic memories, or hold out the uncertain promise of an as-yet unforeseeable future. Objects are not just a way of describing the past through the relations via which they have been made, nor are they simply a means of constituting the present through the relations that they forge, but in many contributions they also seem to have a virtual potential, orienting people and things towards an undefined and yet pressing sense of future. At the same time, the terminology of ghosts and haunting appears as a powerful language for alluding to the invisible, the silent, and that which escapes the materiality or the presence of objects and materials. Haunting seems to connect the past, present and future: the resonating past comes to haunt in the present meanwhile the unresolved or troubling

relations in the practices of the present are always at risk of producing the grounds for future ghosts to appear.

In each of these cases, the excessive capacity of objects works to push the social sciences and the humanities into new spaces of description, and into new forms of conceptualisation. Via their excessive qualities, objects and materials have the effect of drawing forth creative attempts to do justice to that which cannot be subsumed within the cartographic imaginaries of relational connectivity. What is perhaps most exciting for many of the contributors to this book is that the excessive or evental qualities of objects and materials, like the extensive and intensive relations we outlined above, draw out new dimensions of object-politics. Given the difficulty, however, of explicating the politics of affect and the excessive in the conventional language of social science, the objects we find in this volume repeatedly challenge us to engage with a broader question about where the empirical space of social science is thought to be and what place objects, materials, things and concepts might play in forming and re-forming the shape of the empirical and its relationship to politics.

Theory and the Empirical

Almost without exception, the chapters in this volume are driven by a specific engagement with the empirical, drawing heavily on primary research to attend to cases of phenomena in flux, and attempting to draw out relational insights through the description of complex and emergent patterns of more or less material relations. As we have seen, there are certain philosophical influences which recur in these chapters and which appear particularly useful for the authors in making sense of the empirical relations which they are exploring. At the same time, as we have shown above, the

way in which the theoretical is brought to bear on the empirical is uneven and complex.

We suggest that this is in part to do with the way in which particular methodologies have become part of the dynamics by which different disciplinary configurations set out to answer specific questions. Archaeologists, for example, work closely with materials in the course of excavation, in ways that make them highly attentive to the possibilities of both the narrative capabilities of matter, and the limits to the capacity of matter to produce theoretical insights. Ethnographic methods, in contrast, have tended to draw the attention of anthropologists and sociologists to an encounter with the complexity and emergence of social relations not only between humans but including non-humans of different kinds. Within anthropology, the discipline which claims ethnography as the core methodological tool out of which it is able to generate theoretical analyses, the spaces and subject-matter of ethnographic attention have shifted radically in recent years (e.g. analyses of science, technology, global processes, post-identity politics, mobility, multi-sited ethnography). Sociological traditions of ethnographic research continue to engage the question of how inequalities are forged and perpetuated by looking to theories of how power operates within human societies. Nevertheless new empirical conditions such as those generated by digital technologies, transactional data, and processes of securitization destabilise the self-evidence of concepts such as race, class and gender leaving the question hanging for some, as to what kind of empirical sociology is appropriate for a world which is increasingly characterised by uncertainty, instability and flux and in which there is ever more scepticism of the value of a search for overarching and enduring theories of 'society' as an object in itself (Adkins and Lury 2009).

As new empirical situations pose challenging questions for the social sciences and humanities then, we are increasingly forced to recognise that a turn to materiality and objects in the quest to develop new methods and theories is not merely an academic thought experiment. The desire to find non-epochal answers to material transformations is simultaneously driven by a sense of urgency which acknowledges that proceeding as if there were a separation between theoretical and empirical knowledge is untenable. Crises of security, territory and population, to recall Foucault (2007), manifested in events such as the financial crisis since 2008, the global ‘war on terror’ (Massumi 2005; Amoore 2009), and the ongoing threat of anthropogenic climate change (Serres 1991; Latour 2004) impinge on our capacity to theorise the world in which we live, driving the search for new epistemological paradigms and political theories capable of addressing the problems that we face (Bennett 2010; Coole and Frost 2010; Connolly 2011). Retaining the teachings of post-structuralism, but returning to the question of the material dimensions of social and political life, people working in diverse disciplinary traditions are asking how can we both exercise a critique of human induced crises and retain an openness to the tension which lies between the excessive, intensive and excessive forms of relationality which we have explored here.

The most important lesson to be drawn from the contributors to this volume is that material relations are highly political inasmuch as they condition the nature of action in the world and of future forms of intervention. This volume will not provide simple answers to these complex issues, but we hope it will in one way or another become a participant in the ongoing question of how to think and act in a world where our forms of thought and action are always tied up with complex material experiments and the formation and deformation of objects.

Introducing the Sections

Because of the diverse and overlapping interests of these chapters, we have grouped the chapters according to five themes which emerged from our attempts to understand the key questions preoccupying our contributors. All of the chapters engage, to a greater or lesser extent, with the three relational problematics which we have outlined in this introduction, but they do so for different purposes and with different questions in mind.

The first section is titled *Material Qualities*. Here we have drawn together a set of chapters which we see as most explicitly engaging the question of what role material qualities play in constituting social worlds. In these chapters we encounter a range of objects, from living and dead bodies to deified statues, canals, water, art works, synthetic plastics and smart materials. In contrast to classificatory knowledge practices which class materials according to measurable and definable properties, this section alerts us to the qualities of materials, be they numerical, tactile, physical or aesthetic, and to the ways in which they are both made by and make social relations. The material qualities section draws attention in particular to the relational surfaces of materials – the moment of contact between objects; to the action potential that materials contain and their capacity to constrain and condition social relations; to the ways in which materials participate in processes of political transformation in a process we refer to as ‘transforming states’, and to the fragility of the material world. In drawing together these chapters around the question of material qualities, we aim to provide a series of competing and sometimes contradictory explanations for how social and material dynamics are interrelated. Our hope is that the dissonances and

contradictions which we find between the papers can provide a generative starting point for thinking about the ways in which materials are capable of both instantiating and destabilising relations in complex and often surprising ways.

In the section on *Affective Objects* we bring together a set of chapters which collectively attempt to articulate an understanding of the materiality of emotive relationships. The chapters provide a series of compelling and empirically rich accounts of emotive relations that are established and destabilised through the presence of objects and material relations, such as a battered child's toy, an inherited pen, or a broken jaw. Whilst the chapters each provide their own analysis of the particular role that objects and materials play in the constitution of affect, all of the chapters engage the issue of how objects participate in modes of communication or transportation across space and time. Thus we find discussions in these chapters of the relationship between the viscosity of presence and the virtuality of memory and representation, the invisibility of the mundane as it relates to the moment of spectacle, and the link between the transience of a fleeting object and the sedimentation of meaning through processes of repetition and encounter. Collectively the chapters provide a rich analysis of a perennial problematic of western philosophy, namely the relationship between human subjectivity and material objectivity, or mind and matter. Resisting the temptation to fall on either side of this divide, the chapters offer new and often experimental forms of description and analysis that attempt to circumvent the conditions of knowledge production and analysis which tends towards the reproduction of the mind/matter dualism. The chapters in this section often mirror the ephemerality of affect and the capacity of affective objects to point to 'unfinished business' by leaving open the space for an ongoing discussion of how objects and materials participate in the making and breaking of emotionally charged sociality.

The section titled *Unsettling Objects* opens up the concept of the object to an array of entities which might, at first glance, not appear to be objects at all. Starting from the position that objects are not defined through some shared material substance, but are rather the effect of a relational othering – the object is that which is not me (unless I am seen from the perspective of another, in which case ‘I’ potentially become an object too) – these chapters open up the discussion of object-relations to include such entities as ghosts, shamans, commodities, programming code, powder, spirits and earthworms. Ironically, perhaps, the most elusive of the uncertain objects we encounter in this section, is Graham Harman’s ontological ‘object’ considered as a problem of philosophical speculation. Like the ontological object discussed in Harman’s chapter, each of the objects described in this section are discussed in terms of their capacity to unsettle the conventional concepts of the social sciences and humanities. The uncertainty that these objects seem to produce is turned to analytical ends to rethink the conceptual repertoire we have at our disposal for understanding why objects unsettle or, at times, to tame these objects into more settled conceptual spaces. These objects draw the authors to consider such issues as the place of sensory perception in social relations, the role of distraction and the cultivation of attention in forming relations with the world around us, the cumulative dynamics of knowledge as it pertains to processes of understanding and misunderstanding, and to the role of processes of decay, digestion and renewal in the constitution of the world which we inhabit.

In the section on *Interface Objects* we have brought together a set of chapters which pay particular attention to the way in which objects become constituted through moments of encounter. Building on the metaphor of the interface, each of the chapters in this section explore how objects of different kinds – money, models, cars, kettles,

brands – emerge through the work that they do in conjoining fields or entities of different kinds. Interfaces are shown in each of these chapters to be highly dynamic. Whilst on the one hand they bring fields of activity together they also work to transform these fields in the process of their enactment. Moreover, at the same time as bringing together particular activities or materialities they also produce new divisions, setting up the conditions of possibility for imagining the kinds of futures that might be desired and the outcomes that need to be avoided. They are, in this sense, intensive sites of change. What each of the chapters illustrate in their own ways, however, is how change at the interface is not a generic conceptual phenomena but is highly specific. In all of the chapters, change is shown to occur under the weight of specific administrative, legal, technical and material constraints. Indeed, what these chapters show is that it is precisely in the moment of encounter between diverse systems of ordering that both the potential and the threat associated with transformation comes into view.

Our final section, *Becoming Object* extends this focus on transformation by bringing together those chapters that work most explicitly with the issue of how objects and materials participate in processes of change. This section starts not from the idea that objects produce change, but instead asks what difference it would make to consider objects and materials themselves as manifestations of process, movement, emergence and becoming. The chapters in this section make productive use of some key conceptual metaphors which help us to imagine the morphological and material dynamics of change. Much inspiration is taken from the topological relationships through which matter might be understood to transform itself. Linear notions of temporal change are replaced by terms such as swarms, generativity, repetition, the archi-textural, the choreographic, networks, relational matrices and lash-ups, to

rethink the material dynamics of a terrorist threat, the behaviour of meerkats, or the qualities of place. The contribution of these chapters is to turn these distributed collections of material and object relations into an analytical resource in order to provide a radical re-evaluation of the valency of objects and the possibility of identifying the agentic qualities of change.

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