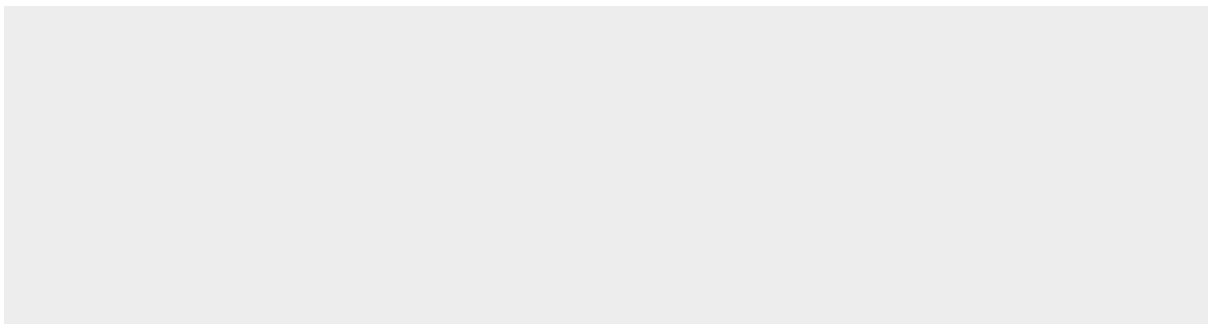# practice theory gathering

online
November 16-17
2023

Programme People Papers

Shipping Manual

Welcome to the Practice Theory Gathering 2023

PhD and Early Career Researchers in different countries and contexts are developing and conducting practice theoretically informed research. The Gathering is designed to foster connections between PhD researchers, early career researchers, and others working with theories of practice across the world and in various disciplines.

On the 16th of November the 3rd Gathering 2023 will start with four 'curtain raising' presentations about the contributions practice theories have made and might make to 'large topics' in society.

There will also be opportunities that day to participate in group conversations, mini-gatherings, and reading rooms.

On the 17th of November the sessions will focus on writings submitted in advance by participants for comment and discussion.

Throughout the Gathering there will also be opportunities to meet and chat with fellow practice theory enthusiasts during more casual sessions.

In this shipping manual you will find:

1. Key instructions concerning how the event will run and what you need to do to make it to the right virtual room on time.
2. A timetable for the two days.
3. A directory of participants.
4. A pack of readings.

We look forward to greeting you online and hope you enjoy the event. In the meantime, let us know if you have any questions: practicetheoryconsortium@gmail.com

For more information about the Centre for Practice Theory at Lancaster, the Consortium, events, resources, podcasts & videos please follow this link: http://wp.lancs.ac.uk/socialpractice/

How The Event Will Run

This event will be held on Zoom

Each day we will make use of a main plenary room and breakout rooms.

On day 1 the breakout rooms will be allocated at random for sessions, including: group conversations, mini-gatherings, reading rooms & virtual pubs.

On day 2 those that submitted writings for comments and discussion will be allocated to breakout rooms. The directory at the back of this manual shows which room you need to join.

We will send a reminder via the chat calling you and the members of your group to join the main room when necessary.

Programme

Day 1: 16ᵗʰ November 2023, 6 PM – 12 AM CET | 17th in some places!

Curtain Raising

Chaired by: Elizabeth Shove

		Welcome
Lancaster	17.00-18.00	
Berlin	18.00-19.00	Four short 'curtain raising' presentations about the
Johannesburg	19.00-20.00	contributions practice theories can make to 'large'
Lexington	12.00-13.00	topics in society, followed by a moment to remember
Los Angeles	09.00-10.00	Hilmar Schäfer.
Rio de Janeiro	14.00-15.00	
Tokyo	02.00-03.00	
Sydney	04.00-05.00	

Capitalism | Ignas Bruder | Katy Mason
Digitality | Charis Asante Agyei | Ted Schatzki | Dale Southerton
Health | Stanley Blue | Elizabeth Shove
Urbanisation | Torik Holmes | Josi Fernandes | Natalia Martini

10 minute break and time to move

Group Conversations

Session introduced by: Torik Holmes

		Participants will move into breakout rooms to discuss
Lancaster	18.10-19.40	how theories of practice can inform research about the
Berlin	19.10-20.40	kinds of 'large' topics introduced in the curtain raising
Johannesburg	20.10-21.40	presentations.
Lexington	13.10-14.40	
Los Angeles	10.10-11.40	
Rio de Janeiro	15.10-16.40	
Tokyo	03.10-04.40	
Sydney	05.10-06.40	

Random allocation to rooms.
Sessions chaired by moderators: Stan Blue | Josi Fernandes | Silvia Gherardi | Ted Schatzki | Elizabeth Shove | Dale Southerton | Matt Watson

N.B. Chairs – please return to the main room after being 'randomly allocated' to one. We can then assign you to chair a specific room. (This is the most elegant solution currently!)

10 minute break and time to move

Mini Gatherings

Session introduced by: Natalia Martini

Lancaster	19.50-20.20	Participants will be allocated to breakout rooms in which they will introduce themselves and get to know each other better.
Berlin	20.50-21.20	
Johannesburg	21.50-22.20	
Lexington	14.50-15.20	
Los Angeles	11.50-12.20	
Rio de Janeiro	16.50-17.20	
Tokyo	04.50-05.20	
Sydney	06.50-07.20	

10 minute break and time to move

Reading Rooms

Session introduced by: Ted Schatzki

Lancaster	20.30-21.30	Participants will be allocated to breakout rooms where a senior researcher will facilitate a discussion of:
Berlin	21.30-22.30	
Johannesburg	22.30-23.30	Everts, J., 2016. Connecting Sites: Practice Theory and Large Phenomena. *Geographische Zeitschrift*, 104(1), pp.50-67.
Lexington	15.30-16.30	
Los Angeles	12.30-13.30	Shove, E. 2022. 'Accumulating' chapter from *Connecting Practices: Large Topics in Society and Social Theory*. Routledge.
Rio de Janeiro	17.30-18.30	
Tokyo	05.30-06.30	
Sydney	07.30-08.30	

Random allocation to rooms.
Sessions chaired by moderators: Donoxti Baylon | Deborah Giustini | Allison Hui | Mikko Jalas | Cecily Maller | Katy Mason | Janine Morley

N.B. Chairs – please return to the main room after being 'randomly allocated' to one. We can then assign you to chair a specific room. (This is the most elegant solution currently!)

10 minute break and time to move

Capping Things Off

Chaired by: Stanley Blue

Lancaster	21.40-22.10
Berlin	22.40-23.10
Johannesburg	23.40-00.10
Lexington	16.40-17.10
Los Angeles	13.40-14.10
Rio de Janeiro	18.40-19.10
Tokyo	06.40-07.10
Sydney	07.40-08.10

Back in the main room - we will thank people and gather feedback (15 minutes). We will outline the Consortium's future plans and related opportunities (15 minutes), and the gathering will end with a traditional capping off ceremony (10 minutes).

To take part in this **you will need to have some kind of hat ready to put on**, and then take off again, in the closing moments of the event.

Virtual Pubs

Lancaster	22.10-
Berlin	23.10-
Johannesburg	00.10-
Lexington	17.10-
Los Angeles	14.10-
Rio de Janeiro	19.10-
Tokyo	07.10-
Sydney	08.10-

Participants will have an opportunity to get a drink, move around, and visit other break-out rooms. The 'virtual pubs' will be limited to six members. If a room is full, find one that has space and join the conversation.

DAY 2: 17th November 19:00 – 22:15 (CET) | 18th in some places!

Welcome back to those who opted to participate in Day 2

Lancaster	18.00-18.10
Berlin	19.00-19.10
Johannesburg	21.00-21.10
Lexington	13.00-13.10
Los Angeles	10.00-10.10
Rio de Janeiro	15.00-15.10
Tokyo	03.00-03.10
Sydney	05.00-05.10

Day 2 introduced by: Stanley Blue

Roundtable Discussions

Lancaster	18.10-20.10
Berlin	19.10-21.10
Johannesburg	21.10-23.10
Lexington	13.10-15.10
Los Angeles	10.10-12.10
Rio de Janeiro	15.10-17.10
Tokyo	03.10-05.10
Sydney	05.10-07.10

Those who opted to participate in day two and to submit some writing will participate in a group session within which they will discuss each other's written contributions.

These discussions will be led by: Thomas Alkemeyer | Seweryn Rudnicki | Ela Sjølie | Silvia Gherardi | Davide Nicolini

Group 1 - Thomas Alkemeyer
Máté János Lőrincz
Samip Dhungel
Christoffer Söderlund Kanarp
Sonja Schoenberg
Akansha Mishra

Group 3 - Ela Sjølie
Paul C. van Fenema
Li Qian
Robin D. Schulz
Julia Corvalan

Group 2 - Seweryn Rudnicki
Magdolna Molnár
Manuel A. Henao
Luca Nitschke & Lukas Sattlegger
Øyvind Sundet

Group 4 - Silvia Gherardi
Gesine Tuitjer
Pauline Fatien; Fabien Moreau; Anne Antoni
Lena Mazurkiewicz
Jo Ann Brooks

Group 5 - Davide Nicolini
Caitlan McLean
Clemens Mungenast
Victor Perez Moraga; Marilyn Poon; Lynne Baxter
Kathrin Lemm

15 minutes break and time to move and get a drink

Virtual Dinner Parties

Lancaster	20.25-21.15	Participants choose a room to have dinner in with five other members of the gathering. There is also the possibility to move around and join conversations in other rooms.
Berlin	21.25-22.15	
Johannesburg	23.25-00.15	
Lexington	15.25-16.15	
Los Angeles	13.25-14.15	
Rio de Janeiro	17.25-18.15	
Tokyo	05.25-06.15	
Sydney	07.25-08.15	

JONATHAN EVERTS

Connecting Sites: Practice Theory and Large Phenomena

ABSTRACT: This article explores the ways in which site ontology helps us to understand how different sites are connected. The theoretical discussion seeks to contribute to the recent debate which connects theories of practice to the study of large social phenomena. Practice theories have contributed to the analysis of everyday life and daily routines and, especially on the local level, help to generate relevant insights. However, it is more difficult for practice theorists to analyse social phenomena beyond the kitchen, the farmyard or the urban neighbourhood. Thus, the following discussion of site ontology aims to explore the ways in which practice theory and the notion of sites can be usefully applied to analyse spatially dispersed and far-flung phenomena.

Key Words: Site Ontology, Place, Scale, Power, Ebola

1 Introduction

The aim of this article is to add to site ontology and theories of practice by considering the problem of interactions and dependencies between sites. This exercise is directed towards a fuller understanding of large phenomena. Large phenomena, such as climate change, pandemics or financial and economic crisis, have been analysed from a wide range of different theoretical perspectives by numerous scholars. Practice theorists have also begun to study large social phenomena such as the global financial system or climate change (Schatzki this issue; Shove et al. 2012).

Practice theory has exceptional analytical qualities where everyday life and daily routines are concerned (Shove et al. 2007; Everts et al. 2011; Pink 2012). In turn, there appears to be a bias towards empirical examples from the micro-scale or what is often referred to as the local level. Yet, practice theory, especially in its elaborate form (Schatzki 2002), presents itself as a thorough social ontology and as such should be able to account for large phenomena just as well as any other theory (Schatzki, this issue).

One of the central tenets of practice theory is that social practices are always situated practices; they do not transpire in a void but are situated in time and space (Bourdieu 1977; Schatzki 2010). Practices have a place, a time and are likely to involve a number of material entities from the enacting bodies to tools to the wider surroundings. In order to give this insight more weight, Schatzki's (2002) account of practice theory as a site ontology grants the material settings with their pertaining arrangements and social practices symmetrical ontological status. The "site" becomes the place (both metaphorically and literally) where practices and arrangements meet.

Such an account of social phenomena is debatable in so far as it gives the site priority over other spatial concepts. While the term site as such is an elusive concept and allows for a broad range of uses, it is easily associated with "place" in its bounded and local senses of the term. Schatzki's (2002; 2010) own examples serve well to illustrate this point (his case studies being Shaker life and their herb production, day trading at stock exchanges, or horse racing).[1] One of the challenges for incorporating site ontology into geography is to put the concept of site to work in a way that does not exclude other spatialities from analysis. This is not to say that there is anything wrong in general with an empirical focus on place, but the conceptual apparatus should be modified to account for more far-flung, spatially dispersed or disjunct phenomena than a kitchen, a house or a farmyard. Thus, the aim of this paper is to put the concept of site in its place through an exploration of its qualities in relation to large phenomena.

In the following, I try to tackle the connection of sites and large phenomena in three steps. In the first section after the introduction, site ontology will be explained in some detail, especially with regard to what it has to say about social sites and spatially disjunctive entanglements. Second, a first tentative positioning of site ontology towards large social phenomena will help to identify some of the more central problems in theorising global interdependencies, including the question of scale and uneven power relations. The remaining parts of the article make use of the concept of power geometries to illustrate the challenges as well as further avenues for research between sites.

2 Practice Theory and Site Ontology

Contemporary theories of practice have been developed since the 1970s. Although the roots of those theories lie deeper and are often related to the writings of Heidegger or Wittgenstein, it is since the 1970s that we find continuous and explicit engagement with "social practice" as a key concept for social theory and research (Reckwitz 2002; Shove et al. 2012). The well-known writings of French anthropologist and sociologist, Pierre Bourdieu (*Outline of a Theory of Practice*; 1977), for instance, develop the practice-related concept of *habitus*. At the same time, Canadian political scientist and philosopher Charles Taylor developed his own account of a theory of practice while reflecting on the human being as 'self-interpreting animal[s]' (Taylor 1971). Likewise, British sociologist Anthony Giddens (1979) contributed towards a theory of practice by making routine and everyday practices an important site for theorisation within sociology. Depending on the perspective, other authors may be added to this list of practice theorists (see Reckwitz 2002). More recent endeavours take social practice as

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1 These examples aside, Schatzki stresses that his use of "site" differs somewhat from mine. He writes that in my account "a site has a more spatial sense as a local place where interactions take place", whereas for him "it has a more conceptual sense as the context as part of which human coexistence takes place." He adds: "The two notions converge in so far as these contexts always have a material component." (Email communication 28.09.2015)

its core inspiration and aim exclusively at the theorisation of 'social practice' as such (Schatzki 1996; Reckwitz 2002; Shove et al. 2012). This has always included a sense of practices being material and material settings being an important part of practice. Yet, from an ontological point of view, the material has become an increasing challenge to practice theory, and one that is dealt with directly by site ontology.

The term "site ontology" was coined by Schatzki (2002). The terminology of the site allows Schatzki to rematerialize his account of social phenomena being primarily a matter of social practices, of what people do, say and feel (Schatzki 1996). The site is a carefully chosen term, wavering between its two senses, the one being a more metaphorical meaning of where discursive and material entities meet (e.g. in practice) and the other being a more conventional understanding of the site as a specific place, locale or location (Agnew 1987); a site is where people, organisms, things and artefacts come together and produce social phenomena. In this second sense, the site has an irreducible materiality which transcends the nexus of practices and material arrangements and forms the wider context for all human affairs:

> "The social site (…) can be defined (…) as the site specific to human coexistence: the context or wider expanse of phenomena, in and as part of which humans coexist." (Schatzki 2002, 146–7)

Schatzki (2002, 149) conceptualises the material and geographical underpinnings of such coexistence as "layouts of, events occurring in, and connections among the components of material settings". In Schatzki's account, the components are usually defined as people, artefacts, organisms and things. In order to highlight their relations as being contingent and yet far from arbitrary, Schatzki groups them together under the notion of orders or arrangements (he uses the terms interchangeably), stressing that: "(…) much human coexistence transpires *as* arrangements of people, artifacts, organisms, and things" (ibid. 149). In conclusion, Schatzki claims that the site of the social is constituted by a mesh of practices and arrangements.

The spatial imagery that haunts Schatzki's account of practice-arrangement meshes – or nexuses – is one of locales being connected to other locales which are at the same time immersed in wider spatial expanses. In a "centrifugal movement" (Schatzki 2002, 151), he explains, one practice-arrangement nexus (e.g. the cooking-kitchen complex) is connected, linked and linked up to broader and larger phenomena (e.g. the village), concluding that:

> "(…) the overall site where contemporaneous social life transpires is one immense mesh of practices and orders. It is an immense plenum of interconnected plenums (orders) linked to innumerable interweaving bounded realms (practices)." (Schatzki 2002, 151)

In his more recent writings, Schatzki (2010) asserts that the problem of large phenomena needs to be addressed through an analysis of the bundles of practice-arrangement nexuses. In addition, the questions of scale and interconnectivity still merit further conceptual work (e.g. Birtchnell 2012).

On the empirical (and mundane) level, we find ourselves in a globalising world, where centrifugal understandings of interconnected scales make less and less sense.

Rather it seems that nodal, punctual, rhizomatic or translocal interrelations are much better denominators for interpreting socio-natural change. Schatzki (this issue) has begun to take up this challenge of theorising phenomena beyond those social sites, which are bound to very limited physical spatial expanses and senses of place. From a practice-theoretical point of view, the challenge lies in going beyond the study of "small social phenomena" and to move on to the study of "large phenomena" such as "markets, international financial systems, educational systems, sports leagues, military alliances, the world of painting, and the fashion industry" (Schatzki this issue).

The concept of social sites being the primary place of interaction between practices and arrangements – the basic units of material social life – is perhaps a little downplayed by this new strand of theorisation. From an ontological point of view, this is of little concern; the new terminology only adds to an existing ontology. From the point of view of empirical research being conducted from a practice theory perspective, however, the original qualities of the ontology are maybe a little undermined, especially when local places, observable everyday life and daily routines disappear from the analytical map. This is a problem of scale; or, more precisely, of the scale at which the analytical gaze of the researcher is directed.

3 The Scale of the Site

So what is the scale of a site? From a practice theory point of view, scales may vary from the tiniest practice-arrangement nexus to the largest bundle, the plenum of plenums, depending on the social phenomenon in question. However, as I have pointed out before, there seems to be a bias towards a specific kind of social phenomena for which the terminology of the site is frequently mobilised, and in its material sense, this site seems largely comparable with what is often known as the local level. However, in order to make the notion of the site a valuable tool not only for theorisations but also for research and analysis, it is important to unpack the scalar implications of the conceptual vocabulary of site ontology. Notions of scale developed and discussed within geography provide a useful starting point.

From a geography point of view, the invention of scales and multi-scalar research has been important for all those who seek to analyse large social phenomena and yet stay in touch with people's everyday lives. Examples from geography can be found in political ecology, for instance, where a local or regional problem (desertification, for example) is traced through the scales from the local to the global level, connecting livelihoods on the one end with globally enforced economic rationalities on the other (e. g. Krings 2002; see also Smith 2008 [1984]). However, such a "scalist" understanding of social space has received criticism for its allegedly naïve reification of scales (Moore 2008; Mackinnon 2011). In contrast, other approaches closer to practice theory have been proposed by geographers, most pointedly that of a "flat ontology", which purports that the question of scale is in reality one of horizontal involvements:

"…localities researchers more often looked 'up' to 'broader restructurings' than 'sideways' to those proximate or even distant localities from which those events arguably emerged. This alignment of economism with 'globe talk' […] is not uncommon: there seems to be no end of examples in which economic macro-isms are articulated alongside their attendant 'global spaces', while (minor? reproductive?) social practices are cordoned off in their respective localities (or even homes), thereby eviscerating agency at one end of the hierarchy in favour of such terms as 'global capitalism', 'international political economy', 'larger scale forces' and 'national social formations', while reserving for the lower rungs examples meant to illustrate the 'unique manifestations' of these processes in terms of local outcomes and actions, such as 'the daily sphere of the local', 'the urban as the scale of experience' and 'the smaller scale of the local'. What is ignored in these associations is the everydayness of even the most privileged social actors who, though favourably anointed by class, race and gender, and while typically more efficacious in spatial *reach*, are no less situated than the workers they seek to command […]." (Marston et al. 2005, 421)

While refuting the fashionable networked fluidities approach, Marston et al. (2005) argue for an approach that takes seriously "the large variety of blockages, coagulations and assemblages (everything from material objects to doings and sayings) that congeal in space and social life" (Marston et al. 2005, 423). In drawing on the work of Schatzki, DeLanda and Deleuze, Marston et al. (2005) make a methodological argument in favour of turning the analytical attention once again towards activities and materialities in meaningful places (Schatzki), which are interconnected (DeLanda) and full of potentialities (Deleuze). To mark the difference between more traditional conceptualisations of place and the local, they introduce the terms "milieu" and "neighbourhood", alongside the Schatzkian understanding of sites. In a nutshell, "a social site is not roped off, but rather (…) it inhabits a 'neighbourhood' of practices, events and orders that are folded variously into other unfolding sites" (Marston et al. 2005, 426).

While Marston et al. (2005) are picking up arguments about the importance of place that have been made elsewhere, their hints at the relevant *scale* of analysis mark the difference between these approaches. While others have remained largely on the level of cities or states (e.g. Massey 2010; Sassen 2006), Marston et al. vote for research that takes place on the level of everyday life such as the home as a site of social reproduction, and they are also thinking of sites such as "the shop floor, the board-room and the war room" (Marston et al. 2005, 427 and footnote 21).

The problem for site ontology conceptualised as flat ontology here is that the scale for research becomes empirically situated on that level which in scalist terms would be identified as the local scale or the micro level of analysis. To make the flat ontology work, however, shop floors or boardrooms cannot be understood as single socio-spatial entities which are embedded in larger contexts or neighbourhoods for that matter (that being a scalist notion), but they need to be analysed as connecting sites where practices and arrangements meet and intermingle, *in situ* as much as over distance. This calls for a research strategy such as multi-sited ethnography, which deals with a number of different locales at the same time.

Yet before dealing with the problem of multi-sited research, the problem of the scale of sites needs more attention. In keeping with the examples from Schatzki (2002) and Marston et al. (2005), the material components of sites are more or less bounded social spaces – no matter how porous in the middle and how fuzzy at the fringes – which can be experienced and identified by humans as single places, locales or locations. In terms of size, these spaces might differ, probably from a small room up to a farmyard or even a city. It might be too far-fetched to take countries or whole continents as the relevant scale of the site. It is possible to make the concept of the site broad enough even for that but the analytical merits are questionable of such an all-encompassing and overly generic concept.[2]

In keeping with the sociological roots of practice theory, it makes sense to check the concept of the site against that of social practices, on the one hand, and large phenomena on the other. The intuitive examples of sites show that it makes sense to speak of sites when we are dealing with locales which are clearly connected to a number, but not innumerable amount, of social practices, producing places which can be experienced by human beings within the timeframe of their daily affairs. Following such an approach to the scale of sites clearly separates the concept of the site from large social phenomena, which are by definition larger than what can be experienced by human beings while pursuing day-to-day activities. Large phenomena might be thought of as "sites" in a metaphorical sense, and as a "place" where practices and arrangements meet and form bundles that are larger than their sum total. But in a more material reading of the term, large phenomena are made up of numerous connecting bundles of practices and arrangements, involving a large number of connecting sites. While Schatzki (this issue) is stressing the former in his most recent account of large phenomena, it is the latter to which I like to draw attention in the following section.

4 Connecting Sites

Schatzki (this issue) suggests dealing with the challenge of conceptualising large phenomena by offering a range of concepts such as association, dissolution, absorption, diffusion, convergence, divergence and so on, which all help to understand the dynamics and changes which happen to large constellations. In terms of empirical research, Schatzki advocates an approach which seeks to analyse large phenomena through their temporalities – through "an account of the formation, stability, evolution, and dissolution of the phenomena involved" (Schatzki this issue). Perhaps the

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2   There are other concepts which are better equipped for large-scale and transnational spatial interrelations such as "technological zones" (Barry 2006, 239): "A technological zone can be understood, in broad terms, as a space within which differences between technical practices, procedures or forms have been reduced, or common standards have been established." Note that towards the opposite end of the scale, "topographic" approaches have been proposed as a "critical spatial practice that highlights the complexities of place and forms one basis for intrinsic geographical judgment" (Coles 2014, 518, see also Katz 2001).

key innovation in the conceptual apparatus is "action chains". Following site ontology, actions are those doings and/or sayings which belong to one or more practices and form subunits of social practices. What Schatzki means by "chain" is that most actions are in some way or another linked to previous actions. They are either an intervention in the world (and all its actions) or they are the more direct reaction to previous actions. Large social phenomena are partly the result of long, complex and interwoven chains of actions. Untangling those may help the researcher to grasp the emergence and internal change of the large phenomenon in question.

In considering large phenomena such as financial markets or even contemporary climate change, this seems very straightforward. However, events that transpire in parallel and spatially disjunctive practices and arrangements, which nonetheless bear the signs of belonging to one and the same large phenomenon, may have a little less weight within such an approach. One example are the locally diverse interventions and reactions that occur in relation to one event of potentially global reach such as a new influenza pandemic (Everts 2013, Everts 2015). The global event of a pandemic may well be considered a large phenomenon, yet its largeness consists of more than direct action chains (e. g. interactions that lead to transmission of the virus) but also of more indirectly related chains of actions, which are rooted in the same phenomenon (a new virus and the discursive representations of it), but from there form practice-arrangement nexuses of their own. In order to balance a practice theory approach to large phenomena, the concept of the site may still prove useful. In addition to Schatzki's emphasis on timings, chains of actions and causalities, the concept of connecting sites may help to complement the theory, giving a little more weight to the parallel and disjunct, the local and the spatial. On the empirical end, the possibilities of multi-sited research methodologies, especially that of multi-sited ethnography, may fruitfully add to the development of a practice theory approach to large phenomena.

In a paradigmatic review paper on multi-sited ethnography, Marcus (1995) explores the ways in which analysing connecting sites in a globalizing world is possible. In sorting the already by then large body of available literature emanating from multi-sited research, Marcus lists a number of "tracking strategies" which enable the researchers to produce meaningful accounts beyond the single-site location study. The strategies are termed as a series of "follow the…" approaches such as follow the people, follow the thing, follow the metaphor and so on (see also Falzon 2009). Since the mid-1990s, these "following" approaches have also become a popular reference for those working within the tradition of human geography (recent examples include Ouma 2015, Schäfer 2015)[3]. Especially "follow the thing" has become near to a new orthodoxy in the years after Ian Cook's (2004) paper on the production, processing, shipment, and consumption of papaya. But also migration researchers, for instance, have picked up some of the "following" methodology. The transnationalism and the translocality research is to a large degree inspired by the idea that social space is

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3   The task to "follow the actor/actant" can also be derived from actor-network theory, which shows sympathies for multi-sited research methodologies (e. g. Latour 1987; 2005).

not divided by physical distance and that the lifeworlds of migrants or other mobile lives are only properly researched and described by following their connections and movements (Pries 2003; Steinbrink 2009; Greiner/Sakdapolrak 2013). Since the announcement of the so-called mobility turn, the following of mobile lives and matter has even gained disciplinary status (Urry 2000; Urry 2007; for a more critical reading Cresswell 2010). While perhaps less in line with the fashionable strategy of moving material stuff, the task of following ideas, mentalities, or concepts has more recently been taken up within the rapidly growing body of social scientific research on climate change (e. g. Weisser et al. 2014).

Much of the multi-sited literature celebrates the fact that lives, materials and ideas are interconnected throughout the planet, that people live global lives and that one and the same idea can be tracked throughout the world, yet leaves different imprints on different places (Cresswell/Merriman 2011; Burawoy 2000). In the tradition of ANT thinkers such as Latour (2005), new moving researchers and their detailed descriptions of social sites are able to unveil the imbalances, inequalities and injustices that reign within and across sites.

All of these approaches connect sites and human activities and thus help to analyse large phenomena. In taking this further, it should be possible to devise a framework for analysis, which accounts for two or more sites being meaningfully related. In contrast to the existing approaches, however, the analysis of connecting sites should start from sites – not people, things or practices. The advantage of researching connecting sites, rather than following entities, lies in the awareness it raises to a host of connections that are not so easily followed. This is especially true where connections are either made of a bundle of small and seemingly insignificant things (rather than the one big item such as a fruit which can't be missed if the research is about the fruit trade) or where the connection is produced through very elusive agents and intangible materials such as digital messages or micro-organisms (e. g. bacteria or viruses). It is also true for large phenomena which are likely to consist of more than one set of entities which are suitable for following.

The methodological challenge is that there is potentially an unlimited amount of sites that are meaningfully connected in some way or another and in contrast to the methodology of following entities, it is both impractical and not economically feasible to pursue parallel research in more than a few carefully chosen sites. The methodological challenge lies in systematically choosing those sites, which need to be analysed in conjunction, in order to reveal the texture of a large phenomena.

There are at least three different systematic approaches, which can be distinguished. The first one is to choose sites because of their similarities and thus their ease for comparison. Second, the opposite approach is to select sites with a maximum of dissimilarities in order to explore the continuum of a phenomenon. A third approach would be to look for qualitative differences such as hierarchical dependencies and power inequalities. In the following, I concentrate on this last strategy and discuss some of the aspects which are meaningfully connecting sites of otherwise great differences.

5 Analysing Connections: The Example of Ebola Crisis and Emergency Response

One aspect that all large social phenomena share is the interdependence and interconnectedness of sites. When accounting for connecting sites, one needs to pay attention to the ways in which connections and interdependencies occur and are, at least partially, orchestrated. Relevant examples help to conceptualise such occurrences and orchestrations. In the following, the most recent and still lingering major public health crisis caused by Ebola infections in West African countries is considered.

The Market and the SHOC Room: Introduction to the Case Study

2 September 2014, Monrovia. A short video[4] is made by an anonymous person showing an alleged Ebola patient who has fled Monrovia's Elwa hospital and walks through a street market, apparently in search for food. The Ebola crisis has effectively cut off the states of Liberia, Sierra Leone and Guinea from international trade and travel. Quarantines and other public health measures further disrupt the mobilities within those countries, hindering millions of people in performing the daily routines in order to survive. Agriculture is badly hit by the mobility downturn. Food prices are skyrocketing. This has also a speculative element. More and more people buy food not for immediate consumption but to save for later, when they themselves might be quarantined. And they have a good reason. Families who were under house arrest were left to starve were it not for local activists providing them with food (WFP 2014; Eba 2014). Amidst all this, a man has escaped the clinic, which itself is also experiencing food shortages. He wears a wristband, allegedly confirming his status as being diagnosed positive with Ebola virus disease (EVD), though the man shows no symptoms of the illness. After being followed by what appears to be an angry mob, public health workers arrive. They are wearing yellow overalls, white masks and green gloves. One wears a container with disinfectant on the back, tied to a spraying device that the person holds in his right hand. They follow the man, surround him, argue with him. After a few skips, the video shows how the person is lifted up and flung into the trunk of a small truck. His bare legs, still wiggling and struggling, are visible for quite some time. The health workers hop on the truck and drive off with speed.

At the same time, public health experts meet in the SHOC room of the World Health Organization (WHO) in Geneva. SHOC is the acronym for Strategic Health Operations Center. It is effectively what today in other places is called an Emergency Operations Center. WHO's SHOC room is the place that is used when a health crisis has attracted the interest of WHO and an international public health response is devised within the context of emergency and urgency. In the more recent jargon of global public health, this is the case when the Director-General of WHO announces a

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4   The video can be watched on many websites, for example here: http://news.sky.com/story/1328891/
     ebola-patient-flees-clinic-in-search-for-food (accessed 25.02.2015)

Public Health Emergency of International Concern (PHEIC), in the case of the most recent Ebola epidemic on 8 August 2014.

The SHOC room is one in a series of rooms which can be found all around the world which are being set up for disaster and emergency response. WHO's headquarter SHOC room actually consists of three rooms. The main room has 8 desks with seating for 16 people. During the swine flu pandemic, WHO's media officer Gregory Hartl described the SHOC room as "'the' nerve centre for WHO's operations" and "the kind of brain from where the tentacles come in and out".[5] The room is equipped for telephone conferences, has large video walls and standard information technologies (November/Leanza 2015, 52–53). From there, world leading public health experts monitor and seek to coordinate the response to global public health emergencies such as the current outbreak of EVD. From here, the isolation of people with probable or confirmed EVD is prioritised, and tasks and targets are given to those doing the practical public health work, such as the UN Mission for Ebola Emergency Response (UN-MEER), according to their website the "first-ever UN emergency health mission".[6]

There is no doubt that the recent Ebola epidemic has become an issue of global importance. The man in Monrovia, captured and ushered away like stray cattle, is not only a suspected victim of a deadly disease; he is also the victim of geopolitical prioritization, which puts security before human rights (for a discussion of these principles in relation to global public health see Lakoff 2010; Davies/Youde 2013).

Two different places such as a market in Monrovia and the SHOC room in Geneva can be interlinked in many ways. While those in Monrovia might not be aware of the existence of a SHOC room, those in the SHOC room have multiple ways to connect themselves with distant places such as markets in Monrovia. They can watch video footage on their computers such as the one referred to above; they can also stay in contact via phone or email with colleagues in Liberia. In turn, they are fed data from colleagues and the governments, which they subsequently turn into graphs, tables, and maps. In creating aggregated and non-aggregated representations of the distant place, likely and desired courses of action are determined, formulated as policy goals and targets, and published, for example as the "Ebola Response Roadmap".[7] From such premises, decisions might also be taken on how to engage directly with the distant place, for instance by sending experts or equipment and by exporting "know-how" such as defined best practices in dealing with infectious diseases and public health safety protocols. All of these connections could be explored in great detail, providing insights into the fabric of scaling regional issues and their up-scaling into large phenomena.

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5   http://www.nbcnews.com/video/nightly-news/30502828#30502828 (accessed 11.02.2015)
6   http://ebolaresponse.un.org/un-mission-ebola-emergency-response-unmeer
    (accessed 11.02.2015)
7   http://www.who.int/csr/resources/publications/ebola/response-roadmap/en/
    (accessed 17.02.2015)

However, what I am concerned with here is a more general formulation of what binds two or more distant sites together. From a scalist point of view, WHO represents the global level from which in a top-down manner best-practices are imposed elsewhere. From a flatist point of view, what happens in a market in Monrovia and what happens in the SHOC room is equally important. Agency resides in both places and the people are connected in the directedness of their practices towards each other.

The Engagement

If sites are interlinked, the engagement between sites has to be re-enacted on a frequent basis. It is the act of being concerned with what goes on elsewhere that actualizes the connection that exists between two or more sites. Today, an analysis of such connections might involve delving into the details of news and email reading, data crunching, and making phone calls. At the same time, this focus on daily activities should not divert the analytical view from established protocols and codes of conduct, some even written into the very spatial layout of the places from where the work of making connections is performed. Of course, the exertion of all protocols needs creativity and rules are appropriated differently by different people (e. g. de Laet 2000 on patents, Enticott 2012 on protocols for disease identification). However, the fact remains that protocols and rules also serve the purpose of legitimizing the engagement with practice-arrangement bundles other than the ones which are immediately present.

Those working for WHO, for example, have a clear list of things they want to know and concern themselves with. It is written down, for instance, in the revised International Health Regulations (IHR) from 2005, and those, who report data to WHO, do so on this basis. Furthermore, to legitimise a more direct engagement with some other place (an engagement that surpasses the practices of gathering and representing data), certain features of acknowledged protocols can be activated, for example the Public Health Emergency of International Concern (PHEIC) which WHO has built into their IHR. Once the PHEIC is announced, the stage is set for active engagement and interference.

No matter how benevolent the engagement with distant others might be, there is an unequal power relation between those who operate within centres and seek knowledge about other places, especially in the context of crisis, and those who lead their lives mostly unaware of such centres and centralised activities (cf. Scott 1999). There is a power geometry (Massey 1993)[8] at work here that – in the present case – could

8   Since the 1990s, Massey made a series of arguments for "a global sense of place" and an analytics she calls power geometries (Massey 1993). She writes: "Now, I want to make one simple point here, and that is about what one might call the power geometry of it all; the power geometry of time-space compression. For different social groups, and different individuals, are placed in very distinct ways in relation to these flows and interconnections. This point concerns not merely the issue of who moves and who doesn't (…); it is also about power in relation to the flows and the movement. Different social groups

be described as an inequality in information. Places geared towards engagement with other places seek to keep the threshold for incoming information as low as possible. All are attuned to the task of gathering information from elsewhere. But the majority who live in places from which information is sought have themselves very little means to extract information about the place, the practices and the arrangements that have been set up to observe them.

The Interfering

Just because one place extracts information from the other, this does hardly justify speaking of connecting sites other than through global awareness. From such a point of view, the newsroom of a large broadcasting company would be the most powerful place on earth. Yet, this is not the case because the means of interference from journalism, though never to be underestimated, are considerably smaller than those of other agents for instance from governments, TNCs or global NGOs, who concern themselves professionally with distant places and can mobilise large bundles of practices and arrangements in their interest. Thus, to understand the effect one site exerts over the other, it is not enough to survey the level and means of engagement, but the levels and means of interference also merit analytical attention.

How are people in one place able to interfere into people's lives in another place? Perhaps trivial but one of the most powerful tools is the making of rules in one place and exporting them to another.[9] Following site ontology (Schatzki 2002, 79), rules are precepts and principles interjected into social life. The rules as such, a guide for best practice, for example, or a taxation scheme, have no intrinsic power. It can at best be thought of as a suggestion for rule-guided behaviour, which can be taken up creatively or left aside. To make rules work then, as many have pointed out before, a whole system of ensuring rule-following behaviour needs to assist the spread and abidance to rules. Yet, the way that rules travel from one place to another is not sufficiently described by announcing them through any written or oral medium. The places of rule-making are also the sites where rule-abidance becomes trained (today often under the disguise of "workshops") to a number of "experts" who will serve as rule-enforcers within their otherwise more immediate surroundings. These, in turn, will turn their workplaces into the centre from where any rule becomes further rolled out by summoning those who are trusted with this task and so on.

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have distinct relationships to this anyway differentiated mobility: some people are more in charge of it than others; some initiate flows and movement, others don't; some are more on the receiving-end of it than others; some are effectively imprisoned by it" (Massey 1994, 149).

9   Schatzki (this issue) develops the notion that social change is due to the causalities of chains of actions. He discerns two modes of the causality of human actions. First, human actions intervene in the world and second, human actions react to previous ones. Note that my concept of interference mixes the two modes of causality. Distributing rules and precepts are as much an intervention in the world as they are a reaction and create a reaction.

Instead of the Russian doll of scales (Herod/Wright 2002, 7), we can already witness with the example of rule-making and -spreading that it is not one site that envelops others, but one place the serves as a hub for gathering people and sending them out again, where they will follow the same principle of gathering people and sending them out and so on. Of course, rule-following is never fully achieved and remains, even in times of dictatorial and territorial rule, patchy and at best practised in pockets of the places that are hoped to be effectively governed from a centre. Yet, no matter how much rule-abidance can be achieved in practice, it is crucial to analyse how rules are one means of interfering in the affairs of distant places. They are as much used as a tool as they are the legitimation for further interference.

To return to the case of WHO's SHOC room and the interference in Monrovia's market, there is a high complexity of the relationship between the two places. It is not the SHOC room alone within which people come up with the idea of isolating people who are suspected to suffer from Ebola, from where it is recommended as a rule to wear protective gear when dealing with patients and from where a rather harsh action against any patient fleeing a clinic is tolerated. Rather, WHO's SHOC room serves as a hub where professional knowledge and experience is coupled with ad hoc information from elsewhere, resulting into a probing and testing of viable strategies of interference, tentatively at first, more determined and definitively put into script later on.

We do not know what, today, the reaction to Ebola patients wandering the streets would be without the WHO and the SHOC room. Perhaps local authorities and public health personnel would act just in the same way or even more brutal. What we do know is, that organisations such as WHO are crucial in turning a grave problem in one place into a bigger issue on another scale. By aggregating the numbers, looking at the "bigger picture", producing maps and "situation updates", WHO provides the legitimation for interference, independently from the cries for help which may or may not be heard.

Lastly, people trained in and through the arena of global public health expertise, in one of WHO's branches or elsewhere, function as carriers of rules and routines. While Liberia, Guinea and Sierra Leone have been effectively cut off from international travel and trade, thousands of experts have come to teach and oversee the exertion of rules recommended by global public health agencies while lending a helping hand to local professionals.

In more general terms, the geometry between the two sites discussed is characterised by unequal accessibility. Although the powerful place serves as a hub for experts, it is largely sealed off from its surroundings and virtually inaccessible for those, whose daily lives elsewhere are the target of interference. In turn, the less powerful site is, dangerous as it may be, in principle openly accessible to the experts (and their tools, things, gear etc.). The differences in their openness to mutual interference is a crucial aspect of connecting sites.

Inflicting Change

What remains after interference? Have things changed in the one place where interference took place for good? In turn, does the place from where interference was conceived, advocated and possibly directed remain unchanged? If a public space like a market becomes the site of a manhunt, this does not mean that this place has changed now for all time. It has contingently become the locale of an interference which disturbs the practice-arrangement bundle of the market only temporarily. Yet, the market is only one place in a series of sites, which are all subjugated under the same information-seeking scrutiny and the practices of gaining access. This gaze and the practices of place-penetration, orchestrated elsewhere, leave a mark on places and on those who inhabit them.

But how much will places change? Those in a more powerful place are not facing interfering practices which bring change directly to them. Their change is more a capacity that resides within the place. It is upon reflection of what happened elsewhere that change might come to those places. New procedures, protocols, meetings, office designs and so on, may all be introduced after one major event of engagement and interference which revealed shortcomings in the practical and material ordering of the more powerful site. Other changes may result from the organisational needs for continuous and long-term tasks. Apart from funding issues which may arise and hold back the changes desired, the places, from where engagement and interference is planned and at least mediated, do not change according to what others from outside imagine that place to be, but from what those who are inside imagine their place to be.

This is in stark contrast to the sites that are the target of engagement and interference. Their change may not completely comply with what has been drawn up and imagined elsewhere, yet they clearly have to deal more directly with *out-of-site* ideas of what seems to be best for them and others. This unevenness in self-determined change and inflicting change onto others represents a third aspect of connecting sites.

6 Conclusions

Theorisations of large social phenomena, from a practice theory point of view, stress temporalities, chains of actions and causalities (Schatzki this issue). In this paper, I have argued that the concept of site may yet deserve more thought in the further development of a practice theoretical account of large phenomena. The concept of the site is taken from "site ontology" (Schatzki 2002) and enjoys as such the advantage of being already intrinsic to the theoretical debate from which the present particular theorisation of large phenomena originates. The concept of the site stresses both aspects of – to use Schatzki's terminology – the ways in which practices and arrangements hang together, that is in practice and in the materialities of a place, location or locale. However, for the purpose of theorising large phenomena, I propose the concept of connecting sites. Although the site is hypothetically anything from a very small to a

very large bundle of practices and arrangements, the intuitive grasp of the concept and the usual examples imply what is often called the local level or the micro-scale. While accepting this bias towards a specific scale for empirical observation, the argument pursued here is to focus on how different sites connect and thus contribute to the emergence of large phenomena. The focus on sites represents also a strategic move which enables the researcher to account for spatially disjunct practice-arrangement bundles and events that are nevertheless fruitfully explored as parts of one larger phenomenon. This move is also inspired by multi-sited methodologies. It however parts from them in not "following" or "tracking" the items that connect sites. Rather the point is to analyse parallel events and becomings where connections are not easily followed. As one viable way of researching disjunct and yet meaningfully connected sites, one could analyse qualitative differences such as hierarchical dependencies and power inequalities between two or more sites.

In respect to the example of Ebola crisis management, two very different sites are connected through at least three interdependent features of power geometries. First, there is an unevenness of the degree of engagement. While people who are part of one site are concerning themselves with the lives of people elsewhere by gathering information of any sort, the place from where information is extracted from has very little means of gaining access to information about what is going on in the former place. Second, on the basis of such information, people embedded within powerful sites are enabled to immerse themselves into campaigns of interfering with the affairs of observed places elsewhere. The making of rules and the export of those rules to other places through experts is one of the key means of interference, which ultimately results in a change of the practice-arrangement nexus. Third, while engagement and interference bring change to powerful and less powerful sites alike, the more powerful sites have a greater potential for self-determined change.

The relationship between WHO's SHOC room and a market space within the city of Monrovia highlights the power geometries of connecting sites. The example helps to establish some of the uneven power geometries that animate the particular large phenomenon of Ebola crisis and management. However, the case study might also prove misleading insofar as the narrative confines itself to the two sites, leaving out the myriad of other places involved in this phenomenon such as parliaments, other public health agencies, universities, research centres, conference centres, hospitals, urban neighbourhoods, villages and local homes to name but a few. However, and in addition to methodologies that advocate the following of entities, the juxtaposition of two highly unequal but related sites proves useful for conceptualising the uneven power geometries that animate large phenomena.

In this account of connecting sites, power imbalances in practice are a crucial feature of what constitutes a large social phenomenon. The analysis of sites is thus deepened by an understanding which orders connecting sites in respect to their differences and inequalities. One avenue for further conceptual work lies in a closer alignment of site ontology and those approaches which deal with uneven geographies of power. Latour's works about centers of calculation (Latour 2005, 178) point in this direction (cf.

Schatzki 2015 on power centers; see also the concept of "choke points", Schatzki this issue). Likewise, Foucault's (1976) discussion of Bentham's panopticon exhibits many of the features, which an analytics of connecting sites might usefully exploit. Building on both Latour's and Foucault's work, Murdoch and Ward (1997), for instance, show how centres of calculation are marked by their will and ability to accumulate statistical data and extract information from the "periphery" (see also Hannah 2009). In turn, those places outside the centres are the ones which need to be "governed at a distance" (Miller/Rose 1990; Rose 1991; Rose/Miller 1992, Scott 1999). Practice theory and site ontology can add to this strand of work by providing the scale for empirical research and concepts which interlink practices and material arrangements and are able to describe their turning into social sites and bundling into larger phenomena.

Acknowledgments

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Accumulating

Schatzki (2010: 19) lists 'accumulation' as one of a series of concepts that might be used to characterise the emergence and dynamics of large social phenomena. This may come as a surprise to some, but a flat ontology and a refusal to invoke external drivers of change does not prevent the description and analysis of massive and unequal accumulations of wealth, concentrations of CO_2 in the atmosphere, global trends in obesity or the build-up of specialist knowledge and expertise. As these few examples suggest, the legacies of past practices combine in ways that enable and constrain those that are enacted today. In thinking about how this happens, it is useful to distinguish between practices, on the one hand, and their outcomes on the other. In what follows, I suggest that processes of *accumulating* are rooted in combinations of practices and that it is the resulting residues – by which I mean elements arising from and/or transformed by these combinations – that accumulate. Although convincing enough in its own terms, this generic description glosses over different aspects of accumulating and the types of connectivity associated with them. One method of capturing these subtleties is to distinguish between the ways in which residues are amassed or built-up, stored or preserved, at least for a time, and mobilised or re-enacted. In what follows, I use this scheme to identify combinations of practices that result in concentrations of residues, the effects of which are widespread and that are large in the further sense that they have substantial social, biological, ecological and/or political impact.

This is not as easy as it sounds. In taking this approach, one problem is to decide which elements to follow. There are many forms of environmental pollution but in this chapter, I focus on the proliferation and distribution of plastic waste including microplastic particles. The United Nations News reports that 'In 1950, the world's population of 2.5 billion produced 1.5 million tons of plastic; in 2016, a global population of more than 7 billion people produced over 300 million tons of plastic' (United Nations News 2017). Not all of this is discarded, but the durability of these materials and their disposability are important for the production, consumption and deposition of plastic wastes and for how these affect the natural environment and its inhabitants.

The second example has to do with body mass. According to the World Health Organization, obesity (defined as having a body mass index of more than 30), has nearly tripled since 1975 (World Health Organization 2021). This is another troubling trend in that being overweight is associated with a range of diseases including heart problems, certain cancers and diabetes. Given that human bodies are quite literally shaped by what they do, putting on the pounds (individually and collectively) is directly related to the range of practices enacted in society. The details and thus the forms of accumulation involved in this case are not the same as those associated with increases in microplastic waste or with growing inequalities in wealth. In one of many contributions to this topic, Mike Savage argues that 'the rise of the very wealthy is one of the defining issues of our time' (Savage 2014: 519). It is so in that ownership of tradeable assets is socially and spatially skewed to such an extent that the 'the richest decile (top 10% of adults) owns 82% of global wealth' (Credit Suisse 2021: 25). These figures represent the outcome – the residue – of past and present modes of acquisition, management, translation and transfer. As such they raise further questions of temporal and spatial scale.

When and where residues matter for future practices is not something that can be determined in advance. This is in part because the significance of different elements varies alongside and with the totality of practices enacted in society. In other words, the status of resources and wastes is never fixed: it changes as they are amassed, stored and enacted and as their actual and potential impact unfolds. This is complicated. If residues are to accumulate, they have to be retained, but storage is not a static process, nor is it one that is without consequence. Changing volumes and thresholds are often important and as described below the distinction between storing and embedding or re-enacting (in which residues have effect on the ongoing stream of social practice) is correspondingly fuzzy. Rather than confounding efforts to show how accumulation proceeds, these observations underline the importance of understanding how practices and outcomes interact at specific moments sliced out of what are always more extensive histories and flows.

Informed by these ideas, the next three sections identify practices and interactions that underpin recent increases in environmental pollution, obesity and the unequal distribution of wealth. Each begins with a discussion of how relevant elements (microplastic particles, body mass, tradeable assets) are amassed. Each then considers the practicalities of storage and transmission before focusing on how these processes shape future practices and the constitution and transformation of large social phenomena. In combination, these accounts provide some insight into how residues build up and into the effects these concentrations have on the highly uneven contours of society.

Accumulating plastic waste
In 1943, Yarsley and Couzens fantasised about the life of 'the plastic man', sleeping in a plastic cradle and eventually ending up in a plastic coffin (Yarsley and Couzens 1943: 157). Although dazzled by the prospect of the plastic age, these authors did not foresee the range of plastics or the diversity of material–product relations with which we are familiar today. Over the last 80 years or so, plastics, including forms of polyester such as polyethylene terephthalate (PET), along with polyurethane, polyamide, polystyrene and polypropylene have displaced materials like cotton, metal, glass and rubber, and have done so on a spectacular scale. Initially designed to replicate the qualities of other materials (ivory, wood, etc.), plastics have been configured in ways that enable the production of objects and equipment that could not have been made before. As a result, plastics have re-defined practices ranging from complex surgical operations through to building construction and the consumption and production of food and drink (Beckman 2018).

Although some plastics are designed to biodegrade, most do not. As a result, very large quantities of discarded plastics end up on the land, in rivers and in the oceans. The Great Pacific Garbage Patch, which covers an area of 1.6 million square kilometres, represents one of the more visible concentrations of plastic debris in the world (Lebreton et al. 2018). Less obvious, but no less important, the volume of microplastics (tiny particles of fragmented plastic, often too small to see with the naked eye) continues to escalate. Microplastics have spread far and wide and have been detected in some of the most remote parts of the world and in human bodies as well (Lacerda et al. 2019). Exactly how these tiny remains might affect future practices is complex and uncertain but there is growing interest in their impact on marine ecosystems and related patterns of employment, leisure, diet and human fertility. The conclusion that plastic pollution is the result of a multitude of related practices enacted at scale is uncontroversial, but what of the detail? As described below, microplastic pollution is an outcome of constantly changing connections between processes of production, consumption and deposition.

Amassing microplastics: disposability and deposition

The attributes of different types of plastic, including weight, cost, rigidity, pliability, etc., are not fixed or ready-made features. As Hawkins (2015) explains, judgements about product life are important for the exact composition of plastics, for how they are used and discarded and for how they degrade. Her analysis of the social and material culture of bottled water captures some of these interactions. She argues that the plastic bottle is 'both pragmatic and potent. It has not simply allowed water to be distributed and consumed in different ways, it has also made it possible for new forms of economic life to emerge' (Hawkins et al. 2015: 3). According to Hawkins, the history of the plastic bottle is a history in which new practices, such as sipping on the move, and new market relations are welded together and in which single use represents a central 'market device' (Hawkins 2011). This close-coupling of material-in-and-as-part-of-practice explains the brevity of the plastic bottle's 'useful' life. Not all plastics are made to be thrown away but many are. In the UK, packaging is said to account for around 70% of all plastic that is discarded (Waste and Resources Action Plan 2022). As these examples show, disposability is not something that happens to certain forms of plastic, it is in a very real sense part of them: it is an assumption built into their design and into the chemistry of the material itself. This is clearly important for the amount of waste that enters and that persists in the environment.

Storing microplastics: durable relations

Plastics are intriguing in that they are both disposable and durable. As Strasser (1999) and O'Brien (2012) point out, material-practice relations change as objects fall out of use, as they become waste and as they lose their original form. Artemis Papadaki-Anastasopoulou's (2018) study of the regulatory regimes through which plastic debris passes as it floats down the Danube gives a sense of the many interactions involved. In the early stages, things like plastic bags and bottles cause problems for municipal authorities by clogging gullies and outlets and blocking grates. Different concerns arise when these same items break down into smaller pieces. No longer an issue for those responsible for managing the flow of water, the resulting particles figure in very different practices, including efforts to monitor and control the effects of pollution on ecosystems and human health. No one knows exactly how long fragments of plastic might last, but it is clear that they will be around for many decades to come (Friends of the Earth 2022). As plastics begin to decompose, plasticisers (used in making plastics pliable) leach out and/or migrate into other materials. According to Liboiron, these chemicals are a bit of an unknown quantity: 'both their long lives and their relatively new arrival in the world – complicate our understanding of their relations with other objects "in the wild", where they become part of bodies, ecosystems, consumer products, and landscapes' (Liboiron 2016: 96). Exactly which interactions occur and where depends on the circulation of plastic products and wastes and on how they are combined and concentrated. As already mentioned, the Great Pacific Garbage Patch is a mass of floating material including objects still identifiable as bags, bottles and nets. Although microplastics are also transported by currents in the sea, they are small enough to be carried in the air and to quite literally rain down from the sky (Leahy 2019). Features of size, weight and density matter for how discarded plastics are dispersed (Allen et al. 2019), but it is important to remember these attributes change and that there are multiple patterns of circulation and flow. According to Hawkins, the result is not a stockpile of plastic waste, but a *process* in which the 'the ever growing flow of plastic moves in chaotic and multiple directions' (Hawkins 2013: 65), having no single source and no destination either.

Microplastics in practice

The practical consequences of these movements and concentrations are difficult to determine. This is in part because the effects of microplastics and plasticisers vary depending on the environments

in which they exist. In addition, and as Gabrys observes, there are important differences between the literal accretion of 'residual matter', and the more dynamic 'build-up of plastics within environmental processes and corporealities' (Gabrys 2013: 209). Thresholds are critical and depending on the setting relatively small concentrations of microplastics can produce significant changes, as with endocrine disruption. They can also combine to form what are known as 'poison pills', these being toxic 'cocktails' of pollutants. The complexities of 'extreme latency, transgenerational effects, collaboration, and additive or antagonist effects' (Liboiron 2016: 98) and the fact that ecosystems evolve with and in response to the existence of marine plastic residues confound attempts to pin down 'causal relations or to identify origins, symptoms, side effects, harm and natural processes' (Liboiron 2016: 98). There are other also relevant connections between organisms that latch on to microplastics, and that travel with them, and the transmission of infections potentially affecting 'the microflora of consumers' through plastic ingestion (Lacerda, Rodrigues et al. 2019). What effects microplastics will have in the future remains to be seen, but it is evident that plastic waste is not only an outcome of past practices. It is an active, sometimes transformative element in the many ecosystems into which it is integrated. As represented here, the building-up, the storing, the circulation and the consequences of plastic residues depends on, and is part of, the delicate relation between social and ecological systems. As the next section shows, accumulations of body mass are similarly dynamic.

Accumulating body mass

There have been heavy people throughout history but data produced by the World Health Organization shows that rates of obesity are increasing at an unprecedented rate (World Health Organization 2021). For any one individual, being overweight is the result of an imbalance between calories in (eating) and out (exercise) with surplus energy stored in the form of body fat, available to be expended at a later date. Whilst this description provides a basic account of accumulation, it overlooks relevant aspects of human biology. For example, the role of exercise is mediated by genetics, hormonal imbalances and other physiological considerations. In addition, and as with stocks of plastics in the environment, fat is not inert: it is part of the body and of how it works.

Amassing fat: systems of provision, consumption and practice

There are plenty of ideas about why people are, on average, getting fatter and what can be done to stem this trend. Since obesity is associated with a range of serious ailments, experts in public health have largely agreed that it is a significant and increasing problem. In response, there have been numerous attempts to isolate and modify relevant behaviours and lifestyle 'choices'. Dixon and Broom (2007) are, for example, interested in whether people walk less when they rely on the car. The further suggestion that certain sectors of society inhabit 'obesogenic environments' (those with a high proportion of fast food outlets) implies a more complex model of causality. Even more elaborate analyses such as those included in the UK's foresight report on obesity (2007) go further, mapping possible links between various influences (the media, social, psychological, economic, infrastructural, etc.), and a long list of contributory factors including the tendency to graze; the level of transport activity; genetic and epigenetic predisposition to obesity; level of employment and the cost of ingredients. Although the foresight map is impressively complex, the basic idea is simple: trends in obesity are treated as outcomes of feedback loops and interactions between different drivers, each of which has a somewhat separate existence of its own.

One problem with this approach is that it strips contributory factors out of the interconnected webs of social practice in which they are enmeshed. As Warde observes, the changing composition and

meanings of meals is inseparable from shifts in employment and the structure of the working day (Warde 2016). The tendency to drive a car (or not) is similarly tied up with the emergence of a complete 'system of automobility' (Urry 2004). The fact that practices develop together and through processes that are part of more extensive, ongoing reconfigurations of temporal and spatial arrangements suggests that trends in obesity are not driven by fixed factors and connections between them. Rather, they are part of a nexus of practices that is changing all the time. The UK's foresight map is static but following this line of argument, what matters is an understanding of the changing relation between practices.

Richard Twine's work on snacking illustrates this point. Snacking is part of what Twine describes as a 'spatial diversification of eating sites and a social destructuration with an increase in solitary eating events' (Twine 2015: 1275). He contends that these developments are not just about what people eat, or the calories they consume. Rather than substituting one form of intake for another, newly emerging hybrids, such as eating-while-watching-tv, or eating-on-the-move are recursively part of what else goes on in the day (Blue et al. 2021). In this analysis, the changing status of traditional meals and the rise in snacking are bound up with the re-configuration of social, spatial and temporal rhythms, only some of which have to do with food (Warde and Yates 2017). Lang and Rayner arrive at much the same conclusion, arguing that the so-called global obesity epidemic is not 'just a technical, food, physical activity or healthcare problem'. In their words, it is a matter of 'what sort of society is being built' (Lang and Rayner 2007).

These ideas support the view that contemporary societies are obese because of the practices they sustain and reproduce. This helps explain what seems to be long-term trends but it is important to recognise that unlike microplastics, which continue to mount up, patterns of obesity are constantly renewed. Figures like those used by the World Health Organization are based on evidence gathered from individuals who gain and lose weight as they move through the life course. On average, and in aggregate, data of this kind suggests that increases in body mass persist across generations. Understanding how this occurs calls for an understanding of the changing shape of the collective biosocial body.

Storing fat: the biosocial body
Some biologists argue that the capacity to lay down and access reserves of energy has developed as a means of coping with periods of feast and famine. Since human existence depends on practices, including those of capturing, growing, preserving and preparing food, both have evolved together. This leads Wells to suggest that homo sapiens have adapted to historically and culturally variable relations between corporeal and 'extra corporeal' stores of food, and to the prevalence (or otherwise) of hard labour (Wells 2012).On this basis, proponents of what is known as the 'thrifty gene' thesis attribute global trends in obesity to an evolutionary mismatch between human metabolism, the ready availability of energy-dense diets and increasingly sedentary ways of life (Kuzawa 2010). Other subtler accounts of metabolic plasticity suggest that bodies fine tune themselves in response to local conditions. Warin describes interactions between an unborn child and its mother in these terms, noticing that in this context, 'Food is not just fuel. It becomes mutually constitutive of the nature and functioning of organs and systems through biological "being-in-each-other"' (Warin et al. 2016: 61).

According to Warin and colleagues, exchanges between mother and foetus represent one of several routes through which 'social and biological environments interact across the life course' and through which the intergenerational transmission of biosocial arrangements occurs (Warin et al.

2016: 65). There is evidently more to learn about precisely 'how bodies enfold molecular and social environments into their growth' (Warin et al. 2016: 57), and about the biological feedback loops through which visceral 'fat causes resistance to insulin, the hormone responsible for regulating metabolism' (Proietto 2012) and through which metabolism is linked to blood pressure, and blood pressure to a range of other conditions. Through interactions like these, the residues of practice (in this case the deposition of fat) matter for various aspects of human biology and for how these are transmitted from one generation to the next.

Processes of amassing, storing and passing on are important but further questions arise about how trends in obesity figure in the ongoing dynamics of practice. To be more specific, how is increasing body mass woven into the details of daily life and into policy responses and related interpretations of health and well-being?

Obesity in practice
Taking a long view, ideas about the body have been marked by a series of symbolic reversals. As Vigarello and Delogu (2013) explain, there have been times when accumulating pounds is seen as 'health insurance' (Vigarello and Delogu 2013: ix) and a sign of social privilege, and times when the opposite is true. In contemporary culture, the meaning of obesity is contested: it is framed as a source of shame and stigmatisation (Crossley 2004), and as a site of resistance to this kind of negative labelling. Some of these twists and turns reflect shifting paradigms in the biological sciences. In *The Metamorphoses of Fat*, Vigarello and Delogu describe successive re-interpretations of the body as a container, a machine or some kind of furnace, all of which have implications for what it means to be well and what it takes to achieve and maintain this condition.

Theories about the causes and consequences of obesity inform the sorts of practices that are advocated in response. For example, the notion that humoral disturbances caused bodies to swell with liquid or wind led to treatments designed to relieve excess (see Chapter 2, 'Infusing'). During the eighteenth and nineteenth century, responses that were consistent with 'The imaginary of air, water, bladders, and containers, as well as the looseness and tightness of enveloping skin' (Vigarello and Delogu 2013: 16) fell out of favour as new ideas took hold. No longer seen as a vessel, the body was re-defined 'as an energy apparatus, a furnace, an engine' (Vigarello and Delogu 2013: 110). With this interpretation in place, strategies focused on the intake and conversion of fuel and on stoking the body up and putting it to work.

Judgements about what counts as a normal or appropriate shape relate to ideas about the human body and how it works, and to the physical demands associated with different social practices. In elaborating on this point, Vigarello and Delogu write about the relative significance of body mass and flexibility in courtly life in the middle centuries of the medieval period. To quote:

> The lance carrier and the man on horseback are inevitably confronted with the increasing demands for dexterity and lightness. … There is a growing expectation that power and lightness be united, an association of big and slim, even though social ascendancy is still associated with alimentary accumulation. One shows one's force with a ravenous appetite and one's dexterity with a more slender figure.

> (Vigarello and Delogu 2013: 21)

In this extract the salience of weight, strength and agility varies with the relative importance of horse riding, on the one hand, and the ostentatious display of bulk and power, on the other. In

characterising what he refers to as forms of 'body consciousness', Crossley (2004) underlines this relational aspect. In his view, trends in obesity and the rise in fitness culture and weight-watching go together, both tapping in to shared ideas about normal or appropriate body shape. The suggestion that corrective practices (for example, trips to the gym) gain ground as body mass increases implies that concepts and practices of 'fatness' and 'thinness' are mutually constitutive and that as in the medieval period, obesogenic and leptogenic (causing weight loss) practices develop in tandem.

There are other routes through which interpretations of ideal or desirable body mass feed into daily life. These include the development and implementation of policies designed to reduce the number of people who are overweight. According to Vigarello and Delogu (2013), familiar measures like those of taxing sugar, promoting exercise or prescribing attendance at weight-watchers groups have the double role of stigmatising obese bodies and of reproducing forms of governance rooted in a politics of identity and self-control. They do so in that they position body mass as an expression of individual choice, not as a form of accumulation rooted in the social organisation of practice.

Since there is no natural or universal body uncomplicated or unaffected by what people do, public health programmes cannot turn the clock back or recreate an era in which bodies were typically thinner than they are today. Equally, the future is not fixed. Different combinations of practice may emerge and other, 'leptogenic' circuits may yet take hold. Some policy interventions may contribute to these processes, some not, but as represented here, trends in body mass and other aspects of health and well-being are outcomes of how multiple practices connect, and of how, where and within whom the traces of these relations and connections build up.

The next section considers some of the practices and patterns of relatedness that underpin increasing inequalities of wealth.

Accumulating wealth

There is no doubt about the existence of vast and increasing disparities in wealth within and between countries nor is there any question about the importance of this topic in social and political theory. Given how much has already been said, the project of understanding how these differences come about, and of doing so in practice theoretically compatible terms is not to be taken lightly. In picking a narrow course through this territory, I am guided by an interest in identifying the forms of accumulation involved and by Sayer's insistence that we pay attention to the 'institutions and practices' (Sayer 2015: 19) on which economic relations depend.

In what follows, I take wealth to be 'stocks of tradeable assets'. This definition immediately opens up further questions about the practicalities of trade and how it is organised, both of which are relevant for the specification of stocks and assets for how they are amassed. In Chapter 3, 'Circulating', I wrote about a time when beaver pelts were swapped for pots and pans. As I explained, interpretations of relative worth were directly linked to specific practices, to making hats in Europe, and to cooking and preparing food in Canada. Exchanges that involve some kind of monetary medium (coinage, paper money, digital finance, etc.) are at one or more steps removed from such closely coupled material-practice relations. This detachment is enabled by shared infrastructures, rules and conventions including recognised metrics, measures and methods of recording and managing debt and credit. Once established, and once embedded in practice, these arrangements facilitate trade in diverse goods and services across an exceptionally wide range of social situations. They do so by providing a common language (cost, price) in terms of which assets can be compared and by establishing money as one amongst other forms in which wealth

can be stored and transmitted from one generation to the next. Given that relative values fluctuate as practices change (for example, beaver fur is no longer prized when hats are made of silk), retaining wealth and doing so over the longer term depends on actively curating that which has been amassed. As described below, these processes amplify persistent and increasingly uneven distributions of wealth, doing so in ways that have far-reaching consequences not only for those who stand to gain or lose, but for the constitution of society as a whole.

Amassing wealth
Given that I am interested in the dynamics of accumulation, not in wealth as such, it makes sense to start with the rather basic observation that as with body mass, tradeable assets mount up when there is an imbalance between what is produced or acquired and what is consumed or used up. To continue with the analogy, coffers swell and 'fat cats' get fatter when sources of income exceed expenditure, and when there is something left to store, or to pass on. There are many ways in which excess assets can be acquired. Theft is one. In his 2015 book, *Why We Can't Afford the Rich*, Sayer identifies others, including rent, interest and overcharging for labour or for goods and services. In all these examples, property rights legally entitle owners to 'control an existing asset and dispose of it as they wish' (Sayer 2015: 45). Whilst owning is a precondition for accumulation and for inheritance and intergenerational transfer, it does not, of itself affect the concentration and reproduction of wealth. As Sayer explains, laws, regulations and institutions layered on top of basic principles of ownership enable those who own land or the means of production, or who are able to gamble with their own or other peoples' money to reap further benefits.

Unlike opportunist raiding, methods of amassing based on the recurrent extraction of surplus value (when workers receive less than the value of that which they produce) are central to the operation of capitalist societies. For example, the potential to rent out that which is already owned makes it possible to acquire unearned income via what Sayer describes as a 'private tax on the industry of others' (Sayer 2015: 50). Loaning at interest, riskier forms of speculation and strategies to minimise that risk (for example, hedging) are arguably devoted to the project of increasing wealth. In these situations, resources and residues build up not as a side-effect of some other activity, as is the case with obesity or plastic pollution, but as an outcome of practices and institutions that are oriented around this end.

As described below, the practicalities of wealth 'creation' develop and change as new connections are made, as technologies are interwoven and as regulations, standards and patterns of relatedness take hold. Preda's discussion of the 'ticker' illustrates one such transformation. This example has to do with the operation of the American stock market in the 1900s, and with speculators who buy and sell shares with the aim of profiting on these deals. Then, as now, speculators wanted to know whether prices were rising or falling. In Preda's words,

It is more or less irrelevant to know that the price of, say, the Susquehanna Railroad Co. is at US$53. What is really relevant is whether it is higher or lower than 30 minutes ago, or an hour ago, or yesterday. (Preda 2006: 760)

The ticker, which printed data communicated by telegraph, enabled the simultaneous and widespread distribution of standardised, authoritative information. This was hugely important for the 'organisation of knowledge production underlying financial transactions' (Preda 2006: 768). With this device in place, watching the market and being in touch became a key condition of 'playing the investing game' (Preda 2006: 768). A century or so later, that game has changed beyond recognition. In *Trading at the Speed of Light: How Ultrafast Algorithms Are Transforming*

Financial Markets, MacKenzie (2021) writes about the methods and skills around which the world of high frequency trading now revolves. As Preda and MacKenzie show, means of amassing wealth depend on specific combinations of practical understanding, procedures and material arrangements. Other methods of amassing assets have histories of their own. Understanding how these evolve and how surpluses are produced is a necessary step, but as with microplastics and obesity, storing and mobilising are also critical.

Storing wealth

If fortunes are to grow, wealth, whether in the form of money, property or some other asset, cannot just be hoarded. It needs to figure again and again in processes similar to those from which it was derived. This is in part because the value of tradeable assets fluctuates alongside the practices to which they relate. One method of riding out the ebb and flow of relative worth is to convert wealth from one form to another. This is not just a question of putting money to work by reinvesting profits, or of buying and selling as markets rise and fall. In writing about how stocks of cultural, social and economic capital are amassed, translated and inherited, Bourdieu (1984) writes about how assets are leveraged and exchanged. In his complex and subtle analysis, relative value is not something to be taken for granted nor is it something that exists beyond the realm of everyday practice. The meaning of worth is instead defined by inherently restless configurations of dispositions and capitals, and by what Bourdieu refers to as the asset structures of society. In describing how these structures take shape, and how value is constituted, Bourdieu argues that the social significance of practices, and of how and by whom they are reproduced is an outcome of ongoing struggle between social groups.

Whether we share Bourdieu's interpretation of class struggle or not, it is evident that concentrations of wealth can endure, sometimes over centuries. For Bourdieu, this is in part a consequence of the fact that 'an individual's social trajectory represents the combination of: the lifelong evolution of the volume of his capital, which can be described, very approximately, as increasing, decreasing or stationary; the volume of each sort of capital (amenable to the same distinctions), and therefore the composition of his capital (since constant volume can conceal a change in structure)' (Bourdieu 1984: 118), and the blending of capitals (economic, cultural, etc.) passed on by parents, grandparents and previous generations. This account of translation and transmission helps make sense of Bryant's finding that in the UK, 'the aristocratic descendants of the Plantagenet kings were worth £4bn in 2001, owning 700,000 acres, and 42 of them were members of the Lords up to 1999, including the dukes of Northumberland, Bedford, Beaufort and Norfolk' (Bryant 2017). Although he does not put it in quite these words, Bryant attributes this to wealthy families' capacity to influence and adapt to the changing asset structures of society.

The broader and in some ways more important conclusion is that retaining wealth is a dynamic process, linked to the ways in which different types of capital are reproduced, translated and passed on. In addition, and as with microplastic pollution and obesity, the existence and the building up of residues is important in making and shaping the settings in which future practices unfold.

Wealth in practice

Stocks of tradeable assets figure in the ongoing trajectories of many social practices and in how these connect. The material traces of wealth are frequently inscribed in the urban form and in individual buildings like the great cathedrals of Europe. Other remains, including legal structures, property rights, political systems and endowments are harder to spot, but they are there all the same. In addition, and as Bryant (2017) and Bourdieu (1984) acknowledge, people are born into

families of different means. These personal and collective legacies are embedded in the warp and weft of contemporary societies *and* in how future practices and patterns of participation develop. Since the task of identifying and following the consequences of wealth is impossibly large, it makes sense to focus on efforts to preserve or fracture what seem to be self-perpetuating spirals of accumulation.

Policies that are designed to facilitate or curb the practices on which increasing inequalities of wealth depend mirror normative judgements about whether extreme differences are harmful to society, or a necessary condition of success. Whilst some nations, organisations and individuals benefit from regulations and laws that make it possible to amass, manage and pass on stocks of tradeable assets, others do not. As Sayer explains, contemporary methods of accumulating of wealth are inherently divisive. In his words: 'one person's interest is always another's debt' (Sayer 2015: 68). Hall and Lamont take a broader view, arguing that that unequal societies are collectively damaging for the well-being of present and future generations (Hall and Lamont 2009). The evidence these authors present suggests that policy makers and others would do well to break the connections and circuits on which wealth inequalities depend. Since there is nothing inevitable about the relative significance of social, cultural and economic capital, or about how these accumulate, it is possible to imagine asset structures that enable and reflect a more equal society. On the other hand, there is no getting away from the fact that present arrangements are rooted in a mass of interlinked histories, the combination of which produces and reproduces extreme and increasing divisions in society.

Accumulating insights

This chapter began by recognising that the outputs of certain practices figure as inputs to others, that in some situations, excess residues are amassed and that the resulting stocks matter for the formation of large social phenomena, for the contours of the total plenum of practice and thus for the constitution of more and less likely future trajectories. In working through these ideas and in doing so with reference to plastics, body mass and wealth, I have suggested that accumulating depends on diverse but linked processes of amassing, storing and re-enacting and that connections between the practices involved produce and sustain unequal distributions of resources and wastes. The examples that I have considered differ markedly in what is accumulated and in how accumulating proceeds but they have some features in common.

One is that residues build-up and have effect within and as part of more extensive ecological, biological and social environments. This does not diminish the significance of what are plainly important and relatively enduring forms of accumulation, but it situates them within what are always changing combinations of practices. Rather than arising from a limited array of consistent interactions, extreme and sometimes persistent differences of wealth, body mass and concentrations of pollution are founded on relations and practices that are always on the move.

A second related observation is that storing is an inherently dynamic process. In theory, the outcomes of practices have to be preserved if they are to figure in the constitution of large social phenomena. However, residues are never kept intact. In each of the examples that I have considered, the outcomes of past practices exist within and not outside the flux of daily life. As already mentioned, plastic particles interact with other entities in marine environments. Similarly, obesity influences the metabolism of the body and the politics of public health. Although the processes involved are really very different, tradeable assets have to be converted if they are to maintain their value as practices evolve. Going full circle, inequalities of wealth make some of these trajectories more likely than others. In short, it is the *transformative flow* of residues that

counts.

Third, trends in pollution, obesity and wealth are marked by social and geographical variations, but of very different forms. Concentrations of microplastic particles depend on when, where and in what quantities plastics are discarded and how they travel, carried along by currents in the air and in the sea. Body mass and wealth are also unequally distributed, but the processes involved are not at all the same. The USA's Centres for Disease Control and Prevention has produced a time series of maps that show how rates of obesity have 'spread' across the states of America (Centres for Disease Control and Prevention 2022). As these images demonstrate, body mass has increased across the board, but it is on average higher within some social groups, and thus in some locations, than in others (Loring and Robertson 2014). There are, in addition, numerous sources of data documenting national and regional differences of wealth and trade (World Inequality Database 2022).

Figures like these reveal exceptionally uneven patterns of distribution but not the histories of the practices and interactions on which these depend. They also gloss over counter-currents and non-linear trends in how different sorts of residue arise. As we know, the amount of plastic that exists in the environment increases, year on year, in part because discarded items take decades to degrade. By contrast, individual waistlines are continually expanding and contracting. This means that long-running trends in the total body mass of society require constant reproduction. The same applies to wealth. Since the value of tradeable assets fluctuates, and since fortunes are lost as well as made, indifferences in wealth depend on ongoing practices of curation, translation and transmission. In addition, and in all three cases, there are thresholds and points beyond which concentrations of residues have different sorts of impact.

Separately and in combination, these observations suggest that processes and practices of accumulating are constantly evolving. They also suggest that the relative significance of the outcomes and residues of past practices varies and changes as new configurations take hold. These are important insights but as mentioned above it would be foolish to ignore the fact that at any one moment stocks of resources and wastes mirror and reproduce massive and in some cases increasing social and spatial inequalities, the effects of which interact.

In commenting on this latter aspect, and on how different forms of accumulation amplify each other, Sayer refers to the 'double crisis of economy and environment' (2015: 384). In his words, 'Through overproduction of debt, and rent-seeking, the businesses that sustain the rich are mortgaging our future and that of the planet' (Sayer 2015: 337). Monbiot makes much the same claim, citing data showing that 'the richest 1% of the world's people (those earning more than $172,000 a year) produce 15% of the world's carbon emissions: twice the combined impact of the poorest 50% [of the population] (Monbiot 2021). The link between accumulations of wealth and carbon emissions is not simply a matter of per-capita expenditure. It is true that private jets and fancy yachts are hugely resource intensive but the more important point is that the practices on which the accumulation of wealth depends enable, constrain and sometimes require other forms of amassing, storing and transmitting. To give a simple example, some people and some organisations profit from trade in oil, plastics and consumer goods, the deposition and transformation of which adds to stocks of carbon emissions and pollutants of one kind or another. Other also escalatory cycles arise when accumulations of wealth affect the geographies of pollution and concentrations of waste, features of which are in turn related to social and geographical variations in the practices on which wealth depends. As the next chapter shows, processes and practices of accumulating,

and relations between them, are crucial for the formation and reproduction of social divisions and inequalities and for the systemic but always dynamic texturing of advantage.

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