

Extending the Longue Dureé: Manuel De Landa and a Thousand Years of Nonlinear History

Colin Wight
(University of Exeter: c.wight@exeter.ac.uk)

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'We must abolish the nineteenth century's holy trinity of politics, economic and culture as the three presumably, autonomous spheres of human action, with separate logics and separated processes. We must invent new language that will permit us to talk about the eternal, instantaneous, continuous movement of all social processes in and among these three supposedly distinctive arenas. (Wallerstein, 1991: 14)

'In my own view, the outstanding achievement of the Annales group, ... has been the reclaiming of vast areas for history. The group has extended the territory of the historian to unexpected areas of human behaviour and to social groups neglected by traditional historians. These extensions of historical territory are associated with the discovery of new sources and the development of new methods to exploit them. They are also associated with collaboration with other disciplines...'
(Burke, 1990: 110-111)

The '*longue durée*' is one of the most important theoretical concepts to emerge out of the Annales School of history. Primarily located in the work of Fernand Braudel it is typically described as an approach to history that accords priority to long-term historical structures over events. Hence it is no accident that the Annales School is often (mistakenly) described in structuralist terms. Yet there is also no doubt that the easy translation of the '*longue durée*' into the long-term, (Burke, 1990) oversimplifies what is a complex and multifaceted theoretical concept. Indeed, in his exemplary study of Braudel, Cheng-chung Lai admits to being puzzled about the exact meaning of the term and the topics to which it can appropriately be applied (Cheng-chung Lai, 2004: 7). Lai's bewilderment arises partly out of Braudel's rather abstract, and almost exclusively temporal, treatment of the term, but also as a result of the manner in which Lai treats the '*longue durée*' as privileging stability over change and materiality over the ideational. Yet Braudel's concept of the '*longue durée*', as opposed to his actual deployment of it, implies no such distinctions. Certainly, in his breathtaking study of the Mediterranean Braudel does suggest that geography and climate can determine social outcomes, and there is little, or no, reference to symbolic structures or the history of collective meanings and beliefs as the driving forces of history. Nonetheless, the concept itself does not necessitate either a lack of change, or an exclusive focus on material factors at the expense of ideational ones. On the other hand, many treatments of the '*longue durée*' do deal only with its temporal aspects and neglect its form and content. In this respect, even when understood as a concern with long term historical structures, the content of these requires concrete ontological specification.

I read the '*longue durée*' as an aspect of a given social field that has both temporal and spatial aspects and that displays both continuity and change across both/and/either/or material processes and ideational forces. In order to understand this approach to the concept I discuss it with reference to Manuel De Landa's *Thousand Years of Nonlinear History* (2000). De Landa sketches the outlines of what he calls a renewed materialist history in the tradition of Braudel, Gilles Deleuze and Felix Guattari. Rejecting prevailing attitudes that sees history almost exclusively in terms of texts, discourses, ideologies and metaphors De Landa traces the concrete movements and interplays of matter/energy through human populations in the last millennium. De Landa addresses three domains that he argues give shape to all human societies; geological history, biological history and

linguistic history. In some respects this differs little from Braudel's approach, however, De Landa explores these processes through an explicit engagement with complexity theory and ultimately views all historical processes as manifestations of the interplay of inorganic energy/matter. Thus, in one important sense, De Landa's work can be seen as an extension of the 'longue duree' as formulated by Braudel. According to De Landa, we live in a world populated by a complex mixture of geological, biological, and linguistic constructions that are nothing but accumulations of materials shaped and hardened by history; itself driven by energy/matter.

Despite these superficial similarities De Landa's triadic framework does not relate directly to Braudel's tripartite distinction between the 'longue duree' 'conjunctures' and 'events'. Braudel's distinctions are temporal, whereas De Landa's are a concretisation of only one of Braudel's temporal domains. As such, he attempts to put some content and form into the 'longue duree'. Equally, although he treats his geological, biological and linguistic structures independently of one another this is simply an analytical device deployed to demonstrate the internal logics of each domain in isolation. In reality, these domains, when taken together, constitute a totality, or what De Landa calls an 'assemblage' (De Landa, 2006) that have developed in relation to one another to produce the patterning of global social relations we observe today.¹ Ontologically the geological, biological and linguistic structures that De Landa studies are the 'longue duree' as a totality/assemblage.

Raising the question of the content and form of the 'longue duree' opens up the issue of whether it should be conceptualised in terms of material or ideational factors. And indeed, this issue had been at the heart of internal debates within the Annales School. What has come to be known as the 'third generation' of the Annales school took issue with what was perceived to be Braudel's materialistic structuralism and returned to a Durkheimian inspired study of the history of mentalities (Burke, 1990) (but they did so without rejecting Braudel's innovative approach to historical time). And the early Annales contributors, such as Lucien Levtre, had also considered ideational structures as important aspects of historical explanation. This issue will resonate with IR theorists. Since the emergence of so-called post-positivist approaches to IR the Discipline has become locked in a sterile and debilitating set of cleavages that hinder constructive debate across rival perspectives. Within this context rationalists (positivists) are often said to favour material explanations and reflectivists (postpositivists) are said to explore ideational ones. Of course, the material vs ideational issue does not map neatly onto the positivist vs post-positivist (or rationalist vs reflectivist) debate, but there is no doubt that under the influence of Alexander Wendt's version of constructivism in particular, there has emerged a consensus that there is something to this demarcation. Marxists too have been internally divided over the extent to which the base determines the superstructure (Althusser), or whether the superstructure displays a certain level of autonomy (Gramsci).

¹ De Landa rejects the idea of 'totalities', however, his arguments against them are not relevant to the arguments raised in this papers.

In this piece I want to address three interrelated questions that arise out of thinking through De Landa's framework in relation to the 'longue duree', and which have implications for historical sociology. First, is the question of the 'longue duree' in its temporal aspect. Few sociologists would question the need to historicise social structures, or the importance of historical accounts of social development and change. Yet just how far should we temporally extend the 'longue duree'? De Landa's framework opens up the possibility of cosmic history being internally related (i.e. necessary) to any understanding of contemporary social forms. Indeed, given his commitment to complexity theory it is difficult to see where the 'longue duree' would end. Interesting as this might seem, and even accepting for a moment that he is correct, how much do we really gain by thinking of human societies as the outcome of how 'matter-energy expresses itself' (De Landa, 2000: 21). Yet once we have accepted a broadly defined historical materialism and consider the content and form of the 'longue duree' as predominantly material, then where do we draw the temporal limits of our inquiries? We may not agree with De Landa that we need to 'allow physics to infiltrate human history' (De Landa, 2000: 15) but is the decision about how far to extend the temporal aspect of the 'longue duree' simply an arbitrary one? Here the distinction between science and history becomes pertinent and however we define the practice of science, ungrounded arbitrary decisions are rarely accepted as valid starting points.

The second question concerns the form and content of the 'longue duree'. Or to put it more sharply, what are the dominant structures underpinning social events, processes and outcomes? Are they predominantly material or ideational in form? My own answer is that, at least at the level of meta-theory, there can be, and should be, no answer to this conundrum. Indeed, rather than deciding in advance that we have theoretical models that cover all cases, the role of social research should be to determine which structures were indeed the most influential in determining outcomes. This highlights another potential difference between history and science; the lack of decisive test situations to verify particular claims. Although once we understand the distinction between the explanation of events and the explanation of structures this is less of a problem than it might seem. This raises the third question: What are the methodological implications of extending the 'longue duree', or even involved in its study?

The paper proceeds by providing a brief account of Braudel's original formulation and places this within the context of the strategic and practical goals that influenced his thinking. Braudel was driven by a desire to break down artificial academic boundaries and hoped to construct an interdisciplinary approach to research; what Wallerstein calls 'interscience' (Wallerstein, 1999). In this respect, historical sociology is at least a step in the right direction. Section two places De Landa's Deleuzian inspired materialism in its context and provides a brief overview of his main arguments. In section three, I consider the three questions I have raised and attempt to think through some of the consequences of them. At this stage I do not promise to be able to answer them, but they are, or at least it seems to me, questions that need answers.

Braudel and the Longue Duree

In common with Marxist approaches the historians of the Annales School begin from the belief that history cannot be understood as simply the unfolding of conscious human actions, but must be explained in the context of forces and structural conditions that underlie, and in fact produce, observed patterns of human behaviour. A major aim of the Annales School was to challenge the contemporary dominance of political and diplomatic history and narratives of events in favour of social, economic and cultural history, and to place events in a broader context that would include what Christopher Lloyd has called the 'structures of history' (Lloyd, 1993). Where the Annales School and many forms of Marxism do differ is in terms of how these underlying forces and material conditions are conceptualised. Early Annales historians such as Lucien Febvre emphasised the role of ideas. Indeed Febvre explicitly distanced his approach from that of Marx declaring that conflict between groups within society was 'no mere economic conflict but a conflict of ideas and feelings as well' (Febvre, 1911: 323; quoted in Burke 1990: 14). Yet Febvre's work did not wholly reject a materialist aspect to social explanation and in common with most of the Annales School geography played a key role in his work. However, he did not endorse the view that geography or the natural environment determined the course of history. On the contrary, he argued that human responses to the environment varied and that ways of life, attitudes and beliefs were central to any interpretation of history.

Braudel, on the other hand, tended to understand his structural configurations in more materialist terms.² This does not mean that he rejected a role for 'mentalities' or collective beliefs, but when considered as a whole his work does tend to concentrate on material structures over ideational ones. This is evident in perhaps his most famous work on the Mediterranean World in the C16th and illuminates another key aspect of Braudel's approach; his explicit breaching of disciplinary boundaries. Braudel aimed to understand the characteristics of the Mediterranean as a physical and geological totality transcending national, religious and linguistic frontiers and to record the variable patterns of human behaviour in the area. In Part I of this work Braudel provides what is best described as a historical geography and a history of the environment of the Mediterranean. In Part II, he examines the economic, geographical, and technological structural trends of Mediterranean people; in effect a history of social structures. In Part III his concern is to undermine the primacy of events in historical writing and he places individuals and events in their structural contexts making them only 'intelligible at the price of revealing their fundamental unimportance' (Burke, 1990: 34). This requires some explanation. Braudel's disdain towards events and individuals is related to his belief that historical time moves at different speeds. Indeed, his division of Mediterranean history into geographical (Part I), social (Part II) and individual (Part III) aspects, correspond to his framework of 'longue duree', conjuncture and event.

² Braudel would disagree with this suggestion and states (1996: 225): 'It is worth repeating here that history is not made by geographical features, but by the men who control and discover them.' However, this remark has to be placed in the context of his practical treatment of the issues.

Thus, Braudel theorised history as taking place across three interacting and dynamic temporal domains which could only be dealt with in terms of a total history (Burke, 1990: 42). The first of these domains was that of events, or what Braudel called, the *événements*. These were the often short-lived observed dramatic events, such as wars, battles and revolutions etc.; often understood through the actions of great men, and which had been the focus of traditional historians. Second were conjunctures which referred to longer term cyclical processes perhaps taking place over a century or less. The last, and for Braudel most important domain, was that of the '*longue durée*'. This referred to a vast historical span that might remain relatively unchanged for centuries, but which played an important role in structuring present day possibilities. However, this does not mean that these longer term structures did not change at all. Indeed, Braudel believed that one of the most important contribution history could make to sociology was to highlight the fact that structures are subject to change, albeit slowly (Braudel, 1969: 26).

In fact, as Burke notes, Part III of Braudel's study of the Mediterranean is really aimed at demonstrating the irrelevance of events (Burke, 1990: 34). To demonstrate this Braudel focused in Part III on the war between an alliance of Christian states, often referred to as the Holy league, (led by Philip II of Spain) and the Ottoman Empire that took place in the latter half of the 16th century. He provides detailed accounts of the important individuals, as well as comprehensive descriptions of the battles, diplomacy, and treaties etc. The key battle, or so Braudel thinks, took place at Lepanto in 1571 and involved the Christian alliance against the Ottoman fleet. Although the Christian fleet emerged victorious Phillip II, Braudel argues, was not able to follow up the victory and establish dominance over the Mediterranean region. In order to explain why Phillip II was not able to turn the victory at Lepanto into dominance, Braudel refers back to the previous two parts of the book. First he refers back to the economic, social and political structures identified in Part II and in particular, to the financial exhaustion of the Spanish economy, which limited Phillip II's options post Lepanto. He also returns to Part I to highlight the geography of the Mediterranean and draws attention to the immense difficulties of communicating across a vast geographical Empire. The point Braudel was making was that 'events', were relatively insignificant in history, and individuals, even those as apparently powerful as Phillip II of Spain, were severely limited and constrained in what they could do by broader, and deeper structures beyond their control. Indeed in the Preface to the 1st edn of *The Mediterranean*, Braudel wrote that statesmen, 'despite their illusions [were] more acted on than actors' (Braudel, 1996/1949: 19). The history of events, Braudel was to scathingly write, were merely the history of 'surface disturbances, crests of foam that the tides of history carry on their strong backs' (Braudel, 1980: 10). The outcome of the struggle for supremacy in the Mediterranean, then, was viewed by Braudel as the outcome of longer term structures (political, social, economic and geographic) and not at all the result events or the actions of individuals.

Braudel's concept of the *longue durée* also had important consequences for content of historical study. Prior to the emergence of Annales School, historians had tended to focus only on various political forms – the tribe, the city state, the empire, the nation-state, and great leaders. Yet, when considered under the influence of the '*longue durée*' geographical and environmental features may be as significant for the

development of human populations as political or ethnic/national borders. Certainly Braudel thought so, and in his work on the Mediterranean he treated the geohistory of the entire region as a 'structure' that exerted countless influences on human patterns of behaviour in that region. In fact, Braudel largely locates civilisation change in the Mediterranean to cataclysmic changes in climate. For example, in 1200 BC the Hittite, Mycenaean and Cretan civilisations literally disintegrated within 30 years. Braudel finds no evidence of invasions, war, human interference or disease to explain this collapse. There was, however, evidence of migrations, hence something else must form the core of the explanation. Braudel suggests that this was massive climate change that led to drought, a lack of food, starvation and ultimately societal failure/collapse.

Braudel insisted on the diversity of time, and the need for historians to look beyond 'social time' or, the history of events, in order to examine the 'longue durée'. But there was something deeper pushing Braudel in this direction which only really became clear in his seminal piece on the relationship between the social sciences and the 'longue durée' (Braudel, 1958/1980). Braudel's thinking can be understood as a response to two important developments of the twentieth century. First was the rapid development of post-war social sciences. Braudel viewed these with some disdain and described them as 'young and imperialistic' and peculiarly ahistorical. Yet he was at the same time deeply impressed with the quantitative, systematic, and analytical approaches to human affairs that the social sciences had developed. What these new social sciences needed was a sense of history, not just in terms of the improved perspective history could provide, but also to bind them together; to create a common language across their disparate, diverging, and increasingly narrowly focussed subject domains. Braudel believed that the historian's perspective on time could help bring such a common language into being; particularly through the concept of the 'longue durée'.³ Thus he conceived of the 'longue durée' not only as an aspect of social time, but a unifying device that could help bridge divides among the social sciences. This was an explicit call for history and sociology to combine. According to Braudel, history and sociology constitute 'a single adventure of the mind, not even just the obverse sides of a single cloth, but the entire cloth itself, in all the complexity of its threads' (Braudel, 1958/1980: 105).

The other important influence on Braudel's intellectual stance was the wars Europe experienced during the twentieth century, and in particular, the effect these had on the practice of history. Given the magnitude of these great events it was hardly surprising that historians focussed their attention on them. The nineteenth and early twentieth centuries had seen the rising dominance of political history and historians understandably concentrated their attention on the short time span. This concern with events had been a consequence of epoch changing events and technical advances in the discipline of history; in particular, a fixation with documentary evidence and the archive. This led many historians to believe that documentary evidence and authenticity was the only legitimate mode of historical research and the exclusive path to historical truth. For

³ In fact, the 'longue durée' was only one of three factors Braudel thought could help engender this cross disciplinary conversation. The others were mathematics as applied to social and historical research and a focus on the particular, or what Braudel called *réduction à*; see (Wallerstein, 1999).

Braudel, on the other hand, the decades of twentieth-century war should have been a signal to historians of the dangers of the ‘event’ and what was needed was an examination of these events in their proper historical context; the ‘longue duree’.

In the period since Braudel first introduced the concept of the ‘longue durée’ scientific understanding has opened up the possibility of dramatically extending it. The Darwinian revolution has continued to open up new vistas on human social development and now the source of life itself (DNA) is said to have been revealed. Scientists too have turned to history and constructed elaborate histories of the earth itself, life on earth, and even the beginning of the universe. Manuel De Landa embraces this challenge and attempts to extend the ‘longue duree’ by bringing physics into human history.

De Landa and Complexity

De Landa’s work is clearly related to that of Braudel; although it is equally clear that Braudel would not agree with all of it. One thing that they do share in common is a critique of the belief that mentalities or language can be the explanation of everything human. De Landa is explicit about this and he attacks what he calls the primacy of ‘interpretations’ and of ‘conceptual frameworks’. Indeed he argues that ‘the key...is to cut language down to size, to give it the importance it deserves as a communications medium, but to stop worshipping it as the ultimate reality’ (De Landa, 2000b). Certainly he accepts that ideas and beliefs are important, and play a role in history and social explanation, but he argues that the contemporary human sciences have reduced all material and energetic processes, and all human practices that are not linguistic or interpretative, to little more than an external ‘framework’ that plays no causal role. But, he argues, once you break away from this view and accept the role of nonlinguistic practices that (in part) make up society (as well as the nonhuman elements that also shape it, such as viruses, bacteria, weeds, or nonorganic energy and material flows like wind and ocean currents) then language itself becomes just another material that flows through a much expanded picture. Language, according to De Landa, is best thought of as a catalyst or trigger for energetic processes and not the source of ‘being’ it appears in more linguistically oriented social theories.

Alongside this view of language two other fundamental assumptions shape his thought. First is a rejection of Platonic essences. By this he means the idea that the form of entities emanates from an essence within them, perhaps existing in some ideal world, or in the mind of a God that created these things. Instead, each entity (not only geological and biological entities, but also social and economic ones), is viewed as the outcome of a set a processes capable of creating or producing such an entity.⁴ Sometimes these

⁴ Since my aim here is mainly exposition of De Landa’s main ideas it does not seem pertinent to engage in a criticism of them. Nonetheless, it is worth pointing out that even in De Landa’s own terms in order to call any entity one of a type requires that we are able to differentiate it from other entities that are not of that type. Hence, and putting aside for a moment the problem of the source of any given entity, even De Landa must be committed to things having properties that allow us to differentiate them from other things that have a different set of properties. In fact, I think no position fully escapes some form of essentialism; if it did it would be unable to talk about ‘anyThing’.

processes are already fully detailed in the natural sciences, such as complexity, chaos theory and nonlinear dynamics, and hence he sees no reason not to borrow their model. At other times, however, we may need to create new models using philosophical resources and he claims that, people like Deleuze and Guattari have been very helpful in this regard. The other assumption is in his rejection of totalities; entities, such as ‘the International Community’, for example, or the ‘Capitalist System’. The morphogenetic approach adopted by De Landa does allow for the emergence of wholes that are more than the sum of their parts, but only if specific historical processes, and specific interactions between lower scale entities’, can be shown to have produced such wholes. Thus, social institutions and organisations only acquire a life of their own from the interactions of individuals. In addition, it is from the interactions of those institutions and organizations that cities emerge, and from the interactions between cities that nation states come into being.

In *A Thousand Years of Nonlinear History* De Landa attempts to engage in an examination of the material processes embedded in human cultures. He conceptualizes these as geological, biological, and linguistic structures that have influenced, possibly even determined, the development of the Earth and its inhabitants over the last thousand years. De Landa’s aim is not to write a history of these processes, but rather, to provide a historical philosophy that can orientate historical work (De Landa, 2000: 11). In this sense he is attempting the formation of a theory that provides a scientific investigation into collective human behavior in relation to its physical and biological environment. Examining three domains (the geological, the biological and the linguistic), De Landa explicates the concepts which he claims are important for gaining insight into the irreversible processes that have shaped humanity and its environment over the last one thousand years. His starting point is the strong materialist claim that it is not only the history of humankind that should be of concern to sociologists and historians, but also those of the earth, plants, animals and ecosystems, and indeed the flow of energy and matter itself.

He explicitly names the *Annales school* of Fernand Braudel and the work of William McNeill as precursors of what he is attempting to achieve. Furthermore, he believes that developments in the natural sciences provide sound reasons for proceeding in this manner. Drawing on complexity theory, he suggests that research in the natural sciences is also producing doubts about the linear relationship between causes and effects, linear notions of progress, and the link between circumstances and their consequences. Reality, when seen through the lens of contemporary science, seems to be built upon fragile dynamic and unstable initial conditions such that small changes in one domain can cause major upheavals in the behavior of parts, fields and energy flows supposedly independent of the initial domain. In these developments within the natural sciences, De Landa sees a model of thinking for the social sciences. Modes of thinking in the social sciences, he argues, are still too reliant on linear processes from one stage of development to the next, whether or not they are necessarily coupled with notions of progress or purpose.⁵ In his view, it is time to infiltrate the study of history and social

⁵ Wallerstein suggests something similar. See, (Wallerstein, 1999)

science with models and concepts that analyze collective human actions in the same manner that behaviors of water, electromagnetic fields, viruses and animal species are studied in the natural sciences. In these sciences, the focus is orientated towards critical breaking points between different conditions than on a development in terms of progress or higher civilization. In short, De Landa, sees non-linear models of science as providing an opportunity to chart the unintended collective effects of human decisions.

De Landa's is not a top-down approach, but rather, he considers that one should, where possible, always consider social phenomena from the bottom up. Hence, when he refers to organizations, cities or nations, he considers these in terms of their populations or units at a lower level. He addresses the past thousand years from three distinct although interconnected standpoints. The first is through a 'geological' lens. In this chapter he examines the origin of different types of cities, the building of states and the conduct of wars. He explores these as patterns of complex processes embedded in the flow of energy/matter. Fuels, such as raw materials and biological muscle power, and the optimisation of its deployment, as well as the utilisation of the landscape (wind, ocean, rivers) are all addressed. The organisations and architecture of cities are interpreted as systems which consume, use and redistribute energy, while in the meantime generating products, people, and waste. Importantly, the cultural, political and religious institutions and organisations are viewed as distinct from the intentions, desires and meanings that have traditionally been associated with them. Indeed, De Landa believes they come into existence much in the same way as minerals come into existence in a mountain.

In the second chapter, the biological becomes the focal point and attention is now directed towards the flow of all forms of genetic material; not only human genes, but also those of bacteria, plants, animals, and viruses. When viewed through a biological lens cities appear as organisms that feed off, and depend upon their environment. Variations in that environment are integral aspects of any explanation that attempts to understand the differences in form between various cities; although he does distinguish between a city that emerges organically in relation to its particular geographical location and one that is the result of central planning. De Landa also shows how the mere coexistence of people and animals generates particular problems and solutions and his discussion of the impact of microorganisms on human history demonstrates the necessity of considering non-human histories when writing human history.

The final section considers the last thousand years through a socio-linguistic lens, and even here the focus remains on non-uniform streams of energy/matter that intersect, intermingle and feed one another in varied ways. Language and everything surrounding it is again interpreted as material; as an expression of energy/matter. His book is a brave and enthusiastic attempt, based on the intellectual legacy of Deleuze and Guattari, to formulate a theory of history which sees wind, rocks, oceans, bodies, cities, bacteria, trees and words as expressions of the same mass energy. Reality is to be understood as a complex, heterogeneous and non-linear process in which energy/matter expresses itself in various ways. A particular strength of his work consists in the subtle linking of the research of geologists, historians, biologists and linguists to produce an overall account of human history over the last one thousand years. Thus in some important respects his

work is exactly the kind of ‘interscience’ that Braudel had called for. However, whilst many of his propositions seem innovative and bold, many contemporary social scientists and historians will find them cold and inhuman; a criticism that was also aimed at Braudel.

Three Times Three Problems

There is no doubt that some or other version of the ‘longue duree’ informs many approaches to social science and history. Certainly most Marxists adhere to some version of it as do all historical sociologists. In this section I want to briefly address some of the key issues that arise when this concept is unpacked in light of De Landa’s treatment of it. First, is the vexed issue the specific form and content of the structures that constitute the ‘longue duree’. Both Braudel and De Landa privilege material factors over ideational ones. For Braudel this may just be an analytical convenience, or a consequence of the particular era and spatial locale which informed his research. But for De Landa, materialism is a logical, or philosophical, commitment that arises out of his commitment to contemporary science, and in particular, complexity theory. In contemporary IR theory, the question of whether material factors take precedence over ideational ones or vice versa seems to be almost an aesthetic choice, or perhaps one related to the identity of the theorist. Graduate school training in both the US and Britain only serves to reinforce this trend with the ‘tyranny of isms’ forcing students to adopt theoretical positions as either/or bodies of thought. But the very structure of the discipline, from journal submissions, academic appointments and grant applications also serves to reproduce an environment in which it is better to belong to one ‘ism’ than adopt an eclectic theoretical attitude or remain outside of them all.

But is there a better way to approach this problem? Sandra Mitchell suggests that one way to think about these issues is to view theory as an abstract characterisation of mechanisms to be deployed in explanations (Mitchell, 2003). Theory, of necessity, can only partially describe a limited part of any complex system, yet events in complex systems evolve through the dynamic interactions of many causal components. ‘[A]t the theoretical level, pluralism is sanctioned. At the concrete explanatory level, on the other hand, integration is required. However complex and however many contributing causes participated, there is only one causal history that, in fact, has generated the phenomenon to be explained’ (Mitchell, 2003: 216). This implies that the question of whether material factors take priority over ideational ones or vice versa is an empirical issue. It also however, requires us to reconsider the claim, commonly accepted in IR and political science, that theory is about explaining the relationship between laws (Waltz, 1979: 5). Laws, according to the view that dominates the discipline, are an ‘observed regular relationship between two phenomena’ (Van Evera, 1997: 8). Or, they can be considered as ‘a regularity, or repeating pattern, that describes a causal relationship between two or more factors’ (Dessler, 2003: 390). This view of law is embedded in a Newtonian closed system view of the world. Laws, in complex open systems on the other hand, do not operate in this way. And the process of theorising structures does not depend on explaining relationships between laws, but rather, on specifying the properties and

potentials of mechanisms and processes. Most theory in IR already engages in this even if it is not explicitly acknowledged.

Waltz, for example, and despite his strong articulation of theory as an explanation of laws, provides an account that specifies the causal power of the structure of the international political system. Certainly, on the basis of this specification he suggests that some relationships might be law-like, but these conclusions are only possible if the structure has the causal powers he has ascribed to it. Much the same could be said of Wendt's alternative theory of the structure of the system (Wendt, 1999). Rejecting Waltz's overly materialist account of system structure he suggests that we conceive of the structure in terms of competing cultural logics. He does not attempt to specify a relationship, or regular pattern, between these differing logics, but rather, articulates what effect they may have in shaping international outcomes. That is, he describes the causal power they are said to possess. On the basis of either theory it may well be that enough empirical research may one day demonstrate that there is a relationship between X structure and Y outcome. And if that were to happen we might be entitled to talk in terms of a law as regularity between two or more factors.

However, the complete absence of any such laws in international relations does not suggest the strategy is turning out to be a productive one. On the other hand, the nature of complex systems provides an explanation of why such laws have yet to be discovered. Put simply, there aren't any. In which case, defining theory as the explanation of laws, and defining laws as repeating patterns that describe a causal relationship between two or more factors, seems a paradigmatic case of *not* doing what Waltz claims all research should do. 'One must', Waltz chastises, 'choose an approach that is appropriate to the subject matter' (Waltz, 1979: 13).⁶ Empirical work, then, can be understood as the study of the interactions of theoretically grounded mechanisms into concrete explanatory problems and we simply do not know in advance whether the important mechanisms are material or ideational, or perhaps a combination of both.

This should not be taken to imply that all theoretical positions are capable of being integrated in a straightforward manner. Some theories explicitly rule out a consideration of alternatives. But which ones can be integrated and which ones can not requires a disciplinary conversation prepared to accept that integrative theoretical pluralism is at least possible. Current theoretical debate in the discipline does not seem conducive to this discussion. Theories seem to function as identity markers within a social system suffused by battles over resources and power. This should not surprise us. Academic disciplines, as social systems, are themselves complex self-organizing systems, and as such, possess all the properties detailed above. As a self-organizing system, however, we can at least recognize that we get the intellectual structure that we create (within the limits of already existing structures and environmental constraints) and this opens up the possibility of change; assuming of course we desire it.

⁶ Waltz seems confused about the logical priority of this issue in relation to methodology. This claim can only be taken to mean that ontology comes first, that is that one should adopt and amend one's methods to the object domain under consideration. However, he then proceeds to claim that 'due process of inquiry' 'requires one to follow the logic and procedures that one's methodology prescribes'.

In fact, this is how I read Braudel when his concept of the 'longue duree' is understood in the context of his desire to break down disciplinary boundaries. For it may well be the case that in terms of the Mediterranean in the 16th century, geography and the physical environment were the most important factors. But it does not follow from this that they will be in all circumstances and I do not believe Braudel intended to suggest they were. If this were the case then he would have no need for anything approaching 'interscience' and we may as well just accept that physics holds all the cards. De Landa, on the other hand, does seem to suggest that all human practices can be understood as the result of material factors, or energy/matter. Now whilst I share his frustration and concern at the way linguistic and cultural modes of inquiry have colonised contemporary critical/radical social science and history, I do not believe that attempting a materialist inversion of this is the best, or the only, way forward. The key concept here is emergence and it plays a fundamental role in both complexity theory and all forms of structural theorising. What is striking about De Landa's treatment is that although he is committed to emergence, he does not see how it blocks some of his conclusions.⁷

Emergence is an important property of complex systems. There are three core ideas which underpin the notion of emergence. First is the idea of 'supervenience'; this means that the emergent properties will no longer exist if the lower level is removed. Second, emergent properties are not aggregates; i.e. they are not just the predictable results of the summation of unit properties; hence they introduce novelty. Third, to be considered emergent, new entities, processes etc., should be causally effective; emergent properties are not epiphenomenal (either illusions or descriptive simplifications only). This means that the higher level properties should have causal effects on the lower level ones.

Emergence is often depicted as a process in which macro processes and properties 'emerge' from micro processes and properties, i.e., the properties of the whole emerge from the properties of its parts. These new entities have novel properties in relation to the properties of the constituent parts. In particular, it is not only that the emergent level has its own laws and modes of operation but rather, that it can interact, and causally impact upon, the parts from which it emerged - a process known as downward causation.

The concept of emergence is a central thread uniting many non-reductive approaches to social science. In this respect Durkheim was a key figure and emergence was a major component of his theoretical and empirical work (Sawyer, 2005). Durkheim argued that the combined interaction of individuals gives rise to a new emergent entity called society, and that this entity could only be understood on its own terms and not in terms of psychology, or even worse, human nature.⁸ For Durkheim, 'society is not a

⁷ Much the same can be said of Wendt's recent attempt to theorise social objects through quantum mechanics. Acceptance of the concept of emergent properties(which Wendt does) makes this a non-starter.

⁸ It is worth point out here how the concept of emergence disrupts the image of 'levels-of-analysis' that is so common in IR. Emergence suggests that the international could only emerges out of the social and not the national.

mere sum of individuals', and if it were 'sociological laws can only be a corollary of the more general laws of psychology; the ultimate explanation of collective life will consist in showing how it emanates from human nature in general' (Durkheim, 1964: 98, 103). In the context of IR theory Durkheim was certainly vindicated when Morgenthau produced just such a theory of international politics. The emergentist reaction to Morgenthau came from Kenneth Waltz's structural realism.

Although not explicitly employing emergence as a central category it is clear that Waltz was keen to develop the notion of an international system structure that has the potential to causally influence the behaviour of its constituent units. His damning critique of 'reductionism' begins with the specification of an international 'system' composed of a 'structure' and 'interacting units' (Waltz, 1979: 79). Noting that 'the same causes sometimes lead to different effects, and the same effects sometimes follow from different causes', he concludes that 'reductionist explanations of international politics are insufficient...' (Waltz, 1979: 37). In rejecting reductionism Waltz argued that 'outcomes are affected not only by the properties and interconnections of variables but also by the way in which they are organized' (Waltz, 1979: 39). According to Waltz, the structure of the international political system possesses causal properties which produce effects, 'shaping and shoving' the behaviour of the units in predictable ways.

All structural theories rely on emergence, even if they do not explicitly refer to this process. Although Wendt's structuralism idealism disagrees with Waltz about how to define structure, he treats his 'cultures of anarchy' in emergentist terms, arguing that they have a logic that operates independent of the beliefs of any given individual (Wendt, 1999). Wallerstein's systemic perspective likewise treats the relationship of dependency as an emergent property of the system as a whole, which can only be explained at the level of the system and not at all in terms of the behaviour of the individual units (Wallerstein, 1976, 1976). Emergence has important implications for how we theorise. It requires that we approach theoretical problems from the standpoint that simple relationships between any two phenomena or elements cannot, in aggregation, provide adequate explanations of the behaviour of real world phenomena. Consequently, emergence encourages a multi-level mapping of processes and interrelationships, which despite the increased level of complexity, improves the standard of analysis. But this also implies that emergent entities have to be examined in their own terms taking into account the specific power and propensities that such levels possess. Hence, even if social life is materially embedded it does not follow that it is materially determined. Moreover, it may well be the case that certain social forms are able to free themselves to a greater or lesser extent from material constraints. Although this can never be theorised as a form of total autonomy and social life always has a material aspect.

Emergence, then, implies a complex view of causal processes. Any system displaying this property will not be susceptible to analysis predicated on the attempt to explain outcomes on the basis of one factor alone. Social systems that possess emergent properties are fundamentally incompatible with a scientific method that examines phenomena through the isolation of elements into dependent and independent variables. Complexity theory maintains that this approach is incapable of capturing the flux of

causation in concrete situations. A system that displays emergent properties cannot be explained by appealing to the nature or behaviour of its sub-systems. Hence De Landa's 'bottom up' approach contradicts his commitment to complexity theory.

Even in a relatively simple complex open system there may well be multiple emergent levels, and potentially hundreds of interacting feedback loops. Even if we had accurate knowledge of how many levels and an appreciation of all their properties, this would still provide us with little understanding of how that system will behave. Causality in such systems is both networked and summative, making it very difficult, if not impossible, to untangle the contribution of individual causal mechanisms, or combinations of them, in explaining specific outcomes. In complex open systems often the only way to determine what happened, and why, is to sit back and watch the process unfold.

The idea of sitting back and watching, however, is the empiricist fallacy; in order to watch we are going to have to have some idea of what it is we are looking for, and we cannot look for everything at once. Reducing complexity is one of the functions of theory.⁹ 'Theory', as Waltz puts it, 'isolates one realm from all others in order to deal with it intellectually' (Waltz, 1979: 8). In building representations of open systems, we are forced to leave things out, and since the effects of these omissions are non-linear, we cannot predict their magnitude. All theories, insofar as they attempt to isolate and identify the key components and patterns of interaction between elements, achieve their aims through abstraction. The process of abstraction is necessarily reductionist (Sayer, 1992). The level of abstraction possible whilst still permitting a theory to be 'realistic' is always questionable. The extent to which abstraction is justified in modelling any system begins with an inherently subjective judgement, but will eventually require validation by the wider scientific community. The pursuit of realistic theories will require lesser degrees of abstraction, but produce more meaningful, but very specific outcomes. Those keen to identify general laws may therefore resort to a greater degree of abstraction in the attempt. Waltz, adopts just this strategy; he hopes to explain a lot of behavior through a limited number of variables. Approaches embedded within philosophical realism, on the other hand will attempt to adopt a 'thicker' form of descriptive accuracy.

This implies that we should embrace a pluralist view of theory since each theory may, in their own limited way, capture something important of the object under study. The suggestion that there are multiple valid representations of the same complex system is not new or particularly revelatory. In his *Introduction to General Systems Theory*, Gerald Weinberg uses what he calls the 'complementary law' to show how two different perspectives about a system may reveal aspects of that system that are neither entirely independent nor entirely compatible (Weinberg, 1975). Different representations may capture different aspects of the system's behavior. The commitment to theoretical pluralism is an acceptance of the fact that there are multiple mechanisms at play in social outcomes. Because theories are abstractions no theory can specify all the potential mechanisms that might produce outcomes, hence we need to remain open to the

⁹ There are, of course, other types of theory.

possibility of both material and ideational factors playing a role in social and historical explanations.

What of the second and third problems of extending the 'longue duree' that of its temporal aspect and methodological consequences? These two are closely related hence I will deal with them together. Here, however, De Landa's work does pose some problems. The question is really one of how far to extend the 'longue duree'. This question has often been addressed exclusively in methodological terms. Indeed, given that the 'longue duree' could, potentially at least, be infinite, then the choice becomes solely that of finding some plausible point from which to begin inquiry. Ironically, most historians and sociologists faced with this decision turn to events for guidance. Hence key historical events are often taken as representative of some momentous change that allows the relevance of the 'longue duree' to be determined. So for example, the French or Russian revolutions are often cited as starting points for contemporary research, since they signify key moments of historical change. Yet this answer places the 'longue duree' in the context of events rather than the other way round.

Whatever the problems with De Landa's approach his ontological treatment of this issue does highlight the problems of framing the 'longue duree' in terms of events. Take, for example, the French revolution. Whilst it may seem plausible to begin inquiry at this point, and strategically it may even be necessary, what if some structural pattern prior to this event is integral to the process under consideration. In fact, De Landa's commitment to complexity implies that this must be the case, since minute changes in one domain can have far reaching implications on another. Viewed this way the framing the 'longue duree' in terms of events can only be arbitrary, no matter how methodologically sound it may seem, and perhaps the most important structural components remain absent. The point is there is no way to tell. Another strategy might be to frame conjunctures in terms of events, and to look for changing structural patterns in the 'longue duree'. Again, whilst this seems plausible there is no way of knowing if the identified change is crucial or not. More problematic, as De Landa's position shows, is that if the 'longue duree' is conceptualised solely in material terms then there really is no point at which the 'longue duree' can be coherently specified, and human history becomes cosmic history.

There is, however, another way to think about this problem that derives from the ontological difference between events and 'the longue duree' and confusion surrounding the role of structural theorising. Martin Hollis and Steve Smith provide one example of this confusion. Hollis and Smith ask, '[i]f structural theories of international relations can say nothing about an event as momentous as the collapse of the Cold War system, what can they say anything about?' (Hollis and Smith, 1994: 241). This implies that the role of structural theorising is to explain events, but is this correct, or is structural theory more correctly conceived as an exercise in the examination of the possibilities within a given structural context?

Wendt argues that structural research starts with actual events and then abstracts to the structures that make those events possible (Wendt, 1987: 363). In effect, structural

theorising is an inquiry into the conditions of possibility for social events to occur: 'Structural explanations reveal the conditions of existence or "rules of the game" of social action' (Wendt, 1987: 363). Moreover, Wendt argues that although structural theories are a necessary part of any complete explanation of actual events, they alone do not explain those events directly, since they only explain how such events are possible.

Hollis and Smith, on the other hand, seem to have misunderstood the role of structural theorising and to have ignored Waltz's claim that a structural theory of international politics will, for example:

explain why war recurs; but it will not predict the outcome of particular wars. Within a system, a theory explains continuities...Within a system, a theory explains recurrences and repetitions, *not change*...Structural concepts, although they lack detailed content, help to explain some big, important, and enduring patterns (Waltz, 1979: 70).

Thus, Waltz's never intended his theory to explain such a momentous change as the end of the Cold War. Whatever the faults of Waltz's theory, and these are many, to critique it for not achieving something it was never intended to, nor could, achieve, is akin to buying a car and then complaining because it will not fly. Structural theory alone can never explain individual events. This is not to say that structural theory will not play a role in event explanations. For all explanations of specific events include within them the conditions of possibility for the outcomes under consideration. Structural inquiry in the social world is concerned with the conditions of possibility for any social act. Thus structural inquiry examines the limits to action; what can be done; what cannot be done; and in some circumstances what is likely to be done. Structural theorising enables us to get a grasp of things as complexes with powers, and when we grasp this we have a particular form of knowledge which we might liable 'structural-understanding'.

Part of the strength of the successful sciences is that they give us 'structural-understanding' and that, at least as theoretical sciences, they make almost no effort to try to explain the particular events occurring in the world. Thus, for example, it is not the aim of nuclear physics to explain, or have predicted, the disaster at Chernobyl in 1986, although such 'structural-understanding' may well play a vital role in the analysis of such events after they have occurred, and perhaps be of use in the prevention of similar accidents. To suggest otherwise is to suggest that events could be explained before being caused, or that we can predict the causal pattern of social events before they occur. In this respect, the natural sciences can be seen to be a great deal less ambitious, in respect of their predictive capabilities, than the social sciences attempt to be.

Within the social sciences such 'structural-understanding' is vital, but analytically different from 'historical-explanation'. Thus, for example, while the properties of a given structure may contain tendencies that motivate, enable and/or constrain the incumbents of positioned-practice systems, the properties of such a structure are not reducible to the properties of those particular individuals that are responsible for its reproduction and/or transformation. Structure is an emergent reality that contains within it particular tendencies, but importantly, these tendencies are not reducible to the individual agents

who reproduce or transform the structure in the course of their deeds. The activities and psychological makeup of the persons comprising a bureaucracy, for example, are wholly irrelevant to the ‘structural-understanding’ required in order to know the possibilities inherent in such a structure. Thus, in terms of ‘structural-understanding’ we speak of Presidents, not George Bush, or of Capitalists, not Bill Gates.

‘Structural-understanding’, however, is limited and is only part of what might be required to explain a given social event. In order to explain particular events, ‘structural-understanding’ needs to be complimented by ‘historical-explanation’. ‘Historical-explanation’ has the logic of a narrative that connects events and processes in time (Porpora, 1987: 94-103; Suganami, 1999).

‘Structural-understanding’, is not causal in the sense of a narrative linking events and processes in time. Structural theorising is causal only insofar as it attempts to identify the powers, liabilities and tendencies inherent in particular structural configurations. But these powers, liabilities and tendencies are always only ever manifested in particular contexts and if we are to understand the role they play in social outcomes they need to be wedded to a narrative form of explanation that emerges out of ‘historical-understanding’. ‘Structural-understanding’ can, and should, be coupled with causal, or ‘historical-explanation’; hence the two forms of understanding are complimentary. As Christopher Lloyd notes:

[A]ction, behaviour and structures are studied in an on-going structuring context. Intentional and unintentional actions are seen as causally conditioned and enabled by structures; and structures of rules, roles, and relations are seen as the consequence of prior collective action (Lloyd, 1993: 196).

Importantly, and contrary to Wendt, ‘structural-understanding’ is prior to ‘historical-understanding’ since the causal narratives we construct to explain events utilise claims about agents, structures and processes. In short, ‘historical-understanding’ is ontologically grounded in ‘structural-understanding’, even if this is not fully acknowledged. Hence, whilst particular acts and events can only be investigated for their causal patterns, signification and meaning from within a structural context, the distinction between ‘structural-understanding’ and ‘historical-understanding’ is still methodologically important. There is a valid methodological division of labour between, the explanation of particular acts and events, on the one hand, and the explanation of the properties of structures on the other. It needs to be noted that this distinction does not mark a radical disjunction between the natural and social sciences, since the distinction between ‘structural-understanding’ and ‘historical-understanding’ occurs in all the sciences, even if as a result of their particular object domains one form may come to dominate.¹⁰ Indeed, and as already noted, in some respects the natural sciences are a good deal more modest than the social sciences vis-à-vis their predictive capabilities. After all, we would not expect aerodynamics scientists to predict when, where and how the next air accident will occur. Nevertheless, at some level, all acts and events fall under general

¹⁰ This is what Wendt (1998) highlights in his discussion of constitutive theory and causal theory.

descriptions and into general patterns and no particular event is the outcome of a truly unique set of mechanisms. These two kinds of analysis must be methodologically united at this deeper level and able to take account of the relationship between particular acts, events, and patterns of behaviour and structures over time.

Structural and historical understanding cannot therefore be two distinct kinds of inquiry, one concerned with uniqueness and change and the other with generality and continuity. The sharp distinction between the studies of action and structure on the grounds of uniqueness versus generality is untenable because of the conditioning role of structure. Any attempt to introduce a purely event based account of action must inevitably introduce unthematized structural features; in any account of a social outcome, one element explains the other. We cannot allow the complexity of the social world to force us into artificial methodological retreats that manufacture elegant simplicity at the expense of explanatory power. If the social world is complex, and undoubtedly it is, then we should expect nothing less than complex, multi-dimensional, and at times contradictory, social theories as well as a wide range of complex methodological techniques.

Conclusion

The ultimate test of any combination of sociology and history will be practice, but this is a practice that can not even begin unless we have some sense of its problems, possibilities and practicality. Because there are no precise solutions for complexly organized systems, there is no one method for their study. It isn't quite 'anything goes', but we cannot tell what 'goes' without trying; and there are no rules we can specify in advance that might tell us either how to proceed or when we are achieving success. This requires a creativity and openness that is not necessarily encouraged in current disciplinary debates.

Braudel's work is suggestive of a way forward and in dispensing with the authority of a event-centred view of historical change and causality and opening up the scope of historical investigations to other disciplines he opens up a vista that goes beyond sterile debates that have no resolution. To study the structures of everyday life of a given period entails looking into more than the chronological succession of what is recorded as an event. Most importantly, all the contributors to the Annales School were committed to broadening the range of the discipline of history, the breaking down barriers between disciplines, and consciously drew on the methodologies of other disciplines, in particular: geography, social sciences such as sociology, anthropology, economics, and psychology, and also linguistics. This is a practice IR should embrace.

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