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A RELATIONAL PERSPECTIVE ON CULTURE AND SOCIETY

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Relations-In-Process: In Honour of François Dépelteau

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Abstract

In this paper, reflecting the twin interests of François Dépelteau, I draw together the themes of 'relationality' and 'process'. Having argued that the concept of 'relations' is central to sociology (and *a fortiori* 'relational' sociology), I discuss some of the problems associated with the concept. In this context I propose a processual conception. A social relation, I argue, is the 'state of play' in an interaction history between two actors and, as such, is always 'in process'. Relations do not exist in isolation, however. They concatenate in complex networks, which are themselves always 'in process'. The later sections of the paper discuss such networks and the mechanisms which drive their evolution across time.

Keywords

social relations, process, networks, relational sociology, network dynamics

Relaciones en construcción: En homenaje a François Dépelteau

Resumen

En este artículo, en que se refleja el doble interés de François Dépelteau, reúno los temas de «relacionalidad» y «proceso». Se ha sostenido que el concepto de relaciones es fundamental para la sociología (y a fortiori para la sociología relacional), y trato algunos de los problemas relacionados con el concepto. En este contexto propongo una concepción procesual. Sostengo que una relación social es el «estado actual» en la historia de la interacción entre dos actores y, por tanto, siempre es «un proceso». Sin embargo, las relaciones no existen de manera aislada. Se concentran en redes complejas, que a su vez están siempre «en construcción». En las últimas secciones del artículo se habla de estas redes y de los mecanismos que las llevan a evolucionar en el tiempo.

Palabras clave

relaciones sociales, proceso, redes, sociología relacional, dinámica de redes

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Relations-In-Process: In Honour of François Dépelteau

François Dépelteau devoted a huge proportion of what turned out to be the final decade of his life to the advancement of 'relational sociology': editing major works (Dépelteau 2018, Dépelteau and Powell 2013a,b), organising panels and symposia, and establishing a book series with a prestigious academic publisher[1]. For Dépelteau, this interest in relationality was twinned with an interest in 'process' (on process see also Abbott 2016). The social world, as he envisaged it, is a relational process. There can be no better way of honouring his memory, therefore, than by exploring the intersection between these two themes: relationality and process. That is my intention. With the specific aim of contributing to the further development of relational sociology as I understand it, I want to reflect in detail upon the nature of 'social relations' and their concatenation in networks, arguing that both (relations and networks) are inherently processual and considering some of the mechanisms which affect their evolution across time (on my approach to relational sociology more generally see Crossley 2011, 2014).

Dépelteau's chief source of inspiration in his reflections upon relationality and process was Norbert Elias (e.g. 1978). I do not engage directly with Elias in this paper, but 'network', as I use it, drawing upon social network analysis (SNA), largely parallels the concept of 'figuration' which is foundational to his approach (a figuration is a network). More importantly, the SNA concept advances relational understanding by rendering figurational processes mappable, measurable and thus more amenable to empirical investigation. In addition, my focus on mechanisms of network evolution in this paper resonates with Elias' (1983, 1984)

analysis of mechanisms (e.g. 'the monopoly mechanism' and 'the royal mechanism') in *The Civilising Process* and *The Court Society*. Whether either Dépelteau or Elias would accept this comparison or find its results instructive we will never know but I would like to think so and in drawing this parallel I at least align what I have to say with the tradition of relational sociology to which Dépelteau was wedded.

I begin the paper with a brief reflection upon the sociological importance of 'relations' and the cognate concept of 'interaction'. This takes me, in the second section, to a discussion of the contested nature of the concept of relations and from there to my processual definition. Relations do not exist in isolation, however. They concatenate within networks and these 'relations between relations' themselves have an important impact. I discuss this in the third section of the paper. After a brief discussion of the boundaries of networks in the fourth section of the paper I return to process in the fifth, discussing a number of the mechanisms which underlie network evolution and dynamics. Like relations, I will argue, networks are always inprocess and the task of sociology is to identify the mechanisms which shape this process. Before I do any of this, however, it is necessary to define the scope of the paper with a few preliminary remarks.

Preliminary Remarks

For the sake of brevity, I restrict my focus to relations between human actors in this paper. A longer discussion would extend this to relations and networks involving 'corporate actors'; that is, organisational actors, such as governments, firms and trades unions, which are comprised of human actors but whose decisions,

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1. Palgrave Studies in Relational Sociology, now edited by myself and Peeter Selg.

actions, resources and often legal status are irreducible to those human actors (Axelrod 1997, Coleman 1990, Hindess 1988). Like human actors, corporate actors are always-already enmeshed in networks with both other corporate and sometimes human actors. I bracket them here, however, for reasons of brevity. The main claims of my argument apply to them but some of the details differ and including them would necessitate lengthy elaboration and digression which would detract from the primary purposes of the paper.

I also bracket out so-called 'non-human actors', as posited within actor-network theory (Latour 2005). However, in this case I am bracketing a discussion of the legitimacy of their inclusion, of which I am far from being persuaded. All manner of non-human objects and forces affect human societies. I am making the finishing touches to this paper in the midst of a global pandemic, for example, during which a virus (Covid-19) has had a huge impact on societies across the world. Likewise, it is clear that human activity and relations are embellished, enabled, extended etc. in many ways by our acquired capacity to harness non-human forces. In the latter case, however, the terms 'tool', 'resource', 'media' and 'environment' seem better suited to capture the role of the non-human than 'actor'. And in the former sociology is inevitably condemned to focus upon the human perspective in a way which precludes non-human objects from enjoying actor status. Actor-network theorists study non-human 'actors' insofar as they impinge upon the lives of human actors, from the point of view of and as conceptualised by those human actors. This does not amount to treating non-human objects as actors, at least in any meaningful sense. It is merely an acknowledgement of the fact that human actors exist within, are conscious of and must negotiate a physical environment whose forces they can to some extent harbour but which may impinge upon their projects and does not always or automatically bend to their will. I can consider the human impact of Covid-19; how humans have understood and responded to the virus, its spread and effects; but the virus has no point of view of its own, and if it did I would have no access to it. I can only grasp the virus as it exists for and affects human actors, which, it seems to me, falls short of treating it as an actor (even if that designation were correct). Moreover, because the virus has no awareness, let alone awareness of humans, of its impact upon them or of their various strategies for combatting its spread and effects, it is incapable of entering into social relationships of the sort which sociology studies, and therefore incapable of belonging to societies of the sort studied by sociologists. It may feel sometimes that we play cat and mouse with viruses, each taking our turn to outwit the other, but that is only true on the human side because viruses are entirely unaware of the obstacles obstructing their spread and incapable of strategically adjusting to such obstacles. A virus can have a causal relationship upon human beings and our societies, from the outside, making us ill and killing us, but that is not a social relationship. We can grasp

its mechanisms and seek thereby to avoid, ameliorate or even use (e.g. weaponise) its effects but we cannot, in any meaningful sense, be said to enter into a meaningful relationship with it. To reiterate, however, I am simply bracketing these considerations for present purposes.

Finally, I will bracket the distinction between different types of relation (e.g. economic exchange, sexual intimacy, warfare, friendship, labour etc.), focusing instead upon relations and networks in a more abstract sense. Variations between types of relation are important and are entirely compatible with my arguments but consideration of them would add considerable complexity (not to mention length) to the discussion. My purpose here is to establish a few basic principles by reference to a minimal and generic conception of social relations. This would of course need to be fleshed out and elaborated for analyses of specific networks.

It will be observed that I use the term 'interaction' in this paper where others might use 'transaction'. Some relational sociologists, following Dewey and Bentley (1949), distinguish between 'interactions', which they define as exchanges between pre-constituted entities whose constitution remains unaffected by their exchange, and 'transactions', which they define as exchanges between parties who are in some part constituted in and by way of their exchange (Morgner 2020). I agree that many (though not all) human exchanges conform to this definition of transaction and have written at length elsewhere about some of the many ways in which human actors are formed in and modified by way of interaction (e.g. Crossley 2011). I do not further explore this issue here, however, for reasons of space, and I stick to the term 'interaction' to designate both 'interaction' and 'transaction', as understood by Dewey and Bentley. I do this because Dewey and Bentley's distinction is not widely known in sociology and 'transaction', on account of its more usual usage, is likely to be misunderstood as designating an exchange of resources (an economic transaction) between actors who are otherwise unaffected by it - the very opposite of what is intended by relational sociologists who use the term. 'Interaction', by contrast, at least for sociologists versed in symbolic interactionism, following Mead (1967), and the work of Simmel (e.g. 1955, 1971), will be understood in exactly the sense my colleagues hope to capture with 'transaction'.

My conception of networks, as noted above, is taken from formal social network analysis (SNA), a methodological toolbox formed at the intersection of sociology and mathematics (Scott 2000, Wasserman and Faust 1994). This is not the place to elaborate upon SNA. It must suffice to say that it defines networks, minimally, as a set of nodes, some pairs of which are connected by a set (or sets) of relations. Smaller networks can be visualised, as in Figure One, with nodes represented by small coloured shapes ('vertices') and relations by lines connecting them ('edges'). Defined thus, networks have mathematically defined properties

and the argument of SNA, which I endorse, is that these properties often have sociologically significant effects. How the members of a population are 'wired up' makes a difference and that is why SNA, as a set of methods for mapping and measuring this 'wiring', is sociologically important.
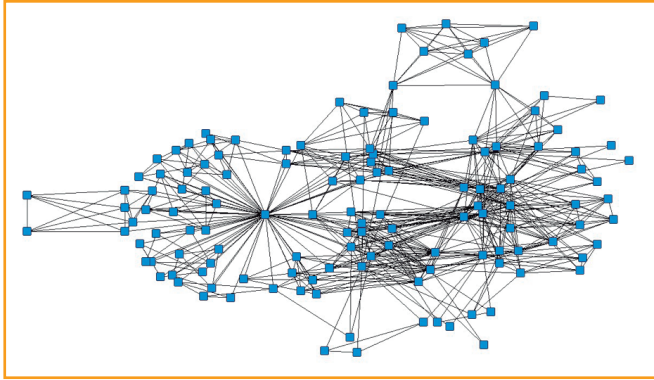

Figure 1. Visualisation of a Network

SNA allows us to capture a snapshot of network structure at a particular point in time. However, this does not preclude a consideration of process. Networks are ever-evolving structures-in-process but, as Elias (1983) observes, their key structural properties and configuration typically evolves slowly, such that a snapshot captures relatively enduring constraints and opportunities (for actors) whose significance extends beyond the immediate moment of the snapshot. Furthermore, if by 'process' we intend to suggest change, and a fortiori cumulative change in a particular direction, such as is involved in 'the civilising process', 'the monopolisation of taxation and the means of violence' and the rise and fall of 'court society', as detailed by Elias (1983, 1984), then 'before' and 'after' snapshots are necessary to demonstrate and measure that change. As I discuss below, SNA allows us to model those changes and their mechanisms. 'Structure' and 'process' are not opposing terms but rather two sides of a coin (structure-in-process); at least that is what I intend to show.

Relations in Sociology

'Relations' and the cognate concept of 'interaction' are central to the definitions of society posited by many sociological pioneers. Blumer (1992), for example, defines society *as* symbolic interaction, building upon Mead (1967), who argues that 'mind, self and society' are each emergent properties of such interaction. Likewise Simmel, who argues that 'Society exists where a number of individuals enter into interaction' (1971, 23). Marx argues that 'Society does not consist of individuals, but expresses the sum of their interrelations, the relations within which these individuals stand.' (1973, 265). And Durkheim observes that:

Society has for its substratum the mass of associated individuals. The system which they form by uniting together, and which varies according to their geographical disposition and the nature and number of their channels of communication is the basis from which social life is raised. The representations which form the network of social life arise from the relations between individuals …. (1974, 24)

Weber (1978), who tended towards methodological individualism, is a possible exception to this tendency. However, even he defines his key unit of analysis, 'social action', by reference to actors taking account of and orienting to one another's actions. This, I suggest, is a minimal definition of interaction.

Durkheim and Marx are often attributed the view that society is more than the sum of its parts. The above quotations provide a crucial key to understanding what that means and why it is so. If human individuals are society's 'parts' then society is more than them because they interact and form relations, and because these interactions and relations make a difference. They affect how individuals act and shape them in relatively enduring ways, as Durkheim's (1973) arguments regarding 'second nature', Marx's (1959) claims about the historicity of human nature and Mead's (1967) analyses of mind and self each suggest. We become who and what we are within social relations and interactions. Furthermore, relations lend society a structure. Each individual interacts and forms relations with a small number of others and the resulting pattern (who interacts with whom) constitutes a structure which impacts upon those caught up in it.

It might be suggested, following this, that 'relational sociology' is a tautology. If sociology is, as its pioneers envisaged, a science of social relations then what is added by the notion of 'relational sociology'? In response, relational sociologists argue that, notwithstanding the centrality claimed for them, relations are often squeezed out of sociology. This happens at a theoretical level in one of two ways. In one way, the relational 'substrate' of society, as Durkheim calls it, is supplanted by a reified and hypostatised conception of society as a singular, monolithic actor. The network of interacting individuals, constrained in many ways but active and agentive, which Durkheim posits, disappears from view. The whole replaces, overwhelms and/or determines the parts, as we observe in the classic functionalist paradigm and in historicist and teleological variants of Marxism. Alternatively, society is decomposed and reduced, whether for ontological or methodological purposes, to a mere aggregate of individuals, abstracted from the webs of relations in which they are concretely embedded. Relations, insofar as they are recognised at all, are reduced to the status of window dressing. Rational choice models are the most obvious contemporary example of this.

This is not only a matter of theory. Individualism is built into many of our methodologies. Survey research, as Abbott (1997, 2001), following Blumer (1986), has argued, for example, typically

explores relations and interactions between variables rather than actors. 'Social relations', insofar as they are captured at all, are reduced to individual level attributes (e.g. class, gender and race), losing their relational character (see also Wellman and Berkowitz 1997). Indeed, most mainstream statistical models and procedures explicitly assume independence of cases; their explanatory power only holds if respondents are independent. Social relations are thereby designed out of data analysis.

Similarly, qualitative interviews typically elicit information about the experiences, perceptions, attitudes etc. of individuals qua individuals, presenting their findings in terms of such individuals. Focus groups and participant observation overcome this to some extent but even in this work data on relations and interactions are seldom gathered or analysed in a systematic manner. In qualitative as in quantitative methodologies society is reduced to a mere aggregate of atomised individuals. There is very little discussion at all of how relations can be captured and analysed in the vast literature on method in the social sciences.

SNA is one amongst a small number of methodologies which tackles this deficit, enabling us to analyse relational structures. Before we turn to SNA, however, we must first consider a fundamental question begged by all of the above discussion; namely, what are social relations? Relations come in many forms, of course, including economic, friendship and sexual relations, but is there anything underlying these variations which affords a general definition? On this question even the classical sociological theorists have little to say.

The Problem with Relations

As a first step in addressing this question I will reflect briefly upon two problematic definitions of 'relations' which Kennedy (2003) identifies in the history of Western science and philosophy: (1) what he calls the realist definition, in which a relation is 'something like a great stone bridge stretching between two cliffs … [it] connects two particular things, but has some extra being of its own.' (99-100); and (2) what I call the juxtaposition definition, which centres upon comparative differences between 'objects'. If John is taller than Jane, for example, then by this definition he is in a 'taller than' relation to her.

We find some evidence of the juxtaposition definition in both sociology and social philosophy. In Bourdieu's sociology, for example, 'relations' are defined as differences in the amounts of cultural and economic capital that individuals possess and in their respective ratios of cultural to economic capital (Crossley 2014). Some are wealthier than others (a 'wealthier than' relation), some more cultural than others, and some enjoy greater advantage than others in virtue of their combined economic and cultural resources. Relations between actors are differences in their levels and types of resourcing.

Similarly, Rorty's (1999) argument for a relational over a substantivist perspective rests upon an understanding of 'relations' (and identities) as comparative differences. Arguing against the ideas of 'substance' and 'essence', Rorty argues that all objects and qualities are relationally constituted: 'male' has no meaning in the absence of 'female', for example, 'black' has no meaning independently of 'white' and so on. Identity in each case rests upon a relation to something other and such relations comprise comparative differences.

Bourdieu and Rorty each raise important points. However, their relationalism is purely epistemological, suggesting or recommending that our knowledge of particular objects is achieved by comparative means. Ontologically the juxtaposition definition does nothing to challenge the atomism of the individualist, who will insist (correctly) that differences and contrasts between individuals do not in any way alter their status as discrete, individual beings. Defined in this way relations are not 'real'. They have no effect in the world, at least unless and until they are mobilised in concrete interactions between actors; a state of affairs which involves 'social relations' in a rather different sense, to which I return.

The realist conception is similarly flawed, according to Kennedy, or at least has been regarded as such historically. In defining a 'relation' between two objects as a third object which physically joins and thereby fuses them it impales the concept on the horns of a dilemma: objects are either fused, forming a new, singular object and thereby eliminating the plurality presupposed by the concept of relations, or they remain separate but we therefore have no basis upon which to say that they are related. In either case the concept of relations is redundant.

We find exactly this dilemma in sociology in the standoff described above between individualism and crude forms of holism. Holism precludes relations by defining society as a singular, monolithic entity. Individualism precludes relations by reducing society to an aggregate of discrete individuals. However, there is a third possibility.

Defining Social Relations

The source of the realist's difficulty is their assumption that a relationship between objects entails a fusion of them. This is counter-intuitive. 'Relation' suggests a state of affairs somewhere between the two scenarios described above. Objects which are related are not completely independent of one another but each retains a distinct identity and at least some independence. They are connected without being fused. What would this involve? My suggestion hinges upon four key concepts: (1) intentionality, (2) intersubjectivity, (3) interaction and (4) institution.

I take the concept of 'intentionality' from phenomenology and Merleau-Ponty's (1962) existential-phenomenology in particular. Consciousness is inherently intentional for the phenomenologists.

It is necessarily consciousness-*of* something. Consciousness is a structure comprising two poles; the conscious being and that of which they are conscious. During the middle phase of his writing, phenomenology's founder, Husserl (1990), argued that the reality of consciousness' object should be 'bracketed' in order to better facilitate analysis of the intending act itself. This steered phenomenology towards idealism. Merleau-Ponty (1962) resists this move. Consciousness is not an inner representation of an outer world or object, for Merleau-Ponty, but rather an 'opening' onto the object or world; a connecting 'thread' or indeed 'relationship'. Consciousness connects me to the world. Indeed, it is connection to the world (Mead (1967) suggests something similar). Consciousness is not a 'substance', as it was for Descartes (1968) but rather a *relation* between the embodied, sensuous subject and objects which exist for them within the world. It forms *between* the conscious being and that of which they are conscious, like a magnetic, electrical or gravitational field.

This applies to all of embodied subjectivity for Merleau-Ponty. Consciousness involves perception (in all of its modalities), thought and emotion, and each is intentional. Emotions are 'about' particular objects or events, for example, and attach us to those objects or events. Moreover, beyond consciousness, narrowly defined, Merleau-Ponty identifies an 'operative intentionality' in our practical engagements in the world. The laptop that I see and hear exists 'for' my fingers, for example, as they find letters and type upon it.

The language of 'connection' is entirely appropriate here but intentionality does not entail fusion. To the contrary, it entails differentiation. I am connected to that of which I am conscious, in virtue of my consciousness of it, and yet my consciousness of it entails recognition of it as something distinct from myself. Intentional consciousness simultaneously connects and differentiates (separates) its subject and object.

There is more to a social relationship than intentionality. Intentional acts are generally short-lived, where relations may endure over decades (see below). Nevertheless, intentionality is important to human relations and affords us a sense both of what 'relations' might mean in the human context and of why and how they are possible. We enjoy relations with others because they exist for us. We are or can become conscious of them, a relation which, at that moment, is constitutive of our consciousness.

This situation is complicated when the intentional 'object' is another subject. Each intends the other, conscious of the other as a conscious being and of their own existence as an object within the consciousness of the other. This is not the place for a detailed discussion of such 'intersubjectivity' (see Crossley 1996). However, a few brief observations are necessary.

As many writers from different philosophical traditions have recognised, intersubjectivity forms the basis for a developed sense of self and individuality. Consciousness of self presupposes consciousness of 'not self' and of other perspectives upon the world than one's own, which lend one's own its specificity (Schutz 1970). Furthermore, it requires, as Mead (1967) in particular stresses, that one learns to assume the 'role' of the other in relation to oneself; to perceive one's self as other (see also Cooley 1982, Merleau-Ponty 1962, Smith 2000). The significance of this is that, like intentionality, intersubjectivity simultaneously connects social actors whilst differentiating and thereby separating them. Actors are connected but simultaneously differentiated and therefore not merged.

Such differentiation entails a developed sense of 'self'. However, as Mead (1967) emphasises, this is coupled with a sense of 'the other' and indeed of particular others. Interaction sensitises us to the perspectives of others. Where others become significant to us we form an internalised sense of their 'perspective' which influences our subjective life even in their (physical) absence (ibid.). This idea is important for many reasons but for present purposes it is important because it points to an important aspect of 'social relations'. Forging a relation with another involves forming and being influenced by an internalised sense of their perspective (upon us, themselves and the world).

As this suggests, intersubjectivity entails interaction and more specifically communication between social actors; exchanges of meaning and negotiation of a 'definition of the situation'. This negotiation may be one-sided, involving threats, power (see below) and even perhaps physical violence but insofar as it is an intersubjective relation it necessarily results in some form of agreement (perhaps tacit) between those party to it about their standing and respective roles and/or identities vis-à-vis one another; what is allowed and expected between them. Interactors negotiate a relationship and their relationship is structured by whatever they 'agree'.

Within the context of interaction, moreover, actors often form interdependencies. Each becomes dependent upon the other. Such interdependencies might be material, as when one depends upon the other for money, food or other such goods and services. They may equally be emotional, however, involving exchanges of love, recognition or friendship. Such interdependency embellishes the 'agreement' between individuals, adding further weight and content to their relationship. Moreover, it introduces a balance of 'power' (Blau 1986, Elias 1978). Depending upon the other for something, whether that be love or money, creates an incentive for one to comply with their wishes. Such power relations might be balanced, with each side in a relationship equally dependent upon the other, but they might be imbalanced to the advantage of one party. Equally, dependence and thus power might be weak but it can be strong. Whatever the case, however, this power balance, like the interdependency upon which it is based, further embellishes the relationship between those involved.

Social relations as I am defining them here are emergent outcomes of interaction between those party to them; agreements, galvanised by interdependence, which modify the intentional

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thread connecting each to the other. Consciousness of the other is embellished by accumulated experience, the expectations it generates, internalisation of their perspective and often affect.

Merleau-Ponty's (2010) concept of 'institution', though only briefly sketched, is useful here. The concept is intended to capture the manner in which aspects of our experience endure; the past shaping the present, whilst at the same time inviting future actions which build upon and modify what has been achieved. We do not repeat what we have done in the past, at least not exactly, but the past endures within the present, forming the tacit context for our actions. Social relations are institutions in this sense. Interactions are discrete events, usually brief and with an identifiable beginning and end, but they are enduring in their effect. First meetings institute a relation between two actors which subsequent and successive interactions return to and build upon. The institution is carried within each party but it is not reducible to them qua individuals because what is instituted intends and connects each to the other. It is important to add, moreover, that relations typically involve anticipation of future interaction and that this too may shape interaction in the present. Actors are mindful that how they act now might have repercussions later and shape their actions accordingly.

'Social interaction' is integral to 'social relations' on this account. However, an interaction is not a relationship. To say that two actors are 'in a relationship' is not to say that they are interacting right at this moment. Like-wise, whilst it makes perfect sense to say that two actors were in a relationship for five years this does not imply that they were in a state of perpetual interaction over that time. Relations are emergent properties of interaction, institutions arising from and, when activated, acting back upon it. A relation is a state of play within an interaction history. Interaction in the present is shaped by the relations between those party to it, at the same time having the potential to modify that relationship and thus influence future interaction. As such *relations are perpetually in-process* and whilst they may remain stable are always susceptible to evolution and change.

We have come a long way from Kennedy's 'realist' definition of relations. This definition treats relations in purely spatial terms. Objects are either joined or not. I have stepped back from this definition, in some part, by exploring conscious intention; a property which the objects discussed by Kennedy lack. No less importantly, however, by discussing social interaction I have brought time and process into the picture. Human being entails 'doing', activity, which unfolds through time, and social relations form at the intersection of such 'doings', in interactions, which are similarly temporal. Relations are not 'things', extending across space like bridges, but rather processes extending through time. A relation is a 'state of play' within an ongoing interaction history. Our relation now is the cumulative effect of all that we have been through together, how it has affected us and what we anticipate

in our shared future, all of which might be affected by what we do, in interaction, right now.

Relations in Networks

Relations, as I have defined them, are inherently processual; a relation is a state of play in an unfolding interaction history. Relations do not exist in isolation, however. Actors are involved in multiple relations simultaneously, within vast networks. These networks and their structural properties are important for many reasons. For present purposes I want to briefly focus upon some of the ways in which the combination of relations within a network can impact back upon them. Any relation $i{\rightarrow}j$ is shaped not only by the history of interaction between i and j, or rather not by that history in isolation but also by the other relations in which i and j are respectively involved. A few examples will illustrate this.
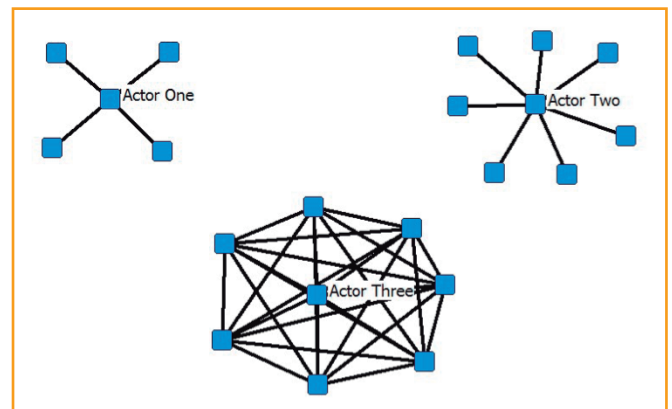

Figure 2. Three Ego-Nets

In Figure Two Actor One is connected to 4 others (in the language of SNA she has a 'degree' of 4). Actor Two, by contrast, has a degree of 7. Other things being equal, this will create a different balance of constraints and opportunities for each. Actor Two has more people to draw upon for help, for example, which may give her a relative advantage over Actor One. However, she may have to invest more of her resources (including time and energy) into maintaining her contacts, which may be constraining. Moreover, she may have less time and energy to devote to each of her alters because there are more of them. Each of her relations will be weakened by her need to spread herself thinly across them all.

Actor Three also has a degree of 7. In contrast to Actor Two, however, most of her contacts are connected to one another. Her 'ego-net' has a higher 'density', to invoke the language of SNA again (Crossley et.al 2015). Density is defined within SNA as the number of ties within a network (or subnetwork) expressed as a proportion of the number that are possible, given the number of nodes. There are $\frac{7*6}{2}$ =21 potential ties in a network of 7

nodes[2], for example, so if we observe 10 ties the network has a density of $\frac{10}{21}$=0.48.

As with degree, variations in density, all things being equal, afford different opportunities and constraints. Coleman (1990), for example, argues that higher ego-net density is a mechanism of social control. If my friends are friends with one another then consensus over appropriate behaviour is more easily arrived at and I am less likely to get away with a violation of these norms. If I am uncooperative, breach trust or fail to support one of my friends then all of the others are likely to find out and punish me. This gives me an incentive to cooperate, support others and honour my word. I cannot get away with what I might get away with if my contacts were unknown to one another.

This constrains me but it is also enabling because my alters are similarly constrained, putting me in a trusting, cooperative and supportive environment. We are each constrained to help one another. Coleman equates this with 'social capital' and argues that it enables forms of action, both individual and collective, which would not otherwise be possible. Constraint creates opportunity.

Burt (1992, 2005) offers a different perspective upon this. Conceptualising relations as channels along which resources, including information, flow and paralleling Granovetter's (1973, 1982) celebrated work on 'the strength of weak ties', he argues that there are high levels of redundancy in dense ego-nets. Actors expend resources maintaining multiple relations to alters who, because connected to one another, provide them with exactly the same information. One could maintain a tie to one of those alters and have access to the same information gleaned by maintaining relations with all of them. It is more useful, in Burt's view, to forge ties with alters whose own alters are different to one's own, affording oneself access to different pools of information (and other resources).

Related to this are Burt's (1992, 2005) ideas of 'structural holes' and 'brokerage'. A 'structural hole' is a gap in a network separating unconnected nodes. A broker is someone who plugs a structural hole, bridging between otherwise unconnected parties. Brokerage can be an advantage for both the broker and those whom they broker between, according to Burt. Brokers benefit because they are rewarded for serving as a gatekeeper for resources passing between otherwise disconnected parties and may, where innovations are involved, be credited as the source of ideas which they are actually only passing on. Brokered parties benefit because they enjoy access to resources which they would not otherwise enjoy. Of course the dynamics may not always play out like this. As I have suggested elsewhere, brokering between 'warring' parties who compete for an actor's loyalty and attention may prove draining and fruitless (Crossley 2008). The more basic

point, however, is that the value and meaning of any one tie is affected by its position within a network of such ties.

We could discuss these aspects of local network structure at length. For present purposes it must suffice to draw two lessons from them. Firstly, as we see if we compare Coleman and Burt, relations may assume different functions in social life. For Coleman, interactions and relations serve to generate, police and enforce norms. For Burt, by contrast, they are conduits through which resources, such as information, flow. These positions are neither exhaustive nor mutually exclusive; relations may play other roles in social life and the norms enforced in a dense ego-net may relate to resources flowing through that net. Nevertheless we get a sense of different ways in which relations matter in social life, and we are thereby reminded of their importance.

Secondly, whatever their differences Burt and Coleman both show that the value and meaning of any one relation is affected by the more general configuration of the network to which it belongs. A relation is more useful to both parties if they share other contacts in common, according to Coleman, because common ties to others will keep both honest and cooperative in their relations with one another. For Burt, by contrast, their ties will have more value if each can afford the other access to social circles they would not otherwise enjoy access to. Both accounts may be true in certain circumstances. Though they pull in opposite directions they do not directly contradict one another. More important than their relative merits for present purposes, however, is the argument common to both; namely, that we should not consider (dyadic) relations in abstraction from their embedding in wider networks, which affect their value, meaning and function.

Networks or The Network?

We can extend this argument. Consider the small network in Figure Three. *l* is not directly connected to to *i*. However, her ties to *j* and *k* impact upon *i*'s ties to *j* and *k* because they provide an alternative and equivalent path between *j* and *k*. *i* is not the exclusive broker between *j* and *k*. Moreover, *j* and *k* each broker between *i* and *l*. And they bring whatever goods or bads (e.g. information or viruses) *l* may command within *i*'s reach. The potential impact of *i*'s ties to *j* and *k* is modified.

Of course networks can be much bigger still (see Figure One for a still quite small example) and much more complex, taking on yet further structural properties and dynamics which generate opportunities and constraints for those enmeshed within them. Networks nest within networks, which nest within further networks and so on.

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2. I am assuming here that a tie from one person to another is identical to any tie back from the second person to the first ($x_{ij} = x_{ji}$). If I distinguish between *i*'s relation with *j* and *j*'s with *i* then there are 7∗6 = 42 possible relations.
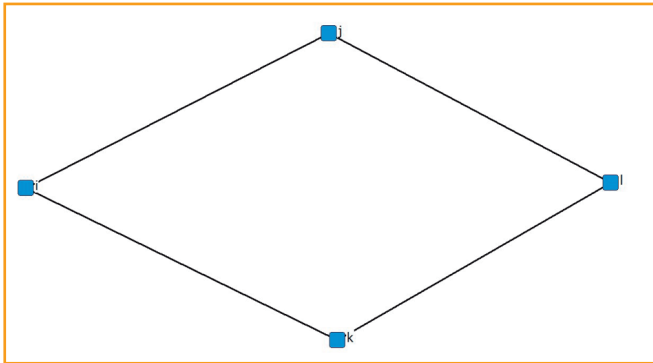
Figure 3. Beyond First-Order Neighbourhoods

Where does this process end? Does the social world comprise multiple (separate) networks or do its various networks merge in a single, global network? I suggest the latter. However, subnetworks can be meaningfully extracted from this whole, for purposes of analysis, and that is a good thing as it is well beyond our means currently to survey anything even approximating the network of global society (with its billions of nodes (human and corporate) and multitude of different types of relations). Drawing boundaries around a network for purposes of empirical analysis, by selecting specific nodes and types of relation for investigation, affects what that analysis will find but if the researcher is aware of this it need not invalidate their study. In what follows, therefore, I will continue to refer to social networks in the plural.

Structures-in-Process: Dynamics and Mechanisms

There is a danger with representations such as Figure One, which captures a snapshot of a network at a particular point in time, that we regard networks as static. Some network structures *are* relatively enduring. The sets of nodes and relations which constitute them remain stable over a relevant (to the sociological observer) timescale. However, stability and endurance depend upon relation-maintaining interactions within a network. More to the point, all social networks evolve over the longer term. Like the relations which in some part constitute them they are structures-in-process. Indeed, it is in some part because relations are in process that the networks they give rise to are too. Relations are formed, transformed and broken as an effect of interaction between nodes who themselves come and go, leaving or joining a network. Moreover, nodes sometimes change in significant ways as a consequence of their relations and interactions within a network. They too are in process.

SNA affords various ways of modelling these processes. Though static in and of themselves, for example, snapshots such as Figure One can be compared over successive time points and changes in their properties observed, measured and explained (Snijders et.al. 2010). Alternatively, using 'relational event models' we can track and model network evolution on an interacti-on-by-interaction basis (Butts 2008). These modelling methods are important and merit discussion. For present purposes, however, another issue must take precedence.

What drives network evolution? There may be many factors; too many for me to fully discuss here. The interactional basis of social life is such that our lives are always in process, throwing up fresh demands and challenges, and exposing us to unexpected events which shunt our lives in different directions. The making, breaking and transforming of relations is often a consequence of this everyday turbulence and flux. New lines of action open up new relational opportunities whilst perhaps putting a strain upon existing relations. Having said this, in amongst the flux we find recurrent mechanisms which, though not responsible for the processual nature of social life as such, steer it in particular directions. In what follows I briefly discuss a number of mechanisms which have been widely observed in social network research. These mechanisms are stochastic rather than deterministic. They affect the probabilities of particular outcomes rather than guaranteeing them. However, they play an important role in shaping the changes and indeed the stability which we observe in social life over time.

'Homophily' affords a useful way in to this discussion. 'Homophily' refers to the widely observed tendency for social actors to link disproportionately to others who are similar to them in some way. Lazarsfeld and Merton (1964) divide this into two types: *status homophily,* in which actors connect disproportionately to others of a similar status (e.g. ethnicity, social class or gender) to themselves, and *value homophily*, in which they link disproportionately to others with whom they share particular attitudes, values or tastes. As status is relatively fixed, status homophily is usually assumed to be the outcome of a process of *selection*. Actors are in some way gravitating towards others of a similar status to themselves. Value homophily is sometimes a consequence of selection too but it may also be explained by (mutual) *influence*. That is, actors may be disproportionately linked to others with similar attitudes, values etc. to themselves because they have influenced and/or been influenced by them: imparting and taking on attitudes and tastes and/or forging new tastes jointly. My friends and I may have similar tastes in music, for example, because I have influenced their tastes and they have influenced mine.

Selection and influence are not mutually exclusive. Both may be in play simultaneously. Furthermore, it is important to recognise that influence may stabilise attitudes and tastes that would otherwise change. An inclination to contemplate new outlooks and likes may quickly wither if not shared with and especially if discouraged by significant others. Stasis is no less in need of explanation in a process ontology and influence may be

an important mechanism in relation to both. For present purposes, however, it must suffice to note that influence (which I have only sketched in the barest terms here) is a key mechanism in the relational process of social life, potentially accounting for both stasis and change at the node level.

Selection is not a mechanism in its own right, in my view, but rather a tendency which must be explained by recourse to mechanisms. Broadly these mechanisms may be divided into two types: structural and psychological. Feld's (1981) concept of 'foci' is a good example of a structural mechanism. Actors are often disproportionately linked to others with similar tastes and attitudes to themselves, according to Feld, because their tastes and attitudes draw them to particular events and spaces catering to those tastes and attitudes ('foci') where they meet others with those same attitudes and tastes. In my work on early punk and post-punk in the UK, for example, I noted how many of the pioneers of these musical styles first met and formed ties at particular shops, clubs and gigs which had become magnets in their local areas for young people with 'alternative' tastes in music and clothes (Crossley 2015). 'Alternative' youths converged on a small number of spaces and events catering to their minority tastes, where they met, forming ties and a (proto-punk) network wherein 'punk' was (collectively) invented (ibid.).

A similar process can be observed in relation to status homophily. Where status is linked to income and wealth, for example, which it often is, it will correspond to the neighbourhoods in which people live, where they work, the schools their children attend and so on; all of which are spaces where they are likely to meet others of a similar status to themselves. Who we form ties with is closely linked to what Giddens (1984) calls our time-space trajectories; the succession of spaces we frequent and the time at which we frequent them. These trajectories are strongly conditioned by our status and so too, therefore, are our opportunities for meeting others.

Foci explain the likelihood of our coming into contact with certain others and thus the opportunities we have for forging relations. I cannot form relations with others without first meeting them (at least virtually). Contact itself does not guarantee tie formation, however, leaving a gap which can be filled by psychological selection mechanisms. I will briefly mention two.

Status homophily is explained in some part by status consciousness: actors want to have their status recognised and this incentivises them to be seen amongst others of the same status and to avoid the questioning of status that might be occasioned by their being seen with others of a different and particularly a lower status (Veblen 1994). Something similar might occur in relation to value homophily where, for example, an actor's attitudes and/

or tastes form an important part of their identity and they want that identity to be recognised and validated by others. This would be enhanced, moreover, where tastes or identities form a basis for 'tribes'. Such collectives might make demands for in-group association amongst their members. In Alan Fletcher's (1979) *Quadrophenia*, for example, the central character, Jimmy, a mod, fears censure from his friends when he bumps into an old friend, who is a rocker (and who is subsequently beaten up by Jimmy's friends). He does not want to be seen with a rocker lest this calls his mod credentials into question.

Beyond these factors similarity typically eases interaction by furnishing it with a common ground. It can be hard work interacting with someone with whom one has 'nothing in common', creating a disincentive for further interaction. If exchange theorists are right in their claim that the likelihood of relationship formation is conditioned by cost-benefit considerations (Blau 1986), and I suggest that they are, then relations to others similar to ourselves are more likely because similarity reduces costs (communication is easier) and increases benefits (affording us an opportunity to affirm and/or indulge our interests).

A further mechanism of network evolution which has received considerable attention in recent years is what Albert and Barabási (2002) calls 'preferential attachment'. This mechanism was first identified in the context of debates on the so-called 'small world phenomenon' and more especially upon the related idea of 'scale-free networks' (and 'power law' distributions[3]). The 'small world phenomenon' refers to a situation in which nodes within very large networks (comprising millions of nodes) are linked by relatively short 'paths', even when those networks are not particularly dense. Most famously, to invoke the social psychological work which first demonstrated this phenomenon, any two people picked at random from the US population are, on average, at 'six degrees of separation'; that is to say, in a network of mutual acquaintances they are linked by a chain of only five intermediaries (Milgram 1967) (see Figure Four).

Figure 4. Six Degrees of Separation
(A path of six degrees between Johan and John)

This characteristic, which has been observed in many large complex systems, has posed a puzzle for mathematicians and physicists: how are short average path lengths possible in large networks? Two answers have been proposed and supported by empirical evidence, one of which is Albert and Barabási's scale-free model (see also Watts 1999). Albert and Barabási observe that some networks which manifest the small world phenomenon are

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3. 'Scale free' and 'power law' have very technical statistical definitions. Loosely speaking, however, they refer to skewed distributions in which (in the case of degree distribution in a network) the vast majority of nodes have a very small degree and a tiny minority have an enormous degree.

characterised by large hubs which are involved in a large proportion of the connections in the network. Many nodes connect to one or more of these hubs and the hubs consequently create short paths between them. This finding, in turn, prompted Albert and Barabási to hypothesise that such networks form through a process of what they call 'preferential attachment': nodes which acquire a relatively high number of connections, possibly by chance, become attractive to other nodes for this reason, thereby accumulating an even higher number of connections in an iterative process which generates their hub position. 'Popularity' breeds 'popularity'.

Preferential attachment is an example of a mechanism endogenous to a network: a node with a high degree becomes, in virtue of this, a target for others seeking to making contact, thereby achieving an even higher degree. Another frequently described endogenous mechanism or rather tendency is 'transitivity'; that is, where a node i has a tie to two further nodes, j and k, this increases the likelihood that j and k will enjoy a tie. As with homophily the mechanisms underlying this tendency partly concern opportunity; two actors with a mutual friend are more likely to hear about one another and meet at events organised by their mutual friend. Again like homophily, however, there may also be a psychological dimension; j and k may feel duty-bound, because of their shared friendship to i, to try to get on or, via a process of cognitive dissonance, may feel that as i likes the other and they like i they must also like the other. Often associated with Granovetter's (1973, 1982) celebrated work on 'weak ties', transitivity tends to produce the dense ego-nets that Coleman (1990) writes about and thereby to eliminate the structural holes and broke-rage opportunities that Burt (1992, 2005) writes about (see above).

Social networks are always in-process because they are constituted by social interactions, which are themselves processes, involving actors who are also always in-process. A process is not a random flux, however, but rather is shaped by mechanisms of various kinds which lend it shape and direction. The mechanisms that I have outlined above: influence, foci, status seeking, cost-benefit calculation, preferential attachment and the mechanisms underlying transitivity, are all important in this respect. They help us to capture and explain the processual dynamics of social relations.

Conclusion

There is a growing recognition in social science of the importance of both relationality and process. In this paper I have drawn these two themes together, showing in particular how and why a focus upon relations lends itself to or indeed necessitates a focus upon process. Specifically I have argued that relations are emergent properties of interaction and are always in process, as interaction itself is a process. Furthermore, I have argued that networks, which are emergent structures forged through the concatenation of social relations, are always in-process for the same reason.

Social life is inherently processual because it is constituted through interaction, which necessarily unfolds through time, and because the actors who engage in these interactions are themselves 'works in process'. As such process is a given, not something which we might seek to offer explanations for. However, the particular twists and turns of the social process are steered by mechanisms which we can seek to uncover and explore. In the final section of the paper I considered some of the mechanisms which social network analysts have unearthed in their attempt to explain the evolution and dynamics of social networks. The quest for an understanding of the social world that is both fully relational and fully processual is still very much in its infancy. We have much to learn but we are at least making a start.

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