The Morphogenesis of Subjectivity: between constructionism and neuroscience

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SUMMARY

Archer (1995) describes a morphogenetic approach to social theory founded in the work of Bhaskar. She proposes an analytical dualism temporally separating agency and structure, in order to facilitate an understanding of their interaction. On this view, actors inherit pre-existing social structures that they reproduce or transform, so creating the structures that future actors will inherit. However, the activity of transformation or reproduction potentially also transforms (or reproduces) the agency of those who thus act. Archer describes this as a "triple morphogenesis" where "agency leads to structural and cultural elaboration, but is itself elaborated in the process". Like structuration theory, morphogenesis recognises the mutual constitution of agency and structure, but unlike structuration theory resists their conflation each with the other.

Archer's account lays emphasis on social theory, but also has implications for psychology. This chapter explores some of these implications with reference to a notion of embodied subjectivity consonant with (critical realist versions of) social constructionist psychology. A notion of subjectivity structured and momentarily completed by discourse in the relational-responsive fashion described by Shotter will be advanced. This will be supplemented by Damasio's (1994) "somatic marker" hypothesis, a neurological account of how socially-acquired repertoires of feelings condition decision-making in social settings. Damasio proposes that somatic feedback is already central to cognition, so challenging the disembodied character of much contemporary psychology. It will be suggested that a notion of subjectivity derived from the work of Shotter and Damasio is thoroughly non-Cartesian and open to completion and elaboration through successive morphogenetic interactions with elements of social structure.

INTRODUCTION

There is an emerging need for social constructionist psychology to formulate or adopt an appropriate notion of embodied subjectivity (Bayer & Shotter, 1998; Cromby & Standen 1999). Not all constructionists theorise subjectivity; those who do typically deploy psychodynamic theories wherein embodied needs and desires are more-or-less subtly transformed into the products of metaphorical mental entities or, in Lacanian versions, the unspeakable surplus remaining after language has colonised subjectivity. Consequently, although many constructionists acknowledge that the

body is important, in practice it tends to appear as a uniform surface of inscription upon which the social gets written, rather than as a fleshy organ with its own enablements and constraints that both facilitate and impede social and interactional processes. So even amongst those who theorise subjectivity there is little discussion of the body *as such;* as a result, the embodiment of subjectivity is not adequately addressed.

Constructionist psychology without a notion of subjectivity reifies "the social" (raising both conceptual and methodological issues), and retrenches the individual-society binary in a conflation to social structure that simply mirrors and inverts the individualist reductionism of the mainstream. Just as essentialist theories reduce the social to accumulative epiphenomena, its impact upon individuals then relegated to the status of superficial skins laminated over a pre-existing core humanity, so a thoroughly discursive constructionism reduces the embodied texture of human life (its pleasures and pains, its aches and desires, its obstinate fleshy intransigences, corporeal enablings, blood, sweat and tears) to its sterile discursive expression. Theories of subjectivity that literally do not *in-corporate* the body weaken their explanatory force, may reify mentalistic or cognitive processes or structures, and retain troubling elements of unacknowledged mind-body dualism. Constructionist psychology therefore needs to theorise not just subjectivity but embodied subjectivity, and to do so without falling prey to essentialism or individualism. This chapter begins to outline one possible basis for such an account, drawing upon the social theory of Margaret Archer, John Shotter's rhetorical-responsive constructionism, and the work of neuroscientist Antonio Damasio.

ARCHER'S MORPHOGENETIC SOCIAL THEORY

For Archer (1995), society is an open system characterised by emergent properties that are the product of both structural arrangements and cultural forms. Structural features of society may be more or less stable, tending to either reproduce or decay over time according to their intrinsic properties (such as their demographic constitution). Cultural forms may similarly tend to either reproduce themselves or be transformed, for example according to their concordance with the material circumstances they inhabit. Both structure and culture may give rise to emergent properties of various kinds: a structural arrangement such as a division of labour impinges directly upon productivity; a cultural form such as the English language (by virtue of its particular vocabulary, grammar and syntax) makes some things more communicable than others. So both structure and culture have emergent properties, and the interplay of these emergent properties conditions the flux of possibilities that encourage either social stasis or transformation.

The emergent properties of culture and structure also influence agency, but they do not determine it. This is because emergent properties are relational products, but the relationships from which they arise always occur within an open system, where other contingencies can always intervene. The causal associations between structure,

culture and agency are therefore necessarily probabilistic rather than deterministic: "emergent properties will not necessarily or usually be demonstrable by some regular co-variance in observable events. Despite their roles, bank tellers sometimes hand over money to masked men and ideologies may be masked by tokenism. In other words, emergent properties rarely produce constant conjunctions" (Archer 1995: 53). Thus, agents are neither wholly free nor wholly determined; their choices instead bear a probabilistic relation to their societal and cultural location. The social structures and cultural forms they inhabit, with and in relation to associated material resources, are the conditions of possibility for their activity. Through this activity they will tend to either reproduce (morphostasis) or transform (morphogenesis) these structures and forms, so creating subsequent conditions of possibility for their own and other agents' future activity.

For Archer, then, agency and structure are thoroughly conjoined and temporally interacting, but nevertheless distinct, referring to ontogenetically distinct objects of noticeably different kinds (social orders, cultural forms and embodied powers). She therefore proposes an analytical dualism temporally separating agency and structure, in order to facilitate an understanding of their interaction. She posits a "triple morphogenesis" wherein agency itself is also transformed through activity: persons' activity not only changes the social structures they encounter, but engagement in such transformative activity is itself transformative of persons. However, her primary concern is with social theory, and with respect to agency there seems to be in her work a crypto-theologism that arbitrarily limits the extent to which this might occur. What is problematic is not that she insists upon a notion of human nature, since "the choice doesn't lie between those who have a concept of human nature and others who haven't, but between those who reflect and expose their ideas about 'human nature' and those who don't" (Osterkamp, 1999). Problems arise instead from the specific notion of human nature she proposes, which us insufficiently social and harbours space for an essential spirituality.

Here, these arbitrary limits to transformation will be ignored and it will be assumed that social interaction is thoroughly co-constitutive of agency. That is, there are pre-existing enablements, constraints, characteristics and features (given by both biology and materality) upon which the social world (itself also pre-structured and organised) acts. Many of these characteristics (the ability to feel pain, the need for food) are shared with other species; others (the ability to develop and utilise together complex systems of reference and symbolisation) appear to be species-specific, part of a uniquely human nature. Both sets of characteristics provide simultaneously the raw material and conditions of possibility for social interaction, over time, to do its work of producing persons, morally accountable, self-aware reflexive beings who can take both themselves and their own activity as objects of enquiry and wonderment. Interactions then do not wholly constitute humans, but they do thoroughly *co-constitute* them, energising the transformation from mere sensate organism to metacognitively aware members of a moral order.

Vygotsky's (1962) account of the acquisition of higher mental functions provides a way of conceptualising this temporally organised, morphogenetic process, since self-monitoring, reflexive awareness and other such metacognitive abilities are, for Vygotsky, emergent products of social interaction. Vygotsky allows us to conceptualise how agents themselves might differentially bring to situations tendencies to reproduce or transform the various conditions they encounter, without having to assume a troubling biological essentialism underpinning these differential propensities. Vygotsky has been influential in social constructionist psychology, perhaps particularly in the work of John Shotter, and it is to Shotter's rhetorical-responsive version of constructionism that I now turn.

SHOTTER'S RHETORICAL-RESPONSIVE CONSTRUCTIONISM

For Shotter (1993) interactions are characterised by uncertainty and indeterminacy, and outcomes and meanings unanticipated by either participant emerge from processes of ethically-informed joint action. Actors co-create the evolving interactional context "into which" they each must act, within which each must (re)make and (re)discover what they think, what they jointly agree, disagree, promise, dispute, desire, refuse, and so on. Shotter's concern is to make "rationally visible" this co-created disorderly context, not by fixing it in a theory, but through deploying "conceptual prosthetics" which might illuminate aspects of its character. A central plank of Shotter's account involves "knowing of the third kind", an "embodied form of practical-moral knowledge in terms of which people are able to influence each other in their being, rather than just in their intellects" (Shotter 1993: 41-2). Shotter draws on Vygotsky to characterise this knowledge as an "affective attitude", a "transmuted version of a social relationship" lending to our words and verbalised thoughts their "dynamic", their "particular motives and valencies". Shotter locates the origins of this affective attitude in "instructional" social relations, typically where children are being assisted to acquire or develop concepts, suggesting a temporal aspect to its emergence. This attitude appears within interactions as feelings which "are not properly called emotions" (p. 29) but are called out within streams of activity and functional within them, supplying sensuous practical-moral guidance and "rooting" our actions synchronously with those of others.

Now it must be emphasised that such feelings are vital for Shotter's account. They allow him to characterise human activity as sensuous (in Marx's sense of the word); they are an intrinsic part of utterances that ground activity and prevent the relativistic slide into "anything goes chaos" (p.29); and they potentially provide the partial basis for constructionism to become a "non-Cartesian moral science". But despite their significance, in Shotter's work aspects of these feelings remain somewhat vague. They are located within the body as sensuous knowing and Shotter, following Vygotsky, clearly acknowledges their fundamentally affective character. Shotter agrees with Vygotsky that the relationship between thought and language is bound up with the relationship between "intellect and affect", but does not go on to spell out the precise character of thought in light of this acknowledged relationship.

However, if we return to Vygotsky we find a clear exposition. In Vygotsky the undifferentiated term "affect" or "affective-conative" is typically used to characterise these feelings, and they are clearly distinguished both from meanings and from discursively-structured inner speech. Inner speech evolves from language via egocentric speech but is nevertheless not the same as thought, which is primary. Moreover, for Vygotsky the nature of thought is "engendered by motivation, i.e. by our desires and needs and emotions. Behind every thought there is an affective-volitional tendency, which holds the answer to the last 'why' in the analysis of thinking." (Vygotsky 1962: 150). For Vygotsky then these feelings are the principal stuff of thought and they are primary, whilst discourse and its forms (including inner speech as well as verbalised utterances) are secondary. So, like some dissident voices in cognitive psychology (Zajonc, 1980, 1984) and most psychodynamic theorists, Vygotsky clearly asserts that affect or feeling is the prime mover, the most fundamental constituent of human agency.

To summarise thus far: Archer proposes that we can best understand the relationships between agency, culture and social structure by adopting an analytical separation between them ordered around the temporal unfolding of activity. Like Shotter, Archer asserts that human relational activity is neither wholly free-floating nor wholly determined, due to its temporal ordering within an intrinsically open-ended system. Shotter's constructionism highlights the significance and role of embodied feelings within activity, as guides to action and sources of practical-moral guidance. Shotter utilises Vygotsky for his understanding of these feelings, and their relationship to discursive, dialogical interaction. Vygotsky in his analysis clearly distinguishes between language and thought, asserting that thought is not only primary but also fundamentally affective, the expression of embodied needs and desires. Vygotsky can also be applied to Archer's social theory to "bridge" the divide between the interiority of the individual and the social, explaining how the cognitive abilities that enable agents to deploy their rationality are themselves emergent products of preceding social interactions, resident now within individuals as the transmuted products of preceding encounters. Through Vygotsky, then, Archer's social theoretics might be joined to Shotter's relational-responsive constructionism to generate a view of social life where interactions are simultaneously the product of both structural arrangements and cultural forms *and* of the unfolding, rhetorical-responsive activity of agents who *literally* make-and-find themselves within the socio-cultural conditions of possibility they inherit. Crucially missing from this account, however, is an appropriately social, non-reductionist account of the embodied nature and operation of feelings and their relationship to social action. Such an account can be found in the work of neuroscientist Antonio Damasio.

DAMASIO'S SOMATIC MARKER HYPOTHESIS

Damasio (1994) describes a neural system that facilitates decision-making in social settings by utilising acquired repertoires of feelings or somatic feedback. His work is derived from studies of people with injury to the ventro-medial sectors of the

frontal lobes: he has now worked with 60 people with such damage (Damasio, 2002), all of whom display the same two consequences. First, their range of affect is greatly diminished: those affected and others who know them describe them as typically lacking in feelings, emotionally unresponsive. Second, they are chronically unable to take decisions in social settings: even simple choices, such as which day some months hence to book in for a doctor's appointment, are problematic. It is important to realise that Damasio's claim is *not* that decision-making is localized to this part of the brain: decision-making is distributed across numerous brain systems joining various areas whose configuration and relevance will vary according to the precise circumstances of the choice at hand. His claim is simply that the ventro-medial sector of the frontal lobe is a crucial node where information from multiple systems is collated, such that removing this node blocks particular flows of information, with specific consequences. Two consequences consistently appear together in Damasio's patients: an impairment of affect and feeling, and an impairment of decision-making in social settings.

Linking these two deficits, Damasio suggests that the ventro-medial sector of the frontal lobe is vital to systems that bring feelings into consciousness, systems that integrate what we feel in our bodies with what we think and experience. Feelings, here, are the raw material of bodily states (muscular tension, posture, arousal levels, visceral activity etc.) derived from information gathered by the brain to assist in the vital function of homeostasis. Loss or damage to the ventro-medial frontal lobes removes such feelings from consciousness and also impairs the ability to make decisions, suggesting that "rational" decision-making is somehow related to somatic feedback. On the basis of this conjunction, Damasio proposes that through experience we learn to classify some stimuli as positive and others as negative, and this learning includes a somatic component. On future occasions where this learning may be pertinent, the brain calls out patterns of bodily activity consonant with previous experience. When this happens, physiological states previously associated with either positive or negative outcomes get reconstituted in decision-making as feelings, *somatic markers* which stamp putative options with valences: "When a negative somatic marker is juxtaposed to a particular future outcome the combination functions as an alarm bell. When a positive somatic marker is juxtaposed instead, it becomes a beacon of incentive" (Damasio 1994: 174). Somatic markers are bodily states called out within ongoing streams of interaction and utilised to weigh alternatives and hence provide a guide to action. They do not make decisions for us, but they do accelerate and simplify the process by reducing the set of choices to which rational consideration must be applied. They use neural pathways that evolved to facilitate homeostasis and so have an intrinsic bias towards pleasurable bodily states, but their ordering, for each individual, has its origin in the particular history of incentives and penalties of that person. As Damasio puts it: "Somatic markers are thus acquired by experience, under the control of an internal preference system and under the influence of an external set of circumstances which include not only entities and events with which the organism must interact, but also social conventions and ethical rules" (Damasio 1994: 179).

For our purposes, two aspects of Damasio's account need to be emphasised. First, that decision-making – agency – is intrinsically embodied: not just in the banal sense that minds need embodied brains in order to exist, but in the much more interesting sense that the actual process of decision-making relies upon, and quite literally incorporates, bodily feedback. And second, that the origins of this feedback lie within socialisation and enculturation. Whilst the general mechanism for utilising somatic feedback to guide activity is biologically endowed, its specifically operative content is, for each person, the consequence of a particular personal-social history. Phrasing this another way, decision-making is co-constituted by a neural mechanism with specific intrinsic properties and a particular accretion of experience and activity: agency, the ability to choose and act, emerges both from this system and from its enculturation.

The feedback Damasio postulates appears phenomenologically as perceptions of bodily states. In English, at least, we have few terms to nominate these perceptions: the catch-all term "gut feeling" springs to mind, as does the experience of "butterflies in the stomach". More generally, it is striking how often even philosophers use a vague language of *feeling* to nominate instances where actors reach conclusions but their chains of reasoning are neither visible nor obvious. Be that as it may, it seems that somatic markers could well be equivalent to the "feelings" that Shotter places at the centre of his "knowing of the third kind". Damasio's focus on feelings, here and in other work where he theorises consciousness and selfhood (Damasio, 1999), also appears compatible with Vygotsky's declaration that affect is central to thought. The neural mechanism Damasio describes allows us to understand how influences from the past can inform and guide decisions in the present, so also appears consistent with Archer's view that agency is strongly influenced by structure and culture but not simply reducible to them. For agency is not just regulated by contemporaneous factors but also by acquired, embodied, feelingful influences, which are the primary constituents of thought.

CONCLUSION

The arguments in this chapter have many implications, I am only able to address some of them here.

First, to the extent that Shotter (and other constructionists) are indebted to Vygotsky for their understanding of how public and private discourse might be related, his analysis of the nature of thought and its relationship to language is important. It raises again the question of what affect, emotion or feeling might be, in what they might reside, what origins, trajectories, nature and consequences they might have. The clear distinction Vygotsky marks between thought and inner speech problematises constructionist analyses which tend to reduce affect to discourse and its epiphenomena (e.g. (Edwards, 1997), and makes the determination of its ontology a renewed issue for constructionists. Moreover, the assertion of affective primacy renews for constructionists the question of embodied subjectivity and its relationship

to social structure and discursive activity. Viewed positively, the assertion of affective primacy could begin to explain some of the multiplicity, fluidity, inconsistency, variability and situation-specific characteristics revealed by studies of discourse, but without wholly fragmenting or dissolving the human subject (since it posits a socialised affective core underpinning and guiding this discursive variability). Nevertheless, if affect generates and fundamentally characterises thought, such that thought is only (albeit momentarily) later completed in language and discourse, then some account of agency is needed which thoroughly addresses its embodied, feelingful nature. For in Vygotsky's analysis agency has at least some of its roots elsewhere, in an embodied realm before discourse.

Second, the partnership of social theory, constructionism and neuroscience is one that some will think doomed to failure. Some will reject the notion that any such partnership is either necessary or possible, whilst others will question the compatibility of the particular partners I propose. My view is that a trajectory somehow uniting such disciplines is the only way to develop a notion of subjectivity that is neither essentialist, individualist nor disembodied; Harre, (2002) also asserts that a similar multi-layered analysis is not only possible but necessary for psychology. Nevertheless, my attempted integration cuts across what are usually seen as positions in the debate between realism and relativism. Indeed, Archer (2000) explicitly dismisses social constructionism for its reliance on language rather than practice, just as Shotter (1993) rejects critical realism in favour of a morally contested ontology of embodied intransigences and empowerments. Whilst I am not able to fully address these objections here, it will already be apparent that in my view the distance between these positions is not so great as it might at first seem.

However, for many readers it will be my simultaneous deployment of neuroscience that is a discipline too far. Of course, all psychologists accept that the brain-body system vitally supports subjectivity; most psychologists also accept evidence that specific impairments to this system can produce particular functional deficits. Nevertheless, more general attempts to relate phenomenal experiences and social actions to particular neural structures still tend to encounter accusations of scientism, biological reductionism and essentialism. These objections must be taken seriously: the history of psychology illustrates the limiting consequences of naïve reductionist theorising, whilst recent global history amply demonstrates that the ethical and political concerns of objectors are well-founded.

In this regard, it is important to recognise that neuroscience is not monolithic Notwithstanding its undoubted reductionist tendencies, current neuroscience also yields extensive evidence that the brain-body is itself an open system, and in this regard similar to the social realm which it indispensably requires from birth in order to acquire its emergent psychological capabilities. Damasio's hypothesis has this character: somatic markers are both biologically enabled and socially, interpersonally acquired; they are one route amongst many whereby sociocultural forces get quite literally incorporated within individuals. Damasio's work facilitates bi-directional theorising that unites, rather than dividing, the biological and the societal. Such

theorising challenges reductionism far more powerfully than mere dismissive assertions that neuroscience is never relevant.

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