

Where has everyone gone? Re-integrating people into accounts of organizational practice

Abstract

This essay seeks to draw attention to the near invisibility of subjective epistemology within organizational research, particularly within accounts of practice. The result can be an incomplete, depersonalised analysis that engages well with physical and social dimensions of organizational life, but which remains mute about this epistemological ‘missing third’: qualities such as tacit skill, personality, motivation, intention, and emotion. In response, the essay offers a detailed explanation of the objective and subjective components of practice, focusing in particular on the way in which these fuse together in the reflexive intentionality of motivated people. Building on this insight, the essay calls for a much closer integration of traditional sociological accounts of social generation that involve notions of ‘structure’ and ‘agency’, with social psychological accounts of personal generation involving notions of subjective and objective, and builds an initial framework for linking the two fields of enquiry at the level of practice.

Keywords: practice, organizational research, social psychology, identity, motivation

‘My conclusion is, then that, although the social constructivists have opened the black box and shown a colourful array of social actors, processes, and images therein, the box they reveal is still a remarkably hollow one. Yes, they regularly succeed in tracking a great deal of intense activity around technological developments of various kinds. They also show us the fascinating dynamics of conflict, disagreement, and consensus formation that surround some choices of great importance. But as they survey the evidence, they offer no judgement on what it all means, other than to notice that some technological projects succeed and others fail, that new forms of power arise and other forms decline’ (Langdon Winner, 1993: 374).

Introduction

Organizational researchers have already achieved much in applying social theory to open up apparently fixed structures – organisational routines, information systems, hierarchies - showing these as emergent, contestible processes and thus deepening our understanding of Winner’s ‘fascinating dynamics of conflict, disagreement, and consensus formation’. As a result, there is now an increasing acceptance within the organizational literature of the interlinkages between the social and the technical, and researchers are able as never before to challenge forms of technical or social instrumentalism that might previously have appeared fixed and immutable. That such an acknowledgement is becoming increasingly mainstream is surely a major achievement within our discipline. However, following Winner, I argue that that this freedom challenges organizational researchers to now move beyond mere *description* of the emergent interaction between people and organizational artefacts, which is now increasingly accepted by many within management literature, and instead to try to comment about ‘what it all means’: to discuss the human impact, or ‘morality’, of this interface, and its deep interrelationship with subjectivity, motivation, and human purpose, by which all organizations are partly fuelled.

Four recent papers, in particular, have pointed out the deficiencies in purely social/material approaches to people, technology, and organizations: Thompson (2002) argued for a greater consideration of subjectivity in peoples’ meaning-making activities in their use of information

technology, Ciborra and Willcox (2006) have underlined the need to “capture the inner life of the actor, mind and heart” by placing organisational analysis within a broader phenomenological tradition – building in turn on Ciborra’s discussion of mood in human-IS interaction (2002) - and McGrath (2006) draws on Foucault to underscore the role of emotions in peoples’ lived experience, introducing a moral dimension to human/technical interaction that underlines peoples’ struggle with notions of right and wrong. In calling for greater attention to be paid to subjective components of social emergence, in different ways these authors show how analyses of the interrelationship between people and the technical artefacts they create can be enriched through the inclusion of a subjective dimension.

This essay aims to build directly on this work, presenting a detailed argument that traditional social/material frameworks of analysis are inappropriate for studying the increasingly prevalent concept of ‘practice’, understood as a ‘fusing together’ of the enabling and constraining capabilities of people on the one hand, and of social rules and (technical) resources on the other, in such a way that it is not possible entirely to separate the two. My argument is framed to be of interest to two audiences. The first comprises those that continue to view ‘practice’ primarily in terms of rules and resources, enacted by people, to whom I argue that we are in need of a more careful definition capable of engaging with concepts of reflexivity and subjectivity, that includes affective behaviour. The second audience comprises those who might already acknowledge a subjective component to practice. To this group I seek to show that much of the literature actually reveals a preoccupation with the rules and resources side of the equation – often reframed as ‘practices’ - at the expense of any real engagement with the ‘people’ side, which is often bracketed out, resulting in a similarly incomplete epistemological picture:

‘Since the sixteenth century, the idea of *method* has progressively overturned the relation between knowing and doing: on a base of legal and rhetorical practices, changed little by little into discursive “actions” executed on diverse terrains and thus into techniques...as a rational management of production and as a regulated operation on appropriate fields’ (De Certeau 1988: 65).

In presenting my argument, I attempt to address this progressive obscuring of the vital link between knowing and doing (practice) by our preoccupation – conscious or semi-conscious - with method and technique (practices). In so doing, I will address in depth some of the enduring concerns of organization science with social generation, in particular concepts of ‘structure’ and ‘agency’, and show clearly how these are linked inescapably with social psychological concerns with personal generation, in particular concepts of the subjective and objective. Taking structuration purely as an example (one might also do the same with, for example, actor-network theory), I seek to show in this essay how our current preoccupation with ‘social’, rather than ‘individual’, agency may stem from the pervasive influence within our discipline enjoyed by theories of social, rather than personal, generation – with limiting consequences for our understanding of practice.

In response, I argue for a ‘repersonalisation’ of our understanding of the generative interaction between people, technology, and organizations that links insights from sociology with others from social psychology, at the level of practice. In making my argument for a more committed re-inclusion of people within formulations of practice, I will refer periodically to one of the most recent formulations of technology-as-practice from a leading and influential researcher in the field: Orlikowski’s recent call for a focus on ‘sociomaterial practices’ (Orlikowski 2007). I refer periodically to this formulation because it is recent, influential, and encapsulates in its title some of the concerns discussed in this essay, but this is only by way of example to anchor the discussion, since my main concern is to mount a broader critique, by implication, of the way in which the concept of ‘practice’ is currently framed in organizational research.

Orlikowski's 'sociomaterial practices' is a call for recognition of the "constitutive entanglement of the social and the material in everyday life" (ibid.: 1435), whilst avoiding either a 'techno-centric' or 'human-centred' bias – in other words, a research lens that implies a balanced, co-constitutive duality of the social and the material, avoiding charges of social or technological 'determinism'. And yet whilst organizational researchers are arguably right to underline the "deep intermingling of materiality within practice" (ibid.: 1446), the increasing recognition of which has surely been a major achievement for organizational research – the implications of the concept of 'practice' itself arguably require fuller consideration than has been the case to date. Like Orlikowski, who argues that our primary ways of dealing with *materiality* in organizational research are conceptually problematic, I want to argue that our primary ways of dealing with *personality* are equally, and epistemologically, inadequate.

So how is 'practice' different from 'practices', and why is this important? I will draw on and extend the ideas of Pickering (1993) to argue that in practising, people combine perceived sociomaterial constraints with elements of the irreducibly personal within a framework of *reflexive intentionality*, and that any purely 'sociomaterial' analysis that downplays or omits personal intentionality is thus founded on an incomplete, 'two thirds' epistemology from which motivated people are curiously absent: in her outline of 'sociomateriality', for example, Orlikowski uses 'human' and 'social' almost interchangeably. In order to offer a complete lens for studying contemporary forms of organising, this and similar 'sociomaterially exclusive' dualities thus need broadening to include epistemologically subjective, as well as objective, dimensions, fused in the reflexive intentionality of practice. Such a lens requires a careful discussion of the concept of practice, and of its resulting epistemological implications for those conducting 'practice-based' organization research.

The remainder of this essay seeks to achieve four aims. First, it further underlines the way in which accounts of 'practice' within organization research have tended to downplay the importance of the person, focusing instead on a notion of individual agency that appears sometimes almost interchangeable with formulations of social agency. Second, it illustrates that although social context is 'necessary' for practice to occur, practice is irreducible to this; it also contains a subjective element – and that to omit this element from analyses of organising is to follow an incomplete, 'two thirds' epistemology. Third, it makes the claim that in responding to this call, we need to do more than just add back in 'tacit' knowledge to the equation; the 'missing third' is broader in its scope, comprising the subjective condition of reflexive intentionality. Fourth, it attempts accordingly to offer a provisional framework for integrating a broader account of *personality* into our understanding of *sociality*, within practice.

The necessity and irreducibility of practice

The 'practice turn' within social science has increasingly foregrounded the importance of (inter)subjective interpretive processes in understanding social life. A range of notions has been advanced explaining aspects of 'sense-giving and sense-reading' (Polanyi 1969) in action, including Bourdieu's habitus (1977), Goffman's frames (1974), Holland's figured worlds (1998), Schank and Abelson's scripts (1977), Kant's schema (1933), and Leontiev's activity (see Wertsch 1981), Garfinkel's ethnomethodology (1967), and Latour's science studies (e.g. 1991) to name but a few. As argued by Reckwitz (2005), in focusing on the relations between bodies, agency, knowledge and understanding, even Foucault can also be considered 'praxeological'. Turning to organizational studies, the pervasive influence of this interest in practice is reflected in an increasing view of apparently fixed, 'deterministic' institutional structures as ongoing accomplishments of social behaviour: 'agency' that literally 'enacts' and, in so doing, frequently modifies, such structures.

In fact, so widespread has the use of the term ‘practice’ become within organizational literature that it has arguably become yet another form of orthodoxy. Thus organizations attempt to distil and transfer ‘best practice’, resulting in ‘core competencies’ (Cook and Brown 1999) and although an argument may hold ‘in theory’, it is usually discursively advantageous to discuss how it stands up ‘in practice’. In spite of their more sophisticated theoretical origins in Situated Learning (Lave and Wenger 1991), ‘communities of practice’ have frequently become shorthand for non-canonical organizational structures (Thompson: forthcoming 2010), and there is a sense that those who align themselves with the ‘coal-face’, or the ‘front line’ of practice are somehow engaging with a more engaged, more authentic order of reality – a relatively more defensible position during challenging times. Practice has thus become a form of organizational discourse in itself.

Notions relating closely to ‘practice’ also appear with increasing frequency in organizational research, including discussions of genre (e.g. Bazerman 1994), discourse (e.g. Thompson, 2002) knowing in organizations (e.g. Gherardi et al. 2003), knowing in practice (Orlikowski 2002), communities of practice (e.g. Brown and Duguid 1991, Wenger 1998), emergent context (Thompson and Walsham 2005), situated activity (Suchman 1987), perspective making and perspective taking (Boland and Tenkasi 1995), creativity (Barrett 1998), sociality (Knorr Cetina 1997), drift (Ciborra et al. 2000), intersubjectivity (e.g. Walsham 1995), the importance of tacit knowledge (e.g. Blackler 1995) sensemaking (Weick 1995), a practice lens for studying technology (Orlikowski 2000) and sociomaterial practices (Orlikowski 2007) to name but a few. Many of these concepts have been influenced in turn by popular, macro-level theories of social constitution such as Giddens’ structuration (1984), and actor-network theory (e.g. Callon 1986), which offer different explanations of emergence in social constitution. Whilst agency is pivotal in the continued generation of social reality within both these theories, neither tackles its subjective component in any depth.

Although acknowledgement of the central importance of practice therefore underpins much recent work in organizational research, and has been instrumental in its ability to expose previously structuralist conceptions of organizations as ongoing accomplishments rooted in the ongoing interaction between people, and things, I argue that we have much further to travel in integrating the concept into our research. In spite of regular invocation of the ‘P’ word across the literature, it is striking how often ‘real’ people themselves continue to remain absent from discussions of practice, and how the link between knowing and doing is obscured by our conscious or unconscious preoccupation with method. And yet ‘practice’ is more than the enactment of method:

‘Concepts of practice have a hook on us because of two basic arguments, which in some contexts amount to the same argument. They are arguments involving necessity and irreducibility, arguments which claim that some notion of practice is necessary to account for some facts or phenomena, and the argument that practice, conceptualised in this way, is irreducible to something other than practice, such as explicit theories or habits’ (Turner 1999: 149).

In other words, peoples’ agency is explicable only with reference to their understanding of shared *social* rules, and yet it is not explainable solely in these terms, since practice also contains a large *tacit* element. In echoing Polanyi’s insight that ‘we know more than we can say’, Turner’s discussion of practice is a reminder that although elements of agency occur at both social and technical levels, they also occur at subjective level, as well:

‘Polanyi’s notion of tacit knowledge fits both of the two notions of practice I have mentioned here. Tacit knowledge is a *basis of an activity* which is in some sense separate from the activity itself, and on which the activity may be said to depend. It also fits with the idea of practice as *an activity which is larger than that which theory can comprehend*’ (ibid., original italics).

In this view, practice involves the necessity of drawing on social rules (subject also, of course, to physical constraints), whilst remaining irreducible to these; it is an alloy of both social and subjective. However, whilst embracing Turner's 'necessity and irreducibility' notion of practice, I argue that the subjective component of practice is larger than simply that of the embodied understanding of tacit knowledge, which, despite its popularity within organizational research (e.g. Blackler 1995), is arguably a rather narrow interpretation of subjective epistemology – and also contains the slightly structuralist implication that it 'exists' in some pure sense, as some latent structure to be drawn upon in practice. Arguing for an explicit, and broad, recognition of the subjective within epistemology is not, of course, such a new idea; in particular, Popper (1994) outlined three 'worlds': the world of (material) things, the world of subjective (personal) perceptions, and the world of abstract objective (social) knowledge.

To summarise thus far, I would therefore argue that views of practice comprising merely the social and the material of Popper's three 'worlds' operate within an incomplete, 'two-thirds' epistemology that lacks the *personal* – and thus that 'sociomaterial practices', and similar formulations that lack *personality*, drive us inaccurately towards the study of '2/3 practices' when we should focus instead on '3/3 practice'. Reflecting its later formulation in 'sociomateriality', Orlikowski's 'practice lens' (2000), for example, draws on Giddens' sociology to ascribe differences in use of technology entirely to "enactment of structures in practice" (2000: 410), an account in which Popper's second world is entirely absent – but, importantly, a similar critique might be made of all analyses that superficially acknowledge, but attempt ultimately to upwardly conflate, the personal dimension into 'the social'. However, if an acknowledgement of personality is needed to achieve a complete epistemology, how is 'personality' to be conceived? How is the 'missing third' to be added in, enabling a balanced approach to practice?

Defining the missing third: reflexive intentionality

The argument thus far - that Turner's 'irreducible' element of practice comprises more than tacit knowledge, that tacit knowledge thus represents too narrow a conception of subjective epistemology, and therefore that an exclusively social/material epistemology that lacks 'personality' is incomplete - is best encapsulated in the concept of intentionality. As an example, Andrew Pickering's challenge to the principle of symmetry between humans and nonhumans in actor-network theory takes intentionality as its 'sticking point':

'We humans differ from nonhumans precisely in that our actions have intentions behind them. ... We construct goals that refer to presently nonexistent future states and then seek to bring them about' (1993: 566).

For Pickering, practice is conceived as a 'mangle' comprising human actors' pursuit of individual interests within the constraints of nonhuman agency, whose precise configuration only emerges in practice. In a later paper that seeks to apply Pickering's insights to the study of technology in organizations, Jones proposes that it may be helpful to think of this fusion of human and nonhuman agency "as a form of "double mangle" in which both material and social agency are mutually and emergently transformed" (1998: 297). Whilst Jones' concept of the 'double mangle' is very helpful in emphasising that both types of agency combine in practice and emerge independently altered, Pickering's 'human agency' has been rephrased in Jones' formulation as 'social agency', thus conflating – at least for the analytical purposes of his discussion - the vital epistemological distinction between the personal and the social.

Taken together, however, Pickering and Jones' ideas help us to construct a view of the mechanics of practice as it relates to conventional sociological debates concerning 'structure' and 'agency'. We therefore have 'nonhuman agency', presumably comprising both social and technical artefacts, as well as the intentionality of (Pickering's) 'human agency' directing

itself at various interests in relation to this, all three – social, technical, and personal - finding expression only through practice, all three emerging independently altered from the encounter. In Pickering and Jones' terms, the important implication of my call for a repersonalisation of practice, of course, is that the 'double mangle' of practice is in fact a 'triple mangle' comprising social, material, and personal agency. Following 'Turner's rule', discussed earlier, of necessity and irreducibility, it is impossible for human agency to operate independently from the sociomaterial constraints required to provide a *necessary* framework of meaning – this would be like a ship sailing at night without a compass (material component of practice) or an understanding of how to use it (social component of practice), whose manoeuvres would be random and purposeless. Similarly, sociomaterial constraints cannot operate with nothing to constrain, and therefore 'human agency' is *irreducible* to 'social agency' *qua* Jones – and 'practice' is irreducible to 'practices':

'Constraints and enablements derive from structural and cultural emergent properties. They have the generative power to impede or facilitate projects of different kinds from groups of agents who are differentially placed. However, the activation of their causal powers is contingent upon agents who conceive of and pursue projects upon which they would impinge' (Archer 2003: 7).

If we are arguing that practice is the 'engine' of social constitution, and that subjective intentionality is a key input and output of this generative process, then discussions of practice have to start to direct the same sort of attention to the personal component – to Archer's human 'agents' - as to social and technical components. The key implication of Pickering's 'intentionality' is, of course, that it begs the question of how peoples' 'intentions' are formed, in practice, in relation to perceived social and material constraints. In turn, this raises the issue of the motivations that underlie intentions, and the emotions by which these in turn are coloured – and thus the discussion shifts necessarily from questions of sociology to social psychology. In the remainder of the essay, I offer a tentative foundation for linking accounts of social generation with personal generation, providing organization researchers with a framework for linking discussions of 'structure' and 'agency' with the 'subjective' and 'objective' dimensions of human experience, in practice. This involves engaging with the properties of the 'missing third': motivation, intention, and emotion.

Underpinning the missing third: Motivation

A discussion of motivation – why people are inclined to care about, and react to social and material constraints in the first place (although they may have less choice about the material!) - forms the first step in explaining reflexive intentionality, since it underpins the nature of the interrelationship between the personal and the social, forming a conceptual bridge between accounts of emergence from within both sociology and social psychology. Most importantly, to place emphasis on subjective motivation is not to argue for any 'separateness' of people from their social context, but quite the reverse; I will argue that people's motivation in practice is fundamentally social, and that an appreciation of this sociality is essential to understanding how the personal and the social are co-constituted in practice. However, such an appreciation is unlikely to be forthcoming from any analysis that relies too heavily on a purely 'sociological' perspective, which, if drawn upon in isolation, introduces a progressively 'social' bias towards the only partially social notion of 'practice'. I will illustrate this with reference to the example of Giddens' structuration (1984), one of the most influential theories discussing the interrelationship between people and social context within modern sociology.

Structuration operates through peoples' ability to draw upon shared 'interpretive schemes', 'facilities', and 'norms' in their activities, and the extent to which they replicate or challenge these also replicates or challenges broader social structures. The most important property of these 'modalities' between structure and agency is that an understanding of these is

approximately shared. Indeed, Giddens' 'modalities' depend for their continuing intelligibility (and thus the continuing operation of 'structuration' itself) upon the extent to which this is the case: recalling Turner, they are 'necessary' for practice, as people refer to and invoke modalities to make sense of, justify, and judge the appropriateness of their own, and others', actions. In this sense, Giddens' modalities are similar to the 'social agency' referred to earlier in formulations that conflate the 'human' with the social'.

Of course, Giddens would appear also to acknowledge the 'irreducible' element of 'Turner's law', which reminds us that, although necessary for its operation, practice remains irreducible to interpretive schemes, facilities and norms in themselves. This is visible in his supplementing of the 'sociological emphasis', or 'two thirds epistemology' of structuration, with a previously developed (1979) 'stratification model of action', as well as discussions of other, scattered aspects of subjectivity including self-identity (1991) on the social psychology side. In particular, Giddens' 'stratification model', a loose approximation of Freud's id, ego, and superego, is an explicit acknowledgement of the importance of unconscious sources of motivation, and allows semiconscious motivations to be rationalised in 'discursive consciousness', and then monitored reflexively in 'practical consciousness'. In fact, the stratification model is arguably essential to the operation of structuration, since "it is analytical to the concept of agency that a person (i.e. an agent) could have acted otherwise" (Giddens 1976: 75) – i.e. that structuration depends on reflexive individuals' capacity to replicate, or to subvert, social structures by endorsing or modifying modalities *should they be motivated to do so*. Taken in isolation, however, although structuration may explain 'how' shared social agency operates in practice, it does not seek in itself to explain 'why' this may occur, relying on the stratification model to supply the 'missing third' to complete this picture at the level of human motivation.

Giddens' model of structuration thus arguably represents an incomplete encapsulation of social emergence, since it relies on further, scattered writings, to explain the motivation that underlies peoples' interaction with structurational processes in the first place. Analyses of social emergence that are heavily influenced by structuration but do not heed this 'warning label' and thus use it in isolation from these necessary supplements, therefore run the danger of constructing similarly incomplete pictures that are good at explaining interlinkages between structure and social modalities in action at the sociological level (structuration's strength) but remain mute about human purpose and meaning at the level of social psychology. If, as has been argued, the explanatory power of structuration and similar 'sociological' formulations of social agency rest on an attendant ability to explain motivation and choice at the level of the individual, then the demonstration of such an ability must constitute an important challenge for researchers that work with such models of social emergence.

The challenge is unlikely to be easy. Continuing with our structuration example, it is arguable that a further trap lies in wait for researchers of practice that heed the warning label and attempt to supplement their use of structuration by also drawing on Giddens' writings on the subjective. Drawing on Willmott (1986), this further trap takes the form of defects in Giddens' explanation of individual motivation, which draws further on Freud, centring predominantly on the idea that motivation for action is driven by a desire to avoid a perpetually lurking existential anxiety stemming from the decentred fragility of the ego. Such an assumption is based on a Freudian dualism between Self and Other, where individuals' sense of insecurity of self is minimised through an embracing of the social:

'Routine, psychologically linked to the minimizing of unconscious sources of anxiety, is the predominant form of day-to-day social activity. Most daily practices are not directly motivated. Routinized practices are the prime expression of the duality of structure in respect of the continuity of social life. In the enactment of routines agents sustain a sense of ontological security' (Giddens 1984: 282).

In offering up an explanation of motivation, Giddens' neat *duality* of structure and agency, whose agency is primarily that of peoples' enactment of social routines, appears to suggest that people are part social – but in fact rests on a *dualism* of the Self-Other, in which insecure Selves, wholly disconnected from the Other, strive to stave off ontological anxiety; and thus are individuals' capacities to do otherwise underplayed. It is almost as if Giddens is telling us that whilst structuration is the primary model of social constitution, there *is* a supplementary part – that of human motivation – but this is less important since the great majority of the time we are all so busy avoiding our insecurities that we are likely to endorse the status quo – and that human agency thus may be taken as pretty much the same thing as social agency.

Viewed this way, Giddens' structuration thus offers a somewhat deterministic and depressing account of how system persistence (structure) observable everywhere is reproduced voluntarily by people who find ontological security in the replication of its routines, but lack other primary motivations. As pointed out by Willmott (1986), however, for other writers such as Lacan, emancipation from such a predicament

‘is understood to involve a surrendering of attachments to, or defences of, those routines which, whilst appearing to secure the self, actually place existentially unnecessary, double-binding constraints upon the recognition and fulfilment of the primacy of non-dualistic awareness’ (ibid.: 116).

In other words, the dualism of Self-Other upon which system persistence in the duality of Giddens' structuration rests arguably represents a very constrained conception of personhood that admits a limited range of possible motivations for action, and as a result, a limited capacity for self-realisation. There is a further problem. In his discussion of the structure/agency interrelationship, Barnes (2001) argues that system persistence is much better explained because people are ‘mutually susceptible’: their actions are always framed and considered in terms of how they will be socially perceived, and the likely consequences of this:

‘In all manifestations of social life, what would otherwise be diverse individual inclinations in the specification and application of rules must be ordered into a tolerably coherent collective practice. But independent individuals have no incentive to do the work of evaluation and standardization constantly necessary to sustain a sense of ‘what the rules are’. Only non-independent human beings will do this work, human beings who are indeed active and independent in relation to rules but not in relation to each other. Sociable human beings, capable of affecting one another implicitly, causally and continuously in their communicative interaction, may co-ordinate their understandings and their actual implementations of rules. ... There must be something *causal* at work, all the time in the course of communicative interaction, that keeps people sufficiently well aligned with each other for mutual intelligibility to continue. People must be *mutually susceptible*’ (2001: 347).

In this view, practice is not primarily reducible to the enactment of social routine, or ‘practices’, by insecure, asocial individuals ‘cut off’ from the social Other, each trying to shore up and reinforce her own sense of separateness, of Self. Rather, following Willmott, practice is innately social precisely because of the close links between deeply mutually susceptible people, who continually recalibrate their understandings of social rules as they evolve – enabling them to be able to interpret and enact routines in the first place. It is their very mutual susceptibility, or concern for how they are perceived by others, that motivates them to do this: in other words, the performative side to their subjectivity.

For Barnes, the condition of mutual susceptibility, where there is an indistinct line between Self and Other, motivates people to do the ongoing work required to continually update their understandings of rules in order to enhance others' perceptions of them – and therefore

underpins their mutual intelligibility. *The mutual intelligibility required to enact social rules is only explicable through mutual susceptibility – which is missing from Giddens’ formulation*, which rests on less ‘radical’, Freudian foundations. In this way, informed, rational practice is at once causally social, yet at the same time causally subjective: people are rational because they are informed; informed because they are susceptible. For organizational research, such a view of motivation calls for a reframing of the hitherto exclusive ‘sociological’ duality of the ‘social’ and ‘material’ into a ‘sociopsychological’ triality of social, material, and personal. Furthermore, it also challenges those who continue to use the duality of structuration or similar sociologically-based models of social agency as standalone theoretical frameworks to recognise the limitations in their ability to explain practice.

I have argued above for a view of reflexive intentionality that, first, admits a broader range of potential motivations underlying peoples’ subjective engagement in practice than is allowed within Giddens’ formulation, and second, that provides a way of understanding the mutual intelligibility required to ‘practise’ in the first place. The contrast is fairly stark: whereas Giddens’ ‘missing third’ is fundamentally asocial, constrained to “competent adjustment” (Willmott 1986: 114) to social routines and thus relatively homogenous in its operation and virtually analogous to social agency, following Barnes, I have presented a view of the self that is deeply, causally social, recognises a broad range of possible motivation and possibilities for self-realisation, and is thus potentially diverse and individual in its operation, and very different from social agency. Having argued that people are socially motivated, thus establishing the underpinnings of the interrelationship between the personal and the social in reflexive intentionality, it remains to offer an explanation for its mechanics: how actual intentions may be formed and modified within our ongoing, mutually susceptible and thus intelligible condition – and thus how the nature of our practice is shaped.

How the missing third operates: Intention and emotion

Reflexivity is defined in the dictionary as ‘directed back on itself’. Used in a social sense, this implies an ability to view oneself in relation to others, and to direct, or feed, this view back into one’s self-perception. A state of continuous reflexivity would therefore imply a person’s ongoing monitoring of her positionality in relation to the physical and social structural constraints by which she is surrounded. If we add to this view of reflexivity a sense of social motivation from the previous discussion, the result is some form of intention on the part of the person – i.e. a desire to behave in some way, or to achieve certain goals, within the modifying constraints of some sort of socially normative order.

‘Reflexive intentionality’ is therefore relational: it is at once intentional, or forward-looking, as well as a reaction to perceived constraints – and the continuous, unending nature of this process means that intentions can be expected to change constantly, since they are expressions of peoples’ reactions to – *how they feel about* - their current concerns: how they perceive themselves to be positioned in relation to where they would *like* to be, and the various constraints that may modify their ability to achieve this position. A description of the role of emotions and self-identity in affecting how we feel about our continually changing physical and social constraints, which in turn informs our reflexive intentions towards these, forms the final component of our ‘missing third’, allowing us to move towards a more complete, ‘repersonalised’ view of practice.

As acknowledged elsewhere (e.g. WAUME 1993), a large, well-developed social psychological literature exists on emotion, forming a rich basis for further, future attempts to introduce a greater awareness of the workings of subjectivity within organizational practice. Although we will focus below on a particular treatment of emotion as it relates to sociology, the current entry on emotion in the Stanford Encyclopaedia of Philosophy offers a useful high-level view on an emerging consensus within the literature on emotion:

‘An acceptable philosophical theory of emotions should be able to account at least for the following nine characteristics:

- emotions are typically conscious phenomena; yet
- they typically involve more pervasive bodily manifestations than other conscious states;
- they vary along a number of dimensions: intensity, valence, type and range of intentional objects, etc.
- they are reputed to be antagonists of rationality; but also
- they play an indispensable role in determining the quality of life;
- they contribute crucially to defining our ends and priorities;
- they play a crucial role in the regulation of social life;
- they protect us from an excessively slavish devotion to narrow conceptions of rationality;
- they have a central place in moral education and the moral life’ (De Sousa 2007).

Whilst it is interesting in passing that almost all nine of these characteristics form central concerns for many organizational researchers, for present purposes, I will focus on number 6 - that ‘they contribute crucially to defining our ends and priorities’, and number 7 – that ‘they play a crucial role in the regulation of social life’. In doing so, I will draw on Margaret Archer’s (2000) extensive discussion of practice, in which she outlines the workings of a reflexive ‘internal conversation’ around three central propositions:

- (i) ‘Different clusters of emotions represent commentaries upon our concerns and are emergent from our human relationships with the natural, discursive and practical orders of reality respectively. Matters do not finish here.
- (ii) Because of our reflexivity, we review these emotional commentaries, articulate them, monitor them, and transmute them; thus elaborating further upon our emotionality itself.
- (iii) This occurs through the inner conversation which is a ceaseless discussion about the satisfaction of our ultimate concerns and a monitoring of the self and its commitments in relation to the commentaries received’ (2000: 195).

In her discussion of the role of emotions in the ‘inner conversation’, Archer also underlines their essential *relationality*, drawing on Charles Taylor’s view of “emotions as essentially involving a sense of our situation. They are affective modes of awareness of situation” (Taylor 1985: 48, in Archer, *ibid.*). Reflecting the physical, individual, and social forms of agency discussed throughout this essay, Archer views our overall emotional response to our physically, practically, and socially-experienced constraints as the result of an ongoing balancing act between often conflicting, ‘first order’ emotions experienced within natural, discursive and social orders of reality, that results in a ‘second-order’ emotion that informs our sense of self: our sense of our own positionality in relation to our surroundings and our feelings in relation to this, which in turn affects our resulting behaviour:

OBJECT OF EMOTIONS	CONCERNS	IMPORTS	EMERGENCE FROM
Natural order	physical well-being	Visceral	body-environment relations
Practical order	performative achievement	Competence	subject/object relations
Discursive order	Self-worth	Normative	subject/subject relations

The emergence of (first-order) emotions, from Archer 2000: 199

For example, upon observing a swimmer struggling under a particularly large wave, an experienced surfer could experience several conflicting emotions that might include physical alarm at the potential threat posed by the wave (natural order), concern at the possible limitations of her fitness, or swimming abilities, in performing a swift rescue (practical order), and an awareness of the socially advantageous effect that a potentially heroic act might have amongst her friends in the bar afterwards (discursive order). The way in which the surfer balances these conflicting emotions during this reflexive ‘internal conversation’, and acts accordingly, will in turn affect the way in which she feels about herself (a second-order emotion in the form of pride, or shame, etc).

For Archer, “the self and its reflexive awareness have been continuous throughout the conversation, but on its completion *the self has attained a strict personal identity through its unique pattern of commitments*” (2000: 241, original italics). Taking our example, as a result of confronting her conflicting emotions, the surfer decides whether or not to intervene, and may then perform various life-saving routines, or *practices*, but will combine these *in practice* with an array of subjective feelings – confidence, timidity, frustration, quelled panic, etc – as well as tacit, embodied knowledge such as the ability to swim in the first place. Emerging from this episode, the surfer will have a modified sense of herself either as the ‘sort of person who intervenes’, or as ‘a bystander’:

‘Every person receives three kinds of emotional commentaries on their concerns, originating from each of the orders of reality – natural, practical, and social. Because they have to live and attempt to thrive in the three orders simultaneously, they must necessarily in some way and to some degree attend to all three clusters of commentaries. This is their problem. ...What it entails is striking a liveable balance within our trinity of inescapable concerns. ...Yet, which precise balance we strike between our concerns, and what precisely figures amongst an individual’s concerns is what gives us our strict identity as *particular persons*. Because these concerns can never be exclusively social, and since the *modus vivendi* is worked out by an active and reflective agent, *personal identity* cannot be the gift of society’ (Archer 2000: 220).

Developing this view of an ‘inner conversation’ between our ‘trinity’ of often conflicting clusters of emotions, Archer offers an example of a cluster of emotions in the ‘natural order’ that might include the following:

Environmental import to the body	Emotion	Tendential effect towards the environment
harm	Fear	flight/shrinking
assault	Anger	Resistance
startle	Wonder	arrest/attention
loss	Sadness	Withdrawal
gain	Joy	Encounter
revolt	Disgust	Emission
enrich	Hope	Awaiting
abreact	Relief	Relaxation

Emotional emergence in the natural order, from Archer 2000: 205

In viewing emotion as affecting peoples’ subsequent dispositions to act (the third column above), Archer draws on Frijda’s study of emotion, where “emotions can be defined as modes of relational action readiness” (Frijda 1986: 71, in Archer 2000: 206). Archer’s resulting view of ‘emotional action tendencies’, which are often in conflict with each other, and with emotional action tendencies in the other, natural, practical or discursive orders, offers a useful way of understanding how, as part of a reflexive ‘inner conversation’, emotions come to affect our intentions. Emotions are therefore of central importance in determining the

condition of reflexive intentionality with which we approach our encounters with the sociomaterial.

A depersonalised analysis of the surfer episode, focused on ‘practices’ and thus shorn of an understanding of people’s ‘dispositions to act’, would be able to offer very little explanation in relation to these events, being confined simply to observations about the wave, and about the surfer’s execution of lifesaving routines. It would be unable to explain key aspects of *how* the episode occurred; neither could it address any questions as to *why* events unfolded as they did – or how they might be likely to affect the actor’s behaviour under similar circumstances in the future. In attempting to view a rich subjective/objective duality through a ‘practice lens’ that sees only purely objective phenomena, such an analysis remains blind to, or ‘socially conflates’ human reflexive deliberations - the very material required for physical and social factors to exercise their powers of constraint and enablement. As has been seen, this is because the reflexive deliberations and resulting intentionality of real people play a crucial role in mediating between ‘structure’ and ‘agency’, and between subjective and objective dimensions.

Conclusion: Re-engaging with person-ality

In attempting to sketch a provisional way of starting to understand how an emotional ‘inner conversation’ may be practically approached in studies of organising, Archer’s framework is not, of course, offered in any normative sense, but as a starting basis for further discussion, and as a possible anchoring point for locating emotions within the ‘epistemologically complete’ conception of practice advanced in this essay. In particular, Archer writes from a realist standpoint that would challenge, wholesale, research lenses based on popular theoretical frameworks such as structuration and actor-network theory, which remain invaluable ‘intellectual scaffolding’ for understanding many aspects of organising. Much of her discussion of emotion, however, remains potentially useable in conjunction with other approaches.

Although at time of writing, it is unclear how, if at all, organizational researchers writing about practice may choose to develop frameworks for addressing subjective components of epistemology in the future, I have argued that ‘to do nothing’ should not remain an option. Although, recalling De Certeau, I have challenged formulations that omit the subjective component as misleading in their encouragement of a continued focus on method at the expense of a real engagement with *knowing* and *doing*, perhaps the most lasting challenge of the argument presented here is that we may need to engage also with *being*:

‘Functionalist social science gave us the word ‘actor’ to use for individual. It went with ‘role’. But roles are inventions, the performance of fictions, which are supposed to mask the actors who play them, to conceal them from us as persons with other identities. We have developed a social science which, consistent with these metaphors, depicts the individual as a performing self. We cannot see the actors, because in anthropology we say that they are methodologically out of reach. ...So we settle for the script, which we invent ourselves through the ingenious use of categories’ (Cohen 1994: 180).

Investigating aspects of *being* within an enhanced subjective epistemology may help us to avoid charges that we study fictions – functionalist masks, enacted roles – at the expense of any real understanding of their underlying generative processes. In particular, recent ‘cognitive’ anthropology, exemplified by Lave (1988), and already visible in organizational studies in the form of Lave and Wenger’s *Situated Learning* (1991) - is careful to focus on “the whole person in action, acting within the settings of that activity” (Lave 1988:17): a shift from examining ‘representational’ texts, to the study of pragmatic discourse, driven by socially mediated cognition (Holland et al. 1998). In a particularly colourful discussion of cognition in artificial intelligence, Clark (1997) proposes that linear, representationalist

models of thought should be abandoned altogether in favour of a view of the mind as a ‘leaky organ’, embodied and always relational to, and intertwined with, physiology and the outside world.

A focus on the individual as the locus wherein physical, subjective and social dimensions of experience combine in activity is supported by recent literature addressing the co-constitution of physiological and cognitive components of perception within the person (Worthman, 1992), and the phenomenology of Merleau-Ponty (1962), which has lately attracted renewed interest within practice-based anthropology – as well as organizational studies (e.g. Boland 1986, 1996, Winograd and Flores 1986, Introna 1997). This ‘personal’, phenomenological perspective has been applied to the relations between the semiotic and (human) physiological components of perception, in which conscious, focal attention is viewed as embedded in wider unconscious and physiological processes (Merleau-Ponty 1962, Bateson 1972, Maturana and Varela 1980, Mingers 2001). Such studies underline the importance of non-shareable ingredients to human experience: take, as an example, Merleau-Ponty’s comment that your angry gesture “does not make me think of anger, it is anger itself”. (1962: 184, in Ingold, 1996: 115).

However, if studies of organizational practice need arguably to engage with aspects of *being*, Cohen’s remarks, above, about actors and fictions remind us that dealing with the invisible is difficult. In particular, as described by Goffman (1959), it appears that the emergent self may deploy various identities in relation to different social and material constraints – but also that, in contrast to Goffman, recent ethnographers of personhood do not distinguish so easily between ‘selves’ and their various deployed identities, which co-evolve over time. A well-known example of this interweaving of self and identities is Cain’s (1991) study of the life stories told by American members of Alcoholics Anonymous (AA), which documented the way in which increasing familiarity with the AA community resulted in the incorporation of certain AA metaphors into people’s self-understanding and purpose. A final, and extreme, example of the relationally-derived self is that of Gergen (eg. 1991), whose ‘socially saturated self; and ‘populated self’ is so confronted with technologically-enabled alternatives and lifestyle choices that the result is a serious weakening of ‘self’ in the sense of some empirically amenable identity, resulting in a ‘pastiche personality’ or ‘ersatz being’.

Perhaps a helpful direction for future attention might be Giddens’ concept of a reflexive project of the self (1991), where a self-narrative plays a co-ordinating role in maintaining coherence of self-identity under changing circumstances. This view receives empirical support from a wide literature, particularly within cognitive psychology (eg. Bruner 1990, Charne 1984, Howard 1991, McAdams 1997) which acknowledges in various ways the capacity of narrative to integrate a person’s reflexively reconstructed past, perceived present, and anticipated future within a *reflexively intentional* trajectory. As these examples all illustrate, however, there is a rich opportunity for researchers of organising to engage with the ‘missing third’, to reintegrate personality into accounts of practice, and to move a concern with the role of the subjective in social generation out of the wings and into centre stage. It is hoped that the framework presented in this essay represents a helpful step in this direction.

Bibliography

- Archer, M.
2000 *Being Human: The Problem of Agency.*, Cambridge: Cambridge University Press.
- Archer, M.
2003 *Structure, Agency and the Internal Conversation.* Cambridge: Cambridge University Press.
- Barrett, F. J.
1998 'Creativity and improvisation in jazz and organizations: Implications for organizational learning'. *Organization Science* 9/5: 605-622.
- Barnes, S.B.
2001 'The macro-micro problem and the problem of structure and agency'. In *Handbook of Social Theory*, G. Ritzer, G., and B. Smart (eds.), Thousand Oaks, C.A.: Sage: 339-52.
- Bateson, G. (1972) *Steps to an Ecology of Mind.* Chicago: University of Chicago Press.
- Bazerman, C.
1994 Systems of genre and the enactment of social intentions. In A. Freedman and P. Medway (eds.), *Genre and the New Rhetoric.* London: Taylor & Francis: 79-99
- Blackler, F.
1995 'Knowledge, Knowledge Work and Organizations: An Overview and Interpretation'. *Organization Studies* 16/6: 1021-1046.
- Boland, R.J.
1986 'Phenomenology: A Preferred Approach to Research on Information Systems'. in B. Langefors, A. Verrjin-Stuart, and G. Bracci, (eds.), *Trends in Information Systems.* Amsterdam: North Holland.
- Boland, R.J., and R. Tenkasi
1995 'Perspective Making and Perspective Taking in Communities of Knowing'. *Organization Science* 6/4: 350-72.
- Boland, R.J.
1996 'Why shared meanings have no place in Structuration Theory'. *Accounting, Organizations and Society*, 21/7: 691-697.
- Bourdieu, P
1977 *Outline of a Theory of Practice.* Trans. R. Nice. Cambridge: Cambridge University Press.
- Brown, J.S., and P. Duguid.
1991 'Organizational Learning and Communities of Practice: Toward a Unified View of Working, Learning, and Innovation', *Organization Science* 2/1: 40-57.
- Bruner, J.S.
1990 *Acts of Meaning.* Cambridge, MA: Harvard University Press.
- Cain, C.
1991 'Personal Stories: Identity Acquisition and Self-understanding in Alcoholics Anonymous'. *Ethos* 19: 210-253.

- Callon, M.
1986 'Some Elements in a Sociology of Translation: Domestication of the Scallops and Fishermen of St Brieuc Bay'. In J. Law, (ed.), *Power, Action and Belief*. London: Routledge.
- Charme, S.T.
1984 *Meaning and Myth in the Study of Lives: A Sartrean Perspective*. Philadelphia: University of Pennsylvania Press.
- Ciborra, C.U., K Braa, A. Cordella, B. Dahlbom, A. Failla, O. Hanseth, V. Hepsø, J. Ljungberg, E. Monteiro, K.A. Simon
2000 *From Control to Drift. The Dynamics of Corporate Information Infrastructures*. Oxford: Oxford University Press.
- Ciborra, C.
2002 *The Labyrinths of Information: Challenging the Wisdom of Systems*. Oxford: Oxford University Press.
- Ciborra, C., and L. Willcocks, L.
2006 'The mind or the heart? It depends on the (definition of) situation. *Journal of Information Technology* 21: 129–139.
- Clark, A.
1997 *Being There: Putting Brain, Body and World Together Again*. Cambridge, MA: Bradford Books.
- Cohen, A.
1994 *Self-consciousness: An Alternative Anthropology of Identity*. London: Routledge.
- Cook, J., and J. S. Brown
1999 'Bridging epistemologies: The generative dance between organizational knowledge and organizational knowing'. *Organization Science* 10/4: 381-400.
- De Certeau, M.
1988 *The Practice of Everyday Life*. Berkeley: University of California Press.
- De Sousa, R.
2007 'Emotion', *Stanford Encyclopaedia of Philosophy*,
<http://plato.stanford.edu/entries/emotion/>
- Frijda, N.H.
1986 *The Emotions*. Cambridge: Cambridge University Press.
- Garfinkel, H.
Studies in Ethnomethodology. Malden MA: Polity Press/Blackwell Publishing.
- Gergen, K.
1991 *The Saturated Self: Dilemmas of Identity in Contemporary Life*. New York: Basic Books.
- Gherardi, S.
2000 'Practice-based Theorizing on Learning and Knowing in Organizations', *Organization* 7/2: 211-221.

- Giddens, A.
1976 *New Rules of Sociological Method*. Stanford: Stanford University Press.
- Giddens, A.
1979 *Central Problems in Social Theory: Action, Structure and Contradiction in Social Analysis*. London: MacMillan Press.
- Giddens, A.
1984 *The Constitution of Society: An Outline of the Theory of Structuration*. Cambridge: Polity.
- Giddens, A.
1991 *Modernity and Self-identity: Self and Society in the Late Modern Age*. Cambridge: Polity.
- Goffman, E.
1959 *The Presentation of the Self in Everyday Life*, reprinted 1990. London: Penguin.
- Goffman, E.
1974 *Frame Analysis: An Essay on the Organization of Experience*. New York: Harper and Row.
- Holland, D., W. Lachicotte, D. Skinner, and C. Cain
1998 *Identity and Agency in Cultural Worlds*. Cambridge, MA: Harvard University Press.
- Howard, G.S.
1991 'Culture Tales: A Narrative Approach to Thinking, Cross-cultural Psychology, and Psychotherapy'. *American Psychologist* 46: 187-197.
- Ingold, T.
1996 'Culture, Perception and Cognition'. in J. Haworth, (ed.), *Psychological Research: Innovative Methods and Strategies*. London: Routledge: 99-119.
- Introna, L.
1997 *Management, Information and Power*. London: MacMillan.
- Jones, M.R.
1998 'Information Systems and the Double Mangle: Steering a Course Between the Scylla of Embedded Structure and the Charybdis of Strong Symmetry', in T. Larsen, L. Levine, and J.I. DeGross, (eds), *Information Systems: Current Issues and Future Challenges*. Laxenburg: International Federation for Information Processing: 287-302.
- Kant, I.
1933 *Critique of Pure Reason*, Trans. N. Smith. London: Macmillan.
- Knorr-Cetina, K.
1997 'Sociality with Objects: Social Relations in Postsocial Knowledge Societies'. *Theory, Culture & Society* 14/4: 1-30.
- Latour, B.
1991 'Technology is Society Made Durable'. In J. Law (ed.) *A Sociology of Monsters? Essays on Power, Technology and Domination, Sociological Review Monograph*. London, Routledge. 38: 103-131.

- Lave, J.
1988 *Cognition in Practice*. Cambridge: Cambridge University Press.
- Lave, J., and E. Wenger
1991 *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press.
- Maturana, H., and F. Varela
1980 *Autopoiesis and Cognition: The Recognition of the Living*. Reidel: Dordrecht.
- McAdams, D.P.
1997 'The Case for Unity in the (Post)modern Self', in R.D. Ashmore, and L. Jussim (eds.), *Self and Identity: Fundamental Issues*. Oxford: Oxford University Press: 46-77.
- McGrath, K.
2006 'Affection Not Affliction: The Role of Emotions in Information Systems and Organizational Change'. *Information and Organization* 16/4: 277-303.
- Merleau-Ponty, M.
1962 *The Phenomenology of Perception*. London: Routledge.
- Orlikowski, W.
2000 'Using Technology and Constituting Structures: A Practice Lens for Studying Technology in Organizations'. *Organization Science* 11/4: 404-428.
- Orlikowski, W.
2002 'Knowing in practice: enacting a collective capability in distributed organizing', *Organization Science* 13/3: 249-273.
- Orlikowski, W.
2007 'Sociomaterial practices: Exploring technology at work', *Organization Studies* 28/9: 1435-1448.
- Pickering, A.
1993 'The Mangle of Practice: Agency and Emergence in the Sociology of Science'. *AJS* 99/3: 559-89.
- Popper, K. R.
1994 *In search of a better world: Lectures and essays from thirty years*, trans. L. J. Bennett. London: Routledge.
- Reckwitz, A.
2005 'The status of the material in theories of culture. From 'social structure' to 'artefacts''. *Journal for the Theory of Social Behaviour* 32/2: 195-217.
- Schank, R. and R. Abelson
1977 *Scripts, Plans, Goals, and Understanding*. Hillsdale, N.J.: Erlbaum.
- Taylor, C.
1985 *Human Agency and Language*. Cambridge: Cambridge University Press.
- Suchman, L.
1987 *Plans and Situated Actions: The Problem of Human-Machine Communication*. Cambridge: Cambridge University Press.

- Thompson, M.
2002 'Cultivating meaning: interpretive fine-tuning of a South African health information system'. *Information and Organization* 12/3: 183-211.
- Thompson, M.
2005 'ICT, power and developmental discourse: a critical analysis'. *The Electronic Journal of Information Systems in Developing Countries*, 20: 1-25.
- Thompson, M., and G. Walsham
2005 'Placing knowledge management in context'. *Journal of Management Studies* 41/5: 725-747.
- Turner, S.
1999 'Practice in Real Time'. *Studies in the History and Philosophy of Science* 30: 149-156.
- Walsham, G.
1995 'Interpretive Case Studies in IS Research: Nature and Method'. *European Journal of Information Systems* 4: 74-81.
- WAUME 93
1993 Proceedings of Workshop on Architectures Underlying Motivation and Emotion, Univ. of Birmingham, School of Computer Science.
<http://www.ofai.at/~paolo.petta/conf/sab98/bibl.html>
- Weick, K.
1995 *Sensemaking in Organizations*. California: Sage.
- Wenger, E.
1998 *Communities of Practice: Learning, Meaning, and Identity*. Cambridge: Cambridge University Press.
- Wertsch, J.
1981 'The Concept of Activity in Soviet Psychology', in J. Wertsch, (ed.), *The Concept of Activity in Soviet Psychology*. Armonk, N.Y.: M.E.Sharpe.
- Willmott, H. C.
1986 'Unconscious sources of motivation in the theory of the subject: An exploration and critique of Giddens' dualistic models of action and personality'. *Journal for the Theory of Social Behavior* 16/1: 105-122.
- Winner, L.
1993 'Upon Opening the Black Box and Finding It Empty: Social Constructivism and the Philosophy of Technology'. *Science Technology and Human Values* 18/3: 362-378.
- Winograd, T., and F. Flores
1986 *Understanding Computers and Cognition: A New Foundation for Design*. Norwood: Ablex.
- Worthman, Carole. (1992) 'Cupid and Psyche: Investigative Syncretism in Biological and Psychosocial Anthropology', in T. Schwartz, G. White, and C. Lutz, (eds.), *New Directions in Psychosocial Anthropology*. Cambridge: Cambridge University Press: 150-178.