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Behaviour Change and Theories of Practice: Contributions, Limitations and Developments

Abstract

- **Purpose:** This paper considers the role that theories of social practice can play in offering new insights into policymaking and practical interventions for behavioural and social change.
- **Design/methodology/approach:** This is a conceptual paper. It provides a brief overview of the key features of practice theories pertinent to the field of behavioural and social change and critically reviews practice theoretical literature relevant to the field.
- **Findings:** The paper argues that a social practice perspective offers more robust accounts of how social and behavioural change comes about than conventional approaches and offers novel insights and targets for interventions. Practice theories have made the most direct contribution to behaviour change in the context of sustainable consumption but offer insights to a range of empirical domains relevant to social business, including health promotion and organisational change.
- **Limitations:** The efficacy of a social practice approach to behaviour change has yet to be empirically established and will require the development of a new evidence base.
- **Implications:** Ongoing dialogue is needed between theoretical development, empirical research and practical interventions utilising practice theories.

- **Contribution:** The paper's contribution is to review recent developments in practice theory, acknowledge the limitations of existing approaches and suggest potential routes to overcome them.
- **Keywords:** behaviour, social, change, practice, theory, theories

Introduction

This conceptual paper considers the role that theories of social practice can play in offering new theoretical perspective and practical application to policy engaged with behaviour change. Practice theories have been particularly influential in organizational studies (e.g. Gherardi, 2000; Wenger, 1998) and the study of education (e.g. Kemmis et al., 2014) but it is in the domain of sustainable consumption that practice theories have most substantively contributed to debates around behaviour change (Evans, McMeekin and Southerton, 2012; Hargreaves, 2011; Strengers and Maller, 2015; Welch, 2016). Practice theories have been adapted to inform policy in this area (Darnton et al., 2011; Darnton and Evans 2013; Spurling, McMeekin, Shove, Southerton and Welch, 2013) and it is perhaps here that a social practice perspective can most obviously contribute to the agenda of social business. In principle, any domain of activity is amenable to practice theoretical approaches and more recently have been applied to transport (Barr and Prillwitz, 2014; Spotswood, Chatterton, Tap and Williams, 2015; Spurling and McMeekin, 2015; Watson, 2012) and health policy (Blue, Shove, Carmona and Kelly, 2016; Maller, 2015).

In 2005 a landmark evidence review on 'Motivating Sustainable Consumption' noted that behaviour change had become something of a 'holy grail' in the field of fostering pro-environmental behaviour (Jackson, 2005). From our perspective, over a decade later, it is clear that the holy grail is as allusive as ever and behaviour change initiatives have delivered

only marginal gains in tackling the unfolding crises of environmentally-damaging consumption and non-communicable diseases. In this context, practice theories offer an important critique of the implicit model of behaviour (or 'portfolio model', discussed below) that lies behind mainstream approaches to behaviour change and an alternative paradigm for understanding human activity that can inform policy and intervention. A social practice perspective promises to offer a significant reframing—even, arguably, a resolution to—the infamous 'attitude-behaviour' or 'value-action' gap; the centrepiece of so much policy focus around behaviour change in the round, and sustainable consumption specifically.

While theories of practice display a certain family resemblance it has become almost routine to acknowledge the heterogeneity amongst them. That notwithstanding, there has been considerable work of synthesis over the last decade or so (see Reckwitz, 2002; Schatzki, 1996, 2002; Shove, Pantzar and Watson 2012; Warde, 2005, 2014; Welch and Warde, 2015).

The family resemblance of practice theories lies in the shared contention that individuals' behaviour primarily takes place through the medium of social practices. Social practices here refer to everything from everyday practices like driving or doing the laundry, to specialist practices such as graphic design, to cultural practices such as going to church or visiting art galleries, which often characterise particular social groups. Practices are organised forms of activity. They are inherently social phenomena. Practices are so in the sense that their performance involves socially learnt skills and shared cultural meanings as well as people's mutual orientation to one another (Warde, 2014). Furthermore, practices can generally be recognized as entities distinct from the individuals that perform them and often require participation with others for their successful performance (Southerton and Welch, 2015).

Theories of practice claim to offer a resolution to problematic dualisms such as structure and agency, methodological individualism and holism, and determinism and voluntarism (Schatzki, 2002); dualisms that have particular resonance for analysts and policy makers concerned with facilitating behavioural and social change (Welch, 2016). What makes a social practice approach distinctive and innovative in the field of behaviour change is that it reframes the question from ‘How do we change individuals’ behaviours?’ to ‘How do we change practices and their performance?’ From a social practice perspective, rather than being the expression of an individual’s values and attitudes, ‘behaviour’ is the observable performance of social practices (Spurling et al., 2013). Practices become the central focus of enquiry—and potentially, intervention—rather than individuals and their attitudes or preferences, or indeed other analytical categories such as norms, values, or social structures.

Ongoing dialogue is needed between theoretical development, empirical research and practical interventions utilising practice theories. In that spirit the paper proceeds from the position that theoretical developments may inform practical application. The paper curates both contributions from the literature seeking to explicitly inform social and behavioural interventions and the cutting edge of theoretical development, and is an invitation to readers wishing to pursue either avenue in more depth through the sources offered. The paper identifies certain challenges to operationalising social practice theory and suggests some novel contributions in the form of dimensions and aspects of practices underplayed in the literature, concerning motivation and emotion, and the orientation of practices.

The paper offers, firstly, a brief overview of the key conceptual innovations of practice theories. Secondly, the paper contrasts the social practice perspective with the underlying,

unarticulated suppositions about behaviour that lies behind mainstream understandings of behaviour change and which, moreover, underscore commonplace understandings of behaviour in general, as well as certain academic perspectives, namely neoclassical economics, much of social psychology and some schools of sociology. The next section provides a review of direct contributions to the field of behavioural and social change inspired by practice theories. The penultimate section addresses certain limitations of these approaches and offers insights from some recent developments in practice theoretical work, as well as original contributions, that offer productive avenues of development for their resolution. The paper concludes by way of summary as well as brief reflections on practical implications.

Practice theories offer novel insights for understanding processes of behavioural and social change, the framing of problem and novel targets for intervention, drawing on a perspective on human activity that challenges many commonplace assumptions that feed into policymaking and initiatives. To proceed we must first give a brief overview of the innovations offered by contemporary practice theories.

Practice theories: a brief overview

In the broadest view ‘theories of practice’ could be taken to mean the widespread reformulation in social science of social entities and collective concepts—such as nation or gender—from essential or substantial categories to categories of practice, or processes of enactment (Welch and Warde, 2017). In a comprehensive review of practice theories for organisation studies, Nicolini (2012) includes such diverse traditions as Critical Discourse Analysis, ethnomethodology and the later work of Foucault. This paper draws on a narrower body of work that develops from the influential theoretical formulations of second

generation practice theorists Andreas Reckwitz (2002) and Theodor Schatzki (1996, 2002) and their subsequent elaboration in sociology, most closely associated with the work of Elisabeth Shove, Alan Warde and their collaborators (e.g. Shove et al., 2012; Warde, 2005). In this body of work social practices are understood as nexuses, arrays or bundles of activity; that is to say normatively organised sets of 'doings and sayings' (Schatzki, 2002).ⁱ Their performance entails the integration of a complex array of components, including materials, skills, norms, conventions, ideas and emotions.

In a much-quoted definition, Reckwitz suggests:

“A ‘practice’ ... is a routinised type of behaviour which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge.” (2002: 249)

For example, driving as a practice involves: the material components of the car and the road transport infrastructure; the embodied know-how of the skill of driving; understanding of a host of meanings and ideas, including rules such as speed limits, and the symbols used on road signs; conventions such as flashing ones' headlights; as well as general cultural understandings and their affective and normative engagements, such as the symbolic equation of driving with autonomy and freedom.

Warde (2005) and Shove et al. (2012) have offered two influential schemas that parse this bewildering array of components of practice into generic categories. Warde (2005, p.134), adapting Schatzki (1996), defines the categories of practice components as

“understandings” (know-how and practical interpretation); “procedures” (rules, principles,

instructions); and “engagements” (an array of ends and projects, as well as affective and normative orientations). Shove et al. (2012, p.23) offer a “radically simplified” schema of three types of practice element: “materials”, “competence” and “meanings”. Shove et al.’s (2012) stress on material elements emphasises how practices are always deeply interwoven with objects, tools, technologies and infrastructures (see also Shove, 2017). Competence draws our attention to the skills and know-how necessary for the successful performance of a practice, while meanings include norms, cultural conventions and expectations. A core task of analysis therefore becomes identifying the components of practices and their configuration within the practice, as well as the dynamic relations between these components and other practices. Such models of practice components have afforded much methodological and analytical innovation (see Halkier, Martens and Katz-Gerro, 2011; Halkier and Jensen, 2011; Browne, Pullinger, Medd and Anderson, 2013). Shove et al. (2012) and Warde (2005) slice praxis into categories that are not directly equivalent to one another and such schemas inevitably inflect understandings of practice per se, a point to which I will return to in a later section.

Shove et al. (2012) and Warde (2005) stress Schatzki’s (2002) useful analytical distinction between practice as *entity* and practice as *performance*. Practices are entities: we can identify driving, for example, as a ‘thing’. Practices-as-entities have a history and a trajectory, or path of development (Welch and Warde, 2015). Moreover, “that history will always be differentiated, for the substantive forms that practices take will always be conditional upon...institutional arrangements” (Warde, 2005: 139). At the same time practices only exist through their performance: for driving to exist, people have to drive.

Performance and entity are therefore recursively related, in a way homologous to agency and structure in Giddens' theory of structuration (1984).

If practices are to be posited as the core focus of enquiry and intervention then the question of how we identify a practice or delimit its boundaries becomes pertinent. Much agonising has accompanied the proper drawing of boundaries around practices. Arguably this is somewhat misplaced. Schatzki (2002) has argued, in Wittgensteinian mode, that many epistemological questions such as the delimitation of practices are answered through the action and language of everyday life. Warde (2014) suggests a criterion for the definition of practices that segues with this insight: a practice can be said to exist if there are, or could be in principle, disputes between practitioners about the standards for the competent performance of that activity (practice). As Rouse (2007) puts it, "a performance belongs to a practice if it is appropriate to hold it accountable as a correct or incorrect performance of that practice" (p. 530).ⁱⁱ Warde (2014) suggests another simple criterion: that to qualify as a practice an activity should, in principle, be amenable to codification in an instruction manual.

However, practices should not be studied as if they are discrete entities. Schatzki's (2002) basic contention is that the social is a field of interwoven practices.ⁱⁱⁱ As Nicolini (2012) puts it "practices can only be studied *relationally* and they can only be understood as part of a nexus of connections" (p. 229). Such connections include shared spatial and material contexts, temporal relationships (sequencing, synchronicity, periodicity etcetera), shared understandings that inform multiple practices and mutual orientations to shared ends or goals. The tendency to frame practices as the "unit of analysis" (e.g. Spurling, et al., 2013) must be qualified by this insight. Practices commonly overlap and share components, such

as ideas or materials. Shove et al. (2012) stress the relative independence of the trajectories of *components* of practices from practices themselves. This helps to foreground the dynamism through which new practices come into being and existing practices are transformed.

To conclude this brief synopsis, it is worth stressing, against a common criticism, that while in practice theories the individual ceases to be the primary focus of attention, individuals need not disappear from view. While practices and their relations take centre stage, individuals are reframed as the practitioners, or carriers, of practices. It is through individuals' active combination and integration of the components that make up practices that practices are performed and transformed (Shove et al., 2012). Furthermore, individuals may be understood as possessing individuality through the unique intersection of the manifold practices that subtend them *as* individuals (Reckwitz, 2002; Warde, 2005). At the same time, practices organise the contexts in which individuals act. Practice theories do not deny individual agency, therefore, but contend that agency transpires chiefly through the medium of social practices (Welch, 2016).

The “portfolio model” of behaviour versus a social practice approach to activity

Conventional behaviour change strategies, primarily influenced by social psychology and economics, draw on an implicit model of the sovereign individual, which emphasises the deliberative character of behaviour and frames social change as the aggregation of individual behavioural choices. As Welch and Warde (2015, p. 88) put it, from the perspective of practice theories this account of individual behaviour:

“...structurally *overestimates* the role of deliberation in routine purposive tasks, and fundamentally *underestimates* the extent to which individuals' autonomous action is

constrained by infrastructures and socio-technical systems [by social norms and] ...
resource constraints: social, cultural and economic”

Hindess (1988) has called this commonplace model of the human subject and behaviour “the portfolio model”. The individual is presumed to possess a more or less stable “portfolio” of values, attitudes, norms, interests and desires, and selects from them to decide on the course of action. In this model behaviour is assumed to be driven by anterior conditions: as found in classical sociology *norms*; in social psychology *attitudes* or *values*; and in economics *preferences* or *interests* (Welch and Warde, 2015). From the perspective of the portfolio model the obvious assumption is that changing behaviour presupposes changing those things which drive it. This commonplace framing of behaviour leads policymaking around behaviour change to focus on information provision and social marketing for the purpose of achieving attitudinal change, or incentives as appeals to economic interest. Shove (2010) has lampooned this dominant understanding as an overly simplistic, voluntaristic and individualised ‘ABC’ model that assumes a linear relation between attitude–behaviour–choice.^{iv}

This is not to deny that people act in respect of values or attitudes but it is to challenge the “paradigmatic privilege” accorded this voluntaristic and rationalistic model of behaviour (Whitford, 2002). Take vegetarianism as an example of individuals choosing a form of behaviour based on their values or attitudes. Some 5% of UK adults report being vegetarian or vegan (Office of National Statistics, 2002). However, we cannot understand why the other 95% eat meat in voluntaristic terms, as an aggregation of individual choices driven by attitudes towards meat-eating. Rather, to understand why the 95% *do* eat meat we need to understand conventional eating practices, that carry a shared understanding that a ‘proper

meal' contains meat, vegetables and carbohydrates, and the historical and social underpinnings of that cultural convention (Spurling et al., 2013). Moreover, to understand vegetarianism as a social phenomenon, and an ongoing activity at the level of the individual, a deliberative model of behaviour in which the vegetarian continually refers to their values before choosing their food is clearly inadequate. As Boyle (2011) notes, becoming a vegetarian involves not only a shift in behaviour but the adoption of a new identity, and, commonly, participation in a collective movement wherein a "career" in the new practice becomes a possibility. As Warde (2016, p. 145) puts it, such "careers...usually take the forms that are indicated and afforded by the organization of the practice" rather than simply self-determination.

From the perspective of the portfolio model the 'gap' between people's attitudes or values and behaviours—as is commonly found in research finding positive attitudes towards the environment concomitant with less than pro-environmental behaviour—appears mysterious (see Kollmuss and Agyeman, 2002). It is explained by 'barriers' blocking the motive force of values and attitudes, which would otherwise drive those behavioural choices. Seen from the perspective of practice theory much of what passes as the mystery of the 'value-action' gap simply arises from the failure of the portfolio model as a paradigm for human activity.

Values, furthermore, from a social practice perspective, should be understood not as psychological entities antecedent to behaviour but as themselves carried in and conditioned by practices, a point to which I return (Welch, 2016).

Against this implicit model of behaviour, practice theory emphasises routine and habit over conscious reflection, dispositions over deliberation, and constraint over choice (Welch and Warde, 2015). As Warde (2014, p. 285) notes, strong versions of practice theory suggest

that habit and dispositions, on the one hand, are “antecedent and prior to” conscious reflection and deliberation, on the other:

“... that doing precedes and steers thinking, that habit and routine are the fundamental basis of all action...that all consciousness is effectively practical consciousness...[that] decisions are the corollary of dispositions, [and] embodied sense [is] the foundation of deliberative capacity...”

‘Strong’ practice theories privilege the role of the tacit, pre-reflexive, non-discursive and embodied in social life. Weaker claims simply insist that these aspects have not received the attention they are due in explanations of social action (Warde, 2014).

That individuals motivated by pro-environmental values commonly find constraints imposed upon them by specific infrastructures of provision could be conceptualised as ‘barriers’ in the standard model. But often just as important is the difficulty of prioritising ‘environmental sustainability’ as an “engagement” of practice, in Warde’s (2005) terms, over competing normative orientations or projects. One study cited by Kollmus and Agyeman (2002 p.258 fn.6) found a correlation between expressing concern for the environment and driving more. This reflected a correlation between environmental awareness and affluence. Everyday practices of work and leisure through which affluent lifestyles are lived involve higher levels of personal mobility than in non-affluent lifestyles. For most affluent people “engagements” with pro-environmental values are far easier to accomplish through other practices, such as eating for example, than through reductions in mobility that conflict with the normalised expectations and conventions of everyday affluent life. From this perspective, Shove (2003) has argued that, for sustainability policy, focusing on environmental attitudes is largely a distraction: “What counts is the big, and in

some cases, global swing of ordinary, routinized and taken-for-granted practice ... [and the] processes underpinning the normalization of consumption and the escalation of demand” (Shove 2003, p.9).

Warde’s (2005) practice theoretical reframing of consumption also follows this logic. ‘The consumer’, generally framed as a sovereign individual engaged in voluntaristic and deliberative activity, is decentred from his account of consumption. Rather, consumption occurs in the pursuit of social practices (for example, sharing a meal, playing sport or gardening), rather than an activity in and of itself: “wants are fulfilled only in practice, their satisfaction attributable to effective practical performances” (Warde 2005, p. 142). The focus therefore shifts from the choices and values of ‘the consumer’ to the social organization of practices and “the moments of consumption” they enjoy (Warde, 2005, p. 146).

In the next section I examine some direct contributions from practice theoretical perspectives to the field of behaviour change.

Interventions in practice

What are the implications of this social practice model of human activity for interventions for behavioural and social change? While existing examples of interventions drawing on a social practice perspective are fairly limited, practice approaches *have* informed public policy in the UK (e.g. Chatterton, 2011; Darnton et al., 2011) and beyond, perhaps most notably in contributing to re-framing the Scottish Government’s approach to influencing behaviours. The practice approach has had a significant influence on reframing the Scottish Government’s approach to its ‘Low Carbon Behaviours’ programme, including the development of a practical ‘toolkit’ designer for policymakers and intervention practitioners

(see Darnton and Evans, 2013; Darnton and Horne, 2013).^v The toolkit has been used in workshops addressing personal transport and home energy efficiency (SGSR, 2013). In answering the question ‘what would behaviour change policy informed by a social practice perspective look like?’ we might first distinguish between two levels at which the question might be answered. Firstly, the political or ideological implications and, secondly, the pragmatic implications for policy design and intervention.

Discussions of behaviour change are inherently normative. Behaviour change assumes how people ought to be (Kelly, 2016). Furthermore, different models of behaviour have ideological ramifications, as a cursory contrast between a model emphasising the autonomous choice (and responsibility) of individuals on the one hand and a model emphasising the inherently social nature of human activity on the other should demonstrate. The logic of models of behaviour leads to the framing of the nature of problems (e.g. of individual or collective responsibility) and suggests the plausibility of targets for intervention, whilst excluding others (Spurling et al., 2013). Conventional behaviour change initiatives, such as those directed at attitudinal change, fit more comfortably into the limited budgets, evaluation time scales and ambitions of contemporary neoliberal policymaking than policies directed at transformations of modes of provision or systemic, socio-technical change. They also reinforce an ideology in which addressing complex social and systemic problems is made the responsibility of individuals (Evans et al., 2017; Barr and Prillwitz, 2014; Shove 2010; Moloney and Strengers, 2014). A social practice perspective demands a much more ambitious approach. But beyond an emphasis on the social, and *socio-technical*, organisation of practices over the deliberative and voluntaristic activity of individuals (an emphasis shared with quite distinct models, such

as systems theory) practice theories do not imply a specific political orientation. While I would argue that some trends in practice theories imply a technocratic model, of interventions as a kind of socio-technical engineering, others (e.g. Vihalemm, Keller and Kiisel, 2015) draw on the tradition of participatory action research, and also sit more comfortably (if not *completely* comfortably) in the existing scale and policy contexts of conventional behaviour change initiatives.

Before addressing pragmatic contributions to interventions in practice it is worth noting how the *analytical* value of practice theory can be demonstrated through the assessment of existing behaviour change initiatives. From a social practice perspective all such conventional initiatives are *themselves* necessarily interventions into social practice, albeit not framed as such. In an international review of 30 policy interventions for sustainable consumption Southerton, McMeekin and Evans (2011) found that the vast majority were framed by the portfolio model of behaviour and sought to change individuals' behaviour by, variously, providing economic incentives, correcting information deficits, seeking to re-frame attitudes, or removing the barriers' to individuals' behavioural change. By contrast, it was, argue Southerton et al.. (2011), those initiatives that addressed as full a range of the components of practices as possible—framed by Southerton et al. (2011) in terms of interlinked individual, social and material contexts—that had the greatest success. It is worth noting that the successful initiatives examined by Southerton et al.. (2011) tended also to be those on a more ambitious scale. The less successful interventions tended to address only a limited range of practice components. The analytical value of a social practice perspective can also, however, be demonstrated in the context of small scale, conventional initiatives. Hargreaves (2011) conducted a study of a conventional workplace behaviour

change programme from a social practice perspective. This was an attitudinal change programme intended to promote pro-environmental behaviours. The programme was relatively successful. Hargreaves analysis, however found that the 'environmental attitudes' of participants were largely unchanged while habitual behaviours, such as turning off lights, had been successfully shifted. Rather than being driven by pro-environmental attitudes, as the portfolio model would presume, these changes in working practices had become invested with meanings of loyalty to company culture. Hargreaves' social practice perspective, therefore, provides a more robust account of the initiative's success than the implicit model of behaviour that had informed the programme. Similarly, Halkier's (2010) research into changing eating habits found that interaction within social networks and practical procedures were often more important as explanations of change than were changes in individuals' commitments to specific values around food.

I now turn to two specific contributions from a social practice perspective to interventions for behavioural and social change. The first, Spurling et al.. (2013), is a report drawing insights from a large scale academic research programme in the UK, the Sustainable Practices Research Group (www.sprg.ac.uk), which addressed several distinct empirical domains, including domestic water use (Browne et al., 2013), transport policy (Spurling and McMeekin, 2015) and eating practices in cross-national couples (Darmon and Warde, 2016). Spurling et al.. (2013) has been quite widely cited in subsequent social practice literature, but remains a speculative contribution to the design of interventions. The second, book length contribution, Vihalemm et al.. (2015), combines insights from Spurling et al.. (2013) with important innovations of their own, and offers a toolkit developed through applied "social change programmes".

Spurling et al.. (2013) draw on Shove et al..'s (2012) schema of “elements of practice” — meanings, competences and materials—and suggest three complementary modes for policy interventions: “recrafting practices”; “substituting practices”; and “changing how practices interlock”. These modes are offered as alternative “problem framings” to the common framing of problems the authors identify in different policy sectors relevant to environmental sustainability, which focus on technological innovation, consumer choice and behaviour change understood in terms of the “portfolio model” discussed above.

“Re-crafting practices” is closest to conventional forms of intervention and suggests changing one or more of the constituent elements of practices. For example, training that addresses competences, such as cookery classes, or social marketing and information campaigns that address meanings. Spurling et al.. (2013) suggest that the novelty of the perspective lies in reframing the starting point of intervention as the systematic analysis of dynamic relations between the meanings, competences and materials that compose the practice.

The second model involves substituting novel practices or promoting more sustainable variants of a practice. This asks policymakers to think how alternative practices can fulfil the same needs and wants as the focal practice. Spurling et al.. (2013) suggest it draws attention to how different practices compete for time, space and resources, as well as to how path dependencies locks practices into particular trajectories of development. Cycling and driving, for example, compete for many of the same resources, including space on roads, and spending on infrastructure, as well as the commitment of their performers (see Watson, 2012).

In recent years renewed popular uptake in cycling has been based on changes of its associated meanings (such as from associations of poverty to fitness) and the spread of competence and material innovations in bicycle technology. Such innovations could be thought of as a *recrafting* of the practice (partly organic, but with ample help from cycling initiatives). However to scale up this trend and significantly shift commuters from travelling by car to travelling by bicycle (“substituting practices”) would require significant infrastructural changes (Spurling et al., 2013).

The third model seeks to identify how practices interlock with one another and target “change in the complex interaction between practices” (Spurling et al., 2013, p. 5).

Practices interact and interlock in institutional, material (and infrastructural), spatial and temporal dimensions. Spurling et al.. (2013) note how practices interlock temporally through sequence and synchronisation. Food provisioning is an example of sequential ordering: shopping, storing, cooking and eating food necessarily follow one another.

Synchronisation includes such things as eating together at meal times. Research demonstrates how changes in the temporal patterns of mealtimes accompany changes in the arrangements of households around working hours (Southerton, 2009; see also Southerton, Diaz-Mendez, and Warde, 2011). It also includes synchronised aggregate activity, such as the morning rush hour or millions putting the kettle on simultaneously in the same TV advert break. Such peak load phenomena can have significant implications for infrastructure (see Wilhite and Lutzenhiser, 1999).

Lastly, Spurling et al.. (2013) note that because social practices are commonly interlocked, any form of intervention is likely to produce change that ripples through interconnected practices. A social practice perspective, they argue, enables a more holistic view of these

effects than models focused on individuals' behaviours. This simple insight has significant implications for the evaluation of any intervention, not least challenging the recent presumption that the 'gold standard' of randomised control trials should be applicable to contexts of behavioural and social change.

Spurling et al.. (2013) stress the idea that practice theory informed policy interventions take practices as the "units of analysis" and the "units of intervention" (p.57). As previously noted there is a tension between this framing and the relational nature of practices. This said, Shove et al..'s (2012) approach, on which Spurling et al. (2013) is based, is centrally concerned with the dynamic relation between and within practices and the complex causal interactions that result. Many aspects of environmental sustainability lend themselves to this approach, which can address, for example, the relative environmental impact or resource use of different practices and seek to modify or substitute those practices with less damaging ones. For example, Browne et al.. (2013) demonstrate the utility of such an approach to domestic water use, in developing new methods of forecasting and intervention for the water industry. Water company's attempts to explain average patterns in people's water use based on values, attitudes, and behaviours have been ineffectual, routinely running up against the value-action gap. Changing the unit of analysis from 'individuals' to the 'practices' in which water is consumed—cooking, laundering, showering, bathing, watering the garden and washing the car—enables segmenting by clusters of practices rather than values and attitudes, opening up novel possibilities for understanding the household patterning of water demand.

However, if we were to address a quite different issue, for example seeking to understand and develop programmes to combat racism or sexism in the work place, it is far less obvious

how practices as ‘units of analysis’ helps us. Racism and sexism certainly find their expression in practices—they are enacted or performed—but these phenomena are smeared, as it were, across whole suites of practice. This is not to deny that understanding the characteristics of some of the practices where the issue is particularly critical and intervening in them—recruitment practices for example—will be a core task, but it is to question the insistence on practices-as-units-of-analysis rather than a less doctrinaire sensitivity towards practice on the part of analysis.^{vi}

Here we note a common criticism of the kind of practice theory offered by Spurling et al. (2013): that the decentring of individuals as social actors elides the contexts of social interaction and intersubjectivity in which much of human activity takes place. While some forms of practice theory (e.g. Shove et al., 2012) are close to Actor Network Theory in seeking to abolish the traditional notion of the individual subject as social actor altogether, other strands of practice theory are more comfortable with individuals, social interaction and intersubjectivity (e.g. Alkemeyer and Buschmann, 2017; Kemmis et al., 2014, Schatzki, 1996; Wenger, 1998).^{vii} A productive way to approach this issue is to return to Schatzki’s (2002) distinction between nexuses of activity (practices) and nexuses of entities, where the latter refers to networks of people, organisms, objects and artefacts, etcetera. Schatzki refers to these nexuses of entities as both “material arrangements” and “social orders”. For clarity it is worth noting that Schatzki’s material arrangement\social order explicitly denotes the same kind of nexus of relations as is meant by “network” in Actor Network Theory (Schatzki, 2002, p. 203-10). Shove et al.’s (2012) and Spurling et al.’s (2013) definition of a practice is, therefore, what Schatzki (2002) refers to as a “bundle” of practices and material arrangements\social orders. “Material arrangements” are often misunderstood as simply an

elaborated form of the materials involved in practice (as in Shove et al., 2012), suggesting infrastructures, the built environment, tools and so on. Clearly “social orders” gives a quite different meaning to the focus of enquiry to that of “materials” as elements of practice.

Kemmis et al. (2014) provide a model usefully building on Schatzki’s material arrangements/social orders that parses them into three dimensions, or intersubjective spaces: semantic (discursive), material and social. These compose the “practice architecture” in which practices happen as situated activity within a place, and prefigure, condition or qualify social interaction (Kemmis, et al., 2014). The domestic sphere is a useful example of thinking in these terms:

“We think of ‘home’ ... in terms of shared language and...ways of thinking about things [discursive dimension]. We also think of ‘home’ in terms of interlocking spaces (rooms, favourite chairs) and the various activities (showers, dressing, meals, cleaning) that compose its...daily rhythms [material dimension]. And we think of home in terms of a range of interconnected (and sometimes contesting and conflictual) relationships between family members and friends [social dimension].”

(Kemmis et al. 2014 p. 4)

For Kemmis et al. (2014, p. 6), we “cannot transform practices without transforming existing arrangements in the intersubjective spaces that support practices”. Vihalemm et al. (2015) offer just such a rebalancing between practices and what they call “socio-material networks”, in their toolkit for applied “social change programmes”. Socio-material networks form the landscape “where people, things, environments, documents, technologies and various other meaningful units form interconnected nodes” (Vihalemm et al., 2015, p. 30). Within this landscape a *territory* can be delineated encompassing where the issue is to be

addressed in a potential programme. This territory is where the situated activity or performance of practices that is to be addressed takes place, and is also the site of the key social interactions pertinent to that activity (Vihalemm et al., 2015, p. 38).

Vihalemm et al. (2015) use the example of a programme to intervene in school bullying to illustrate the notion of socio-material network. Mapping school life in these terms involves “marking possible institutional and individual actors, rules, things and physical rooms that—perhaps mostly unintentionally—enable school violence to emerge and persist, as mutually interconnected nodes in the network” (Vihalemm et al., 2015, p. 51-2). Space does not allow a full elaboration of the authors’ practical approach, however, to conclude this section I will focus on one further useful innovation that their toolkit offers.

Practices are more or less tightly coordinated. This coordination can be thought of in the sense of being *organised* by institutionalised, formalised, rule-governed arrangements. It can also be thought of as being “orchestrated”, as Schatzki (1996: 87) puts it, or channelled, in a non-formalised sense; for example by infrastructures, or the necessity of individuals’ co-presence, or by conventions or interrelations with other practices, such as temporal sequencing (as discussed above). Driving, for example, involves legal tests of competence and a plethora of rules and regulations (organisation) as well as being strongly *orchestrated* by technologies and infrastructures. Eating by contrast is much more loosely coordinated, with, in contemporary settings, limited institutional organisation, and relatively weak orchestration through cultural conventions—although the degree of such conventional orchestration varies widely between cultures (see Darmon and Warde, 2016; Warde, 2013). Vihalemm et al. (2015) develop from Warde (2013) the notion of “coordinating agents” in this context. Coordinating agents may be both human (e.g. management, professional

bodies) and non-human (e.g. technologies, documents). For Vihalemm et al.. (2015, p. 40) coordinating agents should be understood as “nodes in the socio-material network”.

Vilhalemm et al. (2015) therefore offer innovative conceptual and practical tools (such as mapping the territory) for interventions which resolve some of the difficulties inherent in the “agent-less” style of practice theory offered by Spurling et al. (2013).

This section has demonstrated that practice theories can offer novel insights and more robust accounts of the efficacy of conventional behavioural interventions than those implicitly drawing on a “portfolio” model of behaviour. Furthermore social practice perspectives have been explicitly developed into heuristic devices and toolkits for practitioners and policymakers.

Further developments: dimensions of practice

Models of components or elements of practice do much useful conceptual work and have been put to work analytically in multiple empirical contexts. Such models offer novel insights for projects of behavioural or social change. However, as Warde et al. (2017, p. 34) suggest, different schemas “inevitably inflect understandings of praxis per se”. Shove et al.’s (2012) and Spurling et al.’s (2013) focus on *competences* emphasises practical accomplishment. This contrasts with Warde’s (2005) schema, which employs a category of practice component not present in Shove et al.’s (2012) model: “engagements”. This is a less ungainly term that directly translates Schatzki’s (1996, 2002) concept of “teleoaffective structure”. “Teleoaffective structures” link the doings and sayings of practices through a normatively ordered array of ends, orientations, and affective or motivational commitments, which practices embrace or enjoin (Schatzki, 2002: 80). Thus domestic practices of housekeeping may be fundamentally orientated to standards of cleanliness and

propriety, but they may also be conditioned by an engagement with environmental sustainability, which affects the way in which the practices are carried out (such as consideration for energy and water use) and the materials used in their fulfilment (such as eco-friendly cleaning products). By contrast to an emphasis on competent performance Schatzki's schema emphasises, as Warde et al. (2017, p. 34) note, "ends and purposes as the prime axis of praxis, as well as affective and motivational engagement".

A distinction can be made between two kinds of orientations of practices: *autotelic* (activity having an end, purpose or meaning not apart from itself); and *heterotelic* (having an end, purpose or meaning outside itself (Warde et al., 2017). This distinction is best understood not as typological but as relational. Practices are commonly themselves means to another end. Mixing cement might be thought of as an autotelic practice, the object of which is to mix cement effectively or competently. But it is likely always part of a wider project that lends it a heterotelic orientation, such as the project of building a house. Furthermore, it is quite possibly part of a still wider project, such as making profit for a building firm. Such projects marshal, coordinate and orchestrate multiple practices in the pursuit of their own ends. This draws our attention to the critical importance of wider configurations of practice, and again suggests significant caveats to the appropriateness of the focus on practices as the units of analysis. In many circumstances a more appropriate unit may be the wider complex or configuration of practices (see Welch, 2017). As Blue and Spurling (2017, p.31) argue, the teleological or "future dimension of practice...is not an inherent aspect of an individual practice itself, but a product of interacting, changing and metamorphosing complexes of practices".

Warde et al. (2017) stress the relative autonomy or constraint of practices in the context of such wider configurations:

“Some practices are heavily dependent on the organization of others. They may be effectively subordinated to others, or highly inter-dependent within larger configurations or fields (e.g. economic, material, temporal, spatial). Also, collective projects frequently configure multiple practices towards a common end.

Consequently, some practices will hold greater determining power than others for particular social phenomena.” (Warde et al., 2017, p. 35-6)

Coordination (as discussed in the previous section), orientation and autonomy can therefore be suggested as three dimensions of practice (amongst possible others) that it is useful to consider in assessing the practice landscape into which intervention will be made.

While consideration of these dimensions of practice contributes to an understanding of the teleological aspect of practices, or the goals to which they are directed (the “teleo-“ of Schatzki’s “teleoaffective structure”), it tells us less about their affective aspects, or the motivational aspects, of practice. In recent years there has been a significant upswing of interest in the social sciences to address the relevance of emotions and affect as important ingredients of social processes and as a constitutive part of social life, which should not be relegated to a domain of somehow non-social psychological processes. Practice theory has neglected this fundamental aspect of social practice until very recently (see contributions from Scheer 2012; Reckwitz, 2017; Sahakian, 2015, Wetherell, 2015; Weenink and Spaargaren, 2016). The affective aspects of practices are not a special case, relating to specifically affective practices such as falling in love, but are intrinsic to practices in general. Two fundamental properties of practice require affective engagement: motivation for the

practice and the focussing of attention (Reckwitz, 2017; Weenink and Spaargaren, 2016). An initial move has been to ask in what ways emotions and affective engagements are embedded in, enjoined by, or ordered through, practice (Welch, 2016). In the simplest terms this can be understood as the range of emotions permissible or proscribed to enact within the context of a given practice. While certain practices, such as attending a funeral or a music festival, more obviously enjoin particular emotions, more apparently emotionally-neutral practices, such as work practices, clearly both normatively order appropriate emotional registers and presuppose motivational engagement. Emotion and motivation are deeply intertwined, as their shared etymology suggests. Schatzki's notion of the "teleoaffective structure" of practices draws our attention to the complex entwining of emotional commitment and motivational orientation towards goals.

Clearly most kinds of behavioural change programmes entail a motivational, and thus affective, context. In the absence of a theory of motivation practice theory has ceded ground to traditional psychological approaches in relation to behavioural and social change when it comes to matters of motivation. Thus while a social practice theory approach informed the Scottish Government's reformulation of behavioural change policy, cited earlier, the toolkit produced for use by policymakers relegated insights from a social practice perspective to "social context" and "material context" whilst drawing on social psychology to address the "individual context" (Darnton and Horne, 2013). Correcting this lack of attention to motivation and emotion, I would suggest, is not a case of practice theory exhibiting imperial ambitions to colonise other disciplinary areas, but rather an ambition to fully develop the insights that a social practice perspective can offer the field of behavioural and social change.

A practice theoretical approach to motivation engages with the specific forms of motivation that a practice entails for its participation, the forms of affective engagement this motivation entails (which may be positive, e.g. desire, or negative, e.g. fear), as well as the conditions under which motivational engagement, and therefore competent performance of the practice, fails (Reckwitz, 2017). Furthermore, just as with the teleology of practices noted above, it will often be the case that motivational structures are best understood at the level not of individual practices but configurations of practice (see Welch, forthcoming). For example, environmental behaviour change initiatives directed to the domestic context commonly implicitly intervene not simply in a single focal practice (e.g. doing the laundry, showering) but in configurations of practice that are involved in pursuing affectively engaging, overarching projects, such as 'making a home', 'running a household' or 'raising a family'. Understanding the 'structure of feeling' or motivational structure of such projects is therefore critical.

Furthermore, to return to the issue of the value-action gap, values should also be understood in this affective and motivational context of practice (Welch and Warde, 2017). Values are themselves carried and conditioned by practice and can form an important element of the 'structure of feeling' of practices and configurations of practice. Sayer (2013) articulates how values combine conceptual, pre-reflexive and affective components:

"Values are 'sedimented' valuations of things (including persons, ideas, behaviours, practices, etc.) that have become attitudes or dispositions, which we come to regard as justified. They merge into emotional dispositions, and inform the evaluations we make of particular things, as part of our conceptual and affective apparatus." (Sayer, 2013: 171)

Emotions are embodied and energy-laden, and practices produce and modulate emotional energy (Weenink and Spaargaren, 2016). Emotions both orient our practices in tacit and non-reflexive ways and simultaneously are entwined with our evaluative capacities, which are themselves orchestrated in practice. To realise the contribution of practice theories to behavioural and social change further development is needed, to move beyond the technocratic engineering of practices and engage with the motivational and affective aspects of practices and wider configurations of practices.

Conclusions

This paper has explored how practice theories offer novel insights for understanding processes of behavioural and social change and novel tools for the development of practical interventions. A social practice perspective offers an understanding of human activity that challenges the implicit, individualistic model of behaviour commonly built into the design of initiatives and policies. This perspective underscores the inappropriateness of framing complex social problems such as climate change or obesity in terms of the responsibility of individuals and the necessity of more systemic approaches (Evans et al., 2017; Shove, 2010). While some strands of practice theory militate towards a technocratic approach, which would seek to engineer the socio-technical organisation of practices, other strands suggest participatory approaches (e.g. Vihallemm et al., 2015).

The paper has reviewed direct contributions to the field of behaviour change from the perspective of practice theory but has only been able to gesture at practical applications to intervention design (see Keller, Halkier and Wilska (2016) for recommendations for greater reflexivity and experimentation in programme design). While the efficacy of a social practice approach to behavioural change projects has yet to be established, arguably a practice

perspective to policy demands novel forms of evidence and challenges overly simplistic forms of evaluation. In the case of interventions for sustainable consumption at very least, and probably interventions more broadly, a new evidence base is necessary appropriate to the forms of data (e.g. time diaries) deployed in practice oriented empirical research (Southerton and Welch, 2015).

The latter two sections of the paper identified certain limitations in some forms of practice theory pertinent to the perspectives' use in behavioural change programmes: caveats regarding the framing of practices as units of analysis; the absence of attention to "material arrangements/social orders" (Schatzki, 2002) or "socio-material networks" (Vihalemm et al., 2015); and the lack of a theory of motivation and affect. I have outlined some recent developments, as well as making some original contributions, that offer productive avenues of development to overcome these limitations. While theoretical development is needed to further address configurations of practice, motivation and emotion, these initial moves can serve as sensitising devices for behavioural and social change practitioners seeking to use a practice perspective. Empirical research attuned to these issues is as likely to contribute to theorising as practice theorising is to contribute stimulation to empirical research.

Practical application of the insights of practice theory to interventions for behavioural and social change are better conceived in pragmatic terms, as providing reframing and sensitising devices, heuristics, and tools, than as doctrinal applications of theory. At any rate, policymaking and the development of interventions tend to work pragmatically. Social scientists are likely to be persistently disappointed if they judge the success of practical application of their ideas on a criterion of faithful translation. A better approach is to accept that the relation between theorists and practitioners should be one of exchange. "Trading

languages” or lingua franca are the appropriate form of communication in such exchanges, which should not be thought of as vulgarised versions of pure languages but as the successful accomplishment of interaction across very different domains (see Murphy, Parry and Walls, 2016)

Recognising the complexity of social practices also suggests modesty in respect to technocratic approaches to behavioural and social change (Spurling et al., 2013). The complex interactions and relations between practices suggests that evaluating, and far less predicting, the effects of interventions is difficult (Evans et al., 2012). Simplistic heuristics or models of processes of change inevitably oversimplify, usually to the point of incoherence. A recognition that these complex dynamics are always in motion—not statically awaiting intervention—suggests that practices and their configurations are moving targets. Interventions take place within the processes that they seek to change, rather than intervening from the outside (Shove, 2010). This suggests a reflexive approach to policymaking and a participatory approach to the development of interventions.

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ⁱ It is important acknowledge that distinct lineages operating in the name of practice theory have substantively different definitions of practice, e.g. Gad and Jensen (2014), Gherardi (2000). For overviews of the body of work this paper draws up see Røpke, (2009), Warde (2014), Warde et al.. (2017), Warde and Welch (2015).

ⁱⁱ This latter point is critical to contemporary versions of practice theory, albeit not central to the concerns of this paper: namely, that a “practice is not a regularity underlying its constituent performances, but a pattern of interaction among them that expresses their mutual normative accountability” (Rouse, 2007, p. 529).

ⁱⁱⁱ More fully, for Schatzki (2002) the social is a field of interwoven practices and “material arrangements”, the latter understood as nexus of entities (people, organisms, artefacts etcetera). Neither Warde (2005) nor Shove et al.. (2012) work with this analytical distinction..

^{iv} Shove’s lampoon plays on Sterns’ (2000) influential model of “attitude, behaviour, context” which synthesized a range of psychological work on behaviour in the context of environmentally significant behaviours.

^v See also <http://www.gov.scot/Topics/Environment/climatechange/lowcarbonbehaviours>

^{vi} Schatzki notes that while analysis should be attuned to the contours offered by the mesh of social practices and material arrangements, how it is best to demarcate such complexes in order to usefully represent them should always remain at the discretion of the interests of the analyst (Schatzki, 2002: 102). As representation should always be oriented to the identification of key dynamics and mechanisms necessary to explain the phenomenon in question, the same principle should be applicable to intervention.

^{vii} Indeed Welch and Warde (2017) express reservations concerning the individualistic implications of some aspects of Schatzki’s (2002) account.