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Back to the Shop Floor: Behavioural Insights from Workplace Sociology

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Abstract

This article compares insights into decision-making and behaviour developed by Kahneman and Tversky in behavioural economics with the main findings from studies of pay incentives in workplace sociology in the middle decades of the 20th century. The article shows how many of the insights offered by behavioural economists, such as loss aversion, were anticipated and considered by the workplace sociologists. It is argued that the sociological studies offer deeper and more convincing accounts of worker behaviour through a better understanding of the role of social structure, context, and social processes in framing and influencing action.

Keywords

behavioural economics, incentives, payment systems, workplace sociology

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It is remarkable how often concepts described, tested and successfully applied decades ago are presented as novel in contemporary, psychological, management or human resource literature.

Kwiatkowski et al. (2006: 183)

Introduction

Behavioural economics (BE) has become enormously influential in the academy, the business world and the policy sphere (Erta et al., 2013; Kahneman, 2003; Lupton et al., 2015). Key ideas in BE emphasise the limitations of human decision-making, showing how choices and outcomes rarely arise from rational consideration of all available options (Etzioni, 2010). An especially important concept has been loss aversion: the tendency to weight avoidance of loss more heavily than the acquisition of gains (Kahneman and Tversky, 1979). These ideas, which seem to question fundamental tenets of economics concerning rationality, utility and optimisation, have obvious implications for the role of pay incentives since they imply that workers will attach more importance to maintaining current pay levels than maximising bonuses. Responses to incentives are also a traditional focus of the sociology of work. A range of sociological studies from the 1950s observed the operation of incentive schemes in factories, emphasising the limited role of optimisation in behavioural responses to incentives. Might some of the ideas now associated with BE have been identified and explored first in these earlier sociological studies?

This is the first contention in this article. We argue that these studies in the sociology of work discerned key aspects of behaviour some time before they came to be associated with BE. To echo Streeck (2010): ‘economists claim to have discovered something that other disciplines have known forever’ (p.391). Exemplified by Donald Roy (1952, 1953, 1954) in the US and Tom Lupton (1963) in the UK, these sociological studies have been highly influential observations of worker behaviour in piecework payment systems. They analyse why workers do not optimise in response to incentives, and emphasise that collective restriction of output is a boundedly rational response to incentive systems and the power relations embodied in their operation. However, while the BE literature is fashionable and influential, the early sociological literature is all but forgotten.

The second contention is that the insights in this sociological literature not only pre-date the BE literature, but also offer greater explanatory potential. Whereas BE nearly always focuses on individual behaviour, with the context taken as a given, the sociological studies highlight the role of social interaction in generating social norms and collective influences on employee behaviour (cf. Streeck, 2010). These studies show how the generation of norms is a dynamic process arising from interaction between workers, and power relations between managers and workers. In so doing, they provide greater insights into the influences upon human behaviour. Whilst some BE studies do consider the interaction of incentives and social norms (e.g. Gneezy et al., 2011), the generation of these norms tends to be unexplained.

The third contention is that the greater appreciation of social norms in the sociological literature emanates from the rich data generated through an ethnographic approach. By contrast, the primacy of the experiment within BE focuses attention primarily on

individual responses to specific stimuli (cf. Edwards, 2012). While some recent approaches in behavioural science adopt some methods from the ethnographic tool kit (e.g. Kirkman and Melrose, 2014), we argue that there remains a clear contrast with the deep and sustained ethnographies of the industrial sociology tradition. Furthermore, we argue that the ethnographic approach enables a deep understanding of individual (the realm of BE) as well as group behaviour and social norms. It does so by highlighting socially generated and contextualised individual differences, in contrast to BE's focus on universal human foibles.

This article is not the first to critique branches of economics from a sociological perspective: recent work highlights the deficiencies of personnel economics (Grimshaw and Rubery, 2008; Spencer, 2013), the use of experimental methods in economics (Edwards, 2012) and the conceptual shortcomings of BE (Etzioni, 2010; Piore, 2010; Streeck, 2010). Our contribution is that we show how key decision processes associated with BE had already been observed in operation in workplace sociological studies, and we highlight the relevance of sociological analysis to understanding individual behaviour. An important finding from the sociological studies is that actor behaviour is shaped both by social context and social interaction rather than just the individual psyche and its cognitive limitations, as in BE (cf. Streeck, 2010). Nevertheless, we suggest that key ideas found within BE, such as loss aversion and framing, can be adopted within sociological analysis as long as they are divorced from the assumptions of neo-classical economics. This ought to be possible given that they were initially developed outside economics, and indeed pose challenges to the neo-classical paradigm. Further, our point is that the workplace studies recognise these forms of behaviour albeit without using the labels provided by BE. At the same time, workplace studies need to recognise the deeper and broader structural forces that shape workplace behaviour.

The article proceeds by summarising the landmark ideas in BE, focusing especially on the work of Kahneman and Tversky. It then summarises the main features and approach of the earlier sociological literature. There is then a systematic comparison of the two, showing in detail how elements of this earlier work identifies aspects of behaviour that later came to be hallmarks of the behavioural literature.

Behavioural economics: the work of Kahneman and Tversky

BE has come to prominence since the 1980s, with the spread of its key ideas accelerating in the 21st century. The novelty and importance of BE is that it questions three core tenets of neo-classical economic theory, namely that individuals (1) have well-defined, stable preferences along with unbiased beliefs; (2) make optimal choices based on these beliefs and preferences; and (3) their primary motivation is self-interest (Thaler, 2016). There is a clear relevance to the study of incentives at work, and indeed there is a series of recent studies within economics questioning whether they have the simple and direct effect posited by neo-classical economics (Fehr and Gächter, 2000; Gneezy et al., 2011; Larkin and Leider, 2012; Maltarich et al., 2017; Nyberg et al., 2016).

At the theoretical centre of BE has been the work of Kahneman and Tversky. Their work has three main elements, as outlined by Kahneman in his Nobel Prize lecture (2003). The first, based on the presentation of two modes of cognition (described in his recent book as 'thinking fast' and 'thinking slow'), highlights the role of judgements made intuitively in response to readily accessible perceptions (Kahneman, 2011). System 1 thinking refers to our everyday, auto-pilot mental processes, while System 2 refers to a more conscious thought process, triggered when making infrequent or important decisions. System 1 utilises heuristics or 'rules of thumb' to make routine decisions quickly, but may be prone to a range of biases and cognitive errors (Tversky and Kahneman, 1974). This approach generally results in satisficing rather than optimising behaviour. For example, the choice of saving for retirement by following a financial 'rule of thumb' of saving 10% of income is a satisficing choice, which may lead to inadequate retirement income. The optimal means of making decisions is often replaced by 'rules of thumb' shortcuts because the informational and decision-making costs are lower.

The second main element of Kahneman and Tversky's work is 'prospect theory'. This is a major theory of decision-making under uncertainty, and it poses a major challenge to standard economic models of utility, based on rational calculation of outcomes. Shleifer (2012) identifies four main elements of the theory: (1) risky choices are evaluated in terms of gains and losses relative to a reference point; (2) individuals are loss-averse; (3) individuals are risk-averse in the domain of gains and risk-seeking in the domain of losses; and (4) individuals over-weight low probability events and under-weight high probability ones in decision-making (Kahneman and Tversky, 1979; Kahneman et al., 1991). Of prime importance is the finding, derived from a wealth of experiments, that, for a given unit of change, losses count more than gains, typically at least double and as much as around 2.5 times. The marginal value of gains and losses diminishes with the size of the gain or loss (Genesove and Mayer, 2001: 1237). Small losses have a big impact. Linked to this is the 'endowment effect', identified by Thaler (1980), whereby the value of something is higher when it is viewed as a possession that could be lost. A key consideration is the probability attached to the achievement of losses and gains: when losses are viewed as highly probable, actors are more likely to take risky decisions. This contrasts with the assumption of stable risk preferences in neo-classical economics.

The third contribution is framing, whereby preferences are affected by how the choice is laid out. This challenges the idea of rational choice, given that limitations of cognitive capacities will prioritise the readily accessible elements of decision frames at the expense of those that are less readily accessible. Kahneman and Tversky argue that actors rarely make decisions based on all available and relevant information. Instead, decisions are usually characterised by 'narrow framing', whereby decisions are based on a restricted range of choices often formed in isolation from relevant contexts. For instance, investors' decisions about particular investments are often taken in isolation from their broader portfolios (Kahneman, 2003: 1459). They suggest that important causes of narrow framing are perceptual limitations, the accessibility of relevant information and limits on the capacity of individuals to process information.

Kahneman and Tversky's work presents a significant challenge to core tenets of neo-classical economics because it challenges the fundamental assumption that decisions are the outcome of rational self-interest and calculation. The critique of rational choice,

in a variety of situations and policy contexts, has been built on by economists such as Richard Thaler (awarded a Nobel Prize in 2017; see Thaler, 2018). The currently fashionable policy instrument of ‘nudging’ – designing simplified choice architectures to encourage individuals to act in certain ways – has been especially associated with Thaler. However, whether BE has substantially modified neo-classical economics is open to question. Sociologists argue that the focus on the individual fits with orthodox economics (Piore, 2010; Streeck, 2010), while many BE scholars themselves believe that these ideas refine rather than overthrow neo-classical views of utility and rationality (Thaler, 2016).

Nevertheless, key ideas in BE have a clear relevance to incentive pay systems. From workers’ perspectives, variable pay can involve losses even where it adds to base pay if workers have set a reference point above the floor level of pay. The implication of prospect theory is that a reduction in the incentive component of pay will have a more powerful effect on worker behaviour than increases above base pay of the same magnitude. Since the prospect of losses induces risky actions, perceived losses in incentive pay systems can lead to risky, conflictual behaviour, such as withdrawal of effort. The decision as to how much effort to expend on a given task may well be guided by ‘rules of thumb’ rather than a rational calculation of the gains from the incentive. These ideas have percolated into recent work in economics and management on incentives, such as that on loss aversion in stock options (Devers et al., 2007). Other studies in economics highlight the role of social comparisons (Larkin et al., 2012), social preferences (Bandiera et al., 2005) and reciprocity (Fehr and Gächter, 2000) in modifying the impact of incentives. But might sociologists have got there first?

The workplace pay studies

Our main contention is that insights at the core of BE had been discerned and discussed, though not necessarily clearly identified in the terms subsequently used by BE, by a series of ‘classic’ studies of the operation of piecework incentive pay systems in sociology between the late 1940s and the early 1970s (i.e. just before BE first emerged). We review the literature on incentive pay systems published during these years, selecting for detailed analysis those studies containing primary empirical material on worker behaviour (rather than descriptions of incentive system design) and which have been regarded as landmark contributions to the study of incentives and behaviour in reviews of the development of workplace sociology (see Burawoy, 1979b; Eldridge, 2009). On this basis we select studies by Roy (1952, 1953, 1954), Lupton (1963) and Burawoy (1979a) for detailed scrutiny. Workplace studies that were not primarily focused on incentive systems are excluded, as are other important studies of workplace incentives that come later, such as Edwards and Scullion (1982).

The selected studies are notable for their use of ethnographic methods and close observation of individual and group behaviour. Roy spent 11 months working as a machinist in a steel processing mill as part of his doctoral studies at the University of Chicago in the mid-1940s. Some 30 years later, Burawoy conducted a similar study in the same machine shop. Lupton undertook in-depth research on the shop floors of a garment manufacturer and an electrical components firm in the UK. Roy, Lupton and

Burawoy focus on ‘restriction of output’: hitherto viewed by the Human Relations school as a puzzling response to pay incentives. We also draw on the classic study of work effort by Baldamus (1961) and the in-depth study of group norms in piecework systems in 10 engineering companies by Brown (1973),¹ both of which made important contributions to the study of work norms at the time. Brown’s primary interest was bargaining around piecework, devoting considerable attention to ‘topsy’ – customary local variations to pay agreements – and the processes through which it arose. Baldamus (1961) analysed ‘effort’ and the social norms that surrounded it, both of which were, in his view, ignored by orthodox economic analyses of his time.

These studies and BE have a shared concern: why workers do not behave ‘rationally’ in relation to economic incentives, where ‘rational’ is understood as economically maximising behaviour. Roy, Burawoy and Lupton (in one of the latter’s two cases) find workers’ attention focuses on ‘fixes’ and ‘fiddles’ and generally ‘making out’ in relation around the incentive systems operating on the shop floor. This finds expression in various ways. One is *quota restriction*, whereby workers work slowly – at immediate financial cost – to ensure that the rate remains favourable for future earnings and to maintain some slack in the system as a contingency against future production changes. Others *stockpile production* so it can be logged later at preferential rates, and *late booking* of jobs so that those on the following shift have a head start towards quota achievement. Roy notes other behavioural responses to incentive conditions, such as *goldbricking* (going steady when enough has been earned and the next target is perceived to be out of reach), *loafing or soldiering* when targets have been reached, and switching between day rate and piecework jobs depending on the relative earning potential.

All three authors take issue with Mayo’s (1933) interpretation of output restriction as economically non-rational behaviour arising from ‘sentiment’. Roy argues that it is rational in the sense that workers pursue their objectives, utilising the limited information available to them (cf. Etzioni, 2010). However, he makes clear that not all behaviour can be interpreted in this way. Roy observes that employees sometimes work fast for no discernible economic rationale, relate to targets as a game (independent of the financial rewards available), and slow down even when it is ‘safe’ to earn more from further production (Roy, 1953). Burawoy (1979a) argues that playing the game generated tacit consent to the capitalist rules of the game.

Behavioural economics and the classic studies – points of connection

The workplace sociologists and the behavioural economists share a common interest in addressing why people behave differently to the predictions of rational optimisation. Our argument is that they developed similar answers but that the sociologists got there first. We will argue also that the sociologists generated superior insights. To do this, we organise the discussion around the three core ideas in the work of Kahneman and Tversky presented above – decision-making, loss aversion and framing – drawing on later contributions to behavioural economics as appropriate.

Decision models and heuristics

Kahneman and colleagues stress the importance of decision heuristics – that is, ‘rules of thumb’, based on past experience, which individuals use to guide their way through situations requiring choices and decisions. Some years before, Roy (1953) had shown how workers on the shop floor learned and internalised rates of working through experience, and could deploy these ‘rules of thumb’ in manipulating the incentive system. Similarly, Lupton showed that whilst workers did not have a comprehensive understanding of the complexities of the pay incentive scheme, they nevertheless used a set of heuristics, based on experience, that guided work behaviour (such as when to submit completed work). Lupton (1963) saw the ‘rules of thumb’ connected to the ‘fiddle’ as flexible guides on how to respond to new situations. Drawing on Shimmin (1960), he maintained that workers had ‘functional’ understanding of the scheme even if they lacked ‘formal’ understanding, a distinction that resonates with Kahneman’s later Systems 1 and 2. He pointed out that workers found that certain actions led to certain consequences, and that they learned to act in a way to produce results desired by them (see Larkin and Leider, 2012; Nyberg et al., 2016 for contemporary examples in the BE/reward literature). Lupton (1963) described his observations as:

a process of trial and error can be discerned in which alternative modes are tried Some alternatives are rejected because they offer disadvantages. That they do indeed offer such-and-such disadvantages is part of the heritage of the group, and this knowledge is passed on to new incumbents of roles within the group. The modes of behaviour which seem to offer advantages become customary and routine, and their value is unquestioned so long as they give good results. *It is not necessary to know why custom works to one’s advantage, it is enough to know that it does.* (p.172; emphasis added)

Here, Lupton captures a process of heuristic development that contemporary behavioural economists would recognise, though he also highlights its essentially social character. Similarly, Brown (1973) observed that ‘workplace behaviour is replete with regular patterns. People act repetitively through habit, through custom, because it is the best way of getting things done, and because the social pressure of a convention makes it best to act that way’ (p.84). In fact, much of his study focused on the social generation of ‘rules of thumb’ that govern workplace relationships and the operation of the piecework pay system. In contrast to the individualistic focus of the BE tradition, these decision heuristics were viewed as socially operated customs and practice that provided guides and reference points, especially for workers and shop stewards, for the routine evaluation of managerial actions. An important element of these decision heuristics was comparisons against certain long-standing reference groups (p.73). These reference groups were typically those most similar to the group making the comparison, and were those for whom comparisons most readily came to mind. This might be viewed as an example of what behavioural economists call the ‘availability heuristic’.

Loss aversion and risky behaviour

Restriction of output was seen in the classic studies as behaviour conflicting with the ‘simple’ view of incentives and utility maximisation but was nevertheless predicated

upon an economic rationality. These studies highlighted workers' concerns to avoid losses, anticipating the emphasis on loss-aversion found in contemporary BE studies of reward systems (e.g. Bareket-Bojmel et al., 2017; Fehr and Goette, 2007; Nyberg et al., 2016). Like the New York taxi drivers studied later by Camerer et al. (1997) from a BE perspective, Roy found that workers stopped working in situations where economic theory would predict the opposite (i.e. when the prices for particular tasks were advantageous and workers could readily increase their wages). In part, this illustrates the power of reference points (the use of wage targets by workers) as a heuristic for guiding behaviour. It also shows the power of loss aversion in at least two ways. The first is that if workers maximise output on good jobs, this can shift the reference point upwards, meaning that the probability of a future 'loss' increases. Second, worker behaviour is guided by the belief that output maximisation when prices are good will lead management to re-time tasks, with the result that workers will suffer losses in the future relative to current reference earnings. Good prices on 'gravy jobs' are an endowment which may be lost if workers take advantage of them to maximise earnings. A contrast with later BE-inspired work therefore is that loss aversion incorporates perceptions and expectations of the actions of other social actors (in this case, management).

Output restriction manifested itself in risky behaviour. Once the reference wage had been achieved, Roy and his colleagues either worked much more slowly or even deserted their machines ('loafing'), inviting sanctions from line managers. Roy (1953) records being away from his machine for considerable periods of time, and on occasion some workers on the night shift worked less than half their shift. Workers also indulged in risky output restriction behaviour when piecework prices were low to ensure that they did not earn below the desired level of wages (i.e. make a loss relative to their wage reference points). Working slow was designed to pressurise managers to re-time piecework tasks in workers' favour. This meant that workers made a loss in the short term, but the reference point of a given level of earnings per hour guided their behaviour here. The notion of loss aversion is extended in Baldamus' (1961) work. He noted that workers may feel that they make a loss in terms of effort expended relative to desired effort levels. He emphasised that effort standards were quite precise, with both managers and workers focusing their efforts on avoiding losses arising from the 'wrong' level of effort rather than on securing the right level of effort (whatever that may have been).

Lupton (1963) highlighted the importance to workers of stable earnings from week to week, and a stable relationship overall between effort and reward. These priorities underlay what was called the 'fiddle' – manipulation and restriction of effort. Echoing Roy, the avoidance of wage loss was a more powerful influence on behaviour than maximisation of income. Lupton showed that earnings were stabilised, despite the variability of task types, by the practice of delaying booking-in completed work and retaining it in a 'kitty'. Immediate submission of work on 'loose jobs' (i.e. with timings favourable to the operatives) that would exceed bonus ceilings did not occur very often for fear of inviting rate-cutting by management and hence the possibility of future losses. Overall, Lupton viewed the 'fiddle' as an effective form of control over the work environment – it enabled workers to avoid losses in a context where there was a great deal of variability in task types and the incentives attached to them. Based on Lupton's work especially, what has come to be known as loss aversion was widely viewed as an influence on worker

behaviour in 1960s analyses of the adverse effect of piecework pay systems (e.g. National Board of Prices and Incomes, 1968).

Framing and reference points

A key component of BE, drawn from Kahneman and Tversky's (1979) prospect theory discussed earlier, is the notion of reference points, against which individuals evaluate potential gains and losses. A great merit of the sociological studies is that they clearly identified important reference points guiding worker effort and performance – an important theme also in incentive studies in contemporary BE (e.g. Maltarich et al., 2017) – leading them to restrict output both when job prices were good and when they were bad. For example, a key reference point identified by both Lupton and Baldamus was a typical level of weekly earnings linked to household budgeting.

It has been argued that the nature and generation of reference points in Kahneman and Tversky is under-developed and unspecified (Shleifer, 2012). Whilst Kahneman and Tversky accept that reference points may be set by social or subjective norms – that is, those that 'relate to the individual's perception of social pressure from others who are important to them (e.g. family, friends, colleagues, and others) to behave (or not) in a certain manner' (Ham et al., 2015: 740) – they do not deal with how these are generated and maintained. They depict a somewhat atomistic individual, albeit one that resides in a broader social context. By contrast, the industrial sociologists considered extensively how reference points are generated via social processes.

For example, both Roy and Lupton highlighted the role of social interaction among workers, and also with management, in maintaining the reference points for wages as social norms. When Roy joined the workshop, he was told in no uncertain terms by fellow workers the reference points for bonus payments. Deviant behaviour was discouraged though occasionally tolerated within certain bounds (Lupton, 1963). The social pressures were also often stronger than the economic motivations. Lupton (1963) observed peer pressure not to be a 'job-spoiler' (p.145) – that is, working too fast to the potential detriment of future piecework rates for colleagues – and Roy (1953) noted that 'group pressures were immediately brought to bear on the excess earner' (p.512). However, workers could also get positive recognition from fellow workers for appropriate behaviour in relation to quotas. Burawoy (1979a) found that workers were informally peer-evaluated on their success in 'making out' on the bonus system, and this was a key foundation of shop floor hierarchies.

In one of Brown's factories (1973: 127), shop stewards followed a concerted policy of pulling into line those workers accepting 'tight' job values so as to avoid jeopardising the future earnings of other workers. Social norms generally outweighed individual aspirations in these work settings, and came to be incorporated as standard guides to individual behaviour. Brown's discussion of piecework bargaining emphasised the importance of custom and practice – the emergence of informal rules to guide behaviour. These rules became part of workers' 'endowment' (cf. Thaler, 1980), with the result that attempts by managers to roll-back these customs were clearly perceived as a significant loss by workers, leading to risky action. For instance, when a foreman challenged a custom that semi-skilled workers had substantial control over machine speeds, the whole

factory went on strike immediately (Brown, 1973: 113). The rules that were generated to regulate earnings and avoid losses became endowments *themselves*. Baldamus (1961) emphasised the role of distinct *effort* reference points held by both managers and workers, leading to lower and upper bounds for effort in relation to wages (*framing*): negotiation over effort levels was concentrated between these upper and lower limits as both sides sought to minimise losses.

Behavioural economics and the classic pay studies – points of difference, developing a critique

As we have shown, there are some clear points of connection between key BE ideas developed by Kahneman and Tversky and the behaviours around incentives observed earlier in the classic pay studies. A behavioural economist would find much that they would recognise, and would feel that they had some tools to explain the behaviour observed. Whether they are likely to enable complete explanations is another question. We argue that the insights from workplace sociology, exemplified by the pay studies considered here, generate a superior understanding of key influences upon individual behaviour. We consider two important issues. The first concerns the implications of the contrast between the ‘individual’ focus in BE and the ‘social’ focus in the sociological studies. The second concerns methodological differences between the two bodies of work, and how the methodology of the sociologists facilitates understanding of individual as well as group behaviour.

Social forces versus individual characteristics

Some behavioural economists might argue that one of their advances over traditional economics is that they are concerned not just with the behaviour of atomistic individuals. Some writers focus on group behaviour alongside social norms and comparisons (Bareket-Bojmel et al., 2017; Larkin et al., 2012; Tabibnia and Lieberman, 2007). However, the primary focus remains individual behaviour, with social influences being viewed primarily as exogenous. Larkin (2014), in his recent analysis of incentives, acknowledges that relations between workplace actors is likely to influence incentive manipulation, but notes that this ‘remains unexplored’ (p.225). This is a fair assessment of the BE literature, but it is an issue that was extensively explored in workplace sociology many years ago.

Both Roy and Lupton focused their analysis on social groups. Lupton showed that, whilst there were indeed differences in individual behaviours and preferences of the kind that interest behavioural economists, whether or not they came to the fore depended on the social relations in the factory, and indeed beyond (e.g. competition in the industry, labour market pressures, gender relations, etc.). Furthermore, manipulation of the incentive system was a collective activity not a purely individual one: ‘the working group operated controls over behaviour of its members to preserve these techniques of manipulation’ (Lupton, 1963: 139). Different workgroups could collude and cooperate, yet also sometimes have conflicting interests in how they ‘managed’ the piecework systems.

Management groups also had competing interests: both Lupton and Brown highlight collaboration between workers and supervisors against work designers and work study engineers, and between foremen and shop stewards against middle managers.

What is distinctive about the classic studies is not just that they discussed group behaviours as well as individual ones, or even that they gave greater emphasis to the collective over the individual. The difference, as noted by Spencer (2013) in relation to personnel economics, is that analysis was undertaken at the level of social systems and structures, rather than just individual behaviour, and that the explanations were underpinned by theories relating to those systems and structures. This can be illustrated by examining how Roy, Lupton, Baldamus and Burawoy interpreted what they observed.

Both Roy and Lupton offered explanations of worker behaviour that are embedded in interpretations of social relations between workers and managers. Roy (1953, 1954) understood worker behaviour to be guided by rejection of the official logic of the incentive system, and the latter's inability to align management and worker interests. Unlike Roy, Lupton (1963) was sceptical of even the possibility of establishing a commonality of interest, and viewed manipulation of the incentive scheme by workers as a means of protecting their interests (p.201). But the expression of these interests differed between his two factories, and he attributed these differences to variations in the stability of product markets (p.194). Baldamus (1961) highlighted conflict between managers and workers over the effort bargain, arguing that this needed to be understood in the context of the 'social and institutional frameworks' (p.18) of the unequal power relations in the employment relationship. Burawoy (1979a) argued for a deeper layer of analysis, located in systemic conflicts between workers and capital at the point of production. Later, he argued that the structuring of workplace relations was determined more deeply still by the forces of global capitalism (Burawoy, 2013). In summary, the workplace sociologists offered the possibility of explanations at a deeper, and more ontologically appropriate level than those of the behavioural economists, even when the latter's focus (rightly) concerns the social aspects of work (cf. Edwards, 2012).

By contrast, in BE, behaviour is attributed to biases and decision heuristics at the level of individuals. These influences are viewed as universal human characteristics rather than products of particular social contexts (Streeck, 2010). However, one of the implications of framing and referent-dependence in BE is that context matters. How actors make decisions is likely to be framed by a choice architecture that is structured by their situation. Social situation (institutions, social relationships, etc.) is likely to influence which biases come to the fore, and to what extent. Because BE does not usually centrally examine social context, and its reliance on experimental methods often precludes this (Edwards, 2012), BE is fundamentally unable to determine whether decisions and actions are the outcome of individual biases or social relationships, or a combination of the two. For instance, a keynote article by Bandiera et al. (2005), which finds output restriction in incentive systems where individual actions affect others' pay, is unable to determine whether this is due to altruism (individual 'bias') or peer pressure (social relationships). A concern with the interaction between structure (context) and agency (individual action) is of course the traditional domain of sociology.

Methodological issues

There is a clear contrast between the methodologies used in the classic pay studies and those within BE. The former used ethnographic research methods, characterised by extensive participant observation in some instances. Behavioural economists tend to use laboratory experiments (e.g. Larkin and Leider, 2012; Zidelius et al., 2012), field experiments (Bareket-Bojmel et al., 2017; Fehr and Goette, 2007) and analysis of secondary data (Camerer et al., 1997; Farber, 2015; Larkin, 2014; Maltarich et al., 2017). Many of Kahneman and Tversky's key observations were based on very simple experiments that were not reliant on laboratory conditions.

A concern with laboratory experiments is that individuals behave differently in laboratory settings than they do in 'real life' (Levitt and List, 2007). Laboratory experiments abstract participants from their social context and, with the partial exception of experiments focusing on group interaction, treat them as atomised individuals devoid of social relationships. Field experiments offer the potential to avoid this difficulty, but as Edwards (2012) has noted, they have their own limitations relating to the potential of (unobserved) social norms to influence experimental outcomes and the extent to which experiments address the nature, strength, and origins of these norms. Edwards argues (p.310) that experiments in economics could usefully incorporate features of sociological enquiry by, for example, examining the formation of group norms under different conditions, or the impact of prior experience on incentive effects, or simply asking people why they behave as they do. However, he notes that even with these adjustments, 'experiments might address some of the relevant social processes. They will not discover them all ...' (p.311).

Our contention is that only sustained observation of worker behaviour in its social setting enables a full appreciation of the vagaries of behaviour and its determinants. As Watson (2011) notes, 'we cannot really learn a lot about what "actually happens" or about "how things work" in organisations without doing the intensive type of close-observational or participative research that is central to the ethnographic endeavour' (p.204). He notes that the object of enquiry here should be 'social action' (p.213), which captures the sense in which an individual's behaviour is framed by, and understood, in relation to others' actions and intentions. A recent example is Occhiuto's (2017) ethnographic study of New York taxi drivers, which shows the ways in which drivers' aspirations and relationships outside work impact on their attempts to control their work schedules. This generates insights into the factors shaping labour supply and driver behaviour that are not readily available using the quantitative data (trip records) employed by influential studies of driver behaviour in BE (Camerer et al., 1997; Farber, 2015).

One key lesson from the workplace pay studies is that group interaction, shaped by social context, generates social norms and value. This finding can be extended to the experiments conducted by the behavioural economists. These studies have often used everyday objects as endowments or incentives that would typically be of little intrinsic value to the participants in the experiment (e.g. coffee mugs). When individuals participate in the experiment, these objects acquire value that they would not normally have outside the experiment. The 'game' of the experiment, abstracted from 'real life' but with social structure imposed by the researchers, generates value in a similar way to 'making

out'. A key contribution of Roy's work is highlighting how the process of 'making out' turns into a game to be played against oneself or proximate individuals. In this 'game', money was symbolic of the achievement, and not valued for its own sake:

Although operators constantly shared their piecework experience as a chief item of conversation, and always in terms of making money, or not making money, they could, in reality, have been communicating game scores rather than financial success or disappointments. (Roy, 1953: 511)

Burawoy (1979a) took the concept of gaming further to argue that playing the game generated consent to the prevailing pattern of capitalist relations.

Extended case studies, utilising ethnographic approaches, can also beat the individualist focus of BE at its own game by highlighting individual characteristics and behavioural differences to a greater extent than is typically observed in BE studies. Individual workers feature prominently in Roy's and Lupton's, and to an extent in Burawoy's (1979a), accounts. Roy (1953) notes how particular individuals sometimes departed from group norms on pace of work to reduce boredom or ameliorate fatigue. He highlighted the inconsistencies of individual behaviour and, in finding that the same job elicited different emotions according to the form of payment, in effect discerned a form of 'mental accounting' (i.e. the separation of money into different 'accounts') (see Thaler, 2018). As well as facilitating observation of individual characteristics and differences, the methodologies used in the workplace studies also enabled consideration of the effects of socialisation on individuals, as in Lupton's (1963: 179) account of learnt responses to 'loose' piece rates or Dalton's (1948) classic examination of the factors associated with 'rate busting'. They also enabled examination of the interaction between individual behaviour and group norms (Roy, 1953: 513). By contrast, it can be argued that 'Behavioural Economics stripped human beings naked of their social relations and connections' (Streeck, 2010: 391).

A potential limitation of workplace studies is inadequate consideration of the role of broader economic forces shaping workplace practices (Burawoy, 2013), though Lupton (1963), for instance, by no means ignored the role of external economic factors. In principle, ethnographies can incorporate an appreciation of wider, structuring forces, by reflexive interrogation of micro-level data to understand the role of macro-level forces, as in what Burawoy calls the 'extended case study method' (Burawoy, 1998). Some recent ethnographic studies have adopted this approach, as exemplified by Ho's study of Wall Street (2009) (which also shows how the generation of social norms in the workplace can have a much wider impact). It is unlikely that the methods used in BE can evolve in this way, though individual 'nudging' may well have larger societal effects.

Conclusion

The article began with a quotation from an article entitled, 'What have we forgotten – and why?' (by the organisational psychologists Kwiatkowski, Duncan and Shimmin), which laments that elements of their discipline's tradition have become a 'forgotten history' (Kwiatkowski et al., 2006: 183). They argue that a lack of historical perspective in

academic enquiry can lead to a 'debased rediscovery of forgotten ideas disguised as invention, or, conversely, a failure to build on the work of the past' (p.183). The current article has presented an example of this phenomenon within the field of worker behaviour through a discussion of the parallels between contemporary BE and a series of landmark workplace studies from the mid-20th century. By drawing attention to the approach and insights of these 'classic' studies, we hope we will help to prevent them becoming part of the 'forgotten history' to which Kwiatkowski et al. (2006) refer (see also Watson, 2009).

However, we seek to offer something more than an exercise in academic archaeology. While the article is not the first to make a connection between BE and the classic studies (cf. Edwards, 2012), it is the first to analyse – through a detailed examination of approaches to incentive payment systems – the extensive parallels and contrasts between the two bodies of work. We show how several of the phenomena and insights associated with BE were closely observed, if not necessarily identified as such, in the classic pay studies. Perhaps part of the attraction of BE is that it identifies in sharp relief what we already know but have not clearly identified.

By identifying the contrasts and commonalities between BE and the work of the industrial sociologists, we show that BE explanations are insufficiently focused on social factors. The point is not that BE does not consider external influences on individual behaviour, but rather that its focus remains on the *individual* and not on the *relations* between people and groups (Edwards, 2012). Our analysis of the industrial sociology tradition demonstrates how and why the latter focus leads to deeper and more convincing explanations. Behaviour in response to incentives is usually a social phenomenon requiring an explanation at the level of the 'social' (Brown and Spencer, 2014: 947). Individual decision-making must be considered in its context, but an important element of that context is the features inherent to the relations between individuals and groups in specific settings and which frame their intentions and actions. The 'classic' pay studies, as we have shown, emphasise the latter level of analysis, offering rich and convincing accounts as a result.

They adopt a methodology appropriate to the task of investigating the generation of social norms and their influences upon behaviour (Edwards, 2012). The in-depth ethnographies facilitated a deep understanding of patterns of behaviour, the influences upon them and the creation of behavioural norms. Our comparison of the classic pay studies and BE has gone beyond earlier critiques of BE in showing that the methods used by the former facilitate an appreciation of individual differences, as well as group behaviour and social interaction, that is not readily captured by the methods typically used in BE.

We therefore recommend that BE make more use of the ethnographic methods used by the classic workplace studies. There is some recognition within parts of the BE world that they can enhance experimental design and data collection. The Behavioural Insights Team (a unit, formerly part of the UK government, charged with drawing on BE to assist policy implementation) use a strategy of 'immersion' (involving rich interviews and observation) to better understand the range of factors influencing behaviour (Kirkman and Melrose, 2014: 9). However, this 'immersion' tends to be brief – typically just a few days – and not comparable in scope or depth with the extended ethnographies of the classic industrial sociologists. It is arguable too that current sociology would benefit from more widespread use of ethnography given the depth of insight that can be obtained

using this approach (van Maanen, 2011; Watson, 2011). Recent ethnographic studies generate important knowledge about forms of work that have hitherto not been fully understood (Occhiuto, 2017; Zukin and Papadantonakis, 2017). However, as Burawoy (2013) has argued in this journal, workplace ethnography needs to embrace a greater appreciation of the role of wider socio-economic forces in shaping micro-level contexts. This implies an incorporation of ideas and concepts from radical political economy into workplace sociology. It is exemplified by research that links technological change, imperialism, exploitation and employees' work experiences, as captured through ethnographic methods, as in Rosenblat's (2018) study of Uber and its drivers.

Could BE have any role in this? Although critical of BE for the reasons outlined earlier, we do not wish to argue that core ideas found within this field are without value. Indeed, the article indicates that concepts such as framing and loss aversion are useful tools in the analysis of workplace behaviour. Kahneman, Thaler and Tversky have had an enormous impact on the study of decision-making and have played an important role in encouraging economics to engage with real-life deviations from the stylised 'facts' of rational utility (just as Baldamus argued economics needed to do over 50 years ago). To understand workplace behaviour, it could be beneficial to 'join up' the insights that BE offers on heuristics, biases, and loss aversion with an understanding of the systems and structures of workplace practices and of the wider social and economic relations in which they are manifested. As we have shown, loss aversion is a key aspect of worker behaviour in the workplace studies.

For sociologists to draw on these ideas would require that the concepts of heuristics and loss aversion are divorced from economics, given the incompatibility between core assumptions and methodologies of sociology and those in economics. Since many of these core ideas and concepts in BE were developed initially outside economics, this is not an insurmountable challenge. Indeed, Kahneman (2003) argues that economics can never fully accept these ideas whilst retaining its core paradigmatic features. Their ideas present a major challenge to what Streeck (2010) calls *homo economicus*, which economics has so far largely seen off by opportunistic adaptation. Sociologists should also be wary of the libertarian paternalist offshoot of BE that suggests that individuals' actions can be manipulated ('nudged') for their own good by a frank recognition of decision biases and an appropriate framing of decision choices (see Gigerenzer, 2015). To achieve behavioural change, institutions will typically need to change as well as individuals. The implication of our argument is that sociology has better tools than other disciplines to enable a fuller understanding of the situation that individuals find themselves in.

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Note

1. Brown would probably not see himself as a sociologist but his work contains rich sociological insights into norm formation and maintenance.

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