

Social Constructionism Redefined: Human Selectionism and the Objective Reality of Q Methodology

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Abstract. *The main aim of this paper is to demonstrate how social constructionism can be used to make sense of studies in the Q methodological tradition. In order to maximize the effectiveness of this demonstration, the paper seeks to clarify the term 'social constructionism' and to correct some avoidable misunderstandings. Social constructionism is presented as a realist ontology, the difference between constructionism and constructivism is discussed, and the new term 'human selectionism' is introduced. In the final section, a physical analogy is employed to demonstrate the principles of human selection at work and in order to illustrate one possible interpretation of the Q methodological procedure. The tendency for distinct 'groupings-of-individuals' (and hence distinct factors) to be discernible in multi-participant Q methodological data is also discussed.*

Introduction & Context

The main aim of this paper is to demonstrate how social constructionism can be used as a complement to the work of William Stephenson and as a means of making sense of studies in the Q methodological tradition (Curt, 1994; Watts & Stenner, 2005a; Stenner, Watts, & Worrell, 2007). In order to maximize the effectiveness of this demonstration, the paper will seek to clarify the term 'social constructionism', to correct some avoidable misunderstandings, and to illustrate, through use of a physical analogy, a constructionist interpretation of the Q methodological procedure.

It is inevitable that this interpretation will not be to everybody's taste. Nonetheless, Q methodologists will tend to use the method because they appreciate the importance of alternative subjective perspectives in their chosen subject area. This interpretation can be seen as one such perspective. It is also true, however, that Q methodology has well-documented connections with the quantum theory in physics (Brown 1992; Stephenson 1982, 1983, 1988, 1988/9)

—effectively, the mathematics employed is almost identical in the two cases (Burt, 1940; 1958) – and the quantum theory is renowned for the many competing ways in which its mathematical formalism has been interpreted. It would hardly be surprising, therefore, were a similar situation to develop in the context of Q methodology (see, for example, Watts & Stenner, 2003). This might even be construed as healthy given, as the quantum theory demonstrates, that the presence of competing interpretations in no way dents the efficacy and importance of its experimental findings.

In the end, however, acceptance or resistance of theoretical change and development is always going to be a matter of personal preference and subjectivity. Stephenson and his Q methodology would expect nothing else.

The Reality of Social Constructionism

A frequent dismissal of social constructionism involves the assertion that it is ‘just another social construction’. This is actually the fault of the social constructionist movement itself, which has, particularly in the United States, tended to present its ideas as an ‘anything goes’ form of relativism (Gergen, 1994). The trouble with relativism is that it is so easily caught in this sort of infinite regress. Deconstructive statements like ‘personality is a social construction’ also tend to be presented and interpreted as meaning that ‘personality isn’t real’. This is regrettable because most social constructionists are not questioning the realness of personality at all. On the contrary, something very fundamental is being said about the *nature* of its reality (Curt, 1994): namely, that whilst personality has proved itself to be a highly useful and worthwhile semantic entity, we should nonetheless be cautious about its physical or somatic status. As Hacking (1990) puts it, the assertion is that personality is primarily a *human* rather than a *natural* kind.

This evidently remains a contentious conclusion. But this is largely because of our often extraordinary capacity to disregard the importance (and indeed the very reality) of our own semantics, meaning-making, thought and language. Stephenson (1986a & b) captured this reality though his concourse theory of communicability and his emphasis on the concept of shared knowledge or ‘consciring’. But this focus on semantics is an exception. In general, science has led us to see a real world constituted only by physical or material entities. As a consequence, personality is badly damaged by its representation as a human kind because such representation seems to imply that it isn’t real.

This downgrading of all things human has a very long history. Immanuel Kant, for example, famously rejected all possibility of a science of mind on the basis that subjectivity (and the subjective

products of human thought) were too transient and lacking in substance to be subjected to experimental or mathematical treatment (Fancher, 1996). Indeed, the accusation 'social constructionism is just another social construction' actually draws upon this implied lack of substance and gains credence because of it. Social constructionism is a product of human thought and hence it isn't real or tangible enough to be taken seriously.

But this is surely not an argument that Q methodologists would want to employ? Stephenson's (1953) *Study of Behavior*, for example, offers a series of direct and challenging responses to anyone who suggests the 'essential unreliability' of subjective phenomena. Practical experience with Q methodology also demonstrates the reliable, and seemingly almost objective, status of human subjectivity. Here's one example. In 1997, the current author carried out a Q study on love at the University of East London. This was eventually published as Watts & Stenner (2005b). In 2005, a second study was carried out, using the same Q set, with a group of undergraduates at Nottingham Trent University. This second participant group had no awareness of the earlier yet the factor array for their first factor still correlated at an extraordinary +0.86 with the equivalent array from the 1997 study.

Let's put that finding in perspective. We have two studies conducted eight years and nearly 200 miles apart, both have been varimax rotated as a means of delimiting researcher influence, and yet the inter-correlation of the two main factor arrays is at the level one might expect in a situation of test-retest reliability (i.e. where the same person has done the same Q sort twice in quick succession). On one level, this provides clear support for Stephenson's arguments about the reliability of human subjectivity and the ability of Q methodology to capture that subjectivity in both an experimental and mathematical fashion. On a second level, however, it still represents (what Charles Peirce might have called) the 'observation of a most surprising fact'. The likelihood of the observed correlation, viewed statistically, is indeed infinitesimally small. It shouldn't have happened and it really couldn't have happened spontaneously or by accident.

Pierce's *abductive* logic, which has a strong historical association with Q methodology, becomes very pertinent in this situation. To paraphrase Peirce again, a surprising fact, C, has definitely been observed. But if A were true, abductive logic tells us, C would become a matter of course and hence there would be good reason to suspect that A is true. An obvious next step is to ask ourselves what A might make our C—the extraordinary subjective reliability we have observed across two distinct studies—become a matter of course? One possibility is methodological: perhaps there was something about the Q set that caused it? But the fourteen other factors (and fourteen different factor

arrays) which emerged from these studies render this an unlikely candidate. The alternative is to assume, in the absence of contradictory evidence, that our C is a very *real* (as well as a very surprising) fact and that the A which makes it a matter of course is likely to be of a similar nature. That is indeed what a social constructionist interpretation of Q methodology assumes. It also offers a clear vision of what A might be and how it might work.

It can achieve this, however, only when constructionism is seen as a realist ontology which proposes, very simply, that the world we inhabit is constituted, not just by physical bodies, but also by semantic bodies or *bodies-of-knowledge*. The latter are understood to be as real as the former. This ontological move is, in fact, inspired by the quantum theory in physics. The quantum theory sets out, like most conventional scientific approaches, to offer an objective account of its subject-matter (which, for the quantum theory, involves the microscopic aspect of the physical world). As Prigogine & Stengers (1984, p. 54) suggest, however, attention to this subject-matter and subsequent developments in quantum physics have effectively forced "objectivity in theoretical physics . . . [to take] on a more subtle meaning...Whatever reality may mean", they continue, "it always corresponds to an active intellectual construction". In other words, the theory and its empirical findings tell us that processes of construction and subjectivity have a pivotal role to play in the objective world. They are an inescapable part of reality and realist forms of social constructionism are simply acknowledging this fact.

This dramatic transformation of subjectivity, from a hopelessly transient and unreliable non-entity, to an inescapable and pivotal aspect of reality is much more consonant with Stephenson's views. It makes human subjectivity a vitally important subject-matter in its own right. If reality 'always corresponds to an active intellectual construction' then we had better understand where these constructions come from, what they mean, and how they wield their influence. Social constructionism brings resolution of these issues to centre-stage and, in so doing, it has inspired the development of a whole range of qualitative research methods which, in their different ways, all make subjectivity and meaning the key focus of their analyses (see Willig & Stainton Rogers, 2007).

Nonetheless, these qualitative methods are unlikely to be accepted as the foundation of a true *science* of subjectivity (Brown, 1994/5). Only Q methodology seems currently to have this potential. It is little surprise, therefore, that many social constructionists have seized upon its mathematical formalism as a means of conducting their research. Attention is shifted from the somatic to the semantic, from physical bodies to bodies-of-knowledge, and ultimately from states-of-matter to

states-*that-matter*, but otherwise a quantum theory of subjectivity emerges which mirrors its objective counterpart in a great many ways (Watts & Stenner, 2003a & b).

If the full significance of this new science is to be appreciated, however, constructionists would argue that we first need to recognize that the ultimate findings of Q methodology—its emergent factors interpreted as states-*that-matter*—are just as real, just as substantial, and just as difficult to avoid as the findings of the quantum theory proper. Q methodology focuses on the semantic aspects of reality, quantum theory on the somatic, but otherwise the situation (and mode of analysis) is the same. And neither is this a mere boast or unsubstantiated claim. It is the quantum theory itself, remember, which tells us that construction and subjectivity are an inclusive part of reality and that objectivity has duly had to accept its 'more subtle meaning'.

On the other hand, this positive stand on behalf of the findings of Q methodology also contains the seeds of a potential complication: if objectivity includes a necessary element of subjectivity then the reverse is also likely to be true. Objectivity almost certainly intervenes in processes of construction and subjectivity (such that subjectivity may similarly need to be grasped with greater subtlety). For social constructionism this subtlety involves two related beliefs, firstly that coherent subjectivity must necessarily fasten onto something pertinent about its subject-matter or object, and secondly that subjectivity (and the process of fastening) is never a purely *personal* phenomenon. This latter claim will be the main focus of the next section.

SOCIAL Constructionism

One of the problems of communicating the social constructionist message is that the name itself is, to varying degrees, both ambiguous and misleading. The word 'social', for example, is not at all helpful. Part of the responsibility here lies with the discipline of social psychology, which has systematically reduced the concept until it appears to mean little more than a 'gathering of individuals'. This image is supported by the prevailing western ethos of the self-contained individual, who is seen as isolated from the world around them, save for the occasional influence of what psychologists call 'situational variables'. This is a most peculiar view of the self (Geertz, 1973; Sampson, 1993). Its appearance has nonetheless helped to create a pronounced divide between what people view as *social* on the one hand, and what they view as individual or *personal* on the other.

In the context of this dualism (and where the self-contained individual is predominant), a tendency has arisen for the term social to be interpreted by negation. It comes to mean 'not personal'. Hence, the social in social constructionism seems to imply 'construction carried out

by someone other than myself. But this is not what is being proposed. Most coherent versions of social constructionism are actually employing a much wider definition of the social - a definition often associated with sociological (rather than psychological) forms of social psychology - which effectively treats collective and individual processes (the social and the personal) as indelibly interconnected aspects of a *single whole* or *system* (for example, Luhmann, 1996). For the moment, let's refer to this system as the human world as a means of distinguishing it for purposes of conceptual convenience from the natural world.

The key point here is that this latter distinction is indeed a matter of convenience, for the quantum theory (amongst others) clearly indicates that the human and natural worlds are not really separate. They are conceptually or *analytically separable*, but that is not the same thing. This also means that the psychological is not separate from the physical, mind is not separate from matter, and crucially that subjects are not separate from objects. If I were to ask whether you, as an individual person, possess both objective and subjective, natural and human aspects, you would almost certainly say yes to each. But what about the world in general? Perhaps not so clear cut? Yet the quantum theory clearly indicates that the world we inhabit needs to be understood in exactly the same way. It is both objective and subjective, natural and human. That is our environment. We inhabit a single world constituted of both somatic *and* semantic entities, and it is in this image that the social constructionist ontology (described earlier) is drawn.

This same realization also lies at the heart of Niels Bohr's (1950) famous proclamation that physics and psychology are the only two sciences. Intuitively this seems a flight of fancy, but it makes absolute sense when the implications of the quantum theory are properly grasped. If reality 'always corresponds to an active intellectual construction' then reality is *fully explained* when physics has accounted for the construction from the objective direction (by focusing analytic attention on the observed object or objects) and psychology has done similarly from the subjective or psychological direction (by focusing analytic attention on the observing subject or subjects). No further analyses are required.

There is also little doubt that Q methodology is ideally placed to complete the psychological or subjective side of Bohr's analyses, which would be achieved, in a pleasing symmetry, by applying the same quantum theoretical principles used in the physical or objective analyses, albeit in the context of the (still analytically separable) human world. Yet applying quantum principles to 'things human' leads to the collapse of another dualism: namely, the dualism which served to distinguish the personal from the social. The eminent quantum physicist

Bohm (1998, p. 99) describes the repercussions of this collapse and the resulting quantum view of the self. It is not possible, he says, to:

“. . . observe a ‘self’ that can be sharply distinguished from the total environment. Rather, in every aspect of. . . [their] being, the boundary of an individual. . . is to be compared with that of a city - in the sense that it can be at times a useful abstraction, but that it is not a description of a real break or division in ‘what is’. And, ultimately, the same is true of the boundary of anything.”

The personal and social worlds are not really separate. Again, however, we can see that they are still analytically separable - we can, if we wish, draw a boundary as a means of conceptual abstraction - but this boundary is not and can never represent a real break or division in ‘what is’. This observation brings us back to the meaning and use of the word ‘social’ in the context of social constructionism. It is very misleading. It simply cannot be employed as an effective descriptor of a system in which the personal and the social are explicitly recognized as interconnected aspects of a single whole. Some kind of alternative terminology is demanded.

What is actually needed is a word which implies both the social and personal at once, which can be used as a singular or collective noun, and which can hence be deployed as a means of simultaneous referral to one or many persons. In fact, we have already preferred it several times - the word is ‘human’. This isn’t perfect, but it does represent a marked improvement in clarity. Social constructionism, it is being proposed, may better be understood as *human* constructionism.

Human CONSTRUCTIONISM

The previous section began a process in which social constructionism is placed under the microscope. In this section, attention is turned from the social to the issue of ‘construction’ and its meaning. Construction is immediately a difficult term in the sense that it necessarily conflates the *process* of construction with the *structures* that emerge from this process. For our purposes, we need to be clear that human constructionism is first and foremost a functional theory which is descriptive of an ongoing process. Stable and analyzable structures certainly emerge from this process, for the constructionist these are indeed the bodies-of-knowledge which constitute the human world, but the key issue is that these structures are understood to be subject to continual adaptation and evolutionary change. Personality, for example, grasped as one such structure, exhibits exactly the sort of changing nature that constructionism would predict (Danziger, 1997).

Bohm (1980, p. 120) creates the word ‘strucation’ in order to capture just this kind of process—a process in which structures are continually created and dissolved—and in order to countermand our

tendency to see structure as “a ‘finished product’ or. . . an ultimate result”. This argument is designed to help us envision a human world in which the interplay of the personal with the social proceeds in a symbiotic, iterative and creative fashion, not a world in which fixed and unchanging bodies-of-knowledge force themselves upon the perceptions and viewpoints of individuals mechanically and/or through processes of social determinism (see also Watts & Stenner, 2003b).

It is also important at this point to distinguish constructionism from *constructivism*. In the last section, we said that the social and the personal, whilst not really separate, were nonetheless analytically separable. The emergence of constructionism and constructivism as distinct terms can indeed be seen as a direct function of our tendency to conduct this analytic separation. Constructivism asserts that the perceptions and experiences of particular individuals should be understood as “an elaboration or construction based on hypothesized cognitive and affective operations” (Reber, 1985, p. 151). Physiological operations may also play a part. Either way, constructivism describes human world processes (our single social/personal system) from the *personal* aspect.

The work of Jean Piaget in the area of child development and George Kelly’s personal construct theory (Kelly, 1955) are good examples of the constructivist genre. In both cases, interest is focused on personal processes of construction—the ways in which particular individuals come to interpret and make sense of the world around them, and the personal viewpoints and knowledge structures which result. Such knowledge structures, constructivism concludes, “may be altered if conflicting information is perceived, or become fixed and incorporated as basic aspects of one’s personality” (Reber, 1985, p. 532).

Constructionism, on the other hand, identifies a more social approach to these same processes (hence *social* constructionism). This approach tends to focus on the socially shared viewpoints and bodies-of-knowledge which are the cumulative, and publicly accessible, product of constructivist processes. Dewey (1931/1985) called these products ‘social facts’, or the concretion in external form of human purposes, desires, emotions, ideas, and ideals. In adopting this focus, constructionists set out to understand and map the semantic or meaningful constitution of the human world. The work of Michel Foucault is perhaps the most thoroughgoing example of this general approach (see, for example, Dreyfus & Rabinow, 1982).

We saw earlier that physics and psychology, objective and subjective analyses, were both required to bring the natural world to full account. When the human world becomes our main priority, it follows that *both* personal and social analyses—constructivist and constructionist

approaches—will also be required if we are to see the whole picture. This does not phase Q methodology, however, inasmuch as it is quite capable of supporting both types of analysis. When it is used in a case study format (i.e. where multiple Q sorts are collected from a single participant) the emergent factors can reveal much about a person's own viewpoints and knowledge systems. In this context, Q methodology can be a very effective constructivist approach. By contrast, in a multiple participant format (i.e. where a single Q sort is collected from a number of participants) the emergent factors reveal socially shared viewpoints and bodies-of-knowledge (Watts & Stenner, 2005a). The factors drawn from such multi-participant studies can help the constructionist to understand the viewpoints and knowledge systems that constitute the human world in a very thoroughgoing fashion (Watts & Stenner, 2005b).

It becomes obvious that the analytic separation of the personal from the social and hence constructivist from constructionist analyses can indeed be useful on occasion. The point remains, however, that such separation does not a real division or break in 'what is'. It is simply a matter of convenience. As a consequence, we earlier replaced the dualistic terminology personal/social with a singular terminology that captures both: human. Now we must pursue some singular terminology that captures constructivism and constructionism.

In order to achieve this, a word is needed which captures the processes of elaboration that are central to constructivism and the personal freedom of choice which appears to characterise the personal aspect of the human world. On the other hand, it also needs to grasp the social aspect of the system—Dewey's social facts, our constructions or bodies-of-knowledge—which come into being as a product or 'concretion' of earlier choices and which are hence representative of common and already valued (literally *pre-valent*) choice patterns within the system. What we need then, is a word which captures this ongoing process of choosing from amidst the chosen or selecting from a selection. And there, at the end of this last sentence, is our best option: the word is 'selection'.

This leaves us in a position to know constructionism by a new name—a name in which the personal and the social, constructivism and constructionism, are explicitly conjoined—and that name is *Human Selectionism*.

Human Selectionism & Q Methodology

The aim of this final section is to demonstrate how processes of human selection work (and can be observed) in the context of a multi-participant Q methodological study. In so doing, it should be possible to discern a phenomenon that would indeed make our 'surprising fact' appear as a matter of course.

Earlier in the paper we used arguments drawn from the quantum theory to establish that our environment is constituted by both somatic *and* semantic entities and that these two types of entity were both to be treated in exactly the same way, i.e. as 'real'. The idea of a physical environment is straightforward and unproblematic. It is concrete and clearly observable. The concept of a semantic environment is less widely accepted, it is more abstract, and meaning is far less amenable to direct observation. It is nonetheless possible to show how our semantic environment works, and to make it easier to picture, by using a physical environment in the form of an analogy.

The analogy involves a classroom. It's a rectangular space with one exit. There is a projection screen on one of the shorter walls for lecture presentations, windows fill the length of one of the longer walls, and there are four table blocks. Each of these blocks is made up of three or four smaller desks which can be moved around (and which the students are permitted to move themselves). Thirty chairs are provided, most of which are usually situated around the table blocks. The classroom is designed exclusively for research methods teaching and for sessions which ordinarily include a mixture of lecture presentation and group work.

This last piece of observation is important because it tells us that this particular physical environment is also already a semantic environment. It has been shaped and laid out meaningfully—by the application of particular bodies-of-knowledge—and it is built *for purpose*. The position of 'things somatic' is being influenced by 'things semantic' and hence the lecture screen and table blocks are where they are, not by chance, but precisely because it makes sense for them to be there.

With this established let's return to the physical space itself and to a specific question: does the classroom in any way restrict the students in their movement or positioning? The answer is yes and no. There is a clear sense in which they can go where they choose. But clearly there are also boundaries being set. Can they leave via the windows or otherwise move beyond them for example? Not really. It is *possible* to leave this way of course and that's important, the option is not entirely precluded, in fact in some ways it is very easy (you just open the window and climb out), but it is nonetheless an option and a course of action which would necessitate a disproportionate amount of subsequent explanation and justification. The same goes for any of the walls. I *can* get out that way, but a great deal of effort would be involved in taking this unusual and potentially destructive path, and a plausible explanation for having done so is even more difficult to imagine. So there is a sense in which we are restricted. There are clear boundaries and in this space there is only one *right* way to make our way beyond them. And, noticeably, it is the simple and meaningful configuration of the physical environment which leads

us to this very obvious semantic conclusion (and hopefully to a door marked 'exit').

But what about further restrictions within the boundaries of the physical space? The positions the students take up are indeed very telling in this regard. On one level, they enter the classroom having a completely free choice about where to sit. Yet, for the most part, the students gather around the four existing table blocks. Frequently, free standing chairs will even be moved in order to achieve this positioning. At the same time, however, a range of alternative choices and preferences are also being displayed. Some students prioritise a good view of the projection screen and duly adopt a position and perspective which confronts this 'head on', whilst others, no doubt aware of the group work to come, happily take up initial positions which offer perspectives across or even away from the screen. Some prefer the table blocks closer to the projection screen, others prefer a greater distance. A few brave souls may even move tables to a location which is preferable from a personal perspective. This is freely allowed, but it is nonetheless comparatively rare. Even rarer is the student who ignores the tables altogether and in so doing chooses to occupy a space 'in the open'. In fact, this course of action is most commonly associated with late arriving students who find themselves forced into this position because their options have been reduced to near zero by the *a priori* positioning of the other students (who now form an inclusive part of the physical environment to be negotiated).

But why do most of the students gather to the table blocks when they are actually free to sit where they please? This is the crucial issue for our analogy. In principle, the classroom space affords an almost infinite number of possible positions and perspectives, so why are those possibilities not being fully explored? The answer is, of course, completely self-evident. The observed distribution of students is far from a surprising fact: gathering around the table blocks is just the obvious and most appropriate course of action in the environment we have described. Each table block provides a clear physical indication of the already meaningful and pre-selected positions which can most profitably be adopted within this particular space. Each represents an established body-of-knowledge and the students' positioning is simply a tangible reflection of that (social) fact.

Students were completely free to choose their own positions, they decided where to go without any direct instruction, and no two individuals ended up in exactly the same place, yet clearly discernible *groupings* of students have still appeared within the overall distribution. Members of a group have, to some extent at least, adopted a shared position within the available space. This does not mean, of course, that everybody has been drawn to these predictable locations. The groups do

not explain the entire distribution of students. Some individuals sit in the gaps between the tables and other students are occasionally led to join them. Across time, some of the tables may also get shifted in this same direction. Other individuals will reconfigure the existing table blocks if they are badly positioned or if their current form is not considered fit for the latest function. In practice, therefore, the table blocks – our analogical bodies-of-knowledge – are subjected to a process of subtle yet continual change in terms of both their position and form as a direct result of the students' activities and selections. The truth is, you can enter this classroom space week after week and, although its general configuration remains entirely consistent, it never looks exactly the same twice. It is as if the classroom is slowly evolving on the basis of human selection.

Now let us transfer this image from a physical space to the semantic or conceptual spaces with which most Q methodological studies are forced to deal. The physical environment of the classroom provided our students with clear boundaries to contain their activities and clear and tangible objects to define the nature and character of the space itself. There are things in a physical space that cannot be avoided and which are often very difficult to get around. A conceptual space is not so easy to discern. This observation is supported by the image of a 'concourse', which in one of its meanings clearly hints at a large, open and somewhat ill-defined space. The initial work involved in generating a Q set can hence be seen as a first attempt to resolve this definitional problem. We identify relevant boundaries and familiarise ourselves, as far as is possible, with the content of this or that conceptual space. The coverage of the Q set as a whole puts our conceptual walls in place. It defines the area in which our participants must operate.

Love, for example, the initiator of our surprising fact, shares boundaries with concepts like friendship, relationships, emotion, selfhood, and so on, and its content is shaped and defined by these and other associations. It is indeed very easy to make these factual and objective observations about love, for the concept is clearly a central and hugely meaningful aspect of the human world. Its availability as a semantic entity—as a socially shared knowledge system (Luhmann, 1998)—is exactly what allows us to sample its content for Q methodological purposes. And whilst the overall Q set generated by this sampling will ultimately set our conceptual boundaries, the individual statements must cover the relevant ground within those boundaries in as thorough a fashion as possible. The image of carpet tiles can be a useful one in this context. The general aim is to 'cover all the ground' without creating unsightly overlaps.

If this is achieved with any degree of success, a Q sort conducted using that Q set—which captures a participant's preference for some

ideas and their antipathy for others—will give us a very clear sense of their relationship to the concept in question and hence the *position* they are taking up within the conceptual space. A constructivist or case study approach might then proceed by administering further Q sorts to the same participant, under different conditions of instruction, in order to fully appreciate their personal viewpoint and knowledge systems. A constructionist or multi-participant approach, on the other hand, would proceed by administering further Q sorts to different participants under the same condition of instruction.

The inter-correlation and factor analysis of such multi-participant data can then be used to identify particular groups or clusters of participants captured in the form of distinct factors. In a Q study, participants are completely free to like or dislike particular items, to produce a Q sort of their choosing, and hence to position themselves as they please (just like the students in the classroom). There is, in this sense, no obvious reason why discernible groupings should emerge from the data at all. In fact, the vast number of selection possibilities and sorting configurations made available by the Q procedure actually make their appearance statistically improbable (Watts & Stenner, 2003b; 2005a). But they still emerge. The factor analysis confirms this and interpretation of the resultant factor arrays allows us to appreciate the nature of these socially shared viewpoints and knowledge systems in great detail.

Yet this only returns us to our surprising fact. Why do discernible groupings appear in the data? And why would two distinct participant groups, separated by 8 years and two hundred miles produce an almost identical first factor? The answer, it is being proposed, is exactly as it was in our physical analogy: the participants are simply being attracted to the same shared positions (and hence to a shared perspective) by the pre-existing bodies-of-knowledge which reside there.

The point is that conceptual spaces work in exactly the same way as physical spaces. They possess clear boundaries to contain our activities and are shaped by tangible objects which define the nature and character of the space itself. They possess an objective structure. This structure is defined by semantic entities – by bodies-of-knowledge rather than physical bodies – but it is all just as real, just as unavoidable, and just as difficult to negotiate as any physical environment. And it is these bodies-of-knowledge which provide us all with a clear semantic indication of the already meaningful and pre-selected positions which can most profitably be adopted in relation to a particular concept or issue. If you want to fasten onto something really pertinent about this or that concept, then fastening your own viewpoint to such a body-of-knowledge (literally *adhering* to it) will always seem a safe, obvious and very appropriate course of action.

Once this is accepted, our surprising fact appears as no surprise at all. The same objective body-of-knowledge has simply made its presence felt in both studies. It is a result of two distinct participant groups, separated by time and place, freely choosing to accept what is most obvious and appropriate. It is an expression of common sense: a matter of course. But this still doesn't mean that everybody has been led to take up this one position. Absolutely nothing is being *determined* here. Both studies contain a range of other groups (and hence factors), reflecting a range of alternative positions, and all these together still cannot account for the entire distribution of participants (or the total study variance) in each case.

Many individuals make far less conventional selections. Some subtly reconfigure a pre-existing body-of-knowledge (leading perhaps to a low but nonetheless significant factor loading?), others select an eclectic mix of elements from two or three (leading to a potentially confounded sort), and a few radical individuals even operate at a tangent to all that is ordinarily valued or held dear (such that no significant factor loadings accrue). In all that we do, we can just adhere to what is safe, accepted and obvious or we can choose to challenge convention. In the end, the most important thing to grasp, as Stephenson himself (1936, p. 356) suggested, is that a high factor loading "in Q technique may be regarded as a measurement of 'objectivity' in this sense, and low saturation as a measure of 'subjectivity'".

It follows that the more subjective we all are in our personal preferences and selections the more our social bodies-of-knowledge will be forced to alter their position and form. In so doing, the viewpoints or perspectives they represent will also be altered. What is most acceptable and obvious will in this way be subject to evolutionary change. The more 'objective' our personal preferences, on the other hand, the more things stay the same. A conceptual space will always be evolving, but our understandable tendency to cling to the safe and obvious—to stick with common sense—ensures that its general configuration remains very consistent across time. Our surprising fact is testament to that consistency.

It is apparent, of course, that the processes described here and the semantic entities that result, are not as easily observable, nor as immediately tangible, as their physical counterparts. We just can't see a semantic entity or a posited body-of-knowledge in the same way that we can see a table. And social constructionism, now redefined as human selectionism, can only *theoretically* assert their objective reality. As we implied at the outset, this makes it very tempting to dismiss their existence, reality and influence.

Yet it remains the contention of this paper that Q methodology can actually locate these bodies-of-knowledge and render their structure *empirically observable*. Processes of interpretation also allow us to understand and explicate the viewpoints or perspectives they represent holistically and to a level of qualitative detail that simply cannot be matched by other methods. And this is a very important claim. These bodies-of-knowledge evolve slowly but are nonetheless consistent across time, place and repeated interrogation (see, for example, Watts, 2001). They are very real and very central to all that we do: they constitute the human part of the natural world, the social part of the human world and, perhaps most importantly for our purposes, the objective part of the subjective world. They are nothing less than the characteristic (or *eigen*) values of human life—states that *really* matter—and for anyone prepared to accept their reality, they are the primary target and *raison d'être* of multi-participant Q methodology.

References

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