Never the Twain Shall Meet? Quantitative Psychological Researchers' Perspectives on
Qualitative Research

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Abstract

The aim of this article was to provide a quantitative researchers' perspective on qualitative research applied to sport and exercise psychology. Specifically, we aimed to identify some of the 'problems' that researchers adopting a predominantly quantitative, 'natural science' approach to psychological phenomena in psychology have with qualitative approaches. In addition, we also identified, as researchers from a predominantly background, the merits of adopting multi-method approach using both quantitative and qualitative methods in psychological research in sport and exercise psychology. We identified four potential 'problems' that quantitative researchers have with qualitative research: it is 'atheoretical', not sufficiently rigorous, lacks 'objectivity', and isn't generalizable. We argue that many of these 'problems' arise from uninformed prejudice and that many studies in quantitative research are also subject to the perceived 'problems' leveled at qualitative research. In conclusion, we provide advocacy for multi-method approaches using qualitative methods to inform quantitative research and provide examples from the psychological literature such as the development of psychometric measures. We also encourage quantitative researchers to examine the potential merits of integrating qualitative approaches in their research to provide a comprehensive explanation of the phenomenon of interest.

Keywords: multi-method approach; quantitative research; qualitative research; theoretical integration; assumptions; research methods

Never the Twain Shall Meet? Quantitative Psychological Researchers' Perspectives on Qualitative Research

Much has been written on the distinctions, merits, and detriments of quantitative and qualitative approaches to understanding phenomena in human behaviour and, in particular, sport and exercise psychology (Cromby, 2011; Lyons, 2011; Sparkes & Smith, 2009; Weed, 2009). Suffice to say that researchers in psychology adopting quantitative, hypothesis-driven research using positivist methods tend to adopt a view of qualitative, inductive, and interpretive approaches with some scepticism, or even overt prejudice (Pickering, 1993). One of the reasons why such views are relatively rife in social science, and, in particular, psychology is that the predominant mainstream approach to research is the positivist, 'natural science' approach, which is theory driven and tests hypotheses for a given relationship, difference, or effect against a null hypothesis of no effect (Westerman & Yanchar, 2011). However, in our opinion, such views are born of ignorance rather than a genuine aversion to a particular perspective or methodological approach. Indeed, as researchers originally trained as quantitative social psychologists, we too have been guilty of making disparaging remarks and expressing negative views regarding qualitative research in the past. This confession is made with the knowledge that our views have changed as a consequence of experiencing close contact with qualitative research and researchers and, in so doing, developing a greater understanding of what qualitative research entails and its distinctions with our own quantitative designs.

On the basis of this increased understanding we did not only change our views, but have since actively adopted and integrated qualitative designs in our own research (e.g., Hagger, Chatzisarantis, & Biddle, 2001; Hagger et al., 2007; Hardcastle & Hagger, in press; Lentillon-Kaestner, Hagger, & Hardcastle, in press). We recognise that rather than focus on the typical

distinctions between qualitative and quantitative research there is perhaps need to revise our focus and talk of the distinction between, for example, experimental science and interpretive science and indicate that quantitative and qualitative research can be integrated such that one approach compliments and augments the other. Therefore, our aim for this article is to investigate the 'problems' that quantitative researchers have with qualitative approaches to psychological phenomena in sport and exercise, provide our perspective as to why these 'problems' are born of prejudice and ignorance of the qualitative method, and illustrate that some of these limitations could be equally levelled at quantitative research. We also provide some suggestions as to how qualitative approaches can help inform research adopting a largely quantitative approach and, in so doing, provide complimentary, comprehensive explanations of behaviour in sport and exercise.

The Problems

Quantitative psychologists often cite a number of 'problems' or 'limitations' with qualitative research. These include, but are not limited to, a perception that qualitative analysis is atheoretical, the perceived lack of rigor of qualitative analyses, an inherent lack of 'objectivity' in qualitative researchers' findings, and limitations in the extent to which qualitative findings can be generalized. As researchers adopting a predominantly quantitative perspective on approach to research, knowledge, and observation (e.g., Chatzisarantis, Hagger, Smith, & Phoenix, 2004; Hagger & Chatzisarantis, 2009b; Hagger, Wood, Stiff, & Chatzisarantis, 2009, 2010; Mulder, Pritchford, Hagger, & Marlow, 2009; Orbell, Hagger, Brown, & Tidy, 2006), we confess that we have been partial to all of these exceptions at one time or another. However, we believe that our dismissive beliefs were borne of ignorance, and resulting prejudice, rather than of an informed opinion based on knowledge and understanding of qualitative designs and analyses. It is probable

that this is the case for many a quantitative researcher who, generally, is a stalwart of the 'scientific' approach and positivist principles, mainly due to an inherent, institutionalised bias in teaching methods in psychology toward quantitative approaches in academic schools as well as a general lack of contact or close scholarly interaction with those using different perspectives (Shaw, 2011; Jonathan A. Smith, 2011). Such conditions of academic 'isolation', psychologists studying group dynamics will attest, lead to dogmatic, polarised thinking with respect to research perspective and engender prejudices against paradigms and beliefs that are recognised as belonging to a distinct outgroup (Hogg, Abrams, Otten, & Hinkle, 2004). We argue, therefore, that the dismissive and prejudiced attitudes of qualitative research by quantitative researchers are often fuelled by ignorance rather than a response to genuine, informed epistemological differences.

As journal editors, we have been increasingly exposed to research adopting qualitative approaches and designs and a cursory glance at the psychological literature indicates that there has been a recent surge in intensity within the qualitative research literature (Weed, 2006). Other than being a barometer of the increased recognition of qualitative designs as a means to generate knowledge and explain and interpret psychological phenomena and experiences, this has also served to increase the exposure of qualitative research to investigators in the discipline of psychology applied to sport and exercise. Furthermore, the remit of this research is ever-increasing, such that few areas have not been exposed to research adopting qualitative designs. This exposure, we would argue, has compelled quantitative researchers to, at the very least, take a longer, closer look at those investigating phenomena from these perspectives and, in many cases, this has led to a softening of opinion with respect to qualitative designs, or, in our case, a

recognition of the value of qualitative research and its propensity to make a valuable contribution to knowledge and understanding of behaviour and outcomes in sport and exercise psychology.

In the next section we outline the typically-cited 'problems' or issues that researchers adopting quantitative approaches have identified and the basis for their objection. We subsequently offer an alternative point of view from the perspective of 'informed' quantitative researchers who have, by our own admission, 'seen the light' when it comes to recognising the merits of the perspective offered by qualitative research. An important caveat here is to acknowledge that (1) we may very well be in the minority in holding this opinion; (2) we are, and will remain, quantitative researchers who adopt predominantly 'natural science' and positivist principles when it comes to research; (3) we have not been commissioned or solicited to write this piece, but view it as an opportunity to put across our point of view, engendered through our experience with quantitative research, which has led us to adjust our perspective with respect to the role and value to knowledge of qualitative research; and (4) our goal is, at the very least, to raise awareness of and challenge the frequently-held prejudicial beliefs regarding qualitative research held by those involved in quantitative research. We do not expect our quantitative colleagues to engage in, or unequivocally endorse, qualitative designs as a consequence of our essay, that would be tantamount to paradigm shift of seismic proportions; an unrealistic aspiration. Rather we hope that by challenging these erroneous beliefs about qualitative research we, at the very least, turn some heads toward the potential for qualitative research to make contribution knowledge and understanding in sport and exercise psychology.

Qualitative research is atheoretical. Many a quantitative researcher has taken issue with qualitative research, claiming that it is not theoretical i.e., it is perceived as not driven by an explanatory system that allows one to pose hypotheses or research questions and match or 'test'

them against observations to test their validity. These perceptions stem from the observation that qualitative research relies on entirely inductive methods to collect and analyse data, and, as such, there is not theoretical 'starting point'. This is in contrast to quantitative approaches adopting a 'natural science', positivist approach to knowledge which, by definition, adopts a deductive approach. However, examining the multitude qualitative approaches to psychological phenomena in sport and exercise, numerous examples of theory-driven and deductive approaches are apparent. For example, many versions of grounded theory methodologies lie at the interface between inductive and deductive approaches (Weed, 2009). Grounded theory includes a number of core elements which involve the application of theory to inform further data collection and analysis in an iterative process. Inductive approaches that assist in the generation of initial theory are also used and, as a consequence, this approach adopts both inductive and deductive components to generate, as well as 'test', theory until a point of 'theoretical saturation' is reached wherein further iterations or data offer no new insight or novel explanations of the phenomenon or phenomena under scrutiny. For a lucid treatment of the application of the conceptual and methodological principles underlying grounded theory, the reader is directed to Weed (2009) and associated commentaries (Holt & Tamminen, 2010a, 2010b; Weed, 2010). This example clearly illustrates that labelling qualitative research as 'atheoretical' is fallacious.

It is also important to acknowledge that dismissal of qualitative research as atheoretical is also to miss the point. First, as illustrated above, it is a misconception. Second, the elements of qualitative research that are not 'theoretically driven' is one of the important ontological (and, ultimately, epistemological) aspects of qualitative research. The implicit 'demand' placed by quantitative researchers to have research that is rigorously driven by a theory-testing approach does not apply in the same manner to qualitative research. This is because qualitative researchers

are interested in, and have a lot to say, on the nature of reality and 'truth' in the world (ontology) and how knowledge about that world can be generated and interpreted (epistemology) (Marecek, 2011). These perspectives are not mutually exclusive and one of the cornerstones of this kind of research is whether knowledge about the world is separable from the processes (i.e., methods of observation, interpretation) that lead to the generation of that knowledge. Most qualitative approaches acknowledge that the observer is likely to influence or affect change in the phenomenon under observation and therefore suggests that reality is one that is shared and generated through interpretation rather than a single, reified reality. This means that the assumption that knowledge is generated by the testing of a theory of a particular phenomenon by observation (data collection) is less applicable in the case of much qualitative research. Therefore, quantitative researchers who question the value of qualitative research because it is atheoretical, unfairly judge qualitative research by their own epistemological approach, which has comparatively little relevance to the questions asked in qualitative research. Many quantitative researchers disregard this when they talk dismissively of qualitative research as being 'atheoretical'.

Qualitative research is not sufficiently rigorous. One of the key problems that researchers adopting a 'scientific' approach have with qualitative research is that it lacks sufficient academic rigor to provide credible observations that contribute to explaining psychological phenomena in sport and exercise. One of the key 'complaints' is that qualitative research lacks rigorous checks on the validity and reliability of measurement and does not apply its methods in a systematic, consistent manner to its subject matter. Researchers from the quantitative stable cite the testing of measurement instruments, such as psychometric inventories, for construct, discriminant, concurrent, predictive, and nomological validity as an example of the

high-level of 'scientific' rigor applied to measurement. They claim that such rigor ensures that the measure will evoke a 'true' response reflecting the level of the psychological variable from any individual that happens to complete the measure. Experimental designs are also considered exemplary of the rigorous approach in quantitative psychology. The precise control of all variables other than those that are manipulated has very much been the keystone on which the foundations of knowledge and understanding of behaviour in many disciplines in psychology have been built. These approaches to design offer ostensibly rigorous control for the impact and influence of extraneous variables.

From the quantitative researchers' perspective, qualitative research lacks this level of rigor. Methods such as semi-structured interviews and focus groups that provide the primary observational data for many qualitative studies have none of these controls and the data take the form of free responses to questioning from a partial observer or researcher. However, from a methodological perspective, qualitative researchers frequently insist that in qualitative approaches that are interpretative in focus, the level of control over extraneous factors is immaterial. This is because the approach generally focuses on a theory building (inductive) rather than a theory testing (deductive) approach, an acknowledgement that the input and role of the researcher is not only paramount, but inextricably linked to the generation of knowledge about the phenomenon under scrutiny and, in effect, cannot be removed or partialled out through rigorous control over limiting factors. Quantitative researchers' claims that qualitative research lacks rigor miss the point. Qualitative methods acknowledge the input and perspective of the observer (in the case of interviews and focus groups, this is the researcher him or herself) or the context and perspective in which the data were generated. The observer's influence therefore assists in the 'construction' of knowledge of the subject matter and is central to the construction

of the ideas, theories, and models that emerge from the data. Therefore, the 'rigor' so hotly pursued by quantitative researchers is not really on the radar of qualitative researchers, to apply the methodological rigor debate to qualitative psychologists is to miss the point.

In fact, researchers in glass labs shouldn't throw stones. Researchers conducting studies using quantitative methods can learn a lot from qualitative research with respect to the role of the researcher (and other potential extraneous factors) influencing research. The premise that the observer has the propensity to affect the observed, and therefore introduce a confound or change to the phenomenon under scrutiny, is no new phenomenon in research adopting the 'natural science' approach. Werner Heisenberg famously unveiled that faith in the traditional Newtonian laws of mechanics was somewhat misplaced when he demonstrated that precise prediction of the position of particles could not be ascertained with any accuracy, rather estimates could only be provided (Cassidy, 1991). Philosophically, this suggests that observations of the present do not necessarily mean that the future can be predicted with great certainty. On a similar tack, Rosenthal and Jacobson (1992) demonstrated that researcher expectation can have profound effects on the performance of others demonstrating that lack of blinding in experimental research meant that the observer could unconsciously affect the observed. This research suggests that even in the realm of quantitative research, the observer and the act of observing still has to propensity to change the system under observation. Qualitative research takes this notion a step further and explicitly implicates the observer's role in the process of observing and generating data, so, rather than aiming for complete impartiality through methodological rigor, qualitative researchers embrace the uncertainty and suggest that reality and truth is a construction that emerges from multiple perspectives including that over the observer.

Qualitative research lacks 'objectivity'. Related to the generally-held view that qualitative research is 'atheoretical', quantitative researchers also have problems with the specific methods that qualitative researchers use to generate their data. These problems are largely focused about the lack of objectivity in the data generated in qualitative research. Specifically, these problems refer to the interpretive analytic approaches adopted by the researcher or analyst of qualitative data which, by definition, have the role of the researcher as central to the generation of meaning and knowledge of the topic under scrutiny (J. A. Smith, 2011; Todorova, 2011). For example, analytic techniques such as inductive thematic content analysis of interview transcripts and the subsequent generation of 'emergent' of themes or interpretive phenomenological analysis have been criticised as being over-reliant on subjective interpretation by the interviewer and analyst. From a quantitative researcher's perspective, the analysis would lack validity because the input of the analyst means that the data generated was subject to interpretations that affect the data and could be erroneous or different to another's interpretation.

To some extent, from our knowledge of qualitative research, this accusation is true. The role of the analyst as having potential to affect the observations and interpretive phases of data collection is one that is explicitly acknowledged by qualitative researchers. Again, the quantitative researcher 'misses the point' when imposing their desire for apparent objectivity on the qualitative research. We, too, were guilty of this perception of qualitative research until we began to look at the purpose, aims, and approaches used by qualitative researchers, which, as an associated effect, led us to a great deal of introspection on our own methods and approaches as quantitative psychologists. As mentioned above, many approaches to qualitative data explicitly cite the role of the researcher in the interpretive process and focus on the development of

knowledge that is, ultimately, context-tied and 'grounded' in a particular area or situation (Chamberlain, 2011). In qualitative research, there is the clear assumption that data are never likely to be free from bias or interpretation and, therefore, in qualitative research it is important that one that acknowledges the role of researcher input and actively embraces it.

Qualitative Findings Aren't Generalizable. One of the big bugbears we have had with qualitative research is that it is not generalizable to the general population. By definition, qualitative research is only as generalizable as it applies to the phenomenon under scrutiny and reflects the specific experiences of the participants in that research (Jonathan A. Smith, 2011). Again, the purpose of such research is not to generalize, but to generate rich observations that provide insight into the psychological processes involved in the individuals experiencing that phenomenon. As quantitative researchers we initially, like many other quantitative researchers, viewed the value in these data with scepticism; surely the purpose of such research is to provide detailed examination of the processes involved and how they might inform the understanding of the processes and mechanisms that give rise to behaviour, broadly defined? The underlying assumption of this position is that of an 'information processing' metaphor of human psychology, which pervades the quantitative approach to knowledge in all areas of psychology, including sport and exercise psychology (Hagger & Chatzisarantis, 2009a). The assumption here is that given the appropriate conditions within the individual (e.g., personality, belief levels etc.) and in their environment (e.g., various stimuli, social support), one should be able to reliably predict an individual's behaviour. This is a valuable metaphor from a quantitative approach as the methods adopted involve careful measurement of psychological and behavioural variables, measurement of, and control over, other potentially confounding (covarying) variables, and, possibly, careful control over the conditions that might affect people's responses, other than

those variables that are being manipulated. However, we recognise that these assumptions are not applicable to qualitative research. Qualitative research has less focus on generalizability and more focus on detail and richness of experience. Approaches in the qualitative field also concentrate on the value of experience and suggests that a true 'reality' is relative and experienced by people differently, such that multiple versions or readings of phenomena and experiences are possible (Chamberlain, 2011). Therefore truth or knowledge is not a fixed concept, but rather one that is shared or constructed through experience. There is, of course, some potential for generalizability in that experiences can be shared and there may be consensus across experiences in specific situations with identical conditions. It is just that the focus of qualitative researchers is not directly on generalizing at the population level.

Furthermore, a bit of introspection confirms that the generalizability of quantitative research is overstated, even though many researchers in sport and exercise psychology profess that it does, or, at least, it should were it conducted with sufficient consideration for extraneous factors and potential confounding variables. The general assumptions surrounding quantitative approaches to research in sport and exercise psychology indicate that behaviour can be predicted with complete accuracy providing measurement is precise and all potential factors are taken into consideration (Hagger & Chatzisarantis, 2009a). However, a cursory glance at the sport and exercise psychology literature and, indeed, further afield in social science, reveals that regression models used to predict behavioural outcomes on the basis of psychological, environmental, and demographic factors seldom report an explained variance above 50% and, frequently, the value is substantially smaller. This means that, at best, almost half the variance in behaviour remains unexplained by the variables derived from the 'theoretical' model measured by the researcher. Put another way, for every 'unit change' in the linear combination of the variables measured in

the research, one would expect a half-unit change in the dependent behavioural variable. While that change may be statistically significant, in some contexts, it may have little value or 'clinical significance'. Quantitative researchers argue that such regression models do not have the predictive power of the kind observed in pure science because of the complexities of social science research, an inability to measure constructs without systematic error attributable to poor measurement, and an inability to fully account for all of the potential confounding variables. This illustrates that the assumptions of generalizability of underlying quantitative research are overstated. The measurement issues and lack of control for the complex mix of factors likely to affect the system present serious limitations to the assumption of generalizability in quantitative research. In this case, researchers in glass labs should definitely not throw stones!

The Merits of a Multi-Method Approach

Thus far we have focused on the perceived problems of qualitative research perceived by quantitative researchers and served to 'bust' these myths from the perspective of quantitative researchers who have been involved with conducting and evaluating quantitative research as researchers, supervisors, and journal editors. In so doing, we not only wanted to illustrate the foibles and prejudices of those who adopt a purely quantitative, 'natural science' approach to knowledge generation and look upon qualitative research as with scepticism, but also illustrate the limitations of quantitative research (and indeed that quantitative research is also subject to some of the criticism levelled at qualitative research by quantitative researchers themselves!) and highlight the merits and strengths of qualitative research. However, an additional aim was to demonstrate that rather than disparate approaches with irreconcilable differences on the way knowledge is generated regarding phenomena in sport and exercise psychology, qualitative approaches can offer much to informing and developing research adopting quantitative

approaches and vice-versa. In fact, quantitative researchers frequently adopt some, albeit crude, forms of qualitative research to develop their work and, from our perspective, this should not only be encouraged, but expanded as such multi-method approaches provide more comprehensive explanations of the phenomena under scrutiny and also help to fill the gaps in knowledge that remain if research was restricted to one of the approaches alone (Hagger, 2009). From our perspective, qualitative research has informed our thinking and our investigations in two ways: the development of theory and the development of more effective measures.

Quantitative researchers engage in very little inductive, 'theory generating' or 'theory building' research, that is, true 'inductive' research. Much of the development of theory in quantitative psychology applied to sport and exercise arises through the support and confirmation or lack of support and rejection of research or experimental hypotheses through a series of carefully developed correlational and experimental studies. This is one area in which complementing research adopting a qualitative perspective may assist in the further (and quicker) development of theory. This is particularly advantageous in fields where there is comparatively little research or current knowledge. The use of interviews and focus groups as a means to collect rich, detailed data which can then be analysed using qualitative methods will assist in generating new ideas about the psychological processes and mechanisms that might be at play in this particular context. Indeed, a qualitative approach may assist in identifying the salient constructs and factors that might be influential, the key outcome variable that may be informative about people's behaviour in these situations, and help identify links between these constructs and important behavioural outcomes. Whether the qualitative approach actively 'builds' a theory (e.g., such as in grounded theory) or provides the 'raw' constructs of interest, it will be able to

help develop a quantitative study which can then be used to generate further knowledge of the phenomenon in a wider, population-based study.

This leads to the next potential advantage of a multi-method approach; measurement development. To some extent, quantitative researchers, if they are worth their salt, already adopt some forms of qualitative analysis of source data (e.g., interview data, content of questionnaires) using such methods to inform their development of psychometric instruments for use in subsequent quantitative studies. In fact, the general approach advocated by psychometricians is to generate questionnaire items from first principles (Hagger, et al., 2007). Such an approach uses the content analysis of 'free-response' questionnaires or transcripts of interviews or focus groups collected from a sample of individuals regarding the particular topic or construct of interest. For example, personality researchers not only develop their instruments from qualitative data generated from the testimonies of individuals about the construct of interest, but also through the content analysis of dictionaries and other 'word sources'. This generates an initial 'item pool' which can then be tested on a larger sample using quantitative techniques. Similarly, in our research, we have tested particular theories such as the Theories of Reasoned Action and Planned Behaviour and used qualitative analyses of interview data to identify the salient beliefs in order to generate questionnaire items to measure those beliefs so that they are specific and relevant to that population. These can then be piloted further on a larger sample of the target population in order to provide further validity for the constructs. In addition, researchers in the area of questionnaire development talk of 'face validity' alongside other forms of validity. Face validity reflects the judgement of the researchers (and, likely, some acknowledged experts) that their questionnaire measures adequately capture the facets of the construct to be measured. Evaluation of face validity is frequently achieved through consensus opinion via the content

analysis of questionnaires and is a largely 'subjective' approach. Although these analyses are somewhat simplistic from a seasoned qualitative researcher's perspective, they reflect a multi-method approach to the generation of knowledge about a particular construct or subject.

However, it is also important to recognise that researchers do not do this as of right, and often 'cut corners' by imposing their own content on the development of questionnaire items rather than having it generated by the target population. Given the added value that the adoption of a qualitative approach to inform the quantitative testing of psychometric instruments, we would strongly advocate the multi-method development of psychometric instruments and questionnaires using this 'first principles' approach.

Conclusions

In this article we have offered a considered opinion on the merits of qualitative research from the perspective of researchers with a largely quantitative perspective on research and the development of knowledge, but whose perspective has been broadened by the adoption, on occasion, of qualitative research (e.g., Hardcastle & Hagger, in press; Lentillon-Kaestner, et al., in press). Our aim for the article was to provide our perspective on the problems quantitative researchers have with qualitative research and how, in most cases, these are unjustified and reflect methodological prejudices born of ignorance than true insight. A further aim was to identify areas where multi-method approaches using both quantitative and qualitative methodological perspectives can assist in providing a more comprehensive explanation of psychological phenomena in sport and exercise. In particular, we identified four potential 'problems' that quantitative researchers have with qualitative research, namely: qualitative research is 'atheoretical', not sufficiently rigorous, lacks 'objectivity', and isn't generalizable. We argue that these arguments are misplaced, largely due to a lack of understanding of the

approach, and illustrate that some of the limitations applied to qualitative research are frequently evident in research adopting a quantitative approach. Furthermore, we used examples from the area of psychology to illustrate how qualitative and quantitative research can be integrated in a single study and provide complimentary explanations for behaviour in sport and exercise contexts. Specifically, we demonstrated that qualitative research can help generate theory ripe for testing in a more global sense using quantitative methods and also how qualitative research can help in the development of psychometric instruments tested in quantitative personality and theory-testing research.

In conclusion, our advocacy of a multi-method approach is borne out of a desire for deeper insight into the process and mechanisms that underpin behaviour in sport and exercise contexts and, in doing so, advance thinking and knowledge of these phenomena. An adherence to a single theoretical or methodological approach is not only dogmatic and, frequently, born of prejudice and lack of understanding, but is also detrimental to understanding and developing unique and new perspectives on behavioural phenomena. We have gone through the full gamete of emotions and beliefs regarding qualitative research from prejudiced thinkers, to sceptical inquirers, and, finally, to advocates of multi-method approaches. In our view, one of the merits of conducting qualitative research, and developing a fuller knowledge of its methods and approaches, has been that it has helped us develop a greater awareness of what it means to generate knowledge and the ontological and epistemological roots of 'knowing' about our social world. As we stated in our introduction, we are not expecting our eulogy to lead to a 'seismic shift' in quantitative researchers' views of qualitative research, but hope that this, at least, raises an awareness that qualitative research is not necessarily what it seems when seen through the lens of a quantitative, 'natural science' approach to research in sport and exercise psychology.

Therefore, we encourage quantitative researchers to do a bit of research on qualitative research and arrive at their own, informed, opinion.

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