Oxford Review of Education, Vol. 29, No. 1, 2003

Carfax Publishing
Taylor & Francis Group

On Martyn Hammersley's Critique of Bassey's Concept of the Fuzzy Generalisation

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ABSTRACT *This article is a further contribution to a critique of Michael Bassey's concept of 'fuzzy generalisations' as a form of dissemination of educational research. Martyn Hammersley has questioned both the uniqueness, and validity, of 'fuzzy' generalisation; the former in terms of a misunderstanding about the nature of generalisation as a whole, and the latter in relation to the potential for circumventing the research community's role in validation. It is argued here that, whilst in agreement with the first of these criticisms, the second depends upon the perspective taken, and that, from the perspective of the practitioner—as opposed to the researcher—(external) validity is a question of 'usefulness' within a particular context rather than generalisability across contexts. Furthermore, generalisations which state what will happen to a practitioner may fail to take account of the fact that he or she is far from being a passive recipient of the research.*

Bassey (1999) proposes the notion of 'fuzzy generalisations' as a means of disseminating the results of case study research. He acknowledges that his proposal is, in part, a reaction against the kind of research outcomes suggested by David Hargreaves (1996) in his lecture to the Teacher Training Agency in which he called for research that

> demonstrates conclusively that if teachers change their practice from x to y there will be a significant and enduring improvement in teaching and learning. (Hargreaves, 1996, quoted in Bassey, 1999, p. 48)

Bassey rejects the notion that this is even possible, stating that 'teaching situations are so varied that it is rarely, if ever, possible to say with certainty "Do x instead of y and your pupils will learn more"' (Bassey, 1999, p. 48). Instead, he suggests that research outcomes from case studies should be phrased in language that provides 'a firm reminder that there are many variables which determine whether learning takes place' and which invite teachers 'to enter into discourse about it' (1999, p. 51). Thus, in place of 'do y instead of x and your pupils will learn more', he suggests a phrase such as 'do y instead of x and your pupils *may* learn more' (1999, p. 51), noting that whilst this is only a slight change in language, it implies a very great change in emphasis.

In stating these ideas, Bassey refers to his (relatively recent) realisation that there are different kinds of generalisation and refers to *scientific* generalisations (those of classical physics) and *statistical* generalisations (those born of survey research, 'studies of samples', which include a statement of the probability that an event will happen). He delineates these generalisations and claims fuzzy generalisations as a third, distinct, form of generalisation; 'a qualified generalisation, carrying the idea of possibility but not certainty' (p. 46).

ISSN 0305-4985 print; ISSN 1465-3915 online/03/010027-06 © 2003 Taylor & Francis Ltd
DOI: 10.1080/0305498032000045331

In response to Bassey's ideas, Hammersley (2001) has criticised the distinction that is made between these forms of generalisation, claiming that they are all, in fact, of the same kind. Essentially this criticism is on two accounts. First, he rejects the notion that fuzzy generalisations are distinct in the sense that they do not apply to every case. This rejection is based on the premise that *scientific* generalisations too are only 'certain' within the conditions in which the experiment was carried out and, hence,

> outside of the situation where scientific generalisations are being tested, predictions derived from them about future cases should *always* be formulated in terms of what *could* happen. (2001, p. 220, italics in original.)

The same argument is, he claims, valid for statistical generalisations too, since the nature of the sample makes them less than certain in any situation beyond the sample itself. Thus,

> whilst scientific laws should be formulated in terms of what causes them (always or in x% of cases), predictions derived from these laws about future cases ought to be formulated in terms of what *could* happen. (2001, p. 223, italics in original)

His second rejection of the difference between fuzzy generalisations and scientific and statistical generalisations is based on the way in which each is produced. He notes that, in claiming that a fuzzy generalisation can be formulated when a case study suggests a causal relationship between variables and that the fuzzy generalisation suggests that the same causal relationship 'may' exist in other cases, Bassey

> neglects a crucial feature of causal attribution; that it is intrinsically general in character. To say that a causal relationship operates in one case is necessarily to imply that the same relation *will* (not that it *may*) hold in other similar cases (even if we cannot be sure what 'similar' means in exact and reliable terms). (2001, p. 221)

The corollary of this, he points out, is that the problem becomes that of determining what 'sufficient support' implies in the case of a fuzzy generalisation and that, whereas scientific research relies on validation by the research community, Bassey seems to be implying that 'all educational research reports should present fuzzy generalisations designed for use and accompanied by best estimates of trustworthiness' and, hence, that this 'circumvents the role of the research community in validating findings' (p. 221). In summary, Hammersley claims that:

> What is faulty about the use of natural science as a paradigm by social scientists and educational researchers is not the conception of generalisation which this involves but the model – supposedly derived from science – of the relationship between the knowledge produced by the research and practical action. (2001, p. 223)

Thus, the problem is not that case study (or social research in general) cannot create laws that will predict outcomes in all cases, but that, in fact, *any* type of research fails to be able to do this, so that even if educational research could produce scientific laws these would only tell us what *could* happen and not what *will* happen.

> In other words, 'fuzziness' is not a feature of a particular type of generalisation but rather a mode of formulation that ought to be characteristic of all

> generalisations, *including those produced by scientific research*, when they are intended to guide future action in the world. (2001, p. 223, italics in original)

Hammersley, despite his criticisms of Bassey's differentiation between different kinds of generalisation, still acknowledges the usefulness of the notion of fuzzy generalisations, particularly in 'suggesting that we can have theoretical knowledge of causal relationships before we can produce precisely and fully formulated scientific laws—indeed, perhaps even when such precision and completeness are unobtainable' (p. 223).

I wish here to pick up on this sense of utility and to take it on a stage further, for whilst I accept Hammersley's rejection of 'fuzziness' as a unique form of generalisation I agree with him regarding the usefulness of the idea of 'fuzzy generalisation' as a form of dissemination for educational research, but believe that there are implications for it which are not identified in his critique. In essence, this is that he does not take full account of a central aspect of generalisations in influencing practice; namely that the practitioner is not a *passive* recipient of the research in the way in which formulations of generalisations (of any sort) seem to suggest. Thus, they are suggested in the form 'do x instead of y and something positive *will* happen *to* your practice as a result', whilst their 'fuzzy' equivalents suggest 'do x instead of y and something positive *may* happen *to* your practice as a result'. However, both these formulations imply that the changes in practice happen *to* practitioners rather than that practitioners *make* changes happen within their practice.

The important aspect here is the function of research and the role of researcher and practitioner within it. From the point of view of the researcher, the aim of the research is to analyse a situation in order to understand it better and then to disseminate this new understanding in order that others might share in it. From the point of view of the practitioner however, the aim of the research is to *make use* of the fresh insight in *effecting change* in his or her own context. Note that, in the first of these, the aim is the *formulation* of understanding, whilst in the latter, the aim is the *utilisation* of understanding (and note too, that 'researcher' and 'practitioner' may be the same person operating in different modes at the different times). If research merely aims to describe a studied case then an analysis of what happened *to* the practitioner suffices. However, if it aims to offer the opportunity for practitioners to *change* their practice as a result of understanding the studied case (or to try to persuade them to do so), then it seems sensible for the research to present the analysis in a form that emphasises the action that *may* be taken to facilitate that change. Indeed, this is what Bassey seems really to be proposing.

> A fuzzy generalisation carries an element of uncertainty. It reports that something has happened in one place and that it may also happen elsewhere. There is a possibility but no surety. There is an invitation to 'try it and see if the same thing happens for you'. (1999, p. 52)

I would suggest, however, that fuzzy generalisations might be taken a stage further. Instead of stating that 'doing x rather than y may *result in* a positive change to your practice' we might state that 'you may be able *to facilitate* change z in your practice by considering doing x instead of y in your particular context'. One might claim that this may simply be seen as semantics. However, in the same way that Bassey himself suggests that a small change in wording from 'will' to 'may' produces a significant change in meaning, so I make the same claim here. What is important is not—as

Hammersley rightly argues—the *form* of the generalisation, but nor should it be simply an 'invitation to try it and see'—as Bassey proposes. Rather fuzzy generalisations should be seen as a way in which researchers may share with practitioners their understanding of how the latter *might* reconsider their practice in order, *proactively*, to *make* change happen in their own context. That is, the research outcome needs to say to the reader 'this is what happened in this case, these are what appeared to be the significant aspects of it, now you could consider how they *might* (note, the uncertainty remains) apply to your situation in order to help you *make* change happen'. Furthermore, the invitation remains open for the practitioner to report back on the process of trying to effect the change, to describe whether or not it worked, and to analyse the aspects of the practice which facilitated this. It thus maintains, as Bassey suggests (1999, p. 52), the opportunity for case study to become cumulative as individual practitioners identify those features of their practice which seemed to be significant in effecting the change.

In addition to the change in emphasis outlined above, the delineation of the perspectives of researcher and of practitioner allow us to reconsider Hammersley's second objection to the idea of fuzzy generalisations; the circumvention of the research community in validating the outcomes of the research. He points out that validation of case studies through accumulation of cases relies on comparison of cases which are of the 'same putative kind selected to provide comparative leverage' (footnote, p. 224). Once again, this is based on the premise that research should result in knowledge which generalises in a particular way; namely that, given a specified set of conditions, an action of the form x will produce (by causal relationship) a result, z, in practice. However, this again relies on an understanding of the recipient of the research as passive. If fuzzy generalisations are seen as opportunities to understand a situation in order *to effect* change, then their (external) validity may be seen not as a function of whether the 'same thing *happens*' in other situations with comparable conditions but, instead, of the extent to which practitioners can *make use* of them in effecting change proactively in their own situation.

Again, the distinction here is to do with the different perspectives of the researcher and the practitioner. What Hammersley seeks is the creation of academic knowledge, for which (external) validity means the extent to which there is 'substantial agreement' within the research community that the findings are 'sufficiently likely' to generalise to other cases, given the available evidence. On this basis, he thus claims that

> the fundamental problem is that, on his [Bassey's] account, it is not clear what precautions are to be taken by case study researchers to make sure that what is proposed as a fuzzy generalisation has a reasonable chance of general validity based on causality; given the case study does not employ experimental manipulation. (Hammersley, 2001, p. 222)

However, this 'problem' is dependent upon a desire for the outcome of the research to be knowledge in an academic form, where the central tenant of validity is as a measure of generalisation *in terms of causality*. My claim is that (1) this relies on the notion of the practitioner as a passive variable in this causal relationship, and that (2) it takes the perspective of the researcher as being dominant over that of the practitioner, with the result that academic knowledge is seen as superior to practitioners' 'craft' knowledge. When this situation is reversed, and the perspective of the practitioner is placed first, what matters is not whether the result generalises to *all* cases (with the same conditions), but whether it can be *made* to generalise to the practitioner's *own* case. This is, of course, a function, in part, of the *active* ability of the practitioner to do so, not simply

to 'let it happen' to her. Seen in this light, from the practitioner's perspective, external validity becomes more a matter of the *usefulness* of the case in supporting change in the practitioner's own context. Cumulative case studies might therefore provide increasing validity in the sense that they are likely to increase the opportunities for the practitioner to identify those aspects of the situation which are 'significant' to her in being able to effect a change in her practice.

In passing, it is worth noting that this may also provide a rationale for seeking alternative forms of presentation of the research such as those discussed by Woods (1997). Where utility becomes the main focus for reporting research, these alternative forms of presentation are, perhaps, more likely to produce the kinds of resonances that allow the practitioner to identify which of the features of the case studied are the most significant.

Finally, but significantly, it should be noted that the above discussion refers to an alternative conception of *external* validity. It is important to note that, whilst it challenges the notion that external validity need be a function of causal generalisation, it does not alleviate the need for *internal* validity. Whilst it is the perspective one chooses to take (researcher or practitioner) which affects the nature of external validity, whichever perspective is chosen, one needs to be sure that the features of the situation identified as 'significant' are arrived at in ways that allow a reasonable degree of confidence in them. Thus, issues such as soundness of reasoning, sufficient triangulation, systematic enquiry etc., as detailed by Bassey under the term 'trustworthiness' (1999, pp. 74–77), remain crucial to the internal validity of the research. In criticising the adequacy of 'professional judgement about trustworthiness', in the sense that it does not sufficiently involve the research community, Hammersley seems not to be making the distinction between internal and external validity.

SUMMARY

I am aligning myself, in the above discussion, with Hammersley's criticisms of the uniqueness of fuzzy generalisations and agreeing with him about the usefulness of the notion. However, the difference between us is in my own delineation of two perspectives, that of the practitioner and of the researcher, which, I assert, leads to different emphases in terms of what constitutes (external) validity. The latter perspective leads to an emphasis on academic knowledge where the focus is on the legitimacy of the knowledge itself, with an associated emphasis on generalisation between all 'similar' situations. The former perspective, however, leads to an emphasis on craft knowledge—what counts is its applicability to a specific situation; that of the practitioner herself. From this perspective, the practitioner is no passive recipient of the research 'to' whom things happen; rather, she is active in *making* changes to her practice as a result of a consideration of the issues raised by the research.

Research as a contribution to, and stimulus for, professional discourse is in essence the idea that Bassey himself develops and certainly he claims that it

> should contribute to the maelstrom of ideas, theories, facts and judgements about education. It should be something that teachers … look for, read about, argue over, reflect on and then either reject and forget, or file away in their memory to adapt and adopt later. (1999, p. 51)

However, in addition to looking for, reading about, arguing over and reflecting on research I am suggesting that teachers might also attempt to make it (the fuzzy

generalisation) happen in their own contexts and that, in doing so, they might then contribute to the generalisation itself in the cumulative way that Bassey suggests.

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