

RESEARCH ON GENDER IN EDUCATION: MONITORING BLEAKNESS OR INSTIGATING CHANGE?

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AN IMPERFECT BACKGROUND FOR RESEARCH

Scotland has a rather small community of researchers with a particular concern for gender in education. Its smallness is a matter for regret. However, as Maneka Gandhi (quoted in Lindsay Paterson's, 1993a, editorial to the second issue of **Scottish Affairs**) said 'never doubt that a small group of committed citizens can change the world; it is the only thing that ever has done so'. She was speaking in the Lothian European Lectures associated with the European Leaders' Summit in Edinburgh in December 1992. For me, her statement focused attention both on the European dimension and on one special responsibility that we have: to pursue, through research, the interests of gender in education. But what would that mean? What role does research have in this crucial area?

Before addressing those questions, there is another point to be taken from Lindsay Paterson's editorial. He drew attention to Marina Warner's lecture (on folk tales) in the same series where she reminded us that we have to tell each other stories about ourselves before we are ready to face the world of

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responsibility. That seems to me to be especially true when we are talking about responsibility for research on matters of discrimination and social justice. There is a sense in which researchers in this area could be seen as claiming that they are themselves 'squeaky clean'. That is never the case and we need to remind ourselves and others of our shortcomings.

In thinking about my story, in preparation for this article, I was alarmed by how readily I collude with discriminatory practices and ways of thinking. Earlier this year I found myself laughing when a pun specialist commented on the irony of the Week's Good Cause where Joanna Trollope was appealing for Lady Hoare's charity. About the same time, I greatly enjoyed the production of **Merlin** at the Lyceum in Edinburgh - a spectacle of knights, driven by wrath and anger, pressing on to foolish and bloody fights with occasional stops to leer (or worse) at Queen Guinevere. It took me back to my set books for English in school - the **Morte d'Arthur** and **Julius Caesar**. Even a girl's school committed to academic work, sport and careers for women (motto 'fides et opera' and no mention of house-wifery or marriage) socialised us into this angry, authoritarian, judgmental, masculine form of writing. No reference was ever made to medieval *women* writers like Margery Kemp or Julian of Norwich (why did she have a man's name?).

The point of discussing this personal, self-indulgent clutter is to illustrate how easy it is to be trapped at a common sense level in society's assumptions about gender and male norms. Clearly I can be seduced by Arthurian excitement and chivalry. Do I so readily remember that there is no chivalry that prevents women's average gross weekly earnings being just 60.8 per cent of men's (Morag Alexander in **Scottish Affairs**, summer 1993)? And is it chivalry that ensures that women in Scotland are able to work largely free of the pressures and responsibilities (and rewards) that fall on the shoulders of those occupying the senior positions in both private and public sectors of employment?

In this area of personal disorder can I possibly be well-placed (or even well-disposed) enough to continue to write, speak and undertake research on gender, or to analyse the work other people do and pontificate about what we should do in the future? I gleaned some encouragement from Lindsay Paterson's (1993b) editorial in the most recent issue of **Scottish Affairs**. In addressing the idea of Scottishness, he argued that acceptance 'that Scotland is full of contradictions ...might be a sign of some cultural maturity'. Is there an analogy with contradictions in thinking about gender? Does muddle there also signify maturity? Whether or not it does, there is little point in agonizing about the contradictions to the point that one never gets down to the research.

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The vagaries of the literary education and preferences of researchers may be important in making judgments about how genuine their commentaries are, or how valid are the claims of their research, and so we need to know about them. But they are of no consequence in the movement to end discrimination and certainly not a good reason for never doing the research.

THE DOMINANCE OF DESCRIPTIVE RESEARCH

The vast majority of research studies on gender in education in Scotland (and elsewhere) have focused on *descriptions* of the way things are. Many of these have reflected straightforward data collection (eg how many women are there in promoted posts?). Others have been more analytical and looked at, for example, classroom processes such as the relationship of gender to teacher-pupil interactions. And some have been directed towards the mapping out of policy statements through documentary analysis.

Descriptions of this kind tend to monitor the bleakness of current circumstances for girls and women in education. But not always - the performance of girls outstripping that of boys in recent figures for the Scottish Certificate of Education is an obvious exception (and may well be a cause for private concern among those in what Margaret McIntosh refers to in her article elsewhere in this issue of **Scottish Affairs** as 'the decision-making positions'). More typically, descriptive research uncovers gender discrimination in the curriculum and careers. It is the 'masculine' areas that get the high rewards. The government's reduction in funding for places in the social sciences and humanities (where women are well represented), while maintaining the existing level of support for the natural sciences and engineering (where men predominate), is the most recent illustration of this point.

It is interesting that gender research on curriculum and careers has placed a heavy emphasis on describing the sparseness of the place of women in male areas like information technology, computing, engineering, mathematics and physics. In contrast, there are no studies which have addressed gender differences in female areas like English; even the work in foreign languages has made little impression on gender issues beyond primitive number comparisons. There is an underlying 'equal opportunities' assumption which concentrates attention on encouraging and helping girls to participate in male-dominated areas of education. Little evidence is apparent, however, of scrutiny of the value of this assumption, or of justification that this is the goal which should be pursued. I will return to this point later.

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Descriptive research has also confirmed how rarely are girls exposed to role models of women in senior positions. There are still no women university principals or government ministers in Scotland; and should we rejoice that there is now *one* woman director of education and *one* woman among Her Majesty's Chief Inspectors of schools? HMIs, professors and secondary headteachers have tiny minorities of women, and even in primary schools a much smaller proportion of women teachers are promoted to headships than is the case for their male colleagues.

This monitoring of the way things are in Scottish education is, of course, important. But such monitoring has to be complemented by other kinds of research if we are not to be left wringing our hands about the woes of womankind, or berating others in dictatorial ways (behaviour associated with male cultures). A major thrust of that complementary research programme has to focus on *explanations* of why things are the way they are.

RESEARCH FOR EXPLANATION

Research which provides tested and useful explanatory frameworks is rare in the area of gender in education. Speculative explanations are, of course, often offered and usually display the prejudices of the writers rather than rigorous analysis of the data. A common example is the range of explanations offered for the paucity of women in senior management positions which is documented in so many research studies. These explanations range from the wickedness and ignorance of male appointing boards, through the reluctance of women to apply for senior posts, to the conviction that women are simply not good enough. In origin they may come from folk lore ('women have long hair and short brains' - Russian proverb), popular psychology ('As much as women want to be good scientists and engineers, they want, first and foremost, to be womanly companions of men and to be good mothers' - Bruno Bettelheim), humour ('A woman's place is in the wrong' - James Thurber) or women's gut reactions to centuries of male chauvinism and domination (quotations from Starr 1992). Only rarely do they come from painstaking analysis with rational inference, argument and independently tested ideas.

Perhaps the one area of explanation which has been pursued in greater depth over many years is that which focuses on differences between the psychological attributes of girls and of boys, and how these influence performance in school and career paths. Despite the attention it has had, however, this research on gender differences has been disappointing in its

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relative lack of success in helping us to achieve any greater understanding of why things turn out the way they do in education.

So what type of research could lead us towards such understanding? To illustrate the possibilities we might look to the kind of work Geraldine McDonald has done in New Zealand, and especially to a paper by her entitled 'Are girls smarter than boys?' (McDonald 1992).

Dr McDonald was interested in some discrepancies in evidence about boys' and girls' academic performance. She had found that throughout most of their period in school, on any general indicators of scholastic performance, girls in New Zealand did better than boys. At the end of secondary school, however, there was an exception to this finding - the boys did better than the girls at the upper end of the national examinations and scooped all the university bursaries and scholarships. Despite this, in higher education the girls once again performed better than the boys.

As part of her research, she collected many explanations of why the boys moved towards the upper end of the normal curve of performance in the national secondary examinations, even though they did not show this advantage elsewhere. Among those explanations were:

- boys catch up with girls towards the end of secondary school
- the School Certificate uses a statistical adjustment to make the examination fair and objective
- girls' results are inflated because the less able [sic] drop out of the running earlier
- boys get the bursaries because the more able [sic] girls drop out of the running earlier
- boys' genius blooms at the right moment
- girls choose the wrong subjects [most scholarships turn out to be in science and mathematics]
- boys' superiority is due to a handful of very good boys' schools
- girls do well when they arrive at university because of continuous assessment - boys do better under the pressure of final examinations.

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Dr McDonald systematically collected evidence relating to these various explanations and refuted them all. Her own conclusion, following painstaking analysis, was that the examination results at the end of secondary education were the consequence of statistical manipulation of the raw scores that girls and boys obtained. This manipulation resulted in male subject-area scores counting more than those in female subject areas.

The important feature of this research, which gave it its explanatory power, was the strategy the researcher took to put her own and other people's explanations to the test. She could not, in the end, answer her own question 'Are girls smarter than boys?' in any absolute sense, but she could draw conclusions about the ways in which others explained the patterns of achievement. She concluded:

Girls' school achievements are held to be the consequence of factors other than ability. The idea that boys are really capable of greater intellectual feats than girls is still very much alive. Contrary evidence is explained away in a manner which preserves the myth. The girls get there by underhand methods such as working hard ...This kind of reasoning supports the belief that no matter how well girls perform there comes a point at which men will overtake them. In recent years, however, this point seems to have become ever more distant.

A major advantage of a greater research emphasis on explanations would be the development of sound theory. Rather too often current empirical and analytical work is either atheoretical, or based loosely on ideological assumptions and lists of categories which have face validity and not much else. However, it also has to be remembered that explanatory frameworks are likely to be heavily dependent on contextual variables. While we must take account of, and try to build on, research from elsewhere (like Geraldine McDonald's), that has to be done with a challenging, questioning stance. The circumstances of Scottish education are bound to have similarities with education elsewhere, but they also have differences.

RESEARCH TO INSTIGATE WORTHWHILE CHANGE

Explanatory research can be a major support to our understanding. In itself, however, it does not change anything. And while research has monitored the unsatisfactory features of the way things currently are, it has been much less active in critically examining how they might be different.

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There has been plenty of exemplification of aims to encourage change which will get more women into the male preserves of information technology, computing, science and engineering; many people take it for granted that this would be a 'good thing'. There is a variety of plausible arguments for this assumption: it would help the shortage of skilled labour, please the government, give women's perspective on science a chance to have an impact, take advantage of the special place of science in higher education, show everyone that girls *can* do it and enable girls to share some of the enjoyment in science that is experienced by the boys. As a former physicist and physics teacher at school and university levels, I find those arguments attractive. But I am aware of three others. First, scientists and engineers seldom get the top jobs and they are relatively badly treated in industry. Secondly, information technology and computing are unexpectedly precarious in education; much more has been promised than has been delivered, and the lack of evaluation of educational outcomes has led to money being wasted. Thirdly, women have to be careful about being too ready to accept male norms and to conform to men's ways of construing the world. To use a male metaphor - should we always be at the disadvantage of 'playing away' on the opponents' ground? The General Teaching Council for Scotland (1991), in its admirable policy document on gender, has warned that:

It is important that girls are not seen as 'deficient boys' who can be turned into surrogate males*effective equality policies must embrace the concept of anti-sexism..* This implies seeking to raise the status of women's traditional areas of interest and employment as well as changing the nature of the knowledge, attitudes and understanding that shapes the curriculum. (p4)

My point is that some changes with face validity under an equal opportunities banner may, in fact, be embedding gender inequality even further. It is essential, therefore, that research pays more attention to scrutiny of the implications of different kinds of change and their relative worthwhileness.

If research can describe how things are, explain why they are the way they are and analyse what is, and what is not, worthwhile change, can it do anything to encourage such change? There seem to be two possibilities.

First, research is primarily about improving understanding. It can, therefore, provide information to help policy makers and practitioners bring about worthwhile change. It has to make it clear, however, that there is no one 'right answer'. There are always *alternative* courses of action or decisions

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that might be taken, and there are different implications depending on which alternative is chosen. It is the researchers' responsibility to identify the alternatives and elaborate the implications. There may well be resistance; Scottish education is familiar with top-down prescriptions for one course of action rather than with choices. Nevertheless, there are good reasons to expect that with perseverance high quality research can make an impact on policy making and practice.

Secondly, research can be in the form of *action research*; in those circumstances the primary concern is to effect change. Action-research can look more like development than research, but the feature which distinguishes it from 'any old' development is that it is constantly formulating and testing hypotheses about what action will lead to the desired change (i.e. it is theory-based). In other words, alongside any success (or failure) an understanding is generated of why things worked out the way they did. That kind of understanding can promote thoughtful and effective change in a way that enthusiastic trial and error cannot.

A ROLE FOR RESEARCH IN EUROPE?

At an earlier point in this paper I referred to the European dimension. To what extent is such a dimension a priority for the generation of new knowledge about gender and education in Scotland? By arguing for the importance of the contextualization of research, have I not implied that we should be better concentrating our efforts on essentially Scottish research? Should we not be leaving the European dimension to those whose priorities are economic or language based?

In some ways such questions themselves could imply a Luddite mentality. While we may have no wish to be so-labelled, that is not sufficient reason for researchers to turn their attention to Europe. But there are other powerful arguments for making that a priority. Three are especially important.

First, it is essential that we take advantage of everything that other researchers have to offer. If we become part of the European research community, we will be in a position to gather ideas and concepts about gender and education to which we might otherwise have had no access for many years. Research approaches and findings acquired through a European network have the potential to broaden our outlooks, knowledge and skills in ways unattainable in the ever-less-well resourced libraries of Scottish learning. I am advocating a grabbing strategy: we should learn all we can and take all we can from the experience and expertise of others. That can only

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improve our research on, and so our understanding of, gender in education, and it will stimulate creative notions of how things might be changed in worthwhile ways.

Secondly, as well as taking from Europe, we also have to give a little. We have research ideas, methods and findings to offer, and our ways of construing the world of women may be sufficiently different from those in other European states to generate a powerful and constructive debate. That debate, however, has tended to focus on matters of importance for highly skilled women. All European countries, including ourselves, must now ask what research has to offer those member states where women's access to training and education is currently unacceptably restricted. And what of Europe to the east of the Community? Is research a luxury that cannot be contemplated, or is it essential that as countries emerge from their current distress, research is in place to play its part in building just societies? Even in those areas where there is no armed conflict and support from the West is substantial (such as former East Germany) the place of women in education is at risk. As Schade (1993) reports

The restructuring of higher education in Thuringia, one of the new German Länder, is creating an intellectual landscape 'almost without women'. There have been many setbacks for women in higher education since the unification of Germany and equal opportunities work will be an up-hill struggle in the years to come. (p2)

Thirdly, our research has an 'informing' function. Not in the sense of trying to 'sell' Scotland (though there may be some of that), but rather to keep the record straight by illuminating our policies, practices and achievements for the benefit of our European colleagues.

Two anecdotes brought home to me the need for this function; each provides a caricature (one negative, one positive) of the Scottish world of women. The first concerns an article in the Royal Society of Arts Journal (April 1991) by Dr Christine Woesler de Panafieu (Director of the International Research Institute on Social Change in Paris, and formerly a lecturer in sociology in a German university) entitled **British Women: the Laggards of Europe**. I was stung by her assertions (and, from the report of the discussion following her talk, so were members of her audience). She characterised British women in comparison with other Europeans as including more disaffected dropouts, being badly educated and having an abundance of the 'grey and thrifty' (i.e. mean old Scots?). She went on to claim there were fewer well-balanced forerunners, go-getters and career women. These findings were, she asserted,

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based on research although that was left very vague. I felt I needed a background of comparative information (which I did not have) if I were to judge the validity of her conclusions, let alone convince anyone else of them.

The second anecdote was an account from a friend of a big conference of women in Berlin. The sole Scottish delegate was amazed to hear the English delegate tell everyone that the new Scottish parliament would be 50 per cent women - the hall rose in applause and cheering for Scotland leading the world. Can we now assume that the 50 per cent is a *fait accompli*?

IN CONCLUSION

In this article I have endeavoured to make a number of broad points in relation to research in Scotland on gender in education. My first concern was to illustrate the importance of illuminating not only the researcher's value position (which is important in all research), but also to map out inconsistencies in this position as reflected in personal behaviour and the factors which influence it. Awareness of such inconsistencies is especially important when the focus of the research is on some kind of discrimination in society and researchers are inclined to make 'holier than thou' pronouncements on others.

As in other areas, the *quality* of the research is of prime importance. Studies of gender in education have been largely descriptive. If they are to avoid being trapped in a 'low level data collection followed by high inference conclusions' paradigm, then at the design stage they will have to address ways of increasing and enhancing their potential to provide explanations. The aim has to be to *understand* what is going on in the educational world of women, not simply to confirm inequalities of which we are already aware. The improvement in the quality of research is especially dependent on the acceptance by researchers of

- i. the importance of learning from expertise and experience elsewhere (international literature and European networks in particular)
- ii. the need for caution in the direct application of findings from elsewhere to the Scottish scene.

'Understanding' is, of course, only the beginning. Researchers have a responsibility to communicate their findings, or undertake action research, to facilitate the implementation of worthwhile change. But they also have to address the question of which changes are, indeed, worthwhile.

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Let me illustrate this by an example close to my own interests. The Association of University Teachers in their newsletter **AUT Update**, June 1993, reported a survey which found that

while women make up nearly half of the student population, and over one fifth of the total academic workforce, only 4.9% of them are promoted to the rank of professor ...[and] once they become professors, women on average are paid £1,500 less than their male colleagues (p1)

This is, of course, very interesting for me, and stirs thoughts about my own and my colleagues' salaries, especially those of the 95 per cent of professors who are male. It is an example of what I have called 'monitoring bleakness' and brings forth exclamations like 'disgusting', 'well what do you expect' and 'so what's new?' It confirms knowledge we already had (albeit not so precisely) about institutions which are quite active in providing bits of paper on equal opportunities, but leave the implementation of such policies to chance. What the figures do not do is move forward our understanding of why we find ourselves in these circumstances or of how anything can be done about it. Nor do they say anything about what change we would look for if change were possible. We could say we want more women professors and they should have pay parity with men. But how many more? One fifth, a half or 95 per cent women? The questions are not only for researchers, they are for everyone in higher education and many others in our society. But researchers are especially well placed to play a major role in the explication and elucidation of the arguments, and in gathering relevant evidence.

I am conscious that this paper puts considerable emphasis on research scrutiny of women's eagerness to be included in areas of male dominance. In her article in this issue, Margaret McIntosh implies regret that women who penetrate the male structures of education may assume the mantle of the dominant masculine culture. I too regret that, but I have to be careful where I stand on the general issue of sustaining elements of that culture. With regard to research, for example, it may have much to offer us.

There are clearly feminist research questions which are distinctive, are nourished by female culture and form a subset of gender-related research questions. I do not believe, however, that there is a distinctive sub-set of feminist research *methods*. Feminist research questions may be best addressed by particular kinds of methods, but those methods are equally appropriate for other research questions. The set of valid research methods at our disposal may have been (if we can believe the literature) developed largely by men, but that does not mean that they should not be embraced and used by the female culture as 'good' methodology. In all matters, we should

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be evaluating what is just and what is of high quality, regardless of its gender origin.

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