An Address by Robert McCartney Q.C.

THE RESEARCHER AND THE TEACHER - THE THAT AND THE HOW

I commence my address with a quotation from one of the world's most eminent jurists because it goes to the very core of my argument, by establishing the distinction between the logical Newtonian world view, and the later world view of uncertainty and the necessity of human participation. The prescience of Oliver Wendell Holmes Junior is remarkable in the light of subsequent scientific development. I quote: "The life of the law has not been logic; it has been experience. The law embodies the story of a nation's development through many centuries, and it cannot be dealt with as if it contained only the axioms and corollaries of a book of mathematics" (1879 Common Carriers and the Common Law).

As Chairman of the National Grammar Schools Association I have frequently found myself responding to the latest educational research claiming to demonstrate that academic selection is profoundly damaging to the education and well-being of young people. The most oft-cited research study for the past decade has been the OECD's "No more failures" (2007) which uses PISA test scores to argue that selection damages equity. One gets the clear impression that findings derived from PISA scores are becoming the gold standard for such education research.

It is my central claim in this presentation that education research is of questionable value and only serves to lead astray those policy-makers who invest such theorising with some degree of validity. Some of the most vociferous critics of education research come from within its own ranks. For example, Professor Hargreaves, the eminent educationalist, has accused those who *theorise* about teaching and learning of being unconcerned with the *practical* day-to-day issues of the classroom. I draw on my reading of William Kitchen's book to identify the fundamental error in university schools of education to be their propensity for giving theory priority over practice, when it is practice that is paramount. Borrowing the terminology of Gilbert Ryle, they value "knowing that" over "knowing how" when, in truth, the former depends for its very existence on the latter. Wittgenstein's (1967, §419) advice couldn't be clearer: "Any explanation has its foundations in training. (Educators ought to remember this)."

To illustrate my concerns about the quality of education research, I analyse a recent evaluation of the state of Initial Teacher Education in Northern Ireland by Sahlberg et al. (2014). The evaluation uses PISA data to make two radical (and unjustified) claims about our education system: (i) that our post-primary provision is somehow broken, and (ii) that teacher training must undergo significant reform.

In her book *The Elusive Science*, Lagemann (2000, p. 232) traces the "awful reputation" of education research to its strong associations with psychology. She explains education's decision to forsake its philosophical roots for psychology (with its "quantities" and controlled experiments) as a quest for an "elusive science." Once again, I draw on the Wittgensteinian reasoning set out in Kitchen's book to make the case that schools of education should abandon psychology and learn from the teachings of one of the towering philosophers of the 20th century.

At a stroke this switch from psychology to philosophy would sweep away the child-centered constructivist theorising that has been part of the DNA of schools of education for as long as anyone can remember. Wittgenstein sets out a compelling case for moving away from such thinking and embracing learning as enculturation into a set of valued human practices via an "apprenticeship" with a master (the authoritative teacher). Learning a concept would no longer be thought of as getting something in mind (knowing that); rather, the emphasis would now be on "knowing how," and learning a concept would involve the vital ingredient of *participation*. The child who has learned a concept would be able to participate in practices where that concept has a role (knowing how). Once again, practice is prior to theory.

Finally, I will present the case that this mistaken priority of theory over practice, which I believe explains "the mushy educational jargon that doesn't tell us a damn thing" (Lagemann, 2000, p. 208), is writ large in the distribution of professorships in this University's School of Education.

The central importance of William Kitchen's book is the support it offers for the restoration of the teacher to the most influential role in the field of education. One of the book's core themes is the distinction adumbrated by the philosophers Ryle and Oakeshott between knowing "that" (the theory of the researcher) and knowing "how" (the teacher's practical application of judgment to mere information, which transforms it into knowledge). I will explore this distinction as it applies both to the basis of education research's methodology and the quality of its outcome as well as their relationship to the respective merits of constructivist theory and direct teacher led instruction.

In the course of this inquiry I will contend that Professor Sahlberg et al who were commissioned by Minister Farry "to evaluate current provision in initial teacher education in Northern Ireland against international best practice" have produced a report that is frankly a poor piece of research. In particular the claim made "that research provides the warrant for professional action" is flawed. Sahlberg effectively puts the cart before the horse. Oakeshott puts the point more eloquently. For him theory of research - far from being the "quasi-divine" parent of the classroom practice of teachers - is little more than "its earthly step child".

While historically research and teaching were the different but complimentary aspects of university life, the explosion in the 19th century of research in the natural sciences and its practical application gave it a cachet of academic importance greater than teaching. Such research was based on the entirely rational and objective Newtonian view of world science. This was a view that Quantum theorists like Nils Bohr and others were later to sweep away as outdated. The emerging disciplines of psychology and its offspring education - anxious to establish their research as scientific - knowingly and in retrospect mistakenly adopted the Newtonian view of science. William James, the father of psychology, once declared that "there is no such thing as the science of psychology" and added: "the whole present generation of psychologists is predestined to become unreadable old medieval lumber as soon as the first genuine tracks of insights are made". Howard Gardner in 2005 opined: "I have indicated my belief that a century later, James' less optimistic vision has materialised and it may be time to bury scientific psychology".

The reason why the pseudo-scientific basis of psychology is flawed is that Newton's laws are timeless and immutable and entirely independent of us humans. They do not require our participation for they are designed for the description and effect of unchanging and inert phenomena. The laws that should concern psychologists and educationalists are on the other hand such as evolve over time and in which human participation is a vital component in that process. Education research modeled on an outdated world view of science surely cannot accommodate the all important element of human participation. No important thinker has been more dismissive of the notion of Newtonian scientific psychology than Wittgenstein (1953 p232). In the final section of the final page of the Philosophical Investigations he writes: "The confusion and barrenness of psychology is not to be explained by calling it a 'young science' its state is not comparable with that of physics for instance, in its beginnings. For in psychology there are experimental methods and conceptual confusion. The existence of the experimental method makes us think we have the means of solving problems which trouble us; though the problem and method pass one another by".

The new world view of science and its relation to psychology was stated definitively by Robert Oppenheimer in his address to the Annual Meeting of the American Psychological Association in 1955. Oppenheimer attempted to convince psychologists that they had adopted the wrong physical model upon which to base their discipline. "It seems to me" he said, "that the worst of all possible misunderstandings would be that psychology be influenced to model itself after a physics which is not there any more, which has been quite outdated". His argument was underlined nearly forty years later by Stapp (1993 P129) who wrote: "While psychology has been moving towards the mechanical concepts of a 19th century physics, physics itself has moved in just the opposite direction". Quantum theory has altered everything and at its core is the acknowledgment of the human participatory element in modern physics.

If it is accepted that objective reasoning is a flawed basis for educational research and that such should be initiated by the practical human experience of the classroom teacher, why is this so? Polanyi,one of the central figures in William Kitchen's book, provides the answer. He claims that all reasoning has its foundation in trust and acceptance of authority. Polanyi argues that most of our factual beliefs are held at second hand through trusting others and in the great majority of cases our trust is placed in the authority of comparatively few people of widely acknowledged standing - in educational terms, the teacher.

The seminal work "The Elusive Science: The troubling history of Education Research" by Lagemann (2000) is representative of hundreds of similar condemnations in the literature. She acknowledges that many academics would insist that education is not itself a discipline. It has no distinctive methods or a clearly demarcated body of subject matter. It has been argued that its entire structure is based on no more strong foundation than one of opinions: Lagemann suggests that even in the 1980s schools of education were tolerated by university authorities not out of scholarly respect but for the income they generated. That is a matter I will return to with regard to this university.

The 1996 Teacher Training Agency Annual Lecture in Britain was given by Professor David Hargreaves. So scathing was his criticism of educational research that in 1998 Ofsted commissioned a report by Professors Tooley and Darby which largely confirmed the validity of Hargreaves' comments that: "Educational Research was poor value for money; of little relevance to improving practice in classrooms; was taken up with fashionable methodological quarrels baffling to anyone outside the academic community. Its fatal flaw was that researchers not the practitioners determined its agenda. A considerable amount of it was frankly second rate making no serious contribution to fundamental theory or knowledge and was irrelevant to practice and clutters up academic journals that virtually nobody reads".

Lagemann traces all educational research difficulties to its love affair with psychology. The early education pioneers turned their backs on philosophy and - clinging to psychology - believed that as a result useful research in education would be viewed as scientific research. Since psychology involved the study of mental functions and structures its relevance to education was evident and unlike philosophy it involved empirical research, lending an aura of "objective science" to psychology that philosophy lacked. As a result it seemed to provide education with a scientific basis that made it a popular topic among teachers and reformers interested in education. The fatal flaw which I have mentioned earlier was that psychology in general and psychological measurement in particular were based on the outdated Newtonian world view designed to measure timeless inert phenomena and were completely inappropriate to measure intentional human beings. When physics eschewed the Newtonian world view for the quantum world view; psychology stuck to an outdated static model of reality, applying it inappropriately to living beings with an agency.

In my own profession, that of the law, Edward H Levi's famous analysis of case law "An introduction to Legal Reasoning" stresses both the law's evolutionary and participatory attributes. For him the basic pattern of legal reasoning is reasoning by example. It cannot be approached on the basis of general rules once properly determined remaining immutable and unchanging. It is the fact that laws evolve in the process of determining similarity or difference over time, which supplies the indispensable dynamic quality of law. The element of human participation in the form of lawyers and litigants is made clear; all have contributed in the law-making. They are bound by something they have helped to make.

Professors Tooley and Darby in their report to OFSTED (1998) found that 60 percent of the educational research which they had reviewed did not satisfy the criteria of good practice. This finding must surely be a salutary warning to those tempted to adopt Sahlberg's claim that "research provides the warrant for professional action".

What then explains the continued existence of university research mills grinding out material for educational journals? Lagemann has already pointed to one reason: "Schools of education are tolerated by universities not out of scholarly respect but for the income they generate".

Professor David Laboree of Stanford's Graduate School of Education (2005) writes, and I paraphrase :"Education schools are institutions that nobody takes seriously - our colleagues in the university – see us not as peers in the world of higher education but as an embarrassment that should not really be part of a university at all. To them we look less like a school of medicine than a school of cosmetology".

Frohman (2004) supplies another reason:

"The large majority of scientists have little prospect of great and decisive originality. For most of us artisans of research getting things into print becomes a symbolic equivalent to making a discovery. Thus for the great majority of scientists journal publication distributes reward by bestowing some measure of eponymous recognition."

Repeatedly the accusation is leveled by fellow educationalists that the subject matter of education research is so obscure and its language so impenetrable as to render it like the peace of God in that it passeth all human understanding. Yet as in this university, if it is determined that education is a major field of research generating income, and a field in which it claims: "We are exceptional and of global reputation" then in the absence of some great and decisive originality, what does it have to support its claim, other than the sheer quantity of its journal publications? This rewards the authors with Frohman's eponymous recognition and by proxy a similar benefit is conferred upon the university for use by its marketing experts. Since quantity of production rather than quality is the name of the game, the former becomes the measure of an academic's worth to the university. As a result a school of

education may become a Research Mill producing a "that" in the form of published research, which like the mule has neither pride of ancestry or hope of posterity

The first results of PISA (2000) were published in 2001, and hidden away at page 26 was an astonishing confessional caveat, particularly when one considers the serious effect of PISA's rankings in countries such as Germany. The health warning reads:

"If one country's scores are higher than another country it cannot be automatically inferred that schools in the former are more effective since learning starts well before school and occurs in a range of institutional and out of school settings". PISA then ignores its own warning, which in itself raises doubts about its own objective and non participating approach and declares: "PISA seeks to compare how well different school systems prepare students for life". It should be noted that what it compares in not how well educated or even knowledgeable the students are, but preparation for life which it seems to me is a nebulous concept and an unlikely measurable one.

PISA rankings are nevertheless vital to Sahlberg's definition of the problem he is called upon to solve, namely the alleged failure of Northern Ireland's post primary education. They are also central to his solution in meeting Minister Farry's remit "to evaluate current provision in Initial Teachers education against international best practice". Sahlberg first uses PISA rankings to define the problem and secondly to provide the solution. Prior to exploring the defects and frailties of Sahlberg's review it is necessary to address the validity of PISA's methods as the basis for his advice to the minister.

OECD pledged in 2003 to Europeanise education through the statistical activities of Eurostat, but as Professor Laboree of Stanford University points out in (2013) when PISA could not impose a common curriculum on all EU members that would have made statistical comparison meaningful it was forced to measure what no one teaches. Faced with this difficulty PISA came up with an ingenious solution to the problem of how to measure student achievement across national school systems with different curricula. Instead of measuring how well they are taught in each system it measures a set of economical useful skills which were amenable to its unique method of assessment

I do not intend in this address to enter the debate upon the merits of constructivist teaching which is supported by OECD or its antagonism to direct teacher instruction. I do however contend that such are the fundamental flaws of PISA assessment that they are valueless as a means of validating either proposition: nor are they any ground for the OECD strategy to enhance constructivist theory in initial teacher education as Sahlberg's 2014 report might infer. (OECD report 2009 p. 97,98 & 121).

In July 2013 the Times Educational Supplement published evidence that the PISA tables were utterly wrong. The TES article revealed that "a large proportion of the PISA rankings are not based on actual student performance but on random numbers". Most people do not know that half of the students

taking part in PISA (2006) did not respond to any reading items at all. Despite that PISA assigns reading scores to these children.

Professor Svend Kreiner, a statistician from the University of Copenhagen who has carried out a detailed investigation of PISA, offered the following analysis: "the best we can say about PISA rankings is that they are useless". The distinguished British mathematician Tony Gardner of Birmingham University has referred to PISA output as "snake oil". The blog of one of the most eminent statisticians in the world David Spiegelhalter, Newtown professor for the Public Understanding of Risk at Cambridge University, is dismissive of the PISA league table. He has described them on the radio as "utter ballocks". His language although strong and uncivil was nevertheless a measure of his contempt.

Twentieth century physics was dominated by two intellectual giants: Einstein and Niels Bohr. Bohr defined the hallmark of science to be unambiguous communication. "In Quantum theory one cannot meaningfully separate the thing that is being measured from the measurement instrument without communicating in an ambiguous way." Bohr demonstrated that this inseparable integration between the measuring instrument and the thing being measured applied equally to the measurement of psychological and educational attributes such as learning, remembering, thinking, knowing ,meaning, and so on.

Let me illustrate Bohr's point with a simple example. Suppose that a resurrected Einstein and a GCSE student both produced a perfect score on a GCSE mathematics examination paper. To claim on this basis that the student has the same mathematical ability as Einstein would be to communicate AMBIGUOUSLY. The student has nothing to match Einstein's contributions to special and general relativity. However, unambiguous communication can be restored if one takes account of the measuring instrument and says: "Einstein and the student have the same mathematical ability relative to the particular examination paper". Mathematical ability - indeed any ability - is not an intrinsic property of the individual, instead it's a joint property of the individual and the measuring instrument chosen to measure it.

What do we conclude from this? Namely that ability is not a property of the person being measured, it is a product of the interaction of the person with the measuring instrument. Bohr repeatedly in his writings refers to a profound conceptual equivalence between measurement in quantum and measurement in psychology. If this is accepted then as in the Einstein/student example one cannot rationally in psychology or education divorce what is measured from the measuring instrument.

However a core requirement of PISA measurement and the fundamental basis upon which it creates its tables is that its measurement instrument and the measurement outcome i.e. the determined ability must be viewed as entirely independent of each other. This puts PISA measurement completely at

odds with an intellectual giant who is known for having devoted his entire life to solving "the problem of measurement". PISA is claiming that by an objective statistical methodology it can measure the ability of children without any measuring test of instrument.

Those present would benefit greatly from reading the item "Is PISA fundamentally flawed" published by the T.E.S. as updated on 11th August 2013. Time does not permit any comprehensive analysis here but the criticisms of Professor Kreiner et al will open quite a few minds. For example in PISA 2006 only half the participating students were asked any questions at all on reading and half were not tested at all on maths although full rankings were produced for both subjects. Analysis of the reading results in 2006 by Professor Kreiner showed that of the 50% who were asked questions on reading 40% of those were tested on only 14 of the 28 reading questions.

Professor Kreiner's conclusion was: "This in itself is ridiculous. In short the test questions vary not only between students but between countries participating in exactly the same assessment".

In this final part of my address I will offer a synthesis of the disparate parts and hopefully make the connection between research and teaching, "the That" and "the How" of my title; the weakness of Sahlberg's research and report; the reduction of the teacher's authority by its adoption, and illustrate these dangers as demonstrated by the activities of this university's school of education.

Sahlberg makes the claim in his review that "research provides the warrant for professional action" - not so, in the opinion of those authoritative figures in education to whom I have referred. They variously describe much of such research as dross and gobbledygook. On an even higher plane distinguished philosophers such as Ryle, Oakeshott and Wittgenstein have made it plain that research far from being the' quasi-divine parent' of the classroom practice of teachers is little more than the "earthly step child" of those teachers who expound the 'how'.

Earlier in this address I referred to the fundamental error in psychological and educational research in opting for the Newtonian view in which the investigator is seen as a separate and uninvolved observer, which gives the clear sense that the individual plays no role in knowing. Polanyi writes that while modern physics recognises the inappropriateness of the Newtonian view of the investigator, such a view still exercises a destructive influence in biology, psychology and sociology and falsifies our whole outlook far beyond the domain of science. Modern scientists acknowledge that science training has a tacit, intuitive dimension which defies the type of calculation which would enable it to be cast solely in rigidly-defined rules, which if too slavishly followed would take the place of the current apprenticeship which postgraduate students serve.

The central concept in this address is that a practice cannot be distilled down into a rule book from which practice can then be generated. Oakeshott (2001) adopted an approach similar to Gilbert

Ryle's "the 'that' and the 'how', by dividing knowledge into information and judgement of which judgement was the senior partner. Judgement constituted the difference between the pursuit of learning and the simple acquisition of information.

Oakeshott claimed (2001 P49)

"Before any concrete skill or ability can appear information must be partnered by judgement", "Knowing how must be added to the knowing 'that' of information. By judgement I mean the tacit or implied component of knowledge, the ingredient which is not merely unspecified but unspecifiable in propositions. It is a component of knowledge which does not appear in the form of rules and which therefore cannot be resolved into information or itemised in the manner characteristic of information". For example the 'that' of information may tell us that a tomato is a fruit, but the partnership of judgement that converts it into knowledge provides the 'how' which tells us not to put it into a fruit salad. Oakeshott { 1998} P 167 makes the same point with another culinary metaphor-

"The cookery book is not an independently generated beginning from which cooking could spring, it is nothing more than an abstract of somebody's knowledge of how to cook, it is the step child not the parent of the activity. The book speaks only to those who already know tacitly the kind of thing to expect from it and consequently how to interpret it."

Polanyi echoes Oakeshott's concept: "The practice of science cannot be generated from its precepts; they're entirely inert. Rules of art can be useful but they do not determine the practice of an art, they are maxims which can serve as a guide to an art only if they can be integrated into the practical knowledge of the art, they cannot replace this knowledge."

Practical knowledge acquired through a form of apprenticeship with the teacher is the primary requirement with expertly specifiable rules of secondary importance. The teacher is an authority figure in that he or she represents the practice and early learning involves simple trust and acceptance of authority. For Polanyi, Oakeshott , Wittgenstein and Levi all learning is founded on learning by example in the manner of an apprentice. According to Wittgenstein (1980.689) "Instinct comes first, reasoning second".

In the light of the above I wish to examine the Sahlberg et al 2014 "Aspiring to Excellence" report on the structure of Initial Teacher Education in Northern Ireland. In my view it is an example of the sort of poor quality research castigated by Professor Tooley and Darby in their 1998 report to Ofsted on the expressed concern about the quality and effectiveness of much education research as a factor in initial teacher education. The Sahlberg report is notable for its absence of any detailed referencing of the relevant literature. The definition of the problem and the solution offered is entirely predicated upon the acceptance of PISA's rank order.

A fundamental requirement in research of any kind is independence of approach and an absence of any form of partisanship in the presentation of the evidence supporting its findings. Yet Professor Sahlberg has well documented associations with OECD/PISA. It is not unfair to say that he is an enthusiastic supporter of its activist methods and strategy which I have already commented upon in some detail. It is no surprise therefore that when, despite the year on year excellent performance of Northern Ireland's post primary schools in UK wide public examinations, Sahlberg ignores their success and uses a single PISA ranking to argue that post primary education in Northern Ireland faces serious difficulties. I quote:

"In Post Primary and beyond the performance of Northern Ireland pupils gives cause for concern. Thus in PISA, Northern Ireland like other UK Countries was below the average of OECD countries and came third of the UK countries (Sahlberg P36)". Now of course the Northern Ireland GCSE and A level results were the product of a measurement instrument which Einstein and Bohr would have approved of in that all the candidates in a particular subject were set the same examination and their ability was the product of the same measurement instrument.

In identifying a solution for this entirely artificial failure of post primary schooling Sahlberg turns to PISA to meet Minister Farry's remit "to evaluate current provision in Initial Teacher Education against international best practice", but Sahlberg does not set out how they arrived at their model of best practice. However it is not difficult to discern their reason. The countries with the best Initial Teacher Education programmes are the countries who happily coincide with the best education systems as identified by their PISA rankings. PISA then becomes not only the means by which the problem of our allegedly poor post primary education is defined, it is also the means offered by Sahlberg for its remedy.

Surely an organisation with such absolutist founding principles of equality of results, antagonism to direct teacher instruction as well as selective education, and a methodology founded on an outdated scientific approach, should be in no position to offer the type of balanced, impartial, comparative and independent advice to Minister Farry. Moreover such advice is the subject of both fundamental and wide ranging criticism from some of the world's most distinguished educationalists, statisticians and philosophers. As well, in so far as it is claimed to have a scientific basis for its rankings; such a basis is not only outdated but contrary to the view of such intellectual giants as Einstein, Bohr and Wittgenstein.

Sahlberg is not so much offering important and independent advice as making a sales pitch for OECD/PISA. If you doubt this assertion just reflect on the statement of OECD in its 2009 report at page 97-98 and 121, to which I have already referred.

I liken OECD/PISA to a Ponzi Scheme in which governments and big business have invested. That investment has created in them a wish to believe in its validity: and that belief requires them to suspend the intelligent inquiry that would reveal its falsity.

It is difficult to understand why this Sahlberg report was commissioned specifically for Northern Ireland as its substantive content was given in almost similar terms in a report for the Republic of Ireland. Not surprising, perhaps, as all the same OECD/PISA elements can be sourced to the same educational catechism. At page 38 Sahlberg declares that Northern Ireland schools are in urgent need of those, the researchers, who "know the 'that'". Teachers who know the"how" are scarcely acknowledged. In his view teacher education in Northern Ireland needs to be strengthened academically and cognitively. He states that provision has not been sufficiently infused with the intellectual power which University investment in teacher education makes possible. I find this analysis to be utterly and hopelessly in error - an opinion which in due course I will demonstrate with a review of the research activities of this university.

Professor Hargreaves in his 1996 Oxford lecture had this to say about the relationship between the teachers who know "the how" and the researchers who claim to know the "that".

"What would come to an end is the frankly second rate education research which does not make a serious contribution to fundamental theory or knowledge, which is irrelevant to practice, which is uncoordinated with any preceding or follow up research and which clutter up academic journals that virtually nobody reads.". Sahlberg on the other hand would advise Schools of Education where new generations of teachers will be indoctrinated with forms of constructivist education designed to produce "life skills" which are about the only kind of education PISA's flawed methodology purports to be capable of measuring."

The theme running through William Kitchen's book is a timely argument for the reinstatement of the teacher to the forefront of education as one conversant with the "How",which is that tacit and unspecifiable quality that by the application of judgement converts and transforms inert information into knowledge. That is, as Sir Christopher Woodhead so elegantly puts it in his foreword: "To initiate the young into the different ways in which over centuries, men have organised their experience and understanding of the world." Or, as William Kitchen might put it, to accept the authority of the teacher based not on power or duress but upon the respect due to his learning and which without intellectual restraint liberates the pupil's own imagination and potential.

Let us conclude by considering Professor Sahlberg's suggestion that provision for initial teacher training has not been sufficiently infused with the intellectual power arising from the University's research potential. This University presents no better evidence of the skewed relationship between those who merely know the "that" - the researchers - and those who know the "how" - the teachers.

The contribution of the latter to initial teacher education is little acknowledged, if at all, by Sahlberg. Yet it is they who should be initiating the agenda of research, as Professor Hargreaves suggests, and not the researchers directing the practice of teaching. A school is a place where one is educated in a chosen discipline whether it be music, art, medicine, law or even education. The emphasis one would imagine might be upon those skilled in the discipline, who impart by both example and the transmission of knowledge, the tacit subtleties of the art. In the school of education this is unfortunately not the case.

The school of education is divided into two very unequal parts. The greater part one might expect would be those who teach those students who aspire to be teachers. Not so: the imbalance in favour of those ostensibly devoted to research is grossly disproportionate. Well, one might argue perhaps their research is outstanding, for after all the university claims "we are exceptional". Not so: of the nine professorial posts not one is held by a member of teaching staff; but surely one might think as professors in education they must have some teaching experience. The truth is that not one of those professors has any significant or real experience in teaching a post primary class. They include an anthropologist, a psychologist, a lawyer, a behaviourist, a conflict resolutionist, a sociologist even a marine biologist, but not a single one with actual experience as a post-primary teacher. Yet this is the very area of teaching in which Sahlberg is recommending research input as a means of its improvement. On the other hand to be engaged on the teaching staff of the School of Education one had until recently to possess a post graduate degree, preferably a doctorate in the subject one was to teach plus very substantial experience as a teacher. Such a teaching qualification would have excluded all nine Professors from themselves being appointed as teachers for the post graduate certificate of education in the school of education at this University.

Now the question which any informed member of the public might address to Sahlberg is this: "Where is the intellectual power to be found which he alleges to derive from the university's research activities?" I have failed to detect scarcely any such research that is directly relevant to the education of prospective teachers, or that does not fall within the parameters of Professor Hargreaves' censure. Nor do I exclude this university from criticism. The unpleasant truth is that the university, as Lagemann points out enjoys the income which the sheer quantity of such research generates, while the professors themselves enjoy the eponymous recognition which publication provides. Is there a member of the public who would not suffer shocked surprise at the revelation that not a single professor in the school of education has ever taught a post primary class of children? The role and status of the teachers who have done so have been shamefully reduced for the elevation of theorists who hypothesize about the "that", but have no experience in the "how".

Like the late medieval church, this University's search for truth may in some instances have been corrupted by its pursuit of money, and such pursuit as Martin Luther demonstrated inevitably leads to abuse.

Sixty years ago I was an indifferent law student at this university acquiring the "that" of legal principles and theory, but it was only when I had served a professional apprenticeship in the "how" of their practical application that I aspired to be a master in my trade. I conclude to where I began with a return to my legal roots by quoting another distinguished legal figure, Sir Henry Maine, who wrote: "Some of the most important principles of substantive law are to be found in the interstices of practical procedure".

In my 79th year I am a most unlikely Martin Luther, but I am not averse to metaphorically affixing this address to the doors of this University and its School of Education.

Robert McCartney

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