

# Can psychology change the world?

Tommy MacKay, winner of the Society's Award for Distinguished Contributions to Professional Psychology, on applied psychology and the human welfare agenda

**The subject matter of psychology suggests that psychologists should be central to the human welfare agenda. But do we too often settle for too little?**

**This article argues that it is possible and desirable for psychologists to agree a common framework of values, and to then successfully inhabit the borderland between endorsing the pursuit of human welfare and maintaining the detached purity of scientific enquiry. It outlines an attempt to do just this, in what may be the largest, longest and most ambitious literacy project in the world.**

Psychology may not hold the ultimate answer to the human condition, but I firmly believe that it can change the world. I hope to convince you of this through an examination of three things: first, the centrality of psychology; second, the relationship of science and values; and third – as this article has its origins in a personal award – an illustration of changing the world drawn from my own work, the eradication of illiteracy in an entire council area.

## The centrality of psychology

Where does psychology stand in relation to science in general, and to addressing the human welfare agenda in particular? Is it central or peripheral? First, in relation to science, it is often seen as being on the fringes – somewhere on the borderland of proper science, but never fully accepted as one of its central disciplines. However, a different picture emerges when these views themselves are subjected to scientific inquiry. In a paper entitled 'Mapping the backbone of science', Boyack et al. (2005) looked at citations in over a million journal articles published in 7321 journals. Their aim was to map the various scientific disciplines in terms of how central or peripheral they are, using cross-referencing to determine which disciplines have most influence on other areas of inquiry. Seven 'hub' sciences were identified: mathematics, physics, chemistry, earth sciences, medicine, psychology and social sciences.

(Interestingly, those on the periphery included psychiatry, law, political science and economics.)

Second, in relation to human welfare it is relatively straightforward to demonstrate why psychology is central. The definition of psychology on the Society's website is 'the scientific [or we might equally say, the systematic] study of people, the mind and behaviour'. But the main problems facing the world today are caused by people, their thinking and their behaviour. Psychology is therefore the discipline that is clearly at the very heart of the human welfare agenda. It provides the scientific foundation for understanding people and the problems associated with them, and the mission of applied psychology is to address these issues, allowing human welfare to be promoted by interventions leading to changed thinking and new patterns of behaviour.

Perhaps one of the easiest ways to illustrate the centrality of psychology to human welfare is to consider the main items that feature in the daily news. On the day that I write this article five key themes dominate the newspapers: the environment, war, international disputes, crime and the rise in obesity in the UK population, especially among schoolchildren. All of the issues covered arose directly from how human beings think and act: pollution and waste, enmity and aggression, the breakdown of relationships and failed negotiations, antisocial behaviour and unhealthy living. Psychologists are already working in all of these areas, but does our influence match the centrality of our discipline?

## Science and values

When we speak of the 'mission' of applied psychology in terms that are predicated on ameliorating human welfare, we make a number of assumptions. That is, we take for granted that there is a set of implicit values to which we all subscribe. These values reflect a positivist agenda at the core of the caring professions. It is a philosophy that human well-being,

### questions

If psychology is to change the world, what areas should it tackle as its main priority?

What is the single biggest step towards changing the world that psychology could make in your field of work?

If psychology is a force that could change the world, have we settled for too little in our vision?

### resources

'Achieving the Vision' (MacKay, 2007) is available free on request from education.centralregistry@west-dunbarton.gov.uk

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happiness and fulfilment are good and we have a duty to promote them; and that by corollary illness, sadness, distress and personal failure are bad and we have a duty to eradicate or at least diminish them. Psychology is a powerful force for changing thinking and behaviour whatever its nature and goals. However, as a discipline we would expect to oppose the use of psychology to promote, say, the ideals of Nazi Germany, but we would without hesitation endorse its application to national programmes to tackle depression or suicide, or to raise educational achievement. Somewhere in the middle we would argue vociferously over applications of psychology in supporting the military or in promoting various strategies of advertising and marketing.

All of this points to the assumption that we operate broadly within an agreed values framework, one based on notions of human welfare. This assumption is at the heart of our Code of Ethics and Conduct which opens with the words 'Psychologists value the dignity and worth of all persons'. Our commitment to values is sometimes made explicit. Fox and Prilleltensky (1997), in their introduction to their classic text on critical psychology, state, 'Psychology is not, and cannot be, a neutral endeavour' (p.3). I have articulated the same view in my own critique of the critical psychology agenda: 'In its pursuit of objectivity science is nevertheless value-laden' (MacKay, 2000, p.3).

The borderland between endorsing the pursuit of human welfare and maintaining the detached purity of scientific inquiry is a difficult one and not without controversy. In a critique of some of my own work, Professor John Black, formerly of Portland – in an unusually scholarly debate for a local newspaper – stated, 'Science is neutral. It has no agenda of social justice' (*Lennox Herald*, 23 March 2007, p.5). I would argue emphatically in favour of both positions, since I believe that when we speak of values in science we must distinguish between things that differ. In terms of methodology, the place of science

is to provide the analytical tools that describe, explain and predict. The role of the psychologist, as scientist, is not that of social reformer or political campaigner, but is one of carrying out these systematic and analytical functions in relation to human thought and behaviour.

However, there is a further question about what governs the subject areas in which we are carrying out our scientific inquiry. What are our aims and priorities in seeking public funding for our scientific interests? Surely the focus of our research and interventions is not detached from any ultimate concept of the public good? I do not wish to be misunderstood here, since I am totally committed to the pursuit of pure, academic psychology in its own right and for its own sake, and to the view that psychology should stand at no disadvantage in comparison with other scientific disciplines in its dispassionate pursuit of knowledge and understanding. And as to human well-being, we are not concerned only with meeting our basic needs but in the excitement associated with exploring things that satisfy our interests and curiosity. Nevertheless, in a world riven by endemic problems and tensions that psychology above all other disciplines can address, we must surely be concerned with a research agenda that has basic human welfare and social justice at its very heart.

Therefore, when we ask 'Can psychology change the world?', we might rephrase that question as 'Can psychology

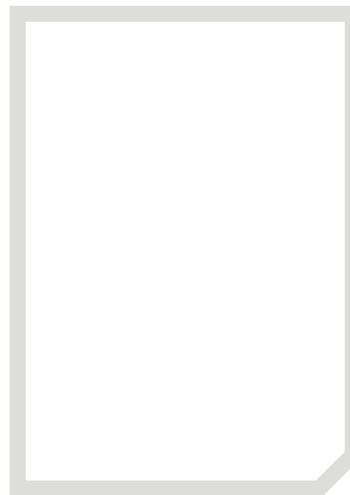
make the world a better place?', or 'Can psychology make a significant impact on human welfare and quality of life?'. It is hard in my view to conceive of a more important question to be addressed by any scientific discipline, and if psychology can address this, then we must ask whether any other discipline could be of such central importance.

If the question then is about doing good and improving the lot of human beings, it is necessary to advance on the basis of a set of agreed values about what we seek to do. Yet psychologists occupy every part of the spectrum of political, religious and philosophical viewpoints, and this raises questions about the possibility of a common agenda for doing good. Nevertheless, I believe that such an agenda is possible. For a statement of core values to which I feel we would almost all subscribe we could propose the following: health, caring and compassion, self-determination and participation, human diversity and social justice (Prilleltensky & Nelson, 1997).

Personally, I have an even simpler values statement, and one that I believe carries fewer assumptions, so perhaps it could come near to being a basis of universal consensus in our discipline. In the words attributed to John Wesley, which I learnt at my mother's knee and which were framed on my desk at work for many years:

Do all the good you can,  
By all the means you can,  
In all the ways you can,  
In all the places you can,  
At all the times you can,  
To all the people you can,  
As long as ever you can.

Most of the good done by psychologists is unremarkable and unheralded. It consists of the small amounts of good that we all seek to do every day in our jobs, increasing well-being and removing human suffering at the level of the individual or family. This unheralded good is of inestimable value – it represents many thousands of psychologists constantly doing everything they can to help those with whom they work. However, if we are to answer the question 'Can psychology change the world?', we must go beyond the good



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**In a world riven by endemic problems, does psychology have the solutions?**

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we routinely do from day to day and grasp a bigger vision – a national vision, a world vision. If we aim to change the world we must ultimately do so at the highest level of its social, political and organisational structures.

If we are seeking to achieve visionary outcomes then there will be certain tests by which we can judge our efforts. For example, has it made a recognised impact at the highest political levels? Has it been celebrated by the media? Has it become known in our communities and not just in our academic and professional circles? Do we hear it spoken of as common parlance in our streets and supermarkets? These were some of the questions that preoccupied me 10 years ago when I sought to address an issue at the very heart of human well-being and quality of life in a modern society – the problem of illiteracy. In terms of these tests I have been fortunate in the outcomes of my vision for literacy. As to political profile, the Prime Minister described it as, ‘Something quite remarkable...able to revolutionise an education system to the benefit of thousands of people’ (Brown, 2007, p.222). As to media impact, it has been covered over 100 times in newspaper headlines and on radio and television. And I can ask most passers-by about it in the streets or stores of the communities where I work and expect an informed and enthusiastic response.

### Changing the world – the example of illiteracy

Every year over 100,000 young people in the UK leave school functionally illiterate

(Basic Skills Agency, 2001; Organisation for Economic Cooperation and Development, 2000). In today’s society illiteracy and human well-being do not go well together, and it is axiomatic to say that those who enter their adult life illiterate have poorer job prospects and restricted economic outcomes. If we are looking for a very straightforward social issue for applied psychologists to tackle at an ambitious and visionary level then we will find it in illiteracy.

It was this problem that led me in 1996 to send a proposal to the Director of Education in West Dunbartonshire in a paper entitled ‘Transforming the reading achievement of all children’. Looking back, the proposal was ambitious almost to the point of pomposity. Its stated purpose was to ‘achieve something that has never been done in the world before, but which I believe to be fully achievable’. The goal: not just for every single child to have higher reading levels, but the total eradication of illiteracy. It was not without risk: ‘Unless the council is willing to risk a commitment to achieving the impossible it is limited only to the ordinary and the possible.’

Thus the West Dunbartonshire Literacy Initiative was born, and just over a decade (and three tons of data) later we have completed what may be the largest, longest and most ambitious literacy project in the world. Our total research sample was 63,563 children and young people, over 33,000 of whom were assessed individually. The full research document is available in book form (MacKay, 2006), and an overview of the final results is published in *Achieving the Vision* (MacKay, 2007), an electronic copy of which is freely available (see references). We carried out five separate studies.

#### The main study

This was a cross-lagged cohort study over 10 years in all 35 primary schools and 23 nurseries. The aim was not only to raise the reading attainment of all children but to reduce the numbers who would experience reading failure through a multiple-strategy early intervention. Our programme was based on 10 ‘key strands’ (see box).

The changes in achievement levels were dramatic. From a welter of statistics perhaps the simplest way to present the results is to say that the children with ‘very low scores’ for word reading on our specially designed baseline test (MacKay, 1999a) fell from 11 per cent in 1997 to 0.5 per cent in 2007, while those with ‘very high scores’ rose from 5

per cent to almost 50 per cent. In short, the intervention totally transformed the landscape of reading attainment in the early years.

#### The synthetic phonics study

This was a quasi-experimental study in 18 primary schools. It compared the effectiveness of two methods of teaching the basic building blocks of literacy – traditional or ‘analytic’ phonics (the approach normally used in teaching reading, beginning at whole-word level and breaking words down into letter sounds) and ‘synthetic’ phonics (starting with letter sounds and learning how to combine these to make words). While good phonics teaching using any approach is fundamental to teaching basic literacy, the results in the nine primaries using the synthetic approach were not only significantly higher but had lasting impact at follow-up three years later. As a result, all of the schools in the authority gradually opted for the synthetic method.

#### The attitudes study

This was a long-term follow-up to a randomised controlled trial I carried out with children aged about nine years (MacKay, 1999b). They were all heading for illiteracy, with an average reading age under six years. The intervention had consisted of neither curricular change nor additional support, but only of changing attitudes towards the value of reading. At the time, the experimentals made significant reading gains. We traced all but two of these young people almost six years later in their various secondary schools and found that the experimentals, despite no further intervention following the first study, were still reading more than a year ahead of the controls. Another interesting factor emerged. The controls were clearly also reading at a higher level than expected. This fits with an observation made in the full report on the original RCT – ‘children became excited about print’ (MacKay, 1995, p.21). The project was infectious, so there were spin-off benefits for the controls too.

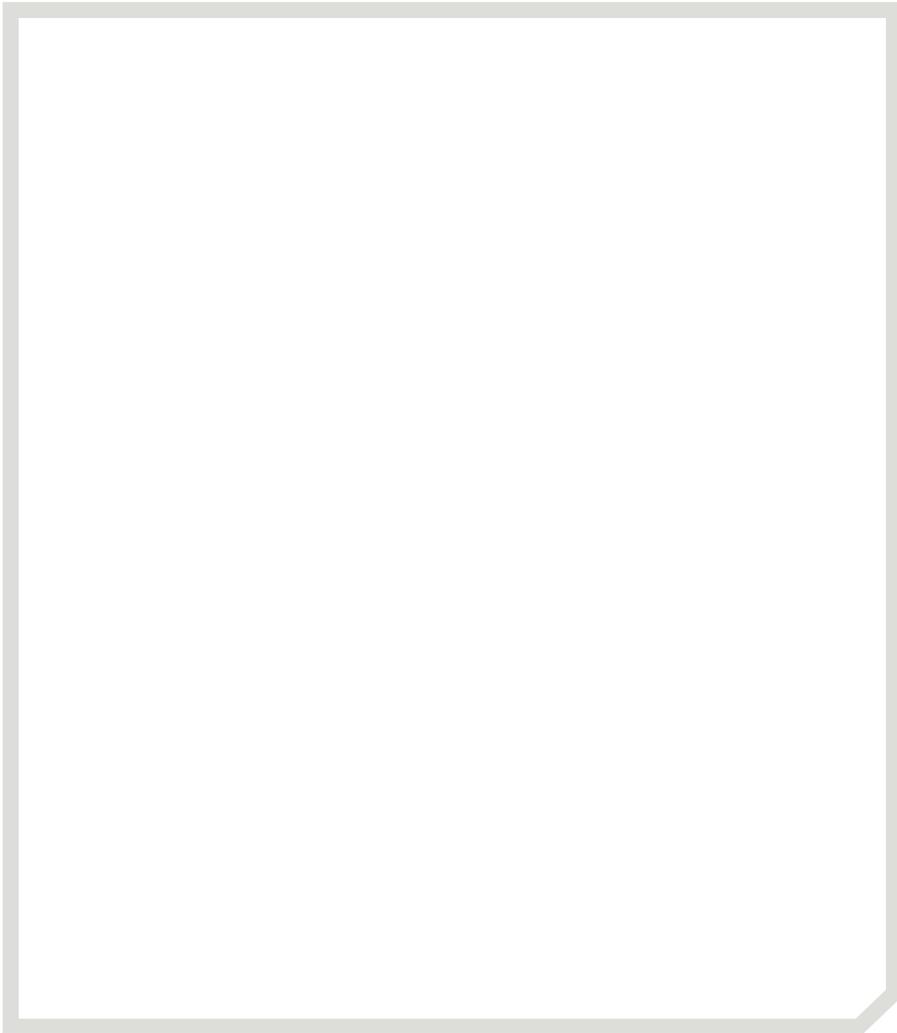
#### The declaration study

The experimental part of this study was carried out in East Renfrewshire. The sample was 565 children in eight primaries and four nurseries. I was asked to do a study on literacy and expectations, the only condition being that it must be completely new and quite different from what anyone had ever done before. I still remember the scepticism that greeted me from a large gathering of educational directorate, head teachers and class teachers when I told them: ‘We want

## Ten key strands

The main study in the West Dunbartonshire Literacy Initiative was based on the following key strands:

- | phonological awareness and the alphabet
- | a strong and structured phonics emphasis
- | extra classroom help in the early years
- | raising teacher awareness through focused assessment
- | increased time spent on key aspects of reading
- | identification of and support for children who are failing
- | home support for encouraging literacy
- | fostering a ‘literacy environment’ in school and community
- | lessons from research in interactive learning
- | changing attitudes, values and expectations



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our research specification but was also economically feasible – Toe by Toe (Cowling & Cowling, 1993), a highly structured scheme for mastering all the basic skills of reading. A quasi-experimental study in one secondary school increased reading ages by an average of two years following a three-month intervention. A further gains score study of over 100 primary school children in 32 schools showed average gains of over one year in five months, using as tutors volunteers with a maximum of one day of training.

At the start of the project in 1997 over 21 per cent of our children left secondary school functionally illiterate. By June 2007 the total was three pupils. All of this has been made possible by applied psychology – using the evidence base of educational psychology and other applied fields. Crucial to the project was understanding the psychology of long-term organisational change, and how we sought throughout 10 years to maximise our five ‘context variables’ of vision, profile, ownership, commitment and declaration. When we seek to change the world we are ultimately changing the lives of individuals. As one secondary school pupil said in addressing one of our conferences,

When all this started I couldn’t read. I was a failure. Now I have a cupboardful of books at home. Now I am a success.

### A vision for psychology

Psychology is able to do very much more to change the world than eradicating illiteracy from our schools and communities. Yet ‘too often we settle for too little’ (Prilleltensky & Fox, 1997, p.4). What is our vision as psychologists both academic, in providing the scientific evidence base, and applied, in turning that evidence base into programmes to promote human welfare? I believe that psychology can play a central role in tackling the issue of crime in our cities, litter on our streets, pollution in our atmosphere, breakdown in our international relations, obesity in our children and perhaps ultimately, oppression and injustice in our world.

**Psychologists must grasp a bigger vision – a national vision, a world vision – if they dream of promoting human welfare**

to raise children’s reading levels by doing nothing different from what we are already doing – except getting them to declare that they will do it.’

The idea was simple to the point of naivety. All the children had to do every day was to make bold declarations about their future levels of reading achievement. It could be done individually or in groups or as whole-class chants. Listening to 60 children in nursery chanting joyfully their own declaration – ‘Reading is fun, reading is cool, we’ll all be great wee readers because we’re going to *school!*’ – can be a powerful experience. It was the results, however, that were impressive. After one term the experimentals showed not only gains in key early literacy skills, but also positive changes in their attitudes to reading and their own beliefs about whether they would become good readers.

The whole idea almost seems content-free. No teaching methods, no glossy

materials, no sophisticated literacy programme. Yet it draws its entire rationale from the evidence base of multiple fields of mainstream psychology – attitudes, self-concept and self-esteem; expectations or ‘expectancy’; cognitive dissonance; social and interactive learning; motivation; attributions; goal setting, self-efficacy; visual imagery. Declaration led to behavioural change. As one bright four-year-old girl in nursery said, ‘Yes – I’m getting better. We’re doing more than we normally would.’

#### The individual support study

This was the final part in our armoury for wiping out illiteracy by school leaving age. Our programme was so successful in reducing the numbers failing that we could invest in intensive individual tuition for the small percentage who were still not fully literate. We selected the one remedial programme that not only met



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