

# Commentaries on "The Two Profiles of Psychology"

Corballis

## THE TWO JAWS OF PSYCHOLOGY

Mike Corballis's vision of two complementary profiles of psychology sees them gradually drawing apart. To me, these profiles suggest a metaphor, a set of jaws, two different sets of teeth that fit together and must work together to achieve their purpose. The fodder is the subject matter of psychology — behaviour, thoughts and feelings. M.C. has suggested that the two jaws bespeak two alternative concerns, together with two sets of methods that best serve these concerns. His opening remarks raise the possibility that these different concerns are represented by different people. To the extent that this is true, there inevitably must be different views on what is good or bad in psychology, what is useful or useless, important or trivial, and so on. This would lead naturally to the sorts of divisions in psychology that M.C. has described, and predict the growth of further separation in teaching and qualifications. This would be psychology tearing itself apart as it expands, just like the wider universe. I agree that this is happening, and think it both unfortunate and unnecessary. Luckily, there are other forces afoot that draw psychology together, exemplified by people like me.

My own Allport-Vernon profile, in 1960, was very like M.C.'s recollection of his own. At that time, quantitative and reductive methods were my unquestioned lore. It was understood that quantitative laws would be wrought in the laboratory, that would explain all behaviour. Cumulative recorders and Munroe calculators would chatter and heave for as long as it took to spew out the answers, and logical positivism would prevail. Before this onslaught, the most inscrutable mysteries even of human behaviour would yield their solutions. Science would triumph, it was only a matter of time (to be counted in seminars at the public bar of the Clarendon Hotel). Psychiatry was a loser, sired by Freud out of medicine. Psychology, sired by Wundt out of physics, flew the colours of positivistic science. Out with psychiatry, was the cry, and out with the soft bits of clinical

psychology as well. Up with the laboratory, and down with mental health. You get the picture.

For me, the events of the following twenty years brought about a change of heart. Working with the problems first of prisoners, and then of the intellectually handicapped, brought me to a gradual realization of the immensity of the gap between laboratory psychology and the needs of the community. The laws of psychology could find no easy application in the areas of need. Attempts to fit the two together were generally staggeringly naive and unproductive. Academic psychology had no conception of community needs, and the community had no conception of academic psychology. Scientists said, "we're working on the basic principles, and benefits will flow from this in due course". In fact, their work tended to be driven by theoretical and methodological considerations, rather than by a wish to be useful to others. Those with an interest in community needs saw that a different approach was required. Returning to our metaphor, the jaws of psychology would not meet, and the fodder went unmasticated.

One result of this was the growth of areas of applied psychology, such as community psychology, health psychology, applied behaviour analysis, school psychology, and so forth. Many, me amongst them, moved from the laboratory into the applied areas, bringing with us our skills in design, measurement and analysis, and a still-strong belief in the validity of these, and usually, in the invalidity of other methods. But down at the pit-face, a shock was in store. Professionals working hands-on with the psychological needs of the community had not only a different frame of reference, but a whole set of different tools. To make a useful contribution, people like me had to learn to respect and work with other valid approaches. This was not an easy process, and my first defence was to restate the problem to make it amenable to the methods I understood. But gradually, I am getting it right. What is required, it seems, is an inter-disciplinary, inter-methodological, approach. It may not be

science-as-we-know-it, but it is surely science-as-we-need-it. At this level, the jaws of psychology will mesh, and applied fodder, at least, will get a proper chewing.

Although I have used the example of applied psychology, I am aware of an increasing acceptance even within academic psychology, of a variety of investigative methods outside the traditional framework of logical positivism. New approaches may be hard to accept, especially if they seem to undermine the value and exclusiveness of our own training, experience and achievements. Although some problems will be more amenable to one methodology than another, surely most will benefit from an inter-methodological approach. This would be best served by keeping different approaches together, under the one roof, or whatever is required to facilitate collaboration and the interchange of perspectives. Here is a good reason, I submit, not to let psychology expand away from itself. Jaws that stay together, play together.

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#### COMMENTARY ON "THE TWO PROFILES OF PSYCHOLOGY"

Professor Corballis' article mourns the loss of a unity within psychology. The article describes the conflicts within academic psychology, and between clinical psychology and academic psychology, with an apparent sense of dismay at the disintegration of an identity of interest. However, looking back at the history of the emergence of psychology from philosophy and its evolution since then, any unity seems largely illusory.

The issues raised highlight three questions which underpin an understanding of the nature of psychology and its application:

1. What is it?
2. How is it to be taught?
3. How are the interests of those who do it best represented?

*What is psychology?* I have a vivid memory of Professor Alan Crowther nearly twenty years ago, summing up the eloquent portrayal

of the history of psychology he gave to a generation of this country's psychologists, (his shoulders wedged between the Room D blackboards), intoning "Psychology is measurement". Whilst it is possible to have measurement without psychology, and indeed to have measurement without science, science cannot exist without measurement, and it is the scientific basis to psychology that makes it psychology. It is not only inevitable but desirable that the content matter of psychology change, and advances within other areas such as brain imaging will draw psychologists and psychology into their wake. The process of evolution within psychology can be likened to the growth of a cauliflower, developing separate florets of activity increasingly remote from the stem, and encompassing an ever increasing diameter. Whether the scientists within each of those growth cells continue to identify themselves as psychologists will depend on the utility of the term "psychologist". If the term becomes associated with applied professionals who engage in "watered down" science its use will be abandoned by scientists and left to a residual group of practitioners, whose link to the fundamental essence of psychology, its basis in science, becomes ever more tenuous.

*How is psychology taught?* The scientific skills which are the primary tools of academic psychology are also necessary for applied psychologists to practice psychology: without its basis in science the practice of psychology cannot be differentiated from that of a range of other professionals (which is not to say that social workers, counsellors and business administrators are not worthwhile, but they are not psychologists).

Clinical psychologists in New Zealand do very little research. But each interaction with a client can be seen as an experiment. It is how the clinical psychologist formulates hypotheses on the basis of listening and looking, and tests the validity of those hypotheses that differentiates the clinical psychologist from other mental health professionals. More important than the duration or academic status conferred upon clinical training courses is the extent to which the application of science is modelled. For that to happen, it is vital that the links between academic psychology and clinical psychology be maintained and strengthened. The trend in the United States toward a divorce of clinical training from university departments of psy-

chology is a retrograde step, both for clinical psychology, which may become more isolated from its underlying principles, and also for academic psychology, which loses a thrust towards keeping a focus on issues relevant to the "real world".

The responsibility of ensuring that the scientific basis of applied psychology training is maintained must rest with both practitioners and academics. There is a clearly perceived need amongst some clinicians to have a broad focus on issues of relevance to addressing the sorrows and ills afflicting humanity (e.g. Seymour, 1990). However, there is a danger that breadth of focus may be gained at the expense of a willingness to put the dogma of currently trendy psychological theory to the test. If clinicians abandon science in the process of gaining a breadth of focus, they cease in fact to be psychologists, and by appropriating the term psychologist, will debase its value. For psychology to have validity as a profession, its practitioners must place value on its basis in science, and use those attributes which are its defining characteristics. It is also important for academic departments of psychology to modulate beliefs that "pure" research (as if there were such a thing) is inherently more worthwhile than applied research, and it is vital that an allocation of resources is achieved within academic departments which reflects the importance of achieving excellence in applied research activities.

*How are the interests of those who "do" psychology best represented?* The split of the APS from the APA is a reflection of the diversification of the content matter of psychology. It also reflects the rise of a need for applied psychologists, especially clinicians, to address professional needs which are quite separate from the pursuit of academic ideals. These non-academic goals are important and legitimate goals for any profession to have, and do not necessarily have to derive from an attitude favouring guildism and exploitation of an unsuspecting public. However, it is evident from the history of psychological organisations in the US, the UK, and Australia as well as recent developments in New Zealand, that it is difficult for one organisation to perform the functions of both professional advocate and learned society. The role of professional advocate is especially difficult when the perceived need for advocacy differs widely across the

different branches of psychology, or where conflicts exist between the interests of one group and another within psychology. (Perhaps the NZPsS should return to its original role of learned society, to promote the pursuit of excellence in the application of science by all psychologists, and leave the expensive and time consuming job of professional advocacy to coalitions of psychologists who wish to have their special needs catered for.)

A unifying essence by which the discipline of psychology can be defined can be found by considering the process by which scientific principles are applied to the study of behaviour. But Professor Corballis' portrayal of a loss of unanimity of interests within psychology identifies a loss more notional than real. Diversity within psychology can be a sign of health rather than decay. Organisational structures which reflect the diversity of needs within psychology, both academic and professional, and allow for the creative resolution of intra-psychology tensions are those most likely to maintain the psychological health of the profession.

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#### PSYCHOLOGY AS PHILOSOPHY

Corballis (1990) worries about the sea-change that is taking place in psychology and invites us to say what we want psychology to be like in New Zealand. In this commentary I want to press the view that psychology should be like philosophy and indicate something of what this would involve. Among other things, Corballis reminds us that psychology grew out of philosophy, and that questions to do with the human mind have long occupied philosophers as well as psychologists. I think psychology would gain much by reuniting with philosophy.

The suggestion that psychology and philosophy can be one will strike many as implausible. For psychology is still saddled with the

empiricist idea that philosophy and science are different in kind. According to positivistic empiricism, philosophy is a privileged and unrevisable enterprise which exists prior to and apart from science and which provides a foundation of certain, or near certain, knowledge about science. As a separate, insular discipline this philosophy has been incapable of genuinely learning from the various sciences. Even so, its prescriptions for research practice still influence psychological science (e.g., operational definitions, Fisherian statistical procedures, APA Publication Manual guidelines). Despite this influence, philosophy is viewed by a majority of psychologists as a dispensable luxury that has little, if anything, to do with their workaday world.

Scientific realism is the natural alternative to empiricist philosophy of science and its best form, evolutionary naturalistic realism (Hooker, 1987), presents a unified view of philosophy and science. According to naturalism philosophy and science are interdependent. This interdependence takes the form of mutual containment (Quine, 1969), though the containment is different for each: philosophy is contained by science by being located within science as an abstract scientific endeavour; science is contained by philosophy because the latter provides a normative framework for the guidance of science.

According to evolutionary naturalistic realism, philosophy of science is an abstract part of science concerned with the critical, in-depth examination of science in respect of its presuppositions, aims, methods, theories and institutions. Philosophy of science naturalized is in fact science self-applied: it employs the methods of science to study science, it is, where appropriate, constrained by the findings of science and it is itself a general scientific theory of science. As such, naturalized philosophy of science is at once descriptive, explanatory, advisory, integrative and reflective of science. Being positioned within science such a philosophy is well placed to study science, learn from science, and help instruct science. Prominent exponents of naturalized philosophy of science include Quine, Kuhn, Shimony, Paul Churchland, Giere and Hooker.

In addition to constructing theories about science, naturalism also encourages philosophers to function as speculative scientists by fashioning theories *a posteriori* in the various

substantive domains. Indeed, the work of a number of people we regard as prominent psychological theorists cannot be properly understood unless we take them to be naturalistic philosophers as well. Here I have in mind such luminaries as Piaget, Skinner, Campbell, and Chomsky. For example, to understand and evaluate Piaget's developmental psychological research we must see it as a part of his theory of genetic epistemology. In contemporary philosophy of mind Fodor, Dennett, Stich, the Churchlands, Dreske and others are engaged in the project of constructing naturalistic theories of the mind. It matters not that their theoretical contributions are often minimally constrained by prevailing psychological knowledge, because much of that knowledge is superficial and far from the truth. It does matter that their creative contributions are not being incorporated into psychology's mainstream efforts to understand the mind, for they rank among the best theories we have to date.

Now conjoining philosophy and science in the manner suggested by evolutionary naturalistic realism has the direct, though provocative, implication that philosophy should figure prominently in the education of psychologists and scientists generally. If philosophical knowledge is essentially scientific knowledge, then good philosophical theory should be included in the science curriculum as worthy substantive knowledge. I have already suggested that the fallout on psychology from contemporary philosophy of mind is considerable.

I also think that contemporary philosophical methodology has enormous resources for helping us better understand and advance our knowledge of effective inquiry procedures. What better way to learn how to do good science than to critically examine how good scientists have actually gone about their work? Useful progress has been made on the nature of research problems, the theory of data analysis, methods of theory generation and elaboration, the nature of experimentation, and so on. Insights from these sources sorely need to be combined with what is good in our indigenous and neighbouring methodological practices so that we can strengthen our hand in the procedural domain.

Philosophy of science also recommends itself as an excellent medium through which to convey a decent understanding of psychological theory. In its contemporary reconstructions of

scientific research philosophy of science explicitly identifies and critically highlights just those features of science that are important pedagogically. These include frameworks, idealizations, models, unifying theories, inquiry strategies, methodological judgements and the like. Harré (1983) has shown how the philosophy of science can be construed as science criticism to revise and improve the pedagogy of social psychological research.

Finally, if evolutionary naturalistic realism is right, there is so much more to science than empiricism would suggest, that coverage of its numerous facets within manageable time limits would necessitate its consideration in general terms. It is here that I think the synoptic character of philosophical theories should play an important role. Indeed, it should be stressed that studying science in a general way is essential to its proper comprehension. This is because a genuine understanding of a particular phenomenon involves knowing its relatedness within an appropriate whole. Relational knowledge of the particular is in fact more concrete than our customary abstract knowledge of it wrenched out of context. A general (realist) philosophical understanding or vision of the many components that make up science will afford us a framework within which we can locate and better appreciate its many parts. Viewing psychology as philosophy is the key to a viable critical education in psychology.

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#### DIVIDED WE STAND, UNITED WE FALL: A REACTION TO CORBALLIS

Michael Corballis (1990) has referred to an uneasy tension in New Zealand universities between the academic interests of most staff and the clinical interests of most students. While therapeutic or "helping" vocational aspirations have always typified a number of psychology students, in recent years such ideals have incorporated the majority. When I was an undergraduate in the late 50s, hardly any of my peers entered first year courses with the expressed intention of becoming a professional psychologist. Because of limited pre-university knowledge of the subject, most people enrolled in Psychology I as a degree "filler". Advancement beyond this level was usually due to an almost accidental captivation of interest. For some students, a knowledge of introductory psychology was believed to be potentially useful in other careers involving frequent contact with people, such as law or school teaching. Nowadays, with a greater emphasis on the social sciences in secondary schools combined with more publicity from the universities, new intakes of first-year students seem better acquainted with the different varieties of applied psychology. This, plus unemployment-driven pressure to carefully consider one's vocational options has, in my view, led to an early fixation on the most immediately visible branch of professional psychology, namely clinical.

However, the fact that most students have clinical interests does not mean that academic psychology departments are necessarily the best environments for effective clinical training. As suggested by Corballis (1990), there may be a case for this becoming the responsibility of university-based multidisciplinary professional schools with academic psychology departments contributing to but not dominating course curricula. Clinical programmes could draw on a wider range of expertise than typifies most academic psychology departments which in turn might then experience fewer demands to make courses "relevant". In my role as a university teacher, I have noticed that modern students often expect undergraduate teaching to reflect issues of relevance to clinical psychology and, as observed by Corballis (1990), are disappointed if it doesn't. Consequently much of the core material essential for a sound, general education in psychology is seen as

uninteresting or even unnecessary. In my own courses on biological psychology, I have found that such an attitude particularly applies to research involving nonhuman animals. While animal studies in psychology deal with processes shared by all advanced organisms, most is still unashamedly anthropocentric in orientation. Despite this and historical support for the value of animal research in the analysis and application of psychological principles (consider, for example, Thorndike, Watson, Skinner, Harlow, Seligman), I have noticed an increasingly prevalent view amongst students (and some staff) that such research has no place in present-day psychology. This contrasts with the present revival of comparative psychology in North America along with pleas for the reintroduction of an evolutionary perspective into mainstream psychology (Demarest, 1987). Such a move would counter beliefs that studies of humans and other animals are antithetical, and that consideration of evolution is dehumanising (Candland, 1987).

Corballis (1990) has commented on another source of tension between "the two profiles of psychology" in the domination of the American Psychological Association by professional psychologists. A similar situation has occurred within our own New Zealand Psychological Society (NZPsS) which, during the course of 20 or so years, has changed from a predominantly learned body to one mainly concerned with professional issues. This is evident from contents of the *Bulletin*, proceedings of annual conferences, business discussed at annual general meetings and general deliberations of Council. The recent 100% increase in the annual subscription to enable the promotion of what are basically practitioners' interests dramatically (and painfully!) illustrates the direction in which the NZPsS has gone. What disturbs me is that, in spite of its professional orientation, there are a significant number of clinical members who believe that the Society still cannot adequately meet their professional needs. One outcome of this has been the formation of a separate professional organisation, namely the New Zealand College of Clinical Psychologists. Interestingly, in a recent issue of the College's newsletter, the council chairperson, John Dugdale (1990) recognizes the need for a learned society to "represent and promote the science of Psychology" and suggests that this is "the appropriate role of the

NZPsS." Many academic psychologists would maintain that it should be the Society's *primary* if not only role.

Because academic psychologists now comprise a minority of the NZPsS, it would be unduly arrogant to advocate a reordering of priorities just to suit their needs. Clearly this shift from a predominantly scientific to professional function is part of an international trend since it has typified psychological societies in Britain, Australia, North America and elsewhere. But in our own case we may have reached a stage where the NZPsS is failing to meet the needs of either professional or academic psychologists. Perhaps it might be appropriate for academics to follow the lead of the clinicians and establish their own break-away society similar to what happened in Britain with formation of the Experimental Psychology Society and, as observed by Corballis (1990), in the U.S.A. with appearance of the Psychonomic Society and, more recently, the American Psychological Society. While this would be a pity for unity of the discipline, the increased subscription (which is now well in excess of charges made by other *scientific* societies) will inevitably make academic psychologists closely examine the benefits of remaining members of the NZPsS. Separation of academics and professionals through membership of different organisations could be an inevitable consequence of the division occurring in our universities, referred to by Corballis (1990).

The movement of academics towards multi-disciplinary groupings accompanied by their increasing neglect of professional issues (Corballis, 1990), and the growing independence of professional psychology may be part of a natural evolutionary process. Rather than trying to identify reasons for the widening gap between academic and professional psychology or determine what we want "psychology" to be like in this country, perhaps we should just let nature take its course. With its origins in philosophy and its propensity for incorporating concepts and methods from other disciplines, it is perhaps fitting that what is called "academic psychology" should eventually be absorbed into broader areas of interest. Consistent with its popular usage, the term "psychology" could then become synonymous with "professional psychology".



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### THE SCIENCE AND THE ART OF PSYCHOLOGY

Michael Corballis has made an insightful analysis of some of the problems that beset psychology. W. B. Yeats's lament: "Things fall apart; the centre cannot hold" offers a poet's description of psychology's plight. Corballis sees a nearly unbridgeable divide between academic psychology and professional or clinical psychology. One solution might be to follow the American lead he describes by establishing independent professional schools of psychology. To my mind, the problem is bigger than he allows, but the solution is simpler.

The problem is bigger than the divide between academic and professional psychology because academic psychology — at least as taught at Auckland — itself does not cohere. I offer but one example. Readers will be able to provide other examples from their own experience. I happened by chance to see a reading list for a seminar in one of our postgraduate courses. The subject of the seminar was G. I. Gurdjieff, a minor mystic who does not rate a mention in *The Oxford Companion to the Mind* or in the 1989 *Social Sciences Citation Index*. Yet this person's teaching can form part of an MSc degree in psychology. Contrast this topic with an equally extreme example from my own postgraduate course in the same department. In that course, students are expected to understand the densely mathematical and physicalistic work of Donald

Laming. How can a university offer, with intellectual honesty, the same degree in the same subject to students who undertake such disparate studies?

Psychology has grown too big, and Corballis has told us why. The product of growth without mitosis is bloat. To create a new school of professional psychology will not relieve the bloated discipline that I have just described. Nor could it be achieved in the medium term: on the one hand, universities are likely to resist such a major restructuring of psychology; and on the other hand, clinicians are likely to resist the formation of a free-standing school because they would lose prestige by the removal of a university's imprimatur.

The straightforward and natural solution is to place scientific psychology fully within a Faculty of Science. Non-scientific psychology (and I would include the art of clinical psychology here) properly belongs in a Faculty of Arts. At present many New Zealand departments, my own included, straddle unsteadily both the Faculties of Arts and Science. It is perhaps idle to speculate why this happened, but at Auckland it probably occurred for no better reason than that its first professor had seen a similar structure at Canterbury when he was there.

Some readers may wonder how the content of scientific psychology is to be determined out of the vast reach of the current discipline in New Zealand. The answer will be obvious to any scientist. The late U. S. Senator, Sam Ervin, once said that some people draw a crude picture of a horse and then put a label on it so that it can be recognized; others simply draw a good picture that needs no label. Similarly, good scientific psychology is instantly recognizable to any scientist, and requires no treatises from part-time philosophers on what it is.

The creation of new departments within Faculties of Arts need not face any impediments from university administrators — assuming, as I do, that only minor additional resources are required. In any case, I believe the additional costs would be more than offset by the additional students that would be attracted to the new departments. Universities have always had to respond to new developments: witness the creation of departments of computer science and cognitive science, for example. Creating a new department will not cause so much strife as finding an apt name to

describe it. My own suggestion — at least for the University of Auckland — would be a "Department of Humanistic and Clinical Psychology". Such a name captures, I believe, many of the interests of those who wish to shun the science of psychology and, instead, to pursue the art and practice of psychology.

Because the new Arts departments will attract most of the students who currently enrol in psychology, the Departments of Psychology in Science Faculties will be placed on their mettle to attract students. There will, however, be beneficial side-effects for those departments. One benefit will result from lifting the enervating administrative burden that at present falls on departments that try to satisfy the separate requirements of different faculties. Another benefit will flow from the new students that will be attracted to science faculties with scientific departments of psychology. The fashionable developments in cognitive science and neuroscience, with their appeal to students, will flourish more readily with the support of a science-based department of psychology. Similarly, humanistic and clinical psychology will be able to forge links with educational and health psychology to the benefit of both.

This proposal offers a simple and natural programme for the development of psychology in New Zealand. Moreover, unlike putative schools of professional psychology, it is an immediately realizable solution. Waiting for the development of separate schools might be like waiting for the second coming — the subject of Yeats's poem.

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#### COMMENTS ON CORBALLIS'S TWO PROFILES OF PSYCHOLOGY

The structural solution of establishing separate professional schools, which Corballis (1990) appears to favour for dealing with the widening divisions between scientific and professional psychology, is hardly new. For some time, because of the relationships psychology has with other disciplines and professions, psy-

chologists have been working in schools of business, medicine and education.

Perhaps the waning of behaviourism to which Corballis refers, and the capacity it once had to provide a unifying approach for diverse areas of psychology, together with the waxing of cognitive psychology, is indicative of a discipline which currently lacks a centre (Spence, 1987). The blurring of traditional disciplinary boundaries in an age of computer searches and similar technologies (Adair, 1990) may accelerate change and the emergence of new disciplines. But are these events sufficient to justify Corballis in describing psychology, world wide, as being at a crisis point? Or do they reflect mere stages in the evolution of disciplines?

There is still a need in our universities for a psychology which is more eclectic than Corballis might prefer, one which retains aspects of behaviourism, and other schools of psychology, as well as one which takes account of the burgeoning cognitive and neuro sciences. This is a particular need for the student who wishes to become a professional psychologist. The mutual need argument, which is that scientific and professional psychology require each other, may be wearing thin. However, a professional field which becomes divorced from an academic discipline risks becoming an arid technology and a testament to mediocrity. Corballis comes close to accepting the need for a link, albeit in one direction, in acknowledging that behaviourism has a place in clinical psychology, and even seeing a role for academic psychologists in the training of clinicians.

Corballis's primary concern is with the relationship between scientific and clinical psychology; he pays scant attention to other applied and professional areas within the discipline. Many of the issues he raises are certainly not new to industrial and organizational psychologists. Some years ago, I dealt with similar issues in this field's tenuous relationship with its parent discipline and with the possible consequences (Jamieson, 1974).

By 1970, in the United States, the business schools were already ahead of psychology departments in terms of the number of industrial and organizational psychology programmes and the production of Ph.D graduates in this area (Cranny, 1971; Campbell, 1971). Although I have seen no relevant New Zealand data, I have no doubt that a similar



pattern for masterate degrees holds in this country.

Contemporary industrial and organizational psychology draws on a number of disciplines. Can clinical psychologists learn from what this polygenesis has produced and from the institutional separation that has occurred? To risk being simplistic, it becomes essentially a question of depth versus breadth. The business school graduate, who has not taken previous courses in psychology, when compared with the equivalent degree level psychology graduate, is equally well prepared in his or her applied speciality, and even in some areas such as social psychology, but may lack depth in many basic areas of the discipline, while at the same time being more knowledgeable in other business disciplines. He or she may also be more familiar with the organizational relevance of material from other social sciences, such as sociology and political science. Corballis envisages a somewhat similar institutional and content elaboration developing, leading to a Psy.D qualification which is, in some ways, a clinical equivalent of the MBA degree. Is this what clinical psychologists would want — clinical or health service generalists rather than more specialised clinical *psychologists*?

The precedent should not be pushed too far. There are considerable differences between these two professional fields and their links with psychology. For example, the decline of behaviourism, which is part of Corballis's argument, has had a lesser impact on industrial and organizational psychology. This field had a much more muted enthusiasm for applied behaviourism and, in particular, the rewards of employing behaviour modification, partly because it is seldom in the workplace that one has the degree of control which is usually available to the clinical or educational psychologist. In addition, cognitive influences, possibly of a non-Neisserian form, have long been apparent in industrial and organizational psychology, and continue to be so (Lord & Maher, 1989) in a manner which does not merely perpetuate the ubiquitous use of the term *cognitive* (Corballis, 1990).

At a professional level, industrial and organizational psychologists' identification and links with the parent discipline are relatively loose, more so than is true for clinical psychologists. Industrial and organizational psychologists work in a very wide range of positions, most of

which are not restricted to psychologists, and as a result during their careers, develop equally diverse membership and reference groups, as well as concerns which have little in common with psychology as a discipline. Would the same process occur should the training of clinical psychologists become institutionally separate? Would it matter?

The more pragmatic psychologist may consider the "crisis" to which Corballis refers, in the same way he or she views the expanding universe; there may be evidence to support the notion, but it has little effect on one's day to day concerns. Perhaps so, but I believe that Corballis has done us a service by drawing attention to some apparent tensions which may become real and overt within psychology in New Zealand. There are other developments too, which will impact on the discipline here. Among these are changes within the universities and in their relationships with other institutions in society, considerable changes in the nature and focus of research funding and changes in the demography of psychologists (Adair, 1990; Howard, Pion, Gottfredson, Flattau, Oskamp, Pfafflin, Bray, & Burstein, 1986).

These matters warrant attention. Allowing for some licence of gender, it would be a pity if Corballis were to be treated as a latter day Cassandra. He states,

"We can learn from what is happening in other countries, but we should also initiate discussions as to what we want psychology to be like in this country."

I agree, and would add, "Who should, and how and when?"

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#### SCIENTISTS AND PRACTITIONERS: ON TRAINING CLINICAL PSYCHOLOGISTS

If there is anyone who can lay claim to being the founding father of the profession of clinical psychology, then it is probably Lightner Witmer. At the turn of the century he demonstrated how psychologists might work independently, using a model of intervention that was essentially educative rather than medical or psychoanalytic. When he described his approach to his American Psychological Association colleagues he received a cool reception. The early members of the Association were not persuaded that there was a practitioner role for psychologists; it was clear they felt that their fragile credibility as scientists was at stake.

Right from the moment of its inception, clinical psychology has existed in tension with the scientific aspirations of academic and research psychologists. With the 1949 Boulder conference came the scientist-practitioner model and the conscious attempt to merge experience in professional practice in clinical psychology with training in research skills. Much of the professional debate in clinical psychology since then has been a consequence of disillusionment with the scientist-practitioner amalgam, and the search for a more comfortable training model.

Most, if not all, clinical psychology training programmes in New Zealand state in their information booklets that the scientist-practitioner model underpins the philosophy of the course. However, as in the United States, tensions between scientist and practitioner values permeate professional and academic psychology in this country. In North America at the present time, it is evident that graduates

from professional practitioner-oriented clinical programmes are far outnumbering graduates from strong scientist-practitioner Ph.D. programmes (Peterson, 1985). If New Zealand were to follow North American trends, then over the next 10 years we can expect a similar dramatic shift in both the base and the orientation of clinical training in this country.

Nevertheless, I think there are a number of reasons why training in clinical psychology may not move away from the scientist-practitioner model as comprehensively in New Zealand as in the United States. One important factor is the absence of any acceptable home for clinical psychology outside the University. Even the most fervent advocate of practitioner models of clinical psychology can see that University training confers credibility on professional qualifications. Staying within the University context has, however, important implications. The Vice Chancellors' committee is at present vigorously championing the unique character of University education, which requires scholars to combine teaching and research. It would therefore be totally contradictory for the University management to support practitioner clinical psychology programmes staffed by academics with marginal or no research aspirations. As long as clinical psychology is taught somewhere in the Universities then the teachers will be expected to be a part of the research community of the institution. This in itself reinforces the scientist-practitioner model. For those who want to abandon the University, perhaps the most viable option open to the profession is to locate practitioner style training programmes at the Polytechnic; I hope this will be avoided.

Peterson notes that "For the most part, the major research universities of America have retained small, research-oriented scientist-professional programs in psychology. With only three exceptions, efforts to develop practitioner programs in research universities have failed. Given the incentives that govern faculty behavior, there is no reason to expect these conditions to change". (p.444). I think that is what will happen in New Zealand; Psychology Departments will continue to run small clinical programmes, with research emphases commensurate with the philosophy of the particular Department.

The fact that our clinical qualifications are at a Masterate level and do not undermine the

Ph.D. is another reason why clinical training can be more successfully located in university psychology departments. American practitioner Psy.D. and Ph.D. programmes can be seen to threaten the research emphasis in doctoral training; with our emphasis on Masters level qualifications there is more room to expand practice training without challenging University-based standards. I suspect also the time has now passed when a course-work/practitioner doctoral degree could be established in a New Zealand University. The Ph.D. or Masters option for the research component of training seems to have evolved as a flexible and academically credible system.

The decision to support a professional training programme is not a simple one for a research-oriented psychology department to make. A department's prestige within the University depends on the acquisition of external funding, research productivity, and the credibility of its faculty as scientists. The viability of psychology departments, as far as their student numbers and claims to internal funding are concerned, is not much affected by the presence or absence of a clinical programme. It is important for practicing clinicians to be aware that clinical psychologists have no right to expect that all Universities in this country will continue to support clinical programmes. However, those departments who do elect to run them, must be conscious of the fact that academic clinicians need sufficient resources to allow them to run a strong programme and remain productive scholars.

The struggle to maintain clinical training standards over the years has not been easy and there have been many casualties. I am more optimistic than Corballis that clinical psychology can remain an integral part of psychology departments in New Zealand Universities and that we can train our clinical graduate students in the values of both science and practice. The scientist-practitioner ideal has served us well and I for one am not ready to see it discarded.

If I am wrong and clinical psychology leaves its present University home, then, in my opinion, the profession will gravitate inevitably towards the medical schools. I think it unlikely that independent professional schools of clinical psychology will evolve in the Universities because I can see no advantage in this development for the University management or for

clinical academics. I believe a move towards medicine will be accentuated in the United States by the growing clamour for limited prescribing rights for psychologists. If this final battle with the medical profession is won, and it can be, then clinical students will need to be trained in more depth as biological scientists. I would be sorry if this came to pass. It would mean the end of the vision that Lightner Witmer had, of a profession that drew its strengths from a multifaceted discipline of psychology and that enhanced the quality of life of clients through educative and social processes.

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#### COMMENTARY

When a scholar as distinguished as Professor Corballis writes on a serious issue I read him seriously. Yet this article is curiously rambling, contains many assertions without reference to supporting facts, reduces complex issues to dichotomies, and has factual errors. I am left wondering if he is pulling our leg, being mischievous, or politicking. It deserves a reply in kind. However I will try to reply seriously.

It is not easy. It is a difficult article to "grab hold of". Take the title. Why "two profiles" and only two? Well, a personal experience by Professor Corballis when a student so markedly affected him that he has "often been haunted by [it]". I refer to the mirror-imaging of his and another student's scores on the Allport-Vernon-Lindzey Scale of Values. Professor Corballis should have been more impressed by the instructor's response, "In amazement he held the two graphs side by side . . ." That amazement expresses the rarity of such extremes. That seems to have been lost on Professor Corballis. Although he likes "to think I am not quite so polarized in my outlook these days . . ." I wonder. In his article psychology has two profiles, humans are

rational or emotional, psychology is scientific or clinical, there are professional interests or client interests, and so on. For most of us matters are rarely dichotomized so.

Then there are the assertions. "There are surely few remaining doubts that the key to the mind is the brain" . . . "Psychology to the person in the street . . . has to do with people's problems and hang-ups" . . . "Behaviourism has been declining since the 1950s". So they go on. It would take considerably more space than allowed here to challenge such assertions.

So I repeat, it is a difficult article to "grab hold of" to review. If the preceding is ignored the essence of it is that there are two growth disciplines in academia: cognitive science arising from computer developments, and neuroscience. These "new" sciences deal with scientific questions traditionally addressed in departments of psychology. So, many scientific psychologists are leaving departments of psychology to take positions in departments dealing with these sciences. They are also, at least in the USA, leaving their traditional associations, e.g., some academic and scientific psychologists have left the APA and formed the American Psychological Society.

Professor Corballis links these movements to recent questioning of the scientist-practitioner model as relevant to clinical psychology which in turn he relates to a decline in behaviourism. According to him it is behaviourism which has linked academic and clinical psychology. The upshot of all this is growing tension between academic psychology and clinical psychology. How Professor Corballis reaches that conclusion from his preceding comments is not clear to me. The movements he writes of have more significance for university departments of psychology and psychologists' associations, than for tensions between academic and clinical psychology. He gives examples of break-away or alternative associations and writes of psychology in some universities ". . . simply falling apart".

Nevertheless Professor Corballis is left "wondering what will happen to clinical psychology". Possible solutions canvassed by him are: adopting an apprenticeship model, establishing professional schools of psychology either outside or within universities, and if within universities either outside or within departments of psychology. At this point he seems to confuse what is taught with where it is

taught. Throughout his paper to this point the issue has been what should be taught rather than where it is taught. His central question has been "does academic psychology have relevance to clinical psychology?"

My answer is of course it does. Out of academic psychology comes the information shaping the practice of clinical psychology (and all other applied psychology, ignored by Professor Corballis except for one passing reference, even though other applied psychologists combined far out-number clinical psychologists). Of particular importance is training in experimental and research methodologies applicable in applied settings. Take away the academic base and well we may ask "what is to become of clinical psychology?" It can be taught anywhere given the staff and facilities. But why shift it outside university departments of psychology? Change for the sake of change is the worst aspect of modern managerialism. This is not to say that ongoing debate about content, flexibility in optional papers in other departments and so on is not required. It is, and not least the assertion by Professor Corballis that ". . . 'hard-core' scientific psychology, including statistics and quantitative techniques are in many cases watered down and sweetened . . ."

The paper by Professor Corballis leads more to questions about gaps within academic and applied psychologies and within associations of psychologists rather than between academic and clinical psychology, a position he seems himself to have partially reached in his penultimate sentence. Nevertheless, and for reasons other than those given by Professor Corballis, there are tensions between academic and clinical psychology. And this is a worry. The threats to psychology, academic or applied, do not lie in neuroscience or cognitive science. Psychology is well able to absorb relevant knowledge from those disciplines as it has with others throughout its history. The real threats to psychology lie in several strong social movements abetted by a depressed economy and pervasive user-pays political philosophy. Many of the Maori and women's movements reject the relevance and application of both academic and applied psychology to their members. Alternative medicine offers services at half the price to traditional clients of applied psychology. Modern managerialism profits on pop-psychology. Consequently, unless psychol-

ogists academic and applied show cohesion and emphasize the theoretical and empirical bases to their science and the benefits accruing from the application of that science, one wonders not what will become of clinical psychology but what will become of psychology. New Zealand psychologists should focus on these issues. I fear the article by Professor Corballis will distract us.

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### COMMENTARY

As director of the Auckland University Diploma in Clinical Psychology programme, the relationship of the clinical training programme to the 'scientific', or perhaps more correctly 'traditional' teaching and research programme in the Department of Psychology has long been of concern to me. As a clinical neuropsychologist, I have a hemisphere in each space, and would like a solution that allows me to talk and cooperate with myself, as well as with my colleagues on both sides.

From the point of view of the staff who teach primarily in the clinical programme, we are understaffed and underfunded, although this is gradually changing as the result of an increasingly assertive student demand for clinical and applied courses. It is refreshing to read Professor Corballis' analysis of the situation, and his recognition that the majority of psychology students want to learn about clinical psychology, even at the undergraduate level, yet the funds our large student numbers attract are needed primarily for traditional research laboratories that interest only a small minority of students.

Training in clinical psychology at the post-graduate level is a very expensive business, primarily because of the intensive one-to-one supervision required, yet the University provides no additional funds or staff for the Dip.Clin.Psych. programme above those already provided for the Masters' programme. Most NZ psychology departments are still top-heavy with psychologists whose expertise lies in traditional areas of scientific psychology. In 1991, Auckland's Department of Psychology

plans to increase its clinically qualified staff to 3, leaving 18 staff members without clinical qualifications, although one of these will be a long-overdue Kaupapa Maori position. While some of these 18 staff members teach and carry out research in non-clinical applied areas of psychology, they are rarely given the necessary funds required to teach these skills in a way that will enable students to use them as occupational qualifications *per se*.

Departments who do listen to student and employer opinion and decide to increase their clinical staff, find it difficult to attract people who have a postgraduate clinical qualification and three years or more experience as a full-time clinician, in addition to the usual academic requirements of a Ph.D. and a good publication record. Such highly qualified people must be willing to take a significant drop in present or future income if they wish to enter the university system. Clinical psychology teachers in NZ also need to have a good understanding of our cultural value systems, and this important requirement even further decreases the pool of eligible applicants. There are a few such people in NZ, but it is difficult to attract them to a lectureship position when it requires them to increase their workload and stress levels significantly, and take a drop in income as an incentive! Even the freedom and funding to carry out independent research, a concept that presumably attracts many people to a university career, is also currently under threat.

There are various ways to increase the likelihood of making good clinical psychology appointments. For example, universities could: (i) appoint people with good clinical, supervisory, and teaching skills, but without a Ph. D. and publication record, thus taking the risk of lowering the academic quality of the clinical programme; (ii) appoint clinically experienced people with Ph.D.s and publications at the Senior Lecturer level or higher; (iii) add a clinical loading to the salaries of clinical staff, as is the case with medically qualified lecturers. None of these steps will be taken until Clinical or 'Professional' Psychology is acknowledged as an important discipline in its own right by our 'scientific' psychology colleagues and by the university system.

The need for well-trained, culturally sensitive, clinical psychologists is increasing in NZ. At a recent meeting of managers of the

Auckland Area Health Board Mental Health Services, set up to discuss the Clinical Psychology internship programme, there was general agreement amongst the managers who employ both our interns and our qualified clinical psychologists, that an annual intake of 8 students into the Auckland programme would not meet the demand for clinical psychologists in Auckland. However, to increase our intake further would require more staff and more funding. Professor Corballis suggests that one answer to this problem of appropriate staffing and funding for clinical training, might be to set up professional schools of psychology that are independent of departments of psychology. He further comments that if this means professional psychology is cut off from the university, professional psychology will stand "only to lose, in effectiveness, credibility, and prestige". While agreeing with this, I would also guess that the traditional 'scientific' psychology departments would also stand to lose, at least in a country as small as NZ. If clinical psychology became divorced from the Auckland Department of Psychology, the latter would lose large numbers of students both at the undergraduate and postgraduate levels, and the research and teaching of the staff would be in danger of becoming increasingly out-of-touch with the communities that support the university. It is in the interests of both scientific and clinical psychology to find a solution that allows clinical psychology to flourish, yet remain within the University with continued close links to psychology departments as well as to other appropriate university departments. This model seems to work well for the professions of medicine, law and engineering, and it is a mystery as to why it is such a difficult leap to take in the case of psychology.

In order to increase the relevance of traditional 'scientific' psychology for the many undergraduate students who are interested in clinical and other applied branches of psychology, our academic psychologists need to broaden their lectures to include applied and clinical examples that reflect an 'Aotearoa' psychology. In my view, as the content and process of psychology teaching at the undergraduate level evolves to incorporate Taha Maori, feminist viewpoints, and applied skills, students will be happier, more motivated and better prepared to enter traditional postgraduate research programmes as well as

clinical and other professional psychology programmes.

It is important that postgraduate clinical programmes retain a research component, as a research ability is perhaps the major factor that distinguishes clinical psychologists from other mental health professionals. It is interesting to note the increasing numbers of psychology thesis students who are using qualitative, descriptive methods in their research. Such methods may well be more relevant and ethical for clinical and applied research, thus increasing the likelihood that psychologists trained in these methodologies will continue their research activities when practicing full-time in their profession.

My hope is that university psychologists, whether they see themselves as having a scientific or applied orientation, will actively work towards developing a more balanced undergraduate programme that meets current student demands and employment needs, and provides a NZ perspective as well as an up-to-date theoretical base. This would help ensure the support and growth of semi-independent postgraduate professional psychology programmes and departments within the University, and the continuation of close links between professional and traditional psychology. If these two aspects of psychology were to undergo a total split, I for one would have trouble knowing where my allegiance lies.

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#### A RESPONSE TO CORBALLIS (1990)\*

I agree with Corballis that the tension between academic and professional psychology is sufficient to consider reviewing clinical psychology training in New Zealand. For me, there are two additional considerations for such a review: they are, the generalist vs specialist training debate and appropriate training for clinical psychologists within a market-forces-driven workplace.

#### *Scientist-Practitioner model*

For four decades the scientist-practitioner



model has been the guide for clinical psychology training. The model implies that clinical psychology students are taught both to *think* soundly and to *practice* competently as psychologists.

In reality, a comfortable balance between science and practice has been worked out in relatively few applied psychology training settings, and it remains an often-debated, though admirable rhetoric (Barlow, Hayes, Nelson, 1984; Drabman, 1988; Martin, 1989; Norcross, Gallagher, & Prochaska, 1989).

To address the issues raised by the scientist-practitioner model we need to consider the historical context in which it was spawned. In 1949, at the time of the Boulder Conference there were few systematic applied training programmes for clinical psychologists in the USA, and none in New Zealand. Budding clinicians had an academic/experimental pre-service training in the university setting and then had to learn or *discover* how to apply this on-the-job.

A model that made explicit the need to integrate science and practice in professional training was a sensible outcome of the Boulder Conference. Even so, its implementation was not straightforward. Some clinical graduates became non-practitioner scientists in applied settings (not necessarily applied scientists), some became non-scientific practitioners, and others, probably a smallish number, got the scientist-practitioner mix about right. However, the present context for reviewing training is markedly different to that of 1949.

Today's debate is less about how to fit the offerings of academic psychology into the needs of applied psychology training and more about what to teach from within applied psychology's own rapidly growing theory and research data bases.

In addition, we now have large numbers of practitioners whose training was guided by the scientist-practitioner model. Feedback from them on their efforts to apply their psychology training to real world problems should offer much of value for future developments in professional training. Many of these ex-students tell us that we missed teaching them important things for practice and that some of what we did teach was irrelevant.

The needs and views of the consumers of our services should also have a bearing on our professional training efforts. To assess whether

our graduates are being equipped with functionally useful skills and knowledge for the marketplace we also need to pursue social validation feedback (Wolf, 1978) from our clients and community groups.

I do think we need to look towards a university-based professional school model. A university-based applied-psychology school would allow for the benefits of the stimulation of the university environment and access to relevant academic resources outside applied psychology. It would also make explicit and give primacy to the needs, values, and resources required for professional training in clinical psychology, issues not always understood within academic departments of psychology that host clinical psychology programmes.

A professional school development may be too radical for our profession at this time or logistically unlikely. An interim or alternative model would be to collapse the current six courses into two or three, and to treble the number of academic clinical staff and students in each programme. This concentration of academic clinical staff would begin to provide for the breadth and depth of training that a professional preparation requires.

Whatever model we work towards we need to clarify the roles and responsibilities of the university and the profession in training clinical psychologists. Clinical psychology is one of the few professions in New Zealand where the university controls the curriculum and training experiences up to registration level. For example, the pre-service academic preparation for law, medicine, and engineering are offered from university-based professional schools, but final professional certification is via a programme of practicum experiences and examinations controlled by those professions. This division of roles allows each organization to take responsibility for those parts of professional training for which it has the most appropriate skills and resources.

#### *Generalist versus specialist training*

Formal clinical psychology training in New Zealand is based on a three year generalist graduate training model, developed in the early 1960s when psychiatrically-oriented psychological assessment was the clinical psychologist's major role.

Today, clinical psychologists have major treatment roles and work in many areas outside

of psychiatry; for example, neuropsychology, child and family practice, rehabilitation psychology, intellectual handicap, forensic psychology, and physical health care. In addition, as clinical psychology in New Zealand *ever so slowly* comes to a world view that includes systemwide social, political, economic, and cultural variables in the genesis and maintenance of personal competencies we will need to include training in ways of working at levels other than the individual or small-group level.

Providing generalist preparation for the range of current practice specialties is near impossible. Many of the specialties could fill out a three year training programme on its own. Indeed, community psychology has done so at Waikato University (Robertson, Thomas, Dehar, & Blaxall, 1989).

Current clinical psychology graduates typically receive an adult and psychiatrically oriented generalist training and then develop speciality areas via ad hoc on-the-job training. We should, and can, do better than that. We could consider at least the following options.

First, we could strengthen our initial generalist training programmes and leave specialization training totally to the profession, hopefully via standardized on-the-job training schemes. Another option would be to add additional year(s) of specialty training onto the current generalist base. A further possibility would be to convert some of our six current generalist courses into specialist programmes; for example, one in neuropsychology/rehabilitation, one in child and family psychology, and one in forensic psychology.

Whatever option we pursue we need to think beyond our present masters/diploma structure. We also need to have greater communication between the clinical psychology profession and the universities in the redevelopment of our training model(s).

#### *Clinical psychology in the free market*

To date, we have trained clinical psychologists in a public service mode. Our graduates have been prepared for employment in agencies where their status and remuneration have been set by bureaucratic process, and where their role has been to provide services to clients in need, both the services and the clients' needs being defined by agency policies.

The massive socio/political changes that

have recently occurred in New Zealand have thrust a new scenario upon us. Whatever one's personal views on the appropriateness of free-market forces setting social and health policy, that is increasingly the reality (Linowes, 1990; Moore, 1990). The survival of our future graduates, in either the public or private sector, is going to increasingly depend on their initiative and flexibility in adapting to change. In my view, these free enterprise survival skills have not been encouraged in our training programmes to date, nor supported in traditional work settings. Indeed, some settings have actively punished innovative practice.

If we are to teach initiative and flexibility to students I suggest some of the following should be in the training syllabi: business administration and financial management, personal promotion and product marketing, and consulting and networking skills. Future graduates will need these skills regardless of whether they are heading for the public or private sector. Being well organized, able to assess needs and to promote services, is important whether you are in private practice, working for an agency, or alongside community groups.

To cope in the brave new world our graduates need management training. In addition, we need to do more than just train students to assess and treat the aberrant cognitions, disturbed emotions, or proximal environmental contingencies that we have claimed are critical for the production and maintenance of maladaptive behaviours. We also need to expose students to models that analyse and suggest interventions for the broader range of social, cultural, political, and economic system-variables that impinge on community and individual health and well-being (see Biglan, Glasgow, & Singer, 1990; Durie, 1984; Sachdev, 1990; Spoonley, 1989; Te Roopu Awhina o Tokanui, 1986; Winett, 1985, 1986; Winkler, 1986). In particular, we need to address the apparent paradox of promoting social equity within a free market environment with its inherent social darwinism (Haworth, 1989).

The education that future clinical psychology graduates will require to think soundly and practice competently demands that we seriously review and redevelop our current training models. I am grateful to Corballis for raising the issue and forcing me to consider

what the redevelopments might eventually look like.

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#### WHAT CRISIS?

A crisis is a telling time, a moment representing a turning point when decisions *have* to be made. And it is a word which is becoming devalued through overuse. I do not believe psychology to be at a time of crisis, nor do I believe that it is useful to suggest that it is, other than heuristically of course. In fact, the general argument presented by Corballis seems to me to be the latest form of the puzzling concern that psychologists have long had with their status as scientists. Perhaps psychologists are reflexive because the nature of their discipline is essentially recursive.

Previous concerns have frequently been with methodology in an apparent attempt to drive psychology in the direction of the natural sciences — to give it respectability. The crisis described by Corballis is similar to this in that it is one of identity. Should psychology be psychology or should it be behaviouralcognitive-neuroscience? Some psychologists mainly carry out research, driven either by practical problems or by theoretical issues — it comes to the same thing in the end. Other psychologists have a professional concern with dealing with various bits of the world to make people more effective, more efficient, or happier. Some psychologists do both.

To wish psychology to be renamed a something-or-the-other science and to be concerned that so-called professional psychologists, with clinical or other interests, are not exactly the same as the academic or pure psychologists, both seem, once again, to reflect a concern with scientific respectability. The implication is that academic psychologists might somehow become tainted by contact with professional psychologists. The professional psychologists are themselves indifferent to such contacts; they have their own concerns. If academic or research psychologists all become behaviouralcognitive-neuroscientists then the professionals can be left to their own devices, in *schools*. It is

perhaps worth noting that schools are somehow lesser places than universities.

I believe none of this to be either necessary or desirable; indeed, at worst, it can lead to wasted time and energy. It is all a matter of labelling and the apparent importance to some people of the labels by which other people stereotype them. It is my contention that if one takes a liberal view of science and adopts a broad perspective on the research endeavours and professional activities of those who are called psychologists, the idea of a crisis disappears. In my view, "Psychology" is no more than a convenient chapter heading in a book entitled "Science".

The endeavours of psychologists take many forms, from the phenomenological analysis of subjective experience through the measurement of response rate and the construction of cognitive models to the recording from single cells in the central nervous system. There are good reasons for all of these approaches, and many more, and they are all science. Many of the areas in which psychologists carry out their various kinds of research are also of interest to those who usually appear in different chapters in the book of Science, from Anthropology and Sociology to Physics and Biochemistry. Moreover, much of what any of these scientists discover is eventually used in applied settings by professionals.

Viewed from this perspective, where is the crisis? Knowledge will develop, as it has for hundreds of years, through the judicial and appropriate application of scientific methods to "pure" or "applied" problems. It is simply of no concern what the various exponents of science are called and it seems pointless and obstructive to open chasms between scientists and practitioners. To label people behaviouralcognitive-neuroscientists does not change what they do, and in my view, scientists and those who apply their findings have much to offer each other.

In summary, it is my contention that psychology is nowhere near a turning point. It embraces so many different things that it would have nowhere to turn. And I would miss those who have professional interests if they were relegated to separate Schools.

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## EXPANDING PERSPECTIVES

The paper by Professor Corballis (1990) is timely and welcome. It opens a debate on professional and "scientific" psychology that is rare and long-needed in relation to the teaching and practice of psychology in New Zealand. The present paper takes up two themes in response to the Corballis paper: elaborating a different perspective on the perceived differences between professional and academic psychology, and outlining alternative views on the future development of psychology in New Zealand.

Reference is made by Corballis to the "... conflict of interest between academics and professionals ..." (p.16). He discusses in some detail the development of the "scientist-practitioner model" in the United States in relation to training in clinical psychology. The model assumed that clinical psychologists should be given training in both research and clinical skills. A key point of conflict has been the realization that the research part of the training often had no relevance to the research needs of practitioners. A point which was not mentioned by Corballis is that this lack of relevance can be linked to the dominance of particular research methodologies originating within experimental psychology. Such methodologies, which place a high value on laboratory-based research, the control of "extraneous" variables, and the use of complex statistical procedures for the analysis of data, usually have little relevance to the research questions asked by clinical or other practitioners and are often inappropriate in applied settings.

The context that Corballis provides for his key point, that the differences between academic and professional psychology are also critical for psychology in New Zealand, appears to contain some crucial limitations. He restricts his discussion of professional training in psychology to clinical psychology. It is not clear why one should assume that what is true for clinical psychology is also true for educational, industrial-organizational and community psychology. While there are certainly debates about the differences between academics and practitioners in these areas of applied psychology (e.g., Elias, Dalton, Franco, & Howe, 1984), these debates have generally taken place within a context which recognizes their mutual interdependence.

Pursuing the emphasis on clinical psychology, Corballis notes that, "The great majority of students in psychology have not enrolled to learn about the science of mind. They want *clinical* psychology" (p. 4). On what basis is this claim made? A recent survey of psychology students in five New Zealand psychology departments (Fernando, 1989) indicated that only 32% intended to pursue employment in the areas of clinical psychology, counselling, or psychotherapy, hardly a "great majority." More students reported that undergraduate courses in social psychology were relevant to their current goals than courses in abnormal psychology (16% vs 13%). At the University of Waikato, most students appear to be interested in practical applications of psychology in a wide range of settings *relevant to their experience of life in New Zealand*. What students really appear to want are knowledge and skills that are useful outside research laboratories.

Corballis goes on to state that, "In our own universities there is an uneasy tension between the predominantly academic make-up of the staff and the predominantly clinical interests of the students" (p. 10). Outside the University of Auckland Psychology Department, there are teaching and research programs in educational psychology, organizational-industrial psychology, community psychology, and recently, aviation psychology, which provide opportunities for professional careers in psychology. The uneasy tension between academic staff and the interest of students has not surfaced in visible form in the other areas of applied psychology at other universities in New Zealand.

If one expands the debate on the apparent conflict between professional and academic psychology beyond the small part of psychology encompassed clinical psychology, neuroscience and cognitive science then other patterns become evident. In areas of psychology not referred to by Corballis, it is common to select research methodologies that not only address theoretical concerns but also provide outcomes that are useful for practitioners (e.g., Inkson, Henshall, Marsh, & Ellis, 1986; Robertson, Thomas, Dehar, & Blaxall, 1989). There has been a great deal of criticism of the exclusive use of deductive theory-testing research in psychology, which often has no practical application, and calls to broaden the development of theory and the

practice of research by investigating psychological processes in ecologically-relevant settings (e.g., Wicker, 1989). To elaborate this point, students are likely to learn more about the challenges in establishing the validity and reliability of data if the data arise from evidence collected in settings outside universities than data generated by students performing seemingly trivial tasks in research laboratories.

In terms of restructuring academic psychology in New Zealand, greater value needs to be placed on the *localization* of psychological research and practice. The developing research literature focusing on New Zealand and the South Pacific (e.g., Inkson et al., 1986; Ritchie & Ritchie, 1979, 1981; Taylor, 1987), provides opportunities to use local material, as well as overseas literature, in teaching and research. A perusal of textbook and reading lists set for undergraduate courses would reveal the extent to which psychology taught in New Zealand universities derives its cultural roots from overseas.

New Zealand psychologists need to go beyond the cultural limitations of much of the psychological research carried out in the United States (Sampson, 1988). The major political, social, economic and cultural changes occurring in New Zealand, especially the emergence of bicultural social policies and practices, provide important research opportunities for psychologists. To what extent are the psychological processes accompanying these changes reflected in the teaching of psychology in New Zealand universities? These surely are some of the issues of concern in discussions about the restructuring of psychology in New Zealand. Ultimately it must be recognized that psychology is a pluralistic discipline. What is seen by some as apparent disintegration, can be seen by others as a healthy sign that psychologists are pursuing common interests with scientists in related disciplines.

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#### COMMENTARY

Professor Corballis is to be congratulated on his article "The Two Profiles of Psychology" which makes many points that have been stated in part by clinical psychologists. It is refreshing to read them fairly and logically put down by one whose "heart sinks when I have to reveal that I am a psychologist". In my several decades in clinical psychology and its teaching and having visited a reasonably large number of overseas training establishments, including the University of California at Irvine which he mentions, I agree with the increasing separation and ensuing tension between academic and applied psychology.

The author is perfectly correct in thinking that the Boulder scientist-practitioner model is still the underlying one in the teaching of clinical psychology. Therefore the movement towards a complete apprenticeship and learning on the job from an experienced practitioner by itself, without a very solid base of scientific observation analysis and development of hypotheses to be applied, would have all the emptiness and potential for confusion as some aspects of Social Work. On the other hand his statements that the majority of the huge number of students enrolling in departments of psychology at Universities in fact wish to become clinicians is something that many of us

believe, but which has not to my knowledge been assessed. Perhaps a full explanation of the statistical chances of gaining a place in a clinical or similar programme, such as educational psychology, or industrial psychology, should be given at enrolment.

The only other comment I wish to make is on the distinction between psychology and medical practice and the fact that psychologists interested in neuroscience work increasingly in medical settings. Although clinical psychologists would be reluctant to embrace the "medical model" in the sense of poor assessment, paternalism, medication rather than psychological investigation etc., there is a wide spectrum within this model and clinical psychologists in a variety of settings utilise neuropsychological assessments and think along this dimension.

In conclusion I believe that in New Zealand, as in other parts of the world, schools of applied psychology will be formed at an advanced stage of training. I have wondered over the years if these should not be separated from the university with teaching, say, in a Polytech but with free continuing communication with the staff and material from the university system. This may well gain more financial backing for courses in clinical psychology, would probably make it easier to finance field supervisors adequately and seems to fit in with our developing political system. I do not believe that we have come to a sad point in the standing of psychology but an interesting opportunity for further growth in the two profiles of psychology.

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#### COMMENTARY

For the most part "Two Profiles" is a lucid exposition of the current state of the discipline of Psychology, in which Professor Corballis identifies two major and not altogether unrelated rifts. The first of these, he finds at a professional level, between many university staff, whom he identifies as academics, and applied psychologists in the community, whom he identifies as clinicians. The second, and



clearly related rift lies between the interests of largely the same university staff, still identified as academics, on the one hand, and those of the great majority of students enrolling for the first time in psychology courses, who are said to wish to *become* clinicians. I found myself in agreement with the author on almost every point he made, and would only wish to offer an alternative interpretation on two points.

The first of these relates to the motivation of students when they first enrol in psychology courses. Although some of the students who indicate a desire to study psychology may wish to be clinicians, as Professor Corballis suggests, and others may be seeking a solution to their own problems, it is my clear impression that the majority of them are simply stable, well integrated young people whose interest is in the systematic study of human behaviour. I realize that the twitch of a toe may be quite properly designated as human behaviour, so I should perhaps define their interest more precisely as a desire to study the behaviour of the whole person. For many students, too, as opposed to the academics who teach them, the next focus of their interest takes them outward to the behaviour of humans in relation to each other in groups and in communities rather than inwards to some element of behaviour studied in careful detail, but out of the context of the whole person.

It is such an impression of psychology, I believe, that leads to the breadth of the apparent interest in the subject among students, many of whom can see the relevance of such a discipline in almost every aspect of their personal, social and vocational lives.

The implications of the second point at issue, which arises directly from the first, were not taken up by Professor Corballis. If departments of psychology are to flourish, it would appear that they must capitalize upon what amounts to a substantially incorrect impression of what they are about. Accordingly, it would appear that in some cases at least, they provide some of the expected material in introductory courses but then make study of the traditional academic areas a requirement for advanced study in areas of wide interest. The advantages for the university departments are obvious. Large introductory classes providing support for substantial staffing and funds are followed by much smaller, more intimate advanced courses from which yet further generations of academics,

reflecting the interests of their teachers, may be drawn.

My concerns here, are whether we have a right to draw so much of our support from what is clearly a misinformed source, and for how long, in an age of accountability, a more clearly focussed student demand will permit such a situation to continue.

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### COMMENTARY

As a medical educator, I read Prof. Corballis' anguished account of the schism in psychology with a sense of *deja vu*. He did not draw on the much longer experience of medicine in struggling with theory-practice conflict, though there are plenty of parallels. Medicine too, used to be a true doctorate (MD), also lost when the competing cheaper diplomas offered by guilds like apothecaries, became common in the 19th century. But, 100 years on, the universities are once again in sole charge of undergraduate education. True, the impact of the trade schools was to cause the university to downgrade its training to that of the current undergraduate practically-oriented double degree (M.B., Ch.B) reflecting breadth rather than depth.

But all was not lost — academic medicine has been able to survive. All good medical schools have a flourishing scholarly side centered on traditional university values, roles and styles. Basic and applied medical sciences are still seen as integral to professional education, though the battle with barbarian hordes of white-coated medical yahoos, now increasingly joined by a braying public, to cut out anything that is not "relevant" to clinical practice, is bitter and eternal. Just because we have this constant battle to preserve science in medicine, does not mean we should quit the field like whipped curs.

Any splitting of basic science and clinical training, would have disastrous consequences in medicine, and I would predict, likewise for psychology. First, good faculty would be hard to get — instead of scholars there would be religious zealots preaching dogma. Second, the point of entry of science into the curriculum

would be lost. Third, the critical attitude to, and pool of, knowledge so important for keeping a brake on media and practitioners alike, would disappear. Fourth, medical research would suffer a decline.

Mike has argued that the main academic pursuits of psychology seem to have little relevance for practice, though I think that he is being a little too nihilistic. But imagine if, in the early 19th century, Pasteur had said — stuff it, my science hasn't got any relevance to medicine, I'm going to retreat into scholastic onanism. It may seem fanciful now to suggest that psychology may engender a science of human behavior which will turn the current superstitious dance most clinicians perform around their patients — sorry, clients (I forgot that customers of psychologists don't suffer, they pay!) — into something rather like the present practice of medicine — only 50% magic.

If I look only at the needs that medicine in general and psychiatry in particular have of psychology, I would say that we do not need more mindless clinical gurus using decibels rather than data boastfully to trumpet the worth of their methods, but real basic (behavioral) scientists who can tackle some of our major health problems. The answers will not come from clinicians who in the imperatives of "help me doctor for I hurt" soon lose the intellectual property they acquired in university, and, in a kind of unwitting prostitution, begin to sell, masquerading as technology, the only thing at the moment that regularly changes human behavior — love or friendship. But the loss of this intellectual property is not absolute, and with proper reinforcement it can be recovered and serve as the port of entry for advances in (real) psychology.

The only solution I can see is, that for all the embarrassment to academics and frustrations for practitioners, clinical psychology should continue to embrace the bicameral model, coupled with strict licensing procedures, both of which have worked well in medicine in preserving both science and practice. It would be a mistake to remove a critical focus in the university for the science of human behavior in its fullest sense. We have enough trouble with group-groupies and family-fanatics as it is, and this would simply give them open slather to destroy whatever intellectual pretensions clinical psychology now has.

However, one medical school model should

be discarded — we waste too much time teaching "practical skills". Unfortunately, clinical psychology has simply aped medicine (as it also has, increasingly, its greed). Since neither theory nor training helps, *it is a complete waste of time teaching therapy* and it could be cut out of training programs (with consequent improvement in intellectual tenor, logistics and costs of operating clinical programs). Abandon the teaching of manual-labour level skills, chicanery and self-deception and cleanse the university as a community of scholars. What happens after graduation, is largely beyond our control. We cannot change the fact that the market place rewards dogmatism and "therapy". But, we can struggle to preserve the University which does promote academic behavior and preserve science.

We should take heart from the history of medicine — the useful scientific base of medicine grows every year and finds its way into practice. The challenge is not to run away from making clinical psychology more of a science by retreating into academic monasticism — after all the scientific pluralism troubling Prof. Corballis is true of every field of knowledge including medicine, not just psychology, — the challenge is to find ways of turning out graduates who have a life-long respect for the basic sciences and keep watching for useable applications, the way most doctors now do. In short, if the likes of Professor Corballis get on with the academic job, the problem which exercises him at the moment, though it will never disappear, will ultimately become more of a chronic irritant than a cancer.

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