

*Novelty in the disciplines concerned with human behaviour has veered this way and that during the century since Sigmund Freud created psychoanalysis. In the process, misunderstanding, conflict, peevishness and vituperation have typified some of the shifting schools of thought concerning behavioural thinking. Sometimes the 'scientist' himself has behaved in most unscientific ways. Here a practitioner of the art looks at some of the conflictual ethics manifested in the exercise of the craft of psychology.*

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## **Creativity and conflict in psychological science**

Graham R. Little

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*Dr Little contributed to our issue on models (Vol. 31, No. 4, 1981). He is co-founder and director, Institute of Theoretical and Applied Social Sciences Ltd, a private firm 'specializing in social science services, ranging from individual counselling (usually referred by a medical practitioner) through groups concerned with weight, stress or assertiveness, to community development and business training'. His address is: 40 Mount Eden Road, Box 67-087, Auckland 3 (New Zealand), telephone 685-136.*

Theories of psychology come and go, yet man remains eternal. This could well be the view of a future historian of science reflecting on the fate of psychodynamics, behaviourism, cognitive psychology, Piagetian theory, 'personal construct' theory and the theory of conceptual systems. Each of these hypotheses concerning man's behaviour has had its time of triumph; at the moment, cognitive psychology holds the reins.

Freud's psychodynamics was one of the first formal theories of psychology. The theory is not supported by much modern empirical evidence,<sup>1</sup> and Freud's contribution remains a source of controversy.<sup>2</sup> With time, however, perspective and balance will undoubtedly emerge. In the case of Freud, such balance is to be found in the sentiments of McVicker Hunt<sup>3</sup> who argues that Freud, while incorrect in many of the specifics of his theory, was correct to emphasize early experience. The first five years of life are indeed vital, as every successful parent knows. But this period, as Hunt has demonstrated, is 'highly sensitive' rather than 'critical'. What is developed during this time can be undone later, and what is not developed can emerge later. Either option demands great effort, typified by Hunt by way of old but insightful truisms: 'A stitch in time saves nine' and 'An ounce of prevention is worth a pound of cure.'

Yet with all its empirical sophistication, the essence of human development still eludes contemporary psychology. The crucial variables making up such attributes as trust, compassion, curiosity, and initiative remain poorly understood. When all is said and done, the research and theorizing complete, the main thing the parent must do for a child is to treat it with tender loving care.

Behaviourism came somewhat after psychodynamics (1913 and after, rather than in the late nineteenth century), its popularity enhanced by the positivist view of science. Natural science, so it was argued, should deal only with what is observable and quantifiable; hence, in psychology, science must deal only with behaviour. The relation between stimulus and response would have been explored with or without positivism in science, so this philosophy merely reinforced the appeal of behaviourism, supplying arguments against the popular, 'instinctual' view of man derived from psychodynamics. Rather than being driven by needs (instincts), as held by the theories of psychodynamics, behaviourism asserted that all comportment is elicited by stimulus provided by the environment. If man acts nobly, then the stimulus is in order to obtain credit. Beliefs, values, self-discipline, self-sacrifice and dignity are attributable to the environment and the contingencies that this imposes.

### **From evaluation to proper recognition**

While the debate over 'mentalism' and 'behaviourism' made the academic brow feverish, there was being developed simultaneously the 'personal construct' theory in which man the scientist (in George Kelly's metaphor) was forever searching for ways to re-create his environment and use new understanding in order to explore it further. In Switzerland, Jean Piaget was collating his perceptive, illuminating and often brilliantly insightful observations on child development. Finally, there evolved the notion that the cognitive processes are an important aspect of man—crucial to understanding him, this notion being facilitated by the rapid development of computer technology.

In theory upon theory, their proponents and disciples strive to have their hypothesis raised to the throne of the scientifically proven. One school has often ignored another; the student, in desperation, selects perhaps indiscriminately the theory he is to accept and follow. Or else, he accepts (perhaps in ignorance) the

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**Yukio Mishima** speaking to a Japanese reporter, 14 September 1970:

‘Frankly, I feel I am finished now. I have done plays, long novels, everything. . . . Beauty is short-lived, and it is very difficult to sustain the creation of beauty indefinitely.’

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theory which is dominant at his place of learning. If psychology is to progress, how is this complexity to be charted?

One guide is in the perspective advocated by McVicker Hunt dealing with Freud’s work. Here, alternative theories are stripped of their overlying specifics, their encrustations of ad hoc explanations and elaboration. Thus there are laid bare the core issues, true and supported by evidence. This is an important epistemological technique, stated by Ayer and implicit in the writings of Karl Popper.<sup>4</sup> The core of Freudian theory is the importance of early experience in the development of the unconscious or subconscious. From this conceptual base, Freud then proceeded to build the specifics of his theory. Adler and Jung, Freud’s disciples, began at the same base and constructed somewhat different theories.

This process—the laying bare of the core issues that seem to be true—is not one of denigrating the great men and women who have created theories. Quite to the contrary, the process is one of objectively evaluating their contribution so that proper recognition is given their work. As noted by Popper,<sup>5</sup> ‘great men may make great mistakes’; certainly in the positive and purposeful pursuit of their theories, the ‘great’ may overstate their case, actively denigrating any opposition. Such is the nature of illustrious people, for their greatness lies in their overpowering belief that they are right. Without such belief, they might not emerge from the ranks of ordinary researchers.

### **Competing hypotheses are not ‘wrong’**

Yet no theory springs to mind unheralded. The development of theories is a creative enterprise, but creativity rooted in what has gone before. Can one imagine a new theory in nuclear physics if its author had not already gained knowledge of existing theories, no matter how divergent the new hypothesis might be? All theories are shaped, fundamentally, from the data available at the time of conception. As the theoretician elaborates his central premise, the details of the resulting theory will be affected by this data base and moulded by the theoretician’s prejudices. But subjective elaborations should not invalidate an original premise, and it is this we must seek. The process is not one of oversimplification, for the theory’s details are virtually ignored; all that is sought is the conceptual core and the principal originator of the idea.

When applying this principle to the multitude of theories in psychology, we can generate a list something like the following.

1. Man is profoundly influenced by early experience, but he can overcome this influence with some effort (derived from Freud and modern work on adaptability and behavioural change).<sup>6</sup>
2. Man is profoundly influenced by his environment and its contingencies (derived from behaviourism and the work of Pavlov, Watson, Tolman and Skinner).<sup>7</sup>
3. Man is profoundly influenced by the cognitive processes operative within him (evidenced by modern research in cognitive psychology and neurophysiology).<sup>8</sup>

4. Man is profoundly influenced by the knowledge he possesses, and human development is intimately related to the growth and development of knowledge within the individual (derived from Piaget, Kelly, and Harvey, Hunt and Schroder).<sup>9</sup>

It is immediately apparent that the various, competing theories of psychology are not 'wrong', for each is based on premises intuitively true and readily validated empirically.<sup>10</sup> The problem with the competing schools is that each delivers only a part of the 'truth': man is shaped, in part, by the premise underlying each theoretical position.

The epistemological problem becomes clear. We need to organize a conceptual scheme (theory) having as its base all the core concepts as derived above, for example. Only then shall we be making effective use of the efforts of those who strove before us; only then shall we be effectively using their work to create a greater understanding of man; and only then shall we be adopting a process able to generate a theory we can call representative of all the complexity that is man.

### Does knowledge tend towards 'truth'?

'Knowledge', Jacques Barzun has said, 'grows out of knowledge, not out of information'. Man is not only a data collector, he is a thinker, especially the scientist. This is a perspective now re-emerging in academe as positivism dies (battered to death by its own limitations) and new journals blossom like daffodils in spring, proclaiming the new-found status of various theories. (See, for example, *Journal for the Theory of Social Behaviour* and *Behavioural and Brain Sciences*.)

The boundary between knowledge and information is subtle and ill-defined. Knowledge pervades, implying values, actions and interpretations. Information, on the other hand, is human only as a product of the human mind. Knowledge forges our being, whereas information catalogues our presence (cross-referenced, for example, under 'Mammals, primates and hominids').

In science, knowledge is dynamic; it grows by the act of creation. Information, however, like debris on the beach, dust on a table or a crowd at a road accident, demands but a methodology: observation and the taking of notes. Knowledge requires the toil and frustration of creative effort, the loneliness of grappling with Einstein's 'thought problems'; these are the price of achievement and progress.

The philosophers of science have debated if, in fact, there is method to the growth of knowledge and that of scientific knowledge in particular—whether knowledge, like an all-pervasive intellectual regulator, tends innately towards truth. If man, the scientist, needed only to ensure correct method for the correct result, then fallible human judgement would no longer be required. No more the sweat and risks of creative effort, no more would a 'person' be responsible. Success would be attributable only to method, as would failure.

Theory creation is a behavioural act which sorts, orders and 'chunks'<sup>11</sup> concepts and data, interrelating them. Theory creation is, more than anything else, the construction of concepts to lay upon the universe in an effort to order and understand.<sup>12</sup> This process is in sharp contrast to theoretical endeavours aimed at reducing complexity to its basic, axiomatic components. Too often, especially in social science, such efforts eliminate the one fundamental fact, namely diversity itself.<sup>13</sup> People are different and cultures are different: theory must embrace that difference and explain it, but it must not judge one person or one culture against others. A theory is a conceptual system, and testing of the theory is its active application to the world—making the theory vulnerable in part or in whole to experience. There is no way of ascertaining whether a part or the whole will be

refuted or confirmed, and the decision to continue with a theory is not decided by a general principle or rule (whether for verification or falsification).

Theory generation, in demanding the generation and interrelation of concepts, is such that the nature of a theory depends on the concepts developed and used. From the core concepts (often implicit in the creative effort rather than being deliberately conceptualized building-blocks), the theory is elaborated to account for 'data'. Should the theory prove untenable, then either its specifics must be modified or there must be a return to basics, requiring a re-assessment of the core concepts. Returning to the fundamentals may entail turning one's back on years of effort; for one, some or all of the core concepts may need to be rejected or altered so that the theory's specifics no longer bear resemblance to the old theory. Theory construction in an academic discipline is thus not so much a professional effort as an entrepreneurial activity,<sup>14</sup> recalling the 'scientific economy' as construed by Maxwell, Hertz and Boltzmann in the natural sciences.

### *Logical analysis versus persuasion*

Failure to think entrepreneurially, failure to recognize that 'competition' has a valid point, not giving proper emphasis to the synthetic and creative aspects of knowledge will inevitably result in 'schools'. Here, one great man is revered as a seer of the truth; all other prophets are false. This typifies modern psychology: behaviourism, humanism, psychodynamics, even information processing, each developing independently of the other and, in the inevitable conflict, failing to see the validity of the others' core concepts. Leonard Krasner, for example, considers the 'current ongoing controversy between the adherents' of behaviourism and humanism.<sup>15</sup> He argues for the partisans to lay down their arms, abandon their entrenched positions, and combine forces to face the common foe of 'mentalism'; where human behaviour is explained by mental forces. Krasner tries to show the similarities between the two schools he favours, but his analysis subsumes a very real divergence between the core concepts embedded in the two orientations. Political cries of 'Rally to the banner for the common good!' do not help to integrate essentially incompatible concepts. This can be achieved only by constructing imaginative schemes embracing the core concepts of both schools or currents of thought.

Like most impassioned endeavour, science embraces ethics and values among its most important components. The humanist staunchly defends humanism just as the behaviourist upholds behaviourism and the depth therapist champions psychodynamics; thus science is, by its nature, an adversary process. Too often, however, ethics are insufficiently explored.

The scientist seeks truth and enlightenment, engages in a dispassionate search for understanding. Or does he? Unfortunately, the sociological rewards which now accrue to the well-known practitioner—status, sponsorship, grants, accolades—consistently distort research, resulting in a reality not removed from myth. As early as 1823, Goethe commented 'Questions of science are frequently career questions. A single discovery may make a man famous and lay the foundations of his fortunes as a citizen.'

Persuasion creates in science, as in the case of politics, both leaders and led. The ethics of politics depends on a selection of favourable information, the 're-interpretation' of conflicting data, the acceptance of argument only from 'proper' authorities, the development of entrenched positions and ideology, and the denigration of all opposition. If such ethics should dominate the scientist, the consequences to scientific research need no elaboration. Science then degenerates into another ideology, advocated by yet another pressure group.

*The inevitability of self-discipline*

Science is an adversary process, but it must be a conflict of ideas not of persons. The element of persuasion dominates in the social sciences, from anthropology and psychology to the management sciences. This kind of persuasion tends to marshal a single argument, rather than offering two or more. The conflict of ideas—thoughts which help us understand nature and the universe—degenerates into strife between persons. Such circumstances are evident in a recent book by H. J. Eysenck and Leon Kamin, where Eysenck argues for an inherited view of intelligence (nature at work) and Kamin for an environmental view (nurture).<sup>16</sup>

The dominant ethic in the similar debate on 'situationality' versus traits seems to be persuasion. In this case, individuals seem to manifest regular characteristics, and to these we give names. When we speak of someone being reliable, we have information which is immediately useful in guiding our relationship with him or her. But there are also behavioural variations within a given situation, that is there are 'specific reciprocal interactions between person and context'.<sup>17</sup> The intellectual problem then becomes: How can we reflect this complexity in a theory compatible with the empirical evidence? The obvious place to begin would be the identification of the valid features of each (entrenched) position. This would be followed by integrating these elements into a new theory.

Such ethics, those of 'I am right, you are wrong', need to be reformed. The task can be accomplished only if each member of the scientific community imposes self-discipline on himself and demands the same from his peers.

**Science's final judgement**

One of the essences of tragedy is the subjugation of judgement to popular sources of authority. This can be readily seen in the reactions of a behaviourist to a 'mentalist', of a trait theorist to a situational theorist, or of a nature theorist to an exponent of nurture. In each case the two positions have valid premises, although undoubtedly some of the specifics of each position are false. Consequently the real issue is not who is right or whose position is to be elevated to that of the scientifically proven. Rather, the real problem is how the valid aspects of the respective positions can be established and then combined into an improved theory.

Where does this leave the wise? They walk the path of scepticism, avoiding at all costs current vogues. Fame and fortune may lie in the swirl of popularity and, in the presence of such temptation, it is judgement that becomes the victim.

Man is capable of exhibiting a herd instinct of frightening proportions (and here academics are not excepted), but the hazard can be circumvented by precision of concept, breadth of knowledge and sweep of perspective, in addition to the specialist's understanding of his subject. The scientist must place his faith in these, applying them to the judgement of ideas, not persons. The main aspect of this struggle, the conflict, must reside within ourselves as we strive to overcome the conceptual prisons we have created and use to order the universe. And to begin we must welcome diversity: where there are two opinions we must create a third, then strip each of its encrustations, combining the core concepts into a fourth opinion, better than the previous three. Where there are four opinions we must create a fifth, and so on.

Science is a hard taskmaster, for its work is never done. The scientist must come to terms with the reality of the fleeting nature and insignificant impact of his life's work. In this supreme struggle all scientists must embrace as brothers, each supporting the other in confronting the true foe: our collective ignorance. ■

## Notes

1. T. Szasz, *The Myth of Mental Illness*, New York, Harper & Row, 1974; for a more recent work, see J. Cocozza and H. Steadman, 'Prediction in Psychiatry: An Example of Misplaced Confidence in Experts', *Social Problems*, Vol. 25, 1978.
2. Many commentators have attacked the critics of Freud. Bruno Bettelheim, for example, argued that some of the problems are due to distortions in translating Freud's work. Behaviourism generally arose in opposition to psychodynamics and, in turn, cognitive psychology arose in response to the excesses of behaviourism. This essay examines ethical issues implicit in such ideological conflicts. Underlying the essay, however, is an epistemological position resting on the clear distinction between knowledge, the knower, and a reality beyond knowledge. This gives rise to three critical issues: (a) the relationship between knowledge and knower; (b) the relationship between knowledge and that represented by the knowledge; and (c) the relationship between reality and knower. The first is a psychological issue, dealing particularly with cognition, belief and intent (see R. Anderson and J. Prichert, 'Recall of Previously Unrecallable Information Following a Shift in Perspective', *J. Verb. Learn. Verb. Behav.*, Vol. 17, 1978). The third is the problem of perception, while the second issue is what I argue is the fundamental problem of epistemology—namely, the conceptualization of the relationship between knowledge and reality, leading to the conceptualization of the structure of knowledge itself. (These issues I have explored in the lecture series 'Why We Do What We Do', Continuing Education, Auckland University.) This position is an extension of Karl Popper's development of 'Epistemology Without a Knowing Subject', based on the view that a university library contains knowledge independent of people; were all people to be destroyed, this knowledge would persist until, eventually, some race or species was able to decode the contents of the remaining books (the Rosetta Stone is an archaeological analogy). I argue that scientific theories are primarily heuristic devices derived from our creative conceptual capacities, mediated by the physiology of our perceptual processes. And, according to the problem areas conceptualized above, they are of the same psychological status as unicorns (issue (a)), but of a different epistemological status (issue (b)).
3. J. McVicker Hunt, 'Psychological Development: Early Experience', *Ann. Rev. Psychology*, Vol. 30, 1979.
4. A. Ayer, *The Central Questions of Philosophy*, London, Weidenfeld & Nicolson, 1973; K. Popper, *The Logic of Scientific Discovery*, London, Hutchinson, 1959; K. Popper, *Objective Knowledge: An Evolutionary Approach*, Oxford, Oxford University Press, 1972.
5. K. Popper, Preface to 1st edition, *The Open Society and Its Enemies*, London, Routledge & Kegan Paul, 1945.
6. McVicker Hunt, op. cit.
7. The writings of the behaviourists are well known. A. Bry (*A Primer of Behavioural Psychology*, New York, Mentor Books, 1975) provides a short introduction to the thoughts of this view's proponents.
8. U. Neisser, *Cognition and Reality*, San Francisco, W. H. Freeman, 1976; D. Norman, *Memory and Attention*, New York, John Wiley & Sons, 1969; E. John and E. Schwartz, 'The Neurophysiology of Information Processing and Cognition', *Ann. Rev. of Psychology*, Vol. 29, 1978.
9. J. Piaget, *The Origin of Intelligence in the Child*, London, Routledge & Kegan Paul, 1953; G. Kelly, *The Psychology of Personal Constructs*, New York, Norton, 1955; O. Harvey, D. Hunt and H. Schroder, *Conceptual Systems and Personality Organization*, New York, John Wiley & Sons, 1961.
10. Such premises must be susceptible to refutation and validated to the extent they have not been refuted, being generally supported by the data. Such premises represent 'the most profitable lines of further creative effort'. They are not 'true'

- in the manner of being 'correct'; they are merely the best insights able to be distilled from all that has gone before. In this way, the past illuminates the path to the future.
11. G. Miller, 'The Magical Number Seven, Plus or Minus Two', *Psychol. Review*, Vol. 63, 1956.
  12. Suitable tools for the creation of theories (as conceptual templates) are Ashby's diagrams of immediate and ultimate effects, applied to systems by the technique of primary operations. Critical issues of judgement within such a system approach are the selection of variables and the definition of the 'system' to be studied. See W. Ross Ashby, *Design for a Brain*, London, Chapman Hall, 1950.
  13. If one reflects on the question, 'Why do people drink coffee or tea?', it should be possible to produce at least a page of answers. And while a statistician may group, collate and weight the reasons according to 'likely occurrence', the fact remains that there are a page of reasons why people drink coffee or tea, and while we may estimate why a person drinks in this situation, we will not know why he acted as he did until we ask him (even then, we may not get the 'right' answer). The use of statistics to reduce the complexity from a page of reasons to one, two or three destroys the reality of people. People are complex, diverse, sometimes perverse, and repeatedly act in ways the empiricists and statisticians tell us they shouldn't. I argue that the simple example of why people drink coffee or tea reflects the general philosophical nature of the causality of all human behaviour.
  14. Philosophical principles and methodological analysis are important to the scientist. In recent times, however, they have become over-refined, over-elaborate, and have acquired too much the character of a rule in the form of a standard formula. No such formula can replace judgement. The scientist and entrepreneur must judge which line to pursue. Often the critical elements in such judgements are felt, more than conceived, as logical reasons. The revolutions in science come when entrepreneurs pursue unpopular paths, working in solitude until their ideas are developed and acceptable for publication. Then they must wait for the community of scientists to think through the ideas and come to see the universe from the new perspective. Paradigm shifts (in the general sense of Kuhn) occur when the scientific community reconceptualizes the universe or some part of it.
  15. L. Krasner, 'The Future and the Past in the Behaviorist Dialogue', *Amer. Psychologist*, Vol. 33, 1978.
  16. H. Eysenck and L. Kamin, *Intelligence: The Battle for the Mind*, London, Pan Books/Macmillan Press, 1981.
  17. W. Mischel, 'On the Interface of Cognition and Personality: Beyond the Person-Situation Debate', *Amer. Psychologist*, Vol. 34, 1979; M. Eysenck and H. Eysenck, 'Mischel and the Concept of Personality', *Brit. J. Psychiatry*, Vol. 71, 1980.

*To delve more deeply*

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