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Psychology in the Public Forum − Unity in Service?

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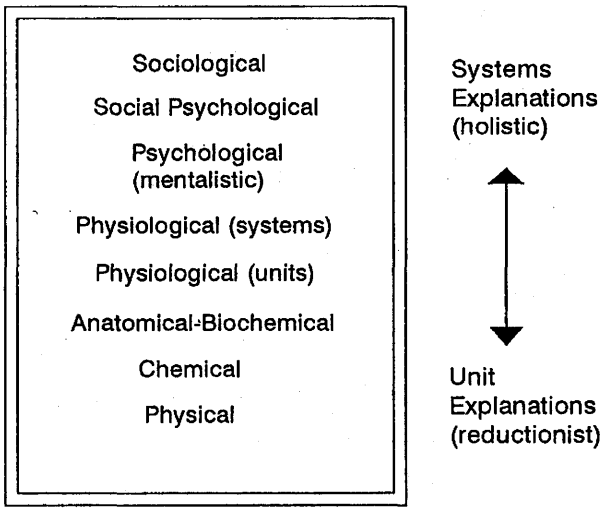
Since its emergence as an independent discipline in the last quarter of the 19th century, psychology has sought to establish a coherent identity with little success even to the present day. The disunity characteristic of contemporary psychology is rooted in the extreme complexity of the phenomena which psychologists address, phenomena which, historically, have resisted attempts to yield to any single theoretical or methodological perspective.

By virtue of its origins in long-standing Western philosophical/theological and biological/medical traditions − what Lundin (1991) refers to, respectively, as the "mind/spirit" and "body" routes to its modern incarnation − psychology holds within its grasp the possibility of being a "core discipline" of considerable significance to the wider communities of which it is a part (Fowler, 1990). Figure 1 provides an indication of how psychology might serve in this capacity, being situated somewhere in its orientation between unit (reductionist) explanations of phenomena and systems (holistic) explanations of these phenomena.

According to this perspective, a vast body of psychological knowledge presently exists which, for a variety of reasons, is presently underutilized in terms of its relevance to many issues of widespread public concern including

Figure 1. Systems versus units explantions of phenomena.



such critical areas as public health and social welfare, stress management, the aging population, education, human factors engineering, public safety, environmental preservation and design, disaster prevention and management, forensic science (e.g., psychological aspects of criminal behaviour, eyewitness testimony), and global issues of justice and peace. Despite this promise, optimism continues to be tempered by a continuing concern about the fate of psychology as a separate and meaningful academic discipline and as a profession offering services of various sorts to the public at large.

The dimensions of the present dilemma are complex and reflected in the diverse historical origins of psychology. Leahey (1980) noted that psychology has a long past, a short history, and an uncertain future and has been continually haunted by its lack of any meaningful and compelling consensus on fundamental issues of a theoretical, contentual or methodological nature. Psychology's early years were marked by the rise and fall of contending systems seeking to establish their ascendancy as the legitimate theoretical, contentual and methodological embodiment of what a proper and respectable psychology should be. All such efforts failed, presumably because of the diversity of the phenomena psychologists seek to address and the resulting need for different theoretical and methodological strategies to accommodate this diversity.

Seeking to contend with this diversity, Watson (1978) developed a set of eighteen prescriptions to compare and contrast various psychological systems and theories past and present. A subset of these prescriptions is provided in Table 1 together with brief descriptions of the essence of each extreme of the twelve dimensions represented. The fundamental and overriding bones of contention among psychologists past and present reduce to seemingly fundamental differences about what the content and methodology of a legitimate psychology ought to be.

Tables 2-a, b, c, and d illustrate how five major psychological systems stood with respect to a subset of four of Watson's (1978) eighteen prescriptions. It is apparent that structuralism, functionalism, associationism, behaviorism and gestalt psychology were at considerable odds regarding the proper content of psychology (contentual objectivism vs. contentual subjectivism), the proper methodology of a legitimate psychology (methodological objectivism vs. methodological subjectivism) and the extent to which psychologists should direct their efforts to purist research interests or practical concerns in society (purism vs. utilitarianism).

Structuralism, as the first formal system in psychology, came under attack for its obvious lack of interest in any issues of a practical nature, its use of introspection as an experimental technique, its acceptance of a kind of mind/body dualism, and its attempts to reduce mental experience to atomistic, and its critics would argue, meaningless units.

Functionalism, with its emphasis on the functional/adaptive value of behaviour and mental processes, was seen by its critics as an almost formless, eclectic system with an excessive emphasis on utilitarian goals.

Behaviorism, especially the radical behaviorism of B.F. Skinner, while demonstrating that psychology had the potential of becoming a science like the others, was criticized for its failure to address those fundamental and signifi-

Table 1. R.I. Watson's prescriptions for psychology arranged in contrasting pairs (Watson, 1978).

Conscious mentalism/Unconscious mentalism: Emphasis on awareness of mental structure or activity/emphasis on unawareness.
Contentual objectivism/Contentual subjectivism: Psychological data viewed as behavior of individual/viewed as mental structure or activity of individual.
Determinism/Indeterminism: Human events completely explicable in terms of antecedents/not completely explicable.
Empiricism/Rationalism: Major, if not exclusive, source of knowledge is experience/is reason.
Functionalism/Structuralism: Psychological categories are activities/are contents.
Inductivism/Deductivism: Investigations should begin with facts or observations/should begin with assumed, established truths.
Mechanism/Vitalism: Activities of living are completely explicable by physiochemical constituents/are not so explicable.
Methodological objectivism/Methodological subjectivism: Use of methods open to verification by another competent observer/not so open.
Monism/Dualism: Fundamental principle or entity in the universe is of one kind/is of two kinds - mind and matter.
Naturalism/Supernaturalism: Nature requires for its operations and explanation only the principles found within it/requires transcendent guidance as well.
Purism/Utilitarianism: Seeking of knowledge for its own sake/for its usefulness in other activities.
Quantitativism/Qualitativism: Stress on knowledge which is countable or measurable/on that which is different in kind or essence.

Table 2-a. Ratings of psychological systems by Marx and Cronan-Hillix (1987) using Watson's (1978) prescriptions for psychology.

Contentual objectivism	1	2	3	4	5	Contentual subjectivism
Structuralism (Wundt)	1	2	3	4	(5)	
Functionalism (James)	1	(2)	3	4	5	
Associationism (Ebbinghaus, Pavlov)	(1)	2	3	4	5	
Behaviorism (Watson, Skinner)	(1)	2	3	4	5	
Gestalt Psychology (Wertheimer)	1	2	3	(4)	5	

Table 2-b. Ratings of psychological systems by Marx and Cronan-Hillix (1987) using Watson's (1978) prescriptions for psychology.

Empiricism	1	2	3	4	5	Rationalism
Structuralism (Wundt)	1	(2)	3	4	5	
Functionalism (James)	(1)	2	3	4	5	
Associationism (Ebbinghaus, Pavlov)	(1)	2	3	4	5	
Behaviorism (Watson, Skinner)	(1)	2	3	4	5	
Gestalt Psychology (Wertheimer)	1	2	(3)	4	5	

Table 2-c. Ratings of psychological systems by Marx and Cronan-Hillix (1987) using Watson's (1978) prescriptions for psychology.

Methodological objectivism	1	2	3	4	5	Methodological subjectivism
Structuralism (Wundt)	1	2	3	(4)	5	
Functionalism (James)	1	2	(3)	4	5	
Associationism (Ebbinghaus, Pavlov)	(1)	2	3	4	5	
Behaviorism (Watson, Skinner)	(1)	2	3	4	5	
Gestalt Psychology (Wertheimer)	1	2	(3)	4	5	

Table 2-d. Ratings of psychological systems by Marx and Cronan-Hillix (1987) using Watson's (1978) prescriptions for psychology.

Purism	1	2	3	4	5	Utiliterianism
Structuralism (Wundt)	(1)	2	3	4	5	
Functionalism (James)	1	2	3	4	(5)	
Associationism (Ebbinghaus, Pavlov)	1	2	(3)	4	5	
Behaviorism (Watson, Skinner)	1	2	(3)	4	5	
Gestalt Psychology (Wertheimer)	1	(2)	3	4	5	

cant mental structures and processes thought to intervene between stimulus and response.

Freud, while undoubtedly one of the great intellectual figures of his day and founder of the psychological system of psychoanalysis, had to contend with a barrage of criticism, much if it directed to his system's apparent failure to meet the criteria of a scientific undertaking.

Humanistic psychologies, such as that advocated by Carl Rogers, were fueled by the belief that an overly technical or mechanical view of "man" somehow missed the point and that "man", in a holistic sense, "man" as master of his own fate, was the true focus of a legitimate psychology. Humanistic psychologists were criticized for the vagueness of their concepts, the imprecision of their methodologies and the quasi-religious nature of their formulations where faith and hope, rather than empirical data, critics claim, constitute the basic operating principles.

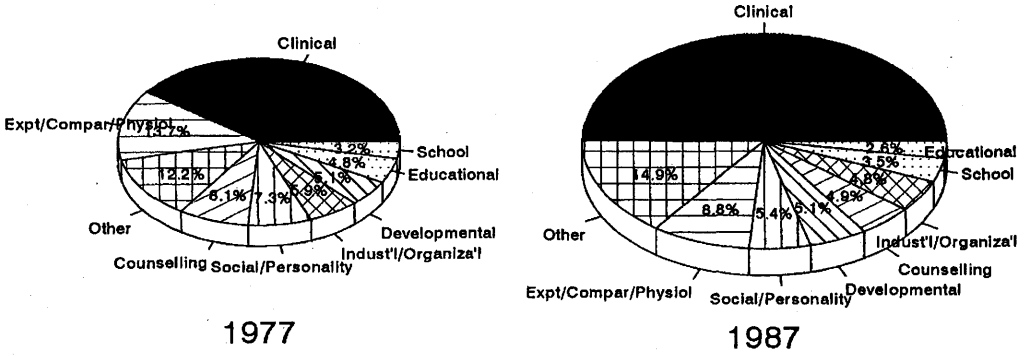
Lundin (1991) considers the ten basic issues confronting psychology past and present to be : (1) the mind/body problem; (2) subjectivism versus objectivism; (3) quantification versus qualification; (4) reductionism versus

non-reductionism; (5) molar versus molecular; (6) determinism versus teleology (future outcomes determine present behaviour); (7) determinism versus free will; (8) utility versus purity; (9) nativism versus empiricism; and, (10) theory versus data. It is clear, as Lundin (1991) notes, that this diversity of perspectives has helped to foster a wide range of psychologies whose theoretical and methodological biases have worked against the achievement of any kind of paradigmatic consensus for psychology as a whole. There is, as a result, a psychology of just about everything imaginable, but what links these psychologies, if anything, remains elusive.

A Crisis of Disunity in Contemporary Psychology?

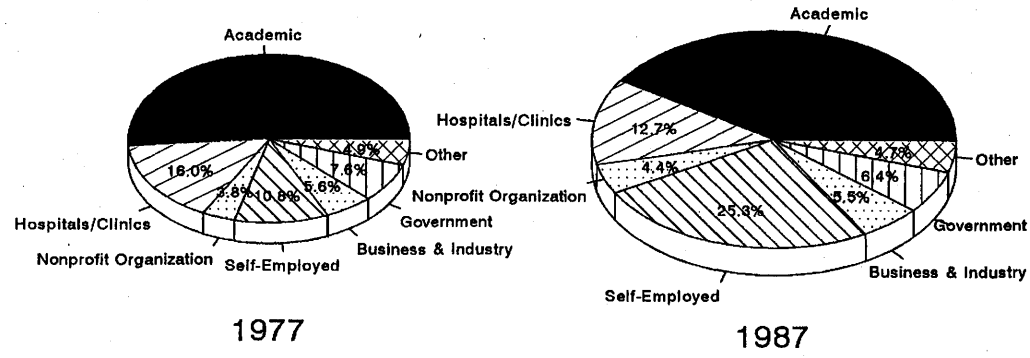
In the 1980s and 1990s, the divisiveness characteristic of psychology's earlier years continues to exert its influence in the form of an ongoing tension among subsets of the professional psychological community. Whether psychology is a scientific discipline and a science-based profession and whether it should be are continuing concerns. (See Jordan, 1968; Hudson, 1972; Leahey 1980; Cohen, 1995; Hearnshaw, 1987; Rackham, 1990; Skinner, 1990; and McPherson, 1992 for a discussion of these and related issues). Related to this dilemma is the increasing divide between academic, research-oriented psychologists and those practicing psychology as a profession by offering services to the wider community, particularly in the field of mental health. With reference to the American context, Figure 2 represents a comparison of fields of specialization in terms of percentages of doctorates awarded in various sub-fields of psychology. It is clear not only that the number of doctoral graduates has increased over the ten year comparison period (1977/1987) but also that the clinical/counselling areas are becoming

Figure 2. Fields of specialization in American psychology by percentages of doctorates in each area in 1977 and 1987 (Adapted from Pion, 1991).



Pie size is proportional to number of doctoral graduates in psychology in 1977 and 1987.

Figure 3. Employment settings of American psychologists in 1977 and 1987 (Adapted from, Pion, 1991).



Pie size is proportional to total number of psychologists employed in 1977 and 1987 in the United States.

increasingly popular among graduate students. In regard to employment settings of American psychologists, similar trends are apparent (See Figure 3). The changing demographics of the psychological community continue to force a reassessment of what the psychology of the future will be as an academic enterprise and as a profession with a firm foothold in the wider community.

Among those concerned about psychology's future, a major issue is the discipline's apparent lack of unity. For some this is a matter for despair, for others a reality simply to be accepted although with some regret, and for still others a sign of the future vitality of the discipline and profession. Staats (1991), for example, worries about the increasing fragmentation of psychology which he describes as a crisis of disunity. Bevan (1991) is concerned about the impact of extreme specialization on the current state of psychology as an intellectual enterprise. While respecting the need for specialization, he laments what he sees as a balkanization of the discipline as efforts to discern the wider picture have taken second place to a highly intensive, specialized look at small problems. For Bevan, it is a given that specialization, while obviously desirable, simultaneously requires an effort at integration, specialization and integration being mutually dependent rather than mutually exclusive activities.

Schneider (1990) considers psychology to be at a crossroads. With particular reference to psychology's contribution to mental health and to the general health agenda, he suggests that insufficient communication between sub-specialties and a general sell-out to the prevailing mental health establishment (in the sense of psychologists seeing themselves as junior psychiatrists) has undermined the potential of psychology to make its unique contribution to the welfare of society at large.

Scott (1991) argues that psychology at the moment lacks a clear identity, amounting to no more than a loose federation of unrelated disciplines under one umbrella. Bower (1993), in his examination of the fragmentation in the discipline, suggests that psychology is, simply put, an ill-defined field. Koch (1993) suggests that "Psychology is misconceived when seen as a coherent science or as any kind of coherent discipline devoted to the empirical study of human beings. Psychology, in my view, is not a single discipline but

a collection of studies of varied cast, some few of which may qualify as science, whereas most do not." (p. 902). Whether Koch feels that the lack of a scientific cast to much of the current psychological enterprise is regrettable remains unclear.

Boneau (1992) solicited observations from prominent psychologists about trends in psychology they had observed over the course of their professional lives. Asked to consider how actual developments corresponded to their expectations at the beginning of their careers a quarter of a century earlier, many respondents were surprised by significant progress in the biological approach to psychological phenomena and by the burgeoning of psychology as a profession oriented toward health and health care delivery as evidenced by the rapidly expanding fields of health psychology and behavioural medicine. Other observations offered by Boneau's respondents related to such matters as: (1) the increasing tension between psychology as a science and psychology as a mental health, practice-oriented field; (2) the increasing fragmentation of psychology as reflected by the fact that "virtually nobody comes out of any graduate program a generalist anymore; the field has turned into specialties of narrow scope."(Boneau, 1992, p. 1589); (3) the rapidity with which practitioners took charge of the American Psychological Association; and, (4) the extent to which psychology, as a multidisciplinary field with irreconcilable orientations, still attempts to maintain a fictitious sense of unity. On the basis of Boneau's observations, it is clear that in a field as disparate as psychology, the ability to predict future developments is limited at best.

Not all observers are disturbed by the apparent fragmentation or disunity of contemporary psychology. In consideration of Thomas Kuhn's (1991) recently revised view of science as a "ramshackle structure" , McNally (1992) suggests that as the view of how mainstream scientific activity actually pro-

ceeds has changed , this might also be taken to imply that psychology's diversity is more an indication of vitality than a sign of impending decline, a natural kind of specialization or speciation but with the advantages which cross-fertilization can confer. Green (1992) acknowledges that while, on the surface, unification for its own sake may seem desirable, the current paucity of psychological data makes attempts at unification highly tentative at best. Even if such data were available, Green suggests that it may be the case that the phenomena psychologists investigate are naturally disparate, rendering attempts at unification of the traditional sort essentially meaningless.

Unity in Public Service?

While attempts to achieve a traditional sort of paradigmatic unity for psychology have failed to date and may well remain elusive for the indefinite future, this does not necessarily force the conclusion that psychology is doomed to irrelevance or extinction as an independent and significant discipline. Despite its lack of unity, psychology remains one of the most popular university majors. Its subject matter is of intrinsic interest to many people. A lack of unity has not prevented psychologists from offering their specialized knowledge to other academic disciplines and to society at large.

Regarding psychology's significance and service to the wider intellectual community, Sperry (1995), best known for his work with split-brain patients and cerebral hemispheric asymmetries, admitted in a recent address to the American Psychological Association that, appearances to the contrary, he had always been a psychologist at heart. Reflecting on the so-called "cognitive revolution" in psychology of recent decades, he suggested that

> "Psychology is today turning the tables on physics and hard science and ... is now leading the way in science to a more adequate and more valid paradigm for scientific and all causal explanation. The same paradigm change that served in psychology to shift emergent mental states into their new interactive causal role applies equally to emergent phenomena and properties at other levels in other sciences. Thus the cognitive revolution is a revolution for science.... What science stands for, what it upholds, its reality tenets and world view, are all radically revised. More important, perhaps, this revised and strengthened paradigm of science upholds a set of value-belief guidelines and a new moral outlook that, if implemented worldwide in a new world order, would go far to correct current self-destruct trends in a humane, noncatastrophic manner."
>
> – Sperry (1995, pp. 505–506)

Bevan (1982, cited by Bevan, 1991), reflecting on Miller's belief that psychology is a revolutionary science, reiterated his contention that the social and personal implications of a successful scientific psychology could have enormous implications for the world. It is psychologists who have developed an expertise to help people change their behaviour both individually and collectively in ways conducive to solving many of the world's major problems, and, Bevan asserts, it is the moral responsibility of the psychological community to convey their expertise to the wider community. Bevan (1991) argues that adhering to a scientific ideal, which is important to the integrity of the discipline, does not absolve psychologists from their responsibilities to the wider community.

For Bevan, the integrity of psychological scholarship resides precisely

in its relevance to the wider community. Recognizing this, the traditional distinction between pure and applied science becomes increasingly blurred. Bevan calls upon psychologists to remember that "the professions, including the scholarly professions, were once a calling, and callings imply public responsibility. Thus, we should never simply be specialists. We must see our science, in part at least, as social or public philosophy." (p. 481).

Miller (1969) also believed that psychology can be a means of promoting human welfare and that psychologists should be prepared to give away their expertise to all who need it so that the practice of psychology by non-psychologists, in the end, will constitute a psychological revolution.

In describing psychology as a "core discipline" , Fowler (1990), in his presidential address to the American Psychological Association, pointed to the fact that psychological methodologies are widely used by other disciplines and that the major problems afflicting society today are problems related to behaviour and lifestyle, precisely the areas in which psychologists are best prepared to contribute to a solution. In Fowler's words,

> The science of psychology, because it deals with the fundamental understanding of behavior, serves as a core discipline for other social sciences concerned with human behavior. Psychological terms, concepts, and methodology are common across the social sciences.... Certainly, few could deny that human behavior, the subject matter of our discipline, is at the core of many of the most fundamental concerns of the inhabitants of the planet. As a core discipline, psychology contains both scientific knowledge about human behavior and methods of applying that knowledge. A good profession must be based on good science, and both the science and the profession are ultimately legitimated by serving

the public.

– Fowler (1990, p. 2)

Matarazzo (1987), having analyzed introductory texts between 1980–87, concluded that the impression they create is of one psychology with no specialties but many applications. It could be argued that psychology has, in fact, already achieved a certain unity of a non-traditional sort, a unity in terms of what the various segments of the psychological community have to offer to the solution of problems plaguing the wider society. Bower (1993) agrees that some unity may already be perceived in what psychologists actually do, even though what they do may often seem diverse and unrelated on the basis of casual observation?

In responding to his query regarding the future of psychology, Boneau's (1992) respondents agreed that psychological methods and thinking were likely to play a significant role in the development of new information-based technologies where human operators must interact with machine systems. A practical example of this of particular relevance to public safety is the contributions psychologists make to the design of cockpit display systems and aircraft control systems in modern aviation. In their edited volume entitled "Human Factors in Aviation" , Wiener and Nagel (1988) examine a variety of topics related to pilot performance including characteristics of human sensory systems, the information processing (memory and decision making processes) involved in piloting an aircraft, and the human cognitive workload with respect to the demands placed on human attentional resources in modern aviation. Their analysis also extends to the psychological factors affecting group interaction and flight crew performance, human error in aviation operations, aircrew fatigue and the effects of circadian rhythmicity. Human factors in aircraft design are also considered including

pilot control, the design of aviation displays, cockpit automation, computer software interfaces for aviation systems, and cockpit-crew systems design and integration. Last, but not least, they consider various aspects of air traffic control. Sato, Rackham and Yamazaki (1994) provide a practical example of the importance of incorporating psychological principles in the development of the next generation of integrated displays for en route air traffic control. Increasing air traffic volume has already placed an added burden on the air traffic controller/radar coordinator team with serious implications for public safety. Since air traffic safety depends to a large extent on the ability of controllers to efficiently manage information regarding aircraft location, trajectory, and future position, the application of human information processing principles to the design of efficient integrated displays for the controller team becomes very important.

Some of Boneau's (1992) respondents felt that traditional areas of psychological expertise would be adopted in the fields of business management, neuroscience and sociology. Others felt that psychology would be increasingly influenced in turn by influences emanating from such fields as law and pharmacology. Many respondents felt that psychologists would have to become increasingly sensitive to the ways they communicate within and beyond the discipline to those whose expertise does not reside in the field of psychology. Respondents detected an increasing trend toward a more problem-oriented discipline and that psychologists "should provide a basis for understanding and for making a difference in people's lives." (Boneau, 1992, p. 1594). The natural world, as opposed to the artificial world of the laboratory, it was thought, would become the more common venue of psychological observation and experimentation.

Hilgard (1992), in considering whether psychology might best be viewed as an integrative science as opposed to a unified one, suggests that

problems come in all varieties, large and small, and that it is not necessary to await some sort of theoretical and/or methodological synthesis for psychologists to have an impact on the wider society of which they are a part. Psychology by itself, or in collaboration with cognate disciplines, may contribute to the solution of such public agenda concerns as the regulation of natural resources, population control, and establishing and sustaining peaceful international relations.

Looking to the year 2050, Scott (1991) believes that "social psychology will continue to expand its strong experimental base, and will increasingly fulfill its promise to address society's most vexing problems. The solutions that emerge from social psychology laboratories will inform gender and racial issues and permeate the workplace, the inner city, and the home." (p. 976). The application of psychology to social issues has been examined by Howitt (1991). Fisher (1990) has explored the role that social psychology might play in the resolution of intergroup and international conflict and Lore and Schultz (1993) offer a comparative analysis of psychological principles at work in the control of human aggression.

Psychologists have a considerable role to play in the arena of environmental issues. Kempton, Darley, and Stern (1992) have documented the relevance of psychological research for the new energy problems with which society is coping. Stern (1992b) argues that psychologists know a great deal about how to achieve energy conservation and urges the application of this knowledge in the development of public policy in this area. Fisher, Bell and Baum (1984) note that:

> Human behavior is responsible for most urban pollution caused by automobiles and manufacturing.... Principles of learning, motivation, perception, attitude formation and social interac-

> tion help explain why we engaged in and accepted pollution in the first place. Principles of developmental psychology, performance, social psychology, abnormal psychology, and physiological psychology help explain the deleterious effects of pollution on humans. Furthermore, principles of attitude change,. behavior modification, industrial psychology, and personality can suggest some steps that will be necessary to change behavior in order to reduce or eliminate pollution. Political and cross-cultural psychology can be seen to be relevant to the solution or containment of such problems with international dimensions.
>
> – Fisher, Bell and Baum (1984, pp. 1–2)

In short, environmental psychologists can contribute to our understanding of how environments are perceived, how people develop attitudes toward their environments, how people respond to cataclysmic natural and man-made disasters and how psychological intervention can be effective in ameliorating the traumatic effects of such experiences (See Hodgkinson and Stewart's 1991 volume "Coping with Catastrophe: A Handbook of Disaster Management" for an overview of the psychological dimension of such experiences). Environmental psychologists can help to clarify the effects of chronic but low-intensity background stressors such as noise, temperature, wind, pollution, crowding and limitations of personal space. Environmental psychologists can help in the design of environmental settings to achieve desired behaviour. Such settings include cities at large, residences, learning environments, hospitals, prisons, work environments and recreational environments. Environmental psychologists can, as noted above, make a significant contribution to changing those environmental attitudes, perceptions and behaviours associated with most of our serious environmental problems.

Cone and Hayes (1985) in their volume "Environmental Problems, Behavioral Solutions" demonstrate the limits of technological solutions to many environmental problems and the need to enlist behavioural and social psychological strategies to effect the fundamental changes necessary to solve these problems.

Schneider (1990) urges an expansion of the kind of services in the mental health and general health fields where psychologists are uniquely qualified to contribute. The link between psychological factors and the prevention and course of disease requires further attention from psychologists and is beginning to receive this attention in the rapidly expanding field of health psychology. In a similar vein, Hunter (1995) argues that psychologists already possess powerful and effective tools which can make a significant difference for those with persistent mental illness. Kiesler and Morton (1988) have suggested that psychologists are well placed to contribute to the establishment of new health and mental health care systems and even to take the lead in formulating public policy in these areas.

It is clear that psychologists are even now actively involved in offering a wide range of services which, directly or indirectly, contribute to the welfare of society at large. Psychologists are university teachers, laboratory researchers, survey researchers studying social problems, and human-factors specialists in the man-machine interface. Psychological expertise is utilized in large institutional settings such as commercial enterprises, schools and prisons. Psychologists are involved in the legal profession as expert witnesses and as advisors in the jury selection and litigation processes (See Sales and VandenBos, 1994). Psychologists are involved in the counselling of children, helping the physically and mentally handicapped, improving preschool programmes, and providing psychotherapy to distressed individuals. Some may see in this diversity clear signs of the fragmentation of psychology and la-

ment this reality. A more optimistic perspective is that this fragmentation, if such it is, is simply the reflection of a natural maturing of the discipline leading to an ever more diverse range of applications attending an ever-increasing psychological data base.

In the American context at least, the American Psychological Association, as the official and most powerful body overseeing the activities and concerns of the psychological community, has become increasingly involved in promoting psychology as a public resource as evidenced by a perusal of recent editions of the APA Monitor. In the sixth issue of this publication for 1995 (Volume 26, No. 6), the following headlines may be noted: (1) *Juror stress can influence final verdict* (psychologists' contributions to an understanding of jury stress and its implications for human behaviour and the law); (2) *What factors influence juror decision-making?* (psychological perspectives on pretrial publicity, social influence, cameras in the courtroom, and racial factors); (3) *Data released from child-care study* (psychological evaluations of who provides the best care for children when mothers are at work); (4) *Responding to Oklahoma City's need* (the role of psychologists in helping people cope with the recent Oklahoma City bombing tragedy); (5) *Psychologists take on new roles on health-care team* (demonstrating to family practice physicians and internists how psychological services can save their practices time and money and enhance the quality of care patients receive).

In the seventh edition of the APA Monitor for 1995 (Volume 26, No. 7), the following by-lines are noteworthy: (1) *Group Therapy: Tapping the Power of Teamwork* (maximizing cost efficiency); (2) *APA and CDC (Center for Disease Control in Atlanta) join forces to combat illness* (emphasizing the disease prevention and health promotion skills of psychologists; (3) *Poor attitudes toward money start early, but they can change*; (4) *Meeting tackles the toll of work stress* (opportunities for psychologists to contribute to the design

of healthier worksites by becoming involved in corporate restructuring, changing attitudes of workers toward their work, attitudes of employers toward their workers, and control of violence in the workplace); (5) *APA campaign stresses the value of psychology* (an attempt to raise public awareness of how psychological interventions can be beneficial in situations where lifestyle changes are fundamental to the solution of a problem); (6) *Which traits predict job performance?* (exploring the relationship between personality and job competence); (7) *Subordinate feedback may foster better management* (psychological expertise is helping to develop new feedback systems contributing to better assessments for determining employees' merit pay increases and advancement); (8) *Predicting workers' success overseas* (increasing reliance on Industrial/Organizational psychologists by companies whose employees must work with people in a variety of cultures and contexts different from their own); (9) *Psychologists as medication advisers* (more practicing psychologists are seeing the value of being well-versed in psychopharmacology with a view to helping physicians and psychiatrists decide whether or not to prescribe medication for patients suffering from certain disorders); (10). *Adapting to new cultures, challenges* (the use of psychological expertise to assist immigrants who must often re-define their roles as husbands, wives and parents in their new society); (11) *Group support is key weight-loss tool* (the use of behavior modification techniques to sustain long-term weight loss); (12) *Educators more sensitive to diversity* (using psychological techniques to instill in grade school students the attitudes of tolerance, open-mindedness, and cultural adaptability so necessary to the proper functioning of a multi-cultural society).

Summary and Conclusions

While a theoretical and methodological unity is beyond the grasp of contemporary psychology, it could be argued that a unity of purpose might be possible if it is recognized that specialized psychological systems and methods, even if irreconcilable at the moment, have all been tapped to provide some sort of service to the wider community. It might be said, therefore, that a kind of unity in diversity actually exists, this unity being in terms of the public service dimension of the psychological enterprise. It is true that much more could be done than is actually being accomplished at the moment. DeLeon (1986) suggests ways in which the societal contribution of organized psychology can be enhanced. He urges psychologists to become involved in the public policy process which, while extraordinarily difficult at times, provides the only effective channel for funneling psychological expertise to those segments of society where such expertise is desperately needed (DeLeon, 1993). Louttit (1992) and Johnson (1992) make similar points. For too long behavioral scientists have been out of the room when policies that regulate human behavior are developed. In these particular areas psychologists have a great deal to contribute but the effectiveness of their contribution is directly related to their ability to mobilize and synthesize their knowledge in ways that the lay community can understand. Sloan (1992) asks psychologists to grapple with global issues, to risk leaving the relative security of the university or laboratory environment for the real world of issues and problems with significant psychological dimensions. As Bevan (1991), Miller (1969), Fowler (1990) and many others have urged in recent years, it is time to make psychology more responsive to the needs of the larger society of which it is a part. A certain ecological relevance is now in order. Increasing recognition of the fact that psychology has much to contribute to the com-

munity despite its current lack of theoretical and methodological unity may, in fact, encourage a kind of cooperation between isolated sub-specialties by fostering a kind of unity of purpose in the public forum.

All this has implications for the ways psychologists will be educated in the future. McGovern *et al* (1991), in their analysis of psychology as a liberal arts major, suggested that the tensions between scientific and applied concerns and between breadth and depth relate to the fact that many traditional research and academic psychologists emphasize scientific values while health service providers emphasize humanistic values. As a corrective to this situation, they advocate that undergraduate psychology majors be involved as a matter of course in some sort of community service as part of their educational experience in psychology. Students should be given training in interpersonal skills so that the psychological knowledge they acquire can be transmitted to the wider communities to which they will return following graduation. Instilling a sense of responsibility for the wider community is a critical component of informed citizenship in their estimation.

Schneider (1990) also argues for a revamping of current educational practices in psychology. He encourages the establishment of colleges of biopsychosocial studies to enable students to grapple effectively with the major problems affecting contemporary society. Anchored as it is at the biological and social ends of the spectrum, psychology could take the lead in such an endeavour. Schneider encourages new relationships with cognate disciplines in the field of health care delivery including cardiology, oncology, pharmacology, preventative medicine, immunology, family practice, pediatrics, etc. Links with schools of public health, law, environmental studies, architecture, engineering and the humanities are also proposed. Schneider encourages psychologists to "consider activities that can be tied to graduate education, involving students in basic, applied, evaluative, and policy research

in a variety of community settings; consultation, including direct and indirect services emphasizing prevention, conflict resolution, problem solving, and the empowerment of people with problems of living; dissemination and diffusion of research findings and the active pursuit of their application; and a variety of educational activities for scientists, professionals, and the community." (p. 525).

Psychology remains a discipline and a profession in search of itself. This is not surprising for psychology emerged as an independent discipline a mere 120 years ago. The complexity of its subject matter and the complex, multi-disciplinary nature of its origins continue to work against the attainment of a grand synthesis, an overriding paradigm, which would confer a theoretical and methodological unity on the discipline. Despite this, or because of it, much progress has been made in more narrowly demarcated sub-specialties, which, while still tending to remain in relative isolation from one another with respect to theoretical and methodological issues, do hold in common the promise of considerable relevance to the public forum where many of the problems and issues of widespread concern have significant psychological components. The extent to which psychologists can commit themselves to offering their diverse specialized expertise to the wider community of which they are a part may just serve as a catalyst for bringing seemingly disparate communities together in a spirit of reconciliation and unity based on the recognition that psychology has much to contribute to the amelioration and solution of the major problems affecting our local, regional, national and international communities.

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