



PERGAMON

New Ideas in Psychology 17 (1999) 1–15

NEW IDEAS IN
PSYCHOLOGY

Functions of knowledge in psychology

Thomas Teo*

Department of Psychology, Faculty of Arts, York University, 4700 Keele street, Toronto, Ont., Canada M3J 1P3

Abstract

It is suggested that psychological knowledge serves three functions according to which subsystems of psychology can be derived: *SCIENTIA* provides an analytic account of parts of psychological objects or events, and is nourished by an implicit utopia to produce “better” and cumulative knowledge; *CULTURA* produces psychological meanings for individuals, communities, and cultures, and is nourished by an implicit utopia to improve the human condition; and *CRITICA* involves the deconstruction, reconstruction, and construction of psychological knowledge, and is nourished by a utopia to change psychological knowledge practices. It is argued, from a historical and theoretical point of view, that the proposed system can be used as a heuristic tool for understanding psychology’s complexity. Consequences for accepting or rejecting an equilibrium among the different knowledge functions are discussed. © 1999 Elsevier Science Ltd. All rights reserved.

1. Functions of knowledge in psychology

German critical thought (Kant, Hegel, Marx, critical theory and critical psychology), which provides the inspiration for this argument, has always been a rich source of systematic accounts of reason, knowledge, or reality. But *modern* philosophical systems of knowledge have been criticized by researchers for not doing justice to the detailed problems of an object under investigation as well as by *postmodern* philosophers for neglecting the complexity of multiple realities (Deleuze and Guattari, 1980/1987). Yet, both types of criticism neglect the fact that a systematic account, which has no omniscient attitude, may serve as a cognitive heuristic or a pragmatic tool for analyzing a problem, and for understanding that a standard that makes sense in one domain may not be valid in another.

Immanuel Kant (1724–1804), who covered in his three famous critiques, “critique of pure reason” (Kant, 1781/1968), “critique of practical reason” (Kant, 1788/1968), and “critique of judgment” (Kant, 1790/1968), epistemology, ethics, and aesthetics as

*E-mail: tteo@yorku.ca

different domains of human reason, may still provide insights for a contemporary psychology. Kant demonstrated that applications may be different in each domain, but that all three domains are located within the authority of human reason. Current psychologists intuitively use such a distinction in their understanding that methodological decisions in research demand different kinds of justifications from those required by ethical guidelines, although both are part of rationality.

For systematizing functions of knowledge and deriving subsystems of psychology, it is neither necessary to provide a transcendental deduction in the sense of Kant (1781/1968), nor to suggest a prescriptive analysis that defines how psychology should appear. A functional analysis, as suggested here, basically addresses the status quo in psychology as an academic research discipline and reflects upon the different functions of knowledge in psychology. A functional analysis uses a neutral definition of knowledge.¹ Thus, the term knowledge refers to any information produced and shared by academically trained psychologists working within academia or other contexts.

2. Subsystems of psychology

A view into the history and status quo of psychology makes it possible to divide psychology as an academic discipline into three subsystems, with knowledge in each subsystem serving a different function:

Knowledge in psychology functions² as *SCIENTIA*. The term *SCIENTIA*³ refers to practices that produce primarily knowledge about a psychological object or event, or details of this object or event. The cultural meanings of knowledge for a subject are secondary. Psychologists in *SCIENTIA* intend to produce psychological laws (nomological knowledge) while using an analytic methodology, in which a psychological object or event is broken down and well defined, detailed, and specific research problems are studied. Thus, the subject matter “psyche” is divided into atomic parts. Traditionally, experimental and quantitative methods have been considered appropriate, while the usage of the term “traditionally” suggests that there is no necessary connection between this knowledge function in psychology and a certain methodology.⁴ *SCIENTIA* is frequently associated with the traditional philosophies of science, empiricism (Hume, 1748/1988), logical empiricism (Reichenbach, 1938), or critical rationalism (Popper, 1935/1968).

¹It is not suggested that philosophers of psychology should use a neutral definition of knowledge in general. It is only argued that for the following type of analysis a neutral definition of knowledge is most useful.

²The present tense is used here although one might include the past tense as well.

³Latin words are utilized for connoting different knowledge functions, as English terms may lead to different associations. In Latin *Scientia* means, among other things, knowledge in opposition to belief; expert knowledge; particular department of knowledge; and knowledge of many things (Glare, 1982).

⁴Introspection in Wundt's program must also be considered part of *SCIENTIA* (cf. Danziger, 1990).

The second function of psychological knowledge refers to *CULTURA*. *CULTURA*⁵ produces meaning-knowledge primarily about a subject for a subject, where the subject may be a single individual, a community, or a whole culture. Its basic methodology is synthetic, suggesting that *CULTURA* puts together psychological pieces into a larger whole, or in its research focuses on the whole picture of the human psyche. The subject matter of *CULTURA* is the human psyche in its wholeness. Hermeneutic and phenomenological epistemologies (e.g., Gadamer, 1960/1982) are considered corresponding philosophies of knowledge, while qualitative methods have traditionally been considered appropriate for this knowledge function.

The third knowledge function in psychology refers to *CRITICA*, which produces critical knowledge. *CRITICA*⁶ has a monitoring and controlling function over *SCIENTIA*, *CULTURA*, and even over itself by being self-critical. *CRITICA*'s status is different from the other knowledge functions, as its level of research is mostly meta-psychological – implying that it maintains a distance from the other subsystems of psychology for evaluation – and its subject matter is the critical study of psychology or psychological topics. *CRITICA* appears in the three functions of deconstruction, reconstruction, and construction. As a hypothesis I would suggest that *CRITICA* as a distinct subsystem may be more prevalent in psychology than in many other academic disciplines, conceivably due to the complex subject matter of psychology.

Deconstruction, as the term is used here, refers to a pure critique of psychology, traditionally based on philosophical and meta-theoretical frameworks. Works with explicit titles such as “Critique of bourgeois psychology” (Bruder, 1973), or “Critique of mainstream psychology” (Zygowski, 1993), or “Rethinking psychology” (Smith et al. 1995) can be subsumed under this category. Moreover, there is a vast literature explicitly criticizing areas of traditional psychology such as social psychology (e.g., Parker and Shotter, 1990) or developmental psychology (e.g., Burman, 1994). Methodologies and methods such as the laboratory experiment have been criticized (e.g., Holzkamp, 1964), as well as psychology's assumptions about human nature (e.g., Sampson, 1993a, b), or detailed technical terms such as “at risk” (e.g., Febbraro, 1994). Critiques of psychology can adopt a Marxist (Holzkamp, 1972), feminist (Riger, 1992), postmodern (Gergen, 1994), neo-modern (Teo, 1996), or multicultural (Mecheril and Teo, 1997; Sloan, 1990) perspective.

Reconstruction refers to the critical reconstruction of psychological theories, methods, and concepts by theoretical, logical, or historical means. Logical analyses, for example, are found within a structuralist framework (e.g., Westmeyer, 1992). Perhaps more important for a critical reconstruction of contemporary psychology are critical historical works such as Chorover (1979), Danziger (1990, 1997), Foucault (1961/1965) or Gould (1996). Of great sophistication also are the theoretical reconstructions of pseudo-empiricism in traditional psychology by Smedslund (1988). Issues such as how gender, class or race – or more generally power – influence

⁵The Latin term *cultura* is defined as, meaning among other things, cultivation; improvement of the faculties; care; or the cultivation of the acquaintance of a person (Glare, 1982).

⁶The Latin term *critica* means literary criticism (Glare, 1982).

psychological research are also included in the domain of critical reconstruction (e.g., Gannon et al., 1992; Hare-Mustin and Marecek, 1988; Iijima Hall, 1997; Yee et al., 1993). Moreover, Gergen's (1991) cultural reconstruction of the self and some suggestions in Slife and Williams' (1997) recent promotion of theoretical psychology fall under this category, as does the attempt to translate critical concepts into developmental psychology (Teo, 1997).

Construction refers to the development of specific critical categories such as emancipation, liberation, alienation, and so on, for psychology. It also refers to the development of psychological theories based on a critical framework. Construction often goes hand in hand with deconstruction and reconstruction, and several of the above-mentioned references may be used as examples of construction, as well. A good example of the development of traditional categories under a critical framework is Holzkamp's (1993) theory of learning. His learning theory does not intend to be just another learning theory, but rather a theory that shows the limits of other learning theories (deconstruction), and which incorporates traditional learning theories (reconstruction), while being able to provide a conceptual framework of what learning means from the standpoint of the subject (construction). Too, Prilleltensky's (1994) goal to rehabilitate the ethical domain in psychology under the broader objective of an emancipatory psychology, and Teo's (1998) attempt to develop a contemporary psychology of liberation may be considered instances of construction. In developmental psychology, for example, Broughton (1987) contributed to construction. In its constructive aspects, CRITICA may approach CULTURA or SCIENTIA.

The distinctions among SCIENTIA, CULTURA, and CRITICA as subsystems of psychology do not reproduce the traditional distinction between basic and applied psychology. Psychologists can do basic or applied research within all three functions of knowledge. This article is itself intended to serve the functions of CULTURA and CRITICA, in attempting to provide meaning for the psychological community while being partially critical (see below). Again, it is important to emphasize that the suggested distinction constitutes a pragmatic heuristic, and that there may be more overlap among the functions than suggested within a "pure" system.

3. Critical-theoretical German background

Readers familiar with critical continental philosophy and psychology may have recognized that this distinction is motivated by post-war German critical thought, in particular, by the social philosopher Jürgen Habermas (born 1929), who suggested different types of knowledge interests (1968a, b), and by Klaus Holzkamp (1927–1995), with his elaborations on the relevance of psychology (1972).

Attempting an epistemological foundation for a theory of society (cf. McCarthy, 1978), Habermas divided human knowledge into three basic categories (see Teo, 1995). He distinguished the empirical-analytic, historical-hermeneutic, and critical-oriented sciences. Each science can be distinguished by a specific underlying cognitive *interest* that guides its respective knowledge. Empirical-analytic sciences are motivated by the production of nomological knowledge in order to achieve

technical control over processes or objects. Historical-hermeneutic sciences are motivated by the practical interest of interpretation and understanding of meanings. Critical theory has an emancipatory interest and applies self-reflection as a basic principle of investigation (Habermas refers to psychoanalysis and ideology critique).

However, as useful as this system may seem at first glance, it exhibits several flaws when applied to psychology. First, Habermas' system is not specifically related to psychological knowledge, as it deals with human knowledge generally. Second, Habermas (1968a, b) justifies the centrality of the concept of human interests by using an evolutionary argument. Habermas' system of interests, which is based on the natural history of the human species, is a speculative argument. Third, Habermas had a selective preference for psychoanalysis and ideology critique as prototypes of critical sciences. But psychoanalysis and ideology critique can be criticized as well; indeed it seems more appropriate to me to suggest formal tasks of critical sciences than to select certain theoretical frameworks.

In a similar fashion, the German critical psychologist Holzkamp applied, in his first phase of developing a critical psychology, Habermas' system and translated the concept of interest into the question of the *relevance* of psychology (cf. Teo, 1993; Tolman, 1994). Holzkamp (1972) argued that psychology needs to broaden its traditional catalogue of scientific criteria for determining the quality of scientific research. Psychology, according to Holzkamp, must consider the external relevance of research, which refers to the significance and importance of the content of psychological knowledge. Focusing on technical and emancipatory relevance (he also distinguished cosmological and anthropological relevance in his system), Holzkamp argued that technical relevance cannot be the significant factor as it is unreflective of power structures in society. Thus, technical relevance must be complemented by emancipatory relevance. The latter is achieved in psychology through enlightening humans about their societal dependencies and by helping individuals to change their situation.

Although showing that the traditional criteria for evaluating psychological research are limited, Holzkamp's theoretical preference was that of emancipatory relevance. Therefore, he was not able to address the status or legitimacy of research that has no immediate technical or emancipatory relevance. Yet, from a functional point of view, there is no justification for excluding basic research from psychology.⁷

4. Utopian notions in subsystems of psychology

Still, psychologists in either subsystem might argue that the knowledge functions are not equal and can be ranked (not surprisingly, in a way that represents individual preferences). In order to demonstrate that no knowledge function has a superior role, it is necessary to introduce a second dimension: Each knowledge function is based on an implicit utopia, whereby the term *utopia* is used in its ancient Greek meaning,

⁷In a comment on his earlier writings, Holzkamp (1972) himself criticized his own position.

a non-place or nowhere land, a place that cannot be reached. If this should be the case, then the choice of a subsystem is a choice value and not one of truth.

The utopian dimension of SCIENTIA is the idea that the truth of an object can be reached through better, enhanced, more sophisticated, and future research. Psychologists in SCIENTIA believe in the continuous progress of knowledge regarding the human psyche. The implicit utopia in CULTURA is the idea that the provision of meaning allows individuals (e.g., through therapeutic means), communities, and cultures to become better individuals, better communities, or better cultures, whereby “better” is evidently not defined as something universal but is constructed by the particular context. For example, each therapeutic intervention is motivated by the utopian idea that the personal status quo can be transformed into something better. Even “eugenics” was motivated by the notion of something “better,” even if we nowadays – with very good reasons – consider eugenics a dystopia. The utopian notion in CRITICA refers to the idea that criticism changes the theories, methods, concepts, and practices of the academic psychological community for the better.

If this analysis is correct, and psychologists in different subsystems act under different utopian premises, then it becomes transparent that knowledge production in psychology is embedded in certain non-rational moments and that there is no logical or empirically justifiable preference for one knowledge function over the other. No utopia is more epistemologically legitimate than the other; rather, it is a question of personal interest and taste, cultural importance, scientific convention, and so on. On the other hand, such a statement does not mean that one always encounters adequate theories or methodologies in psychology, because psychologists can produce more or less right, true, good, or supported statements within all three subsystems. Yet, the analysis of the suitability of concepts, theories, methodologies, and results, must be discussed on the level of academic quality within each subsystem and is not part of the argument presented here.

5. Psychology’s multiple historical foundation

The division of psychology into subsystems is not theoretically arbitrary but finds support in the history of psychology. SCIENTIA, CULTURA, and even CRITICA have been discussed in many ways under different names in the psychological literature. Since the institutionalization of psychology at the end of the 19th century, psychology has been confronted with the problem of what kind of science it should represent. The many ambiguous answers to the questions of what should be the adequate subject matter, the methodology, and the practice of psychology can be found in the enduring discourses on the crisis of psychology (cf. Teo, 1993), which are part of CRITICA.

Wilhelm Wundt (1832–1920), whose pivotal role in the institutionalization of psychology is generally recognized (see Fancher, 1996), developed a conceptualization similar to SCIENTIA and CULTURA for psychology (cf. Danziger, 1990). Accordingly, experimental psychology is considered valid for simple psychological functions, whereas higher psychological performances in the domain of culture or society

demand a non-experimental “Völkerpsychologie”. But already Wundt’s contemporaries demanded the dominance of one or the other function of knowledge. While Wilhelm Dilthey (1833–1911) (1961) demanded the location of psychology within the “Geisteswissenschaften” (an untranslatable term meaning something similar to the humanities), thus suggesting that he preferred a psychology that came close to what is called CULTURA in this article, Hermann Ebbinghaus (1850–1909) promoted psychology as SCIENTIA. Dilthey (1961) argued that psychology’s subject matter is human experience and thus its method must be *understanding* (*verstehen*), while Ebbinghaus (1896) put forward the idea that there is no need for understanding, that *explanation* is qualified enough, and that psychology should rely on experimental methods (see also Staebble, 1985).

While Germans were still discussing issues such as the status, subject matter, and methodology of psychology (cf. Ash and Geuter, 1985), a discussion which continued vigorously even after the so-called “Americanization” (Métraux, 1985) of German psychology after the Second World War (for example, Eberlein and Pieper, 1976; Brandtstädter et al., 1994), North-American functionalism helped to prepare John B. Watson’s (1878–1958) triumph and radical break from continentally inspired discussions, for which Titchener’s structuralism provided no alternative (Titchener, 1929/1972). Watson (1913), with the rejection of consciousness, as well as subsequent behaviorists, advocated a position that excludes CULTURA radically from academic psychology.

Cognitive psychology represents SCIENTIA, and humanistic psychology (Rollo May, Abraham Maslow, Carl Rogers), which had little influence in academia, concerns issues of CULTURA. But the reality of a threefold system of knowledge functions as discussed here can no longer be denied in light of the professionalization of psychology in North America in diverse clinical and applied fields, the emergence of different, marginalized voices in society critical of mainstream psychology, and the formal recognition of different divisions within the American Psychological Association (APA). Nowadays, it is evident that psychology cannot be reduced to a single subject matter, a single methodology, or a single practice.

The pluralization of North American psychology has been accompanied by important developments in the philosophies of knowledge that challenged increasingly empiricist notions of research according to which neutral researchers discover a psychological reality using objective methods and interpret results in a value-free, neutral fashion. Most significant for this move were Kuhn’s (1962) analyses in physics demonstrating through the concept of a paradigm that research is “theory-laden”. Followers and contemporary philosophers of knowledge go even further when they apply the concept of theory-ladenness not only to a scientific framework but include social characteristics such as gender (Harding, 1986) and race (Collins, 1991) to reconstruct gender-biased and race-biased choices of research topics, theories, and methods (see also Febbraro, 1997).

CRITICA, as a distinct subsystem of psychology, has not only existed for the last 30 years. It appeared during the emergence of psychology as a scientific discipline and has accompanied psychology since then. In the crisis discussion of psychology one can see that CRITICA is part of the history of psychology. In 1898 Willy published an

essay with the title “Die Krisis in der Psychologie [The crisis in psychology]” (see Jaroschewski, 1974/1975, p. 140). Karl Bühler (1927/1978) wrote his analysis of the crisis in psychology in 1927, the same year in which Lev S. Vygotsky (Wygotski, 1985) wrote a dialectical-materialist account of the crisis in psychology. Since then one finds a crisis discussion accompanying psychology (cf. Herzog, 1984; Teo, 1993; Westland, 1978), not to mention a vast crisis literature pertaining to subfields within psychology (e.g., social or clinical psychology).

Related to all of this is the issue of psychology as a fragmented or unified science (see Staats and Mos, 1987). Again, one finds a parallel in the history of psychology with Franz Brentano (1874/1995) lamenting the plurality of psychology while demanding a unified psychology. I suggest here – based on a subsystems approach of psychology – that unification, whether possible or not, can only be discussed meaningfully within each subsystem, but not between the subsystems, as each subsystem is associated with a different knowledge function and a different utopia. An approach in psychology that takes the seemingly unified status of physics as an ideal (cf. Staats, 1991) seems doomed to fail because it neglects the functions of *CULTURA* and *CRITICA*. Thus, the suggestions provided by representatives of a unified positivism (Staats, 1991), or a dialectical materialism (Tolman, 1988), which already represents a promising alternative to positivism, might lead nowhere as long as the suggested subsystems are not acknowledged as distinct. On the other hand, a rejection of unification (Krantz, 1987) seems premature, as long as there are only a limited number of studies investigating how a unified system within each subsystem might appear. More promising are positions such as that of Herzog (1984) who argued that a unification of psychology is possible only for theories that are based on the same model of human nature.

Critically, it must be mentioned that the discourse on unification in psychology – from a factual point of view – turned out to have no impact on the field. How could the majority of psychologists be convinced that unification is productive, when proponents of unification were not able to unify the small community of unification advocates or to commit them to a few unification goals? How much more difficult it must be to find agreement on unification among the much larger system and institution of psychology and community of psychologists. From the perspective of different knowledge functions in psychology, it seems again more adequate to propose a pragmatic approach that focuses on actual knowledge functions in psychology instead of demanding an ideological commitment to unification. It is not difficult to predict that a unification in one subsystem that grows at the expense of other subsystems, and which does no justice to the factual work of psychologists, will have little future in psychology.

6. Individual psychologists and knowledge functions

A certain knowledge function is not necessarily bound to an individual psychologist. A psychologist may be able to work in all three subsystems, either simultaneously or at different stages of his or her career. Some researchers point out that

“philosophical” reflections seem to arrive in the later life of scientists (Oeser, 1988), that there may be a season for theory in psychology (Ross et al., 1996), or a “maturity shift” towards theory (Edwards and Endler, 1987) in one’s career. Although many examples can be found of a movement from SCIENTIA towards CULTURA or CRITICA, it seems worth mentioning one North American and one European example of a shift from SCIENTIA to CRITICA: in North America, Koch became an outstanding critic of psychology (contrast, for example, Koch, 1959–1963, versus Koch, 1981); and in Europe, Smedslund identified pseudo-empiricist aspects within psychology (contrast, for example, Smedslund, 1963, versus Smedslund, 1994). On the other hand, it is well known that psychologists may defend and promote one subsystem during their entire career. Yet, there is no logical or psychological reason – and perhaps only institutional constraints – why psychologists should not work in all three subsystems at all stages of their career.

Moreover, public attention and scientific career success seem to come, in particular, to people who have worked in SCIENTIA and CULTURA simultaneously. The best example is probably Sigmund Freud (1856–1939), who was trained in SCIENTIA as a physiologist of his time, and thus had a natural-scientific attitude when studying psychological phenomena (cf. Fancher, 1973). At certain points of his career he even intended psychoanalysis as SCIENTIA and thought that psychoanalytic therapy might be replaced one day by pharmacological approaches (cf. Habermas, 1968a). At the same time Freud’s approach functioned, and still functions widely, as CULTURA, with many contemporary mainstream psychologists hardly considering it scientific anymore. Freud provided meaning for individuals with his therapeutic model and for communities by allowing for the understanding of cultural products such as art, jokes, and everyday life (Freud, 1969–1975). Psychoanalysis is still used in contemporary film and literature and is still discussed as a popular topic.⁸

Something similar occurred to Skinner (1904–1990), a representative of SCIENTIA, who worked also in CULTURA by publishing in popular magazines and by articulating some of his ideas in novels (e.g., Skinner, 1971; cf. Bjork, 1993). It is not surprising that Skinner drew much more public attention to his person than did the neo-behaviorists Clark L. Hull (1884–1952) or Edward C. Tolman (1886–1959).

There are also personal needs, disappointments, and interests involved in the choice of subsystems. Students of psychology may discover that SCIENTIA – due to its knowledge function – does not solve personal problems or address personal issues. Wittgenstein (1953/1982, p. 370) referred to this point when he mentioned that the experimental method and psychological problems have nothing to do with each other. A psychologist in CULTURA might be disappointed because knowledge produced within this subsystem does not satisfy his or her need for unambiguous clarity or objectivity.

Moreover, there may be self-misunderstandings involved: A psychologist working in SCIENTIA might believe that he or she can derive immediate cultural meanings

⁸Freud has been so successful that his head is now portrayed on the 50 Schilling bank note of Austria.

from SCIENTIA, while psychologists who engage in CULTURA may think that they are producing SCIENTIA, while not understanding or recognizing the different utopias underlying each knowledge function.

Problems arise when, in fact, CULTURA-motivated studies are presented and justified as SCIENTIA-oriented ones. This becomes evident in psychologists' involvement with the study of "race" and in their lack of reflection regarding its ethical as well as epistemological foundations (see Galton, 1869/1962). If one treats race as a "natural kind" (cf. Danziger, 1997) and not as a socially, culturally, and historically constructed reality (Gaines and Reed, 1995; Miles, 1989; Teo, 1994), then one is prone to reproduce a cultural construction that is founded in CULTURA. Although admittedly, this may give meaning to certain communities, it has not much to do with the knowledge function of SCIENTIA.⁹

7. Disequilibrium among knowledge functions and consequences

Psychology has emerged as a discipline with different knowledge functions. The subsystems require an equilibrium among each other because any disequilibrium in the system can lead to problems. A colonization of CULTURA through SCIENTIA encourages critics and meaning-oriented psychologists to point out psychology's lack of application and practical significance (Rennie, 1995). Problems of meaning cannot be addressed, solved, or justified by SCIENTIA with its different knowledge function. A colonization of SCIENTIA through CULTURA may lead to the problem that a successful and important dimension of knowledge production is abandoned. There is an increasing demand that psychologists who work in SCIENTIA should be able to present their research as CULTURA, but there is no rational argument for why SCIENTIA should submit itself to meaning concerns. Thus, it seems necessary that there be a balance between CULTURA and SCIENTIA.

CRITICA has a somewhat different status with its knowledge function of controlling and monitoring. But a lack of CRITICA in SCIENTIA or CULTURA results in psychology being an unconscious discipline that is prone to many self-misunderstandings. An equilibrium with the other subsystems means for CRITICA that there should be space for the deconstruction, reconstruction, and construction in institutional and communicative contexts of the two other knowledge functions. A disequilibrium also arises when psychologists in CRITICA act as if only CRITICA is true psychology, and develop criticisms for the sake of criticism, while not understanding the limitations of this knowledge function.

The idea that a colonization of knowledge functions is problematic does not mean that psychologists should not discuss problems in each function. CULTURA may take a critical stance when challenging parts of SCIENTIA as underdetermined by reality or as not addressing genuine problems of human psychology, or when suggesting

⁹The same argument applies to "eugenics", which is inspired by the function of CULTURA but is presented as SCIENTIA. Promoters of eugenics, too, desired a "better" society.

that its research is lacking in ethical reflection.¹⁰ On the other hand, SCIENTIA may take a critical stance when arguing that parts of CULTURA are solely subjective, and that CULTURA is close to popular psychology. Indeed, CULTURA is permanently threatened by pop psychology, which covers similar issues, yet with different types of justifications. However, such criticisms should be based on a basic acceptance of different knowledge functions within psychology. Such discussions may, for example, provide an entrée for methodological discussion on how criteria such as reliability or validity are understood differently in CULTURA or SCIENTIA.

I would like to suggest that different knowledge functions find their equivalents in the organization of different scientific communities, which also require equilibrium for the sake of a fertile future for psychology. History has shown that a colonization of one community through another can lead to major problems in the progress of the discipline. A *monotheistic* conception of psychology (e.g., behaviorism) has led to many more problems of exclusion and neglect of human complexity than the threefold status of psychology.

Recent developments, for example, in Germany and the United States of America, support such an analysis. Psychologists in Germany founded a “Neue Gesellschaft für Psychologie” (New Society for Psychology), more closely linked to what is described as CULTURA, as an answer to the traditional “Deutsche Gesellschaft für Psychologie” (German Society for Psychology), which was perceived as SCIENTIA-oriented, exclusive, narrow-minded, not doing justice to the everyday life of people, and so on (Initiativgruppe Erneuerung der Psychologie, 1990). In the United States one finds the opposite process operating with the founding of the American Psychological Society (APS) in 1988, which was intended as an organization specifically aimed at supporting concerns of SCIENTIA (see the bylaws of American Psychological Society, 1996), while the American Psychological Association (APA) may have been perceived as dominated by concerns of CULTURA. I would like to suggest that there is no problem with founding new societies that try to do justice to different knowledge functions as long as these societies are aware that different knowledge functions of psychology exist. Certainly, a regular communicative exchange between the subsystems of psychology is necessary for mutual learning processes.¹¹

8. Practical implications

For the sake of the productivity of psychological knowledge, psychology as an institution must find a *modus vivendi* among its different subsystems. This means that

¹⁰For example, Prilleltensky (1997) and Kendler (1993) represent orthogonal positions with regard to the ethical dimension in psychology. While the former advances an inclusion of ethical concepts into psychology, the latter insists on the traditional difference between descriptive and prescriptive statements (see also Kurtines et al., 1992).

¹¹This analysis is also inspired by the Department of Psychology at York University, its research activities, its acceptance of multiple ways of producing knowledge (SCIENTIA, CULTURA, CRITICA), and by the “History and Theory of Psychology Graduate Option”.

psychology as a system of knowledge must first of all accept different functions of knowledge in psychology. Not accidentally, departments of psychology have been located sometimes in faculties of arts and sometimes in faculties of science. To do justice to the complexity of psychological knowledge, departments should recruit and hire people who represent these different knowledge functions. The same argument applies to publication opportunities: It is necessary to develop journals that are open to covering all three subsystems.

All three functions must be taught at universities if universities wish to do justice to the reality of knowledge production in psychology. I suggest that for general educational purposes, psychologists who specialize in SCIENTIA should be knowledgeable about CULTURA and CRITICA, and vice versa, and that psychologists who specialize in CRITICA should be knowledgeable about SCIENTIA and CULTURA. Students should be educated in such a way that they are able to write and read adequately in all three subsystems. Furthermore, the adequacy of a paper must be decided by criteria within each subsystem, and not by criteria of the other subsystems.

Psychology as it stands with its different knowledge functions, but also with its many areas, topics, and methods, is a multi-subcultural system. I suggest that the future of psychology depends on its ability to accept these differences, and that the existence of different functions within psychology should not be perceived as an essential weakness, but as a fundamental strength.

Acknowledgements

Some of the ideas reported here were presented at the 58th Canadian Psychological Association (CPA) Annual Convention in June 1997 in Toronto, Ontario, Canada. I appreciate the helpful comments of Angela R. Febraro. Part of the research was supported by a York University Social Sciences and Humanities Research Council Small Grant.

References

- American Psychological Society. (1996). *Membership directory of the American Psychological Society* (1996 ed.). Washington, DC: Author.
- Ash, M.G., & Geuter, U. (Eds.). (1985). *Geschichte der deutschen Psychologie im 20. Jahrhundert: Ein Überblick* [History of German psychology in the 20th century: An overview]. Opladen: Westdeutscher Verlag.
- Bjork, D.W. (1993). *B.F. Skinner: A life*. New York: Basic Books.
- Brandstädter, J., Eckensberger, L.H., Gadenne, V., Holzkamp, K., Kempf, W., Maiers, W., & Markard, M. (1994). Zur Problematik des Empiriebezugs psychologischer Theorien [Concerning the empirical connection of psychological theories]. *Forum Kritische Psychologie*, 34, 5-79.
- Brentano, F. (1995). *Psychology from an empirical standpoint*. New York: Routledge (Original work published 1874).
- Broughton, J.M. (Ed.). (1987). *Critical theories of psychological development*. New York: Plenum.
- Bruder, K.-J. (Ed.). (1973). *Kritik der bürgerlichen Psychologie* [Critique of bourgeois psychology]. Frankfurt am Main: Fischer.

- Bühler, K. (1978). *Die Krise der Psychologie* [The crisis of psychology]. Wien: Ullstein (Original work published 1927).
- Burman, E. (1994). *Deconstructing developmental psychology*. London: Routledge.
- Chorover, S.L. (1979). *From genesis to genocide: The meaning of human nature and the power of behavior control*. Cambridge, MA: MIT Press.
- Collins, P.H. (1991). *Black feminist thought: Knowledge, consciousness, and the politics of empowerment*. New York: Routledge.
- Danziger, K. (1990). *Constructing the subject: Historical origins of psychological research*. Cambridge, MA: Cambridge University Press.
- Danziger, K. (1997). *Naming the mind: How psychology found its language*. London: Sage.
- Deleuze, G., & Guattari, F. (1987). *A thousand plateaus: Capitalism and schizophrenia* (B. Massumi, Trans.). Minneapolis: University of Minnesota Press (Original work published 1980).
- Dilthey, W. (1961). *Gesammelte Schriften* (V. Band) [Collected works: Vol. 5]. Göttingen: Vandenhoeck and Ruprecht.
- Eberlein, G., & Pieper, R. (Eds.). (1976). *Psychologie: Wissenschaft ohne Gegenstand?* [Psychology: A science without subject matter?]. Frankfurt am Main: Campus.
- Ebbinghaus, H. (1896). Über erklärende und beschreibende Psychologie [Concerning explanatory and descriptive psychology]. *Zeitschrift für Psychologie*, 9, 161–205.
- Edwards, J.M., & Endler, N.S. (1987). The “stars” revisited: What are the “stars” of the 1970s doing in the 1980s? *Canadian Psychology*, 28(2), 148–160.
- Fancher, R. (1973). *Psychoanalytic psychology: The development of Freud's thought*. New York: Norton.
- Fancher, R.E. (1996). *Pioneers of psychology* (3rd ed.). New York: Norton.
- Febraro, A.R. (1994). Single mothers “at risk” for child maltreatment: An appraisal of person-centred interventions and a call for emancipatory action. *Canadian Journal of Community Mental Health*, 13(2), 47–60.
- Febraro, A.R. (1997). *Gender, mentoring, and research practices: Social psychologists trained at the University of Michigan, 1949–1974*. Unpublished doctoral dissertation, University of Guelph, Ontario, Canada.
- Foucault, M. (1965). *Madness and civilization: A history of insanity in the age of reason* (Transl. by Richard Howard). New York: Pantheon Books. (Original work published 1961)
- Freud, S. (1969–1975). *Studienausgabe: Band I-X* (Study ed. Vols. I–X). Frankfurt am Main: Fischer.
- Gadamer, H.G. (1982). *Truth and method*. New York: Crossroad. (Original work published 1960).
- Gaines, S.O., & Reed, E.S. (1995). Prejudice: From Allport to DuBois. *American Psychologist*, 50(2), 96–103.
- Galton, F. (1962). *Hereditary genius: An inquiry into its laws and consequences*. Cleveland: World (Original work published 1869).
- Gannon, L., Luchetta, T., Rhodes, K., Pardie, L., & Segrist, D. (1992). Sex bias in psychological research: Progress or complacency? *American Psychologist*, 47(3), 389–396.
- Gergen, K.J. (1991). *The saturated self: Dilemmas of identity in contemporary life*. New York: Basic Books.
- Gergen, K.J. (1994). Exploring the postmodern: Perils or potentials? *American Psychologist*, 49(5), 412–416.
- Glare, P.G.W. (Ed.). (1982). *Oxford Latin dictionary*. Oxford, UK: Oxford University Press.
- Gould, S.J. (1996). *The mismeasure of man* (revised and expanded). New York: Norton.
- Habermas, J. (1968a). *Erkenntnis und Interesse* [Knowledge and interest]. Frankfurt am Main: Suhrkamp.
- Habermas, J. (1968b). *Technik und Wissenschaft als “Ideologie”* [Technology and science as “ideology”]. Frankfurt am Main: Suhrkamp.
- Harding, S. (1986). *The science question in feminism*. Ithaca: Cornell University Press.
- Hare-Mustin, R.T., & Marecek, J. (1988). The meaning of difference: Gender theory, postmodernism, and psychology. *American Psychologist*, 43(6), 455–464.
- Herzog, W. (1984). *Modell und Theorie in der Psychologie* [Model and theory in psychology]. Göttingen: Verlag für Psychologie.
- Holzkamp, K. (1964). *Theorie und Experiment in der Psychologie. Eine grundlagenkritische Untersuchung* [Theory and experiment in psychology: A foundation-critical study] Berlin: Walter de Gruyter.
- Holzkamp, K. (1972). *Kritische Psychologie: Vorbereitende Arbeiten* [Critical psychology: Preparatory works]. Frankfurt am Main: Fischer.

- Holzkamp, K. (1993). *Lernen: Subjektwissenschaftliche Grundlegung* [Learning: Subject-scientific foundation]. Frankfurt am Main: Campus.
- Hume, D. (1988). *An enquiry concerning human understanding* (Introduction, notes, and editorial arrangement by Antony Flew). La Salle, IL: Open Court. (Original work published 1748).
- Iijima Hall, C.C. (1997). Cultural malpractice: The growing obsolescence of psychology with the changing U.S. population. *American Psychologist*, 52(6), 642–651.
- Initiativgruppe Erneuerung der Psychologie (Ed.). (1990, Juni). *Initiative Erneuerung der Psychologie. Rundbrief Nr. 1* (Initiative for a renewal of psychology. Newsletter No. 1). Heidelberg: Asanger.
- Jaroschewski, M. (1975). *Psychologie im 20. Jahrhundert* (Psychology in the 20th century). Berlin: Volk und Wissen (Original work published 1974)
- Kant, I. (1968). *Kritik der reinen Vernunft* [Critique of pure reason] (2 vols.). Frankfurt am Main: Suhrkamp. (Original work published 1781).
- Kant, I. (1968). *Kritik der praktischen Vernunft* [Critique of practical reason] Frankfurt am Main: Suhrkamp. (Original work published 1788).
- Kant, I. (1968). *Kritik der Urteilskraft* [Critique of judgment]. Frankfurt am Main: Suhrkamp. (Original work published 1790).
- Kendler, H.H. (1993). Psychology and the ethics of social policy. *American Psychologist*, 48(10), 1046–1053.
- Koch, S. (Ed.). (1959–1963). *Psychology: A study of science* (Vols. 1–6). New York: McGraw-Hill.
- Koch, S. (1981). The nature and limits of psychological knowledge: Lessons of a century qua “science”. *American Psychologist*, 36(3), 257–269.
- Krantz, D.L. (1987). Psychology’s search for unity. *New Ideas in Psychology*, 5(3), 329–339.
- Kuhn, T.S. (1962). *The structure of scientific revolutions*. Chicago: University of Chicago Press.
- Kurtines, W.M., Azmitia, M., & Gewirtz, J.L. (Eds.). (1992). *The role of values in psychology and human development*. New York: Wiley.
- McCarthy, T. (1978). *The critical theory of Jürgen Habermas*. Cambridge, MA: MIT Press.
- Mecheril, P., & Teo, T. (Ed.). (1997). *Psychologie und Rassismus* [Psychology and racism]. Reinbek: Rowohlt.
- Métraux, A. (1985). Der Methodenstreit und die Amerikanisierung der Psychologie in der Bundesrepublik 1950–1970 [The method dispute and the Americanization of psychology in the Federal Republic of Germany between 1950 and 1970]. In M. G. Ash and U. Geuter (Eds.), *Geschichte der deutschen Psychologie im 20. Jahrhundert*. Opladen: Westdeutscher Verlag.
- Miles, R. (1989). *Racism*. London, UK: Routledge.
- Oeser, E. (1988). *Das Abenteuer der kollektiven Vernunft: Evolution und Involution der Wissenschaft* [The adventure of collective reason: Evolution and involution of science]. Berlin: Parey.
- Parker, I., & Shotter, J. (Eds.). (1990). *Deconstructing social psychology*. London, UK: Routledge.
- Popper, K.R. (1968). *The logic of scientific discovery*. New York: Harper and Row (Original work published 1935).
- Prilleltensky, I. (1994). *The morals and politics of psychology: Psychological discourse and the status quo*. Albany: State University of New York Press.
- Prilleltensky, I. (1997). Values, assumptions, and practices: Assessing the moral implications of psychological discourse and action. *American Psychologist*, 52(5), 517–535.
- Reichenbach, H. (1938). *Experience and prediction: An analysis of the foundations and the structure of knowledge*. Chicago, IL: The University of Chicago Press.
- Rennie, D.L. (1995). On the rhetorics of social science: Let’s not conflate natural science and human science. *Humanistic Psychologist*, 23(3), 321–332.
- Riger, S. (1992). Epistemological debates, feminist voices: Science, social values, and the study of women. *American Psychologist*, 47(6), 730–740.
- Ross, B., Febraro, A., Thoms-Chesley, H., Bauer, N., & Lubek, I. (1996). Is there a season for theory? Theoretical and methodological writings of men and women social psychologists over the lengths of their careers. In C.W. Tolman, F. Cherry, R. v. Hezewijk, and I. Lubek (Eds.), *Problems of theoretical psychology* (pp. 228–241). Toronto: Captus.
- Sampson, E.E. (1993a). Identity politics. Challenges to psychology’s understanding. *American Psychologist*, 48(12), 1219–1230.

- Sampson, E.E. (1993b). *Celebrating the other: A dialogic account of human nature*. New York: Harvester.
- Skinner, B.F. (1971). *Beyond freedom and dignity*. New York: Knopf.
- Slife, B.D., & Williams, R.N. (1997). Toward a theoretical psychology: Should a subdiscipline be formally recognized? *American Psychologist*, 52(2), 117–129.
- Sloan, T.S. (1990). Psychology for the Third World? *Journal of Social Issues*, 46(3), 1–20.
- Smedslund, J. (1963). The concept of correlation in adults. *Scandinavian Journal of Psychology*, 4, 165–173.
- Smedslund, J. (1988). *Psycho-logie*. Berlin: Springer.
- Smedslund, J. (1994). What kind of propositions are set forth in developmental research? Five case studies. *Human development*, 37, 280–292.
- Smith, J.A., Harré, R., & Van Langenhove, L. (Eds.). (1995). *Rethinking Psychology*. London, UK: Sage.
- Staats, A.W. (1991). Unified positivism and unification psychology: Fad or new field? *American Psychologist*, 46(9), 899–912.
- Staats, A.W., & Mos, L.P. (Eds.). (1987). *Annals of theoretical psychology* (Vol. 5). New York: Plenum.
- Staeuble, I. (1985). "Subjektpsychologie" oder "subjektlose Psychologie." Gesellschaftliche und institutionelle Bedingungen der Herausbildung der modernen Psychologie [Psychology with a subject or without a subject: Social and institutional factors for the emergence of modern psychology]. In M.G. Ash and U. Geuter (Eds.), *Geschichte der deutschen Psychologie im 20. Jahrhundert* (pp. 19–44). Opladen: Westdeutscher Verlag.
- Teo, T. (1993). *Theoriendynamik in der Psychologie: Zur Rekonstruktion von Wissenschaftsentwicklung am Fallbeispiel von Klaus Holzkamp* [Theory dynamics in psychology: The reconstruction of scientific development with using Klaus Holzkamp as an example]. Hamburg: Argument.
- Teo, T. (1994). Zur Identität von sogenannten Mischlingen [The identity of interracial people]. In P. Mecheril, & T. Teo (Eds.), *Andere Deutsche. Zur Lebenssituation von Menschen multiethnischer und multikultureller Herkunft* (pp. 145–165). Berlin: Dietz.
- Teo, T. (1995). Society, subject, and development: Analysis of categories in German critical thought. In I. Lubek, R. van Hezewijk, G. Pheterson, and C.W. Tolman (Eds.), *Trends and issues in theoretical psychology* (pp. 353–358). New York: Springer.
- Teo, T. (1996). Practical reason in psychology: Postmodern discourse and a neo-modern alternative. In C.W. Tolman, F. Cherry, R. v. Hezewijk, and I. Lubek (Eds.), *Problems of theoretical psychology* (pp. 280–290). Toronto: Captus.
- Teo, T. (1997). Developmental psychology and the relevance of a critical metatheoretical reflection. *Human Development*, 40(4), 195–210.
- Teo, T. (1998). Prolegomenon to a contemporary psychology of liberation. *Theory and Psychology*, 8(4), 527–547.
- Titchener, E.B. (1972). *Systematic psychology: Prolegomena*. Ithaca, NY: Cornell University Press. (Original work published 1929).
- Tolman, C.W. (1988). Theoretical unification in psychology: A materialist perspective. In W.J. Baker, L.P. Mos, H.V. Rappard, and H.J. Stam (Eds.), *Recent trends in theoretical psychology*. (pp. 29–36). New York: Springer-Verlag.
- Tolman, C.W. (1994). *Psychology, society, and subjectivity: An introduction to German Critical Psychology*. London, UK: Routledge.
- Watson, J.B. (1913). Psychology as the behaviorist views it. *Psychological Review*, 20, 158–177.
- Westland, G. (1978). *Current crises of psychology*. London, UK: Heinemann.
- Westmeyer, H. (Ed.). (1992). *The structuralist program in psychology: Foundations and applications*. Seattle: Hogrefe and Huber.
- Wittgenstein, L. (1982). *Philosophische Untersuchungen* [Philosophical investigations]. Frankfurt am Main: Suhrkamp (Original work published 1953).
- Wygotski, L.S. (1985). Die Krise der Psychologie in ihrer historischen Bedeutung: Methodologische Untersuchung [The crisis of psychology in its historical significance: Methodological investigation]. In L.S. Wygotski, (Ed.), *Ausgewählte Schriften. Band 1: Arbeiten zu theoretischen und methodologischen Problemen der Psychologie* (pp. 57–278). Berlin: Volk und Wissen.
- Yee, A.H., Fairchild, H.H., Weizmann, F., & Wyatt, G.E. (1993). Addressing psychology's problem with race. *American Psychologist*, 48(11), 1132–1140.
- Zygowski, H. (Ed.). (1993). *Kritik der Mainstream-Psychologie* [Critique of mainstream psychology]. Münster: Bessau.