

HUNGARIAN CONTRIBUTIONS TO MODERN PSYCHOLOGY*

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Traditions of History Writing in Psychology

I wish to argue in this paper that in terms of its sociological background psychology is not entirely neutralized and decontextualized as a science. Therefore in analyzing its trends there is something to be learned from its national characteristics, beyond the mere fact of there being national differences.

The Linear View: A Caricature

The received or accepted tradition of historiography in psychology is one of *the linear traditions*. This conception is present in points of views emphasizing an unbroken and monocentric image of the unfolding of this young discipline. They assume several linearities.

(i) There is a clear development from psychology characterized by an unarticulated, speculative view on human nature and especially an understanding of the mind and behavior contaminated by considerations of philosophy and, even worse, religion, toward an end point, the implied goal, which is a solid and reliable view of the human mind based on disinterested natural science.

(ii) According to this view, psychology as a modern science, as a profession, as well as a disciplinary subject taught at universities had articulated itself starting from the world of academia "downward." There is one center for modernization in this linear perspective: that of the leading universities and their theoretical approaches. These may change over time, such as moving from a mentalistic psychology to a behavioral one, but at any given period there is only one center. The center may change nationally as well. It may move from Germany to the United States, but there still would only be one true center at any given time. All the rest like Russian-Soviet psychology, or Spanish language psychology with its

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peculiarities would be atavistic phenomena of the periphery. Also, in any given cultural and temporal context the academic world would be the dominant and decisively interesting one.

(iii) The received conception is also linear in the sense that it treats national features as belonging to the obscure, early and difficult times in the formation of the discipline. Psychology with its institutionalization will have basically lost all of its national characteristics.

The development of psychology will be in harmony with political globalization. National trends belong to the past and will disappear with liberalization.

Questioning Linearity

This line of thought is of course valid not only for psychology but for traditional historiography of science at large. In order to prove an almost religious progress from obscurity to clarity, one had to assume this kind of unification. Present day revisionist approaches, however, seriously question this attitude. The different networks in the life of the scientist (intellectual, private, political and national) as Bruno Latour (1993) claims most clearly, are interwoven; they are competitive and sometimes cooperative determiners of the growth of science. Science should not be interpreted as the equivalent of a religious sacred realm that should not be tied to profane issues (Bloor, 1991).

In the conception of Latour (1993) the entire process of modernity is characterized by dualities. The basic one in fact is the duality between division and unification. Interestingly enough, both could support the neglect of national differences and the ideal of studying science in its pure essence. Certainly there is a shared presupposition behind the constant thriving of modernity towards *autonomy* of the different spheres of life, which results – using Latour’s symbolic expression – in *great divides*. It started with the separation of state and church, between faith and knowledge on the intellectual side, and continued in the governmental separation of powers, to arrive in the nineteenth century to a *de facto* separation of intellectual activities (the separation of art, science, and philosophy being the clear-cut example, to be followed by the drawing of clear boundaries between sciences and humanities, between the different sciences, and so on). This continued into a further separation in “science studies” as well, and one vision of linearity and national neutrality was a consequence of this. The idea of “divide” supported the neopositivist notion of separating the *context of discovery* (ephemeral, disorganized, irrational and individual) from the context of verification (eternal, organized, rational and institutionalized) and a separation of the logical-structural versus the contingent aspects of scientific theories. (For a recent clear critique of this division see Brown, 1989).

The other governing feature of modernity analyzed so powerfully by Toulmin (1990) is universalistic decontextualization, accompanied by its two sisters, depersonalization and disinterest (Shapin, 1996). These attitudes also clearly deny the continuous importance of any national peculiarities and entail a belief in a universal and algorithmic way of making science.

Today all of this bold belief in separations starts to belong to the past. We begin to realize that separation and total autonomy is only an ideal, and it is always supplemented by hybridization on all levels, which is the complementary process proposed by Latour (1993). This is true for the actual research process, as well as for its history. As Latour and Woolgar (1986) in their path breaking and rather controversial work describe "laboratory science," it is a process where data, internal determination and external issues (rivalry, cooperation, primacy issues, technical nets) are always interwoven. Where "facts" behave according to their Latin etymology: they are "made" and not simply discovered.

The hybridization and network ideas of Latour propose that there is an interplay between the three basic contexts in the historical development of science as well. One is the intellectual context so dear to the proponents believing in an internalist approach to science, the other two being the personal and social aspects so dear to the proponents of an externalist view on science (see Shapin, 1992 for a critical review of this opposition). The new and more radical sociology (incomparably more radical than the social view of science represented by Mannheim, 1952 or Merton, 1938, 1973) is referred to as the strong program because it claims science to be strictly determined by social factors (Bloor, 1991).

This attitude presupposes all the three contexts, or networks, and claims that they are also mixed networks in the history of the enterprise. If we take science to be a human undertaking rather than a divine longing for truth, that should be the state of the affairs. Ideas (the so called internalist aspect) do belong to the everyday social and personal net of the scientist, and they are the moving forces for larger social nets from journals and associations to founding agencies. Thus they enter into the external aspect. Or, to start from the other way around, ideas and even experimental methods are formed under the impact of social and personal factors. Even the structure of the movement of science reflects this. The intersection and constant friction between autonomy (or in the words of Latour, *divide*) and *hybridization* is valid for the classical natural sciences as well. However, psychology's subject matter should make the historiographer more sensitive to this multiple embeddedness. This embedding implies destruction of the classical linearity hypothesis because rival social worlds are present even today, and they were coexisting during the entire period of modernity.

What Do Historians of Psychology Do?

Let us move nearer to our specific issue and take a look at how unification and the problem of hybrids shows up in histories of psychology. The most well-known modern histories, starting with Murphy (1949), and Boring (1950), in several respects follow the tradition of the "modern great divides." They divide psychology into an *implicit* and an *explicit* period: one in which the separation of the (would be) science from philosophy was not yet clearly made, and with fuzzy outlines among many issues of general human knowledge, and one in which scientific issues and methods got their division from speculation and the like. Though they provide a few chapters on the implicit period, as Richards (1992) points out, due to seeing everything as a preparation for the great divide in their treatment even of the implicit period they are rather parochial. Only high brow philosophy is of relevance to them. And due to this, they only see one kind of role hybridization in the emergence of psychology: that of the philosopher and the natural scientist.

This simplification has taken time. Earlier histories, like the ones written by Baldwin (1913) and Dessoir (1911) were much more generous regarding the impact of philosophy, and regarding the importance of other domains of knowledge, including even literature in the formation of psychology. When simplification was done, however, it resulted in a view where on the one hand there was a clear divide postulated between the prescientific and the scientific. On the other hand, there was a clear divide of what was being treated as relevant from the prescientific period. Only those pieces of knowledge were relevant that had become integrated into the new discipline. This new discipline, to use the expression introduced by Ben-David and Collins (1966) was a result of *a hybridization of the attitudes of two disciplines*: that of philosophical epistemology and experimental physiology. It tried to present a competitive advantage by promising answers based on natural science to issues of philosophy.

Under the influence of Kuhn (1970) several attempts have been made to interpret the history of our discipline as one where paradigms change rather rapidly. Thus there would be a sequence of Psychology of Consciousness, Behaviorism, Cognitivism and so on (Palermo, 1971). Other alternative voices claim a non-linearity by suggesting that psychology is a "multi paradigmatic science," where different paradigms would coexist (Leahey, 1980). This would, of course contradict the very notion of paradigm as introduced by Kuhn (1970). Therefore still others claim that psychology is not organized around paradigms but around prescription pairs or eternal dichotomies such as: objectivism-subjectivism, determinism-indeterminism, staticism-dyanamism and the like (Watson, 1967).

All of this "loosening," however, does not change the status of national differences. It seems to be an unspoken assumption to accept the image introduced by Boring. Boring's (1950) classic text shows how experimental psychology was

born in Germany, England, and the United States, and suggests that after these nationally different birth processes the discipline has taken a cosmopolitan turn. Even the revisionist approaches of historiography stick to this image. Based on the example of Hungarian psychology, I shall try to show that by taking a realistic sociological and historical attitude, on the contrary, one can find some meaning to the study of surviving national differences.

Traditions within Hungarian Psychology

It would be too ambitious to describe in a short paper what are the implications of a broader and non-linear view for treating national elements in the history of psychology. I shall concentrate on the continuous *multiplicity of the approaches* and their close relation to each other, due to a small and therefore relatively transparent set of networks. A rather direct consequence of this is the other peculiarity of Hungarian psychology: the relatively limited intellectual narrow-mindedness, which is such a danger in contemporary psychology. I should suggest that both are features we should not feel inferior about and that should be preserved, if we want our students to have as much impact in "world psychology" as they have now.

In the following I am going to attempt to explain the last one hundred years of Hungarian psychology by trying to redress the received view of historiography and by encouraging a more open and multifaceted view of the history and the present status of psychology.

Multiple Hybridizations

Psychology, as Ben David and Collins (1966), in the paper already noted clearly document, has gained its autonomy both on the institutional and academic side as a result of a process of role hybridization. The social conditioning for the hybridization of the natural science background obtained in German medical schools with philosophical issues was the shortage of physiology chairs in the 60s of the last century in Germany. Thus a job tension was present for a generation of newly "habilitated" people on the one hand, and this coincided with a shortage of talented philosophers on the other hand. The birth of academic psychology was a fortunate meeting of these two trends.

In my view this is only part of the picture, however. This is certainly the dominant trend, the kind of "top down" academic psychology that tries to move philosophical issues close to natural science, and then tries to campaign for disciplinary independence, chairs, labs, etc. While it is born out of a process of hybridization, due to its own academic interests soon turns into a self-conscious

partisan and champion of autonomy. It remains conscientiously theoretical. In the first institutionalized primary centers talks about "man in general" and avoids touchy mundane issues. (Wilhelm Wundt, the German founding father was, for example, as it is well known, an open opponent of applied psychology.)

Another hybridization, however, proceeded parallel to this development. This involved a role hybridization between issues of the practical man and the naturalist biological approach to man. It led to a combination of the problems of the governor, the military man, the industrialist, the educator, i.e. the issues of society dealing with human life, and the developing evolutionary theory of organisms represented mainly by Darwin. As for its substance, this hybridization resulted in the formation of several functionalist psychologies, which were much less oriented towards disciplinary autonomy than towards practical success and application. As for its social aspect, this kind of psychology started to deal with development, individual differences, and pathology as well. It usually started off outside of academia proper, and when institutionalized, its institutions were practical social institutions, rather than those of the academia.

The case of Hungarian psychology is interesting in this regard for several reasons. The most important aspect is that as things happened in Hungary, the early role hybridizations took place in parallel along three planes. The first one was academic hybridization. However, since it was nearer to the practice it only partially followed the usual pattern in the early period. Psychology was introduced to philosophy departments in the form of lectures, then "seminars," and constituted something similar to a sub-department, or the like. But during this process many of the early Hungarian academic psychologists were less academic than some of the first German leaders. The second role hybridization was a special Central European version of the practical and functionalist hybridization: that of psychoanalysis and the different trends of depth psychology. This carried with it an emphasis on the well-known openings toward cultural studies, literary and artistic culture, as well as medicine. The third hybridization was the practical institutionalization of psychology for education, dealing with retarded populations, and industrial selection. This latter attempt partly started from hygienic considerations of modern city life and also derived from considerations of educational reform connected to child-centered and sometimes radical social ideologies.

It is essential to keep in mind the parallel and interactive existence of all three of these networks, because there is a frequent peculiar and intellectually disadvantageous treatment of them in the literature on Hungarian intellectual history. Most people who try to make psychology a part of their vision of the turn of century or of Hungary between the wars usually include only psychoanalysis as a point of reference. Some exceptions, such as Kende (1974), take notice of the other networks, mainly that of the educational reform movements, but also neglect academic psychology as such. Theirs is not simply a one-sided selection. It is also a radical distortion of the *de facto* situation, even of the extraacademic

networks themselves. For several decades a very interesting aspect of Hungarian psychology was the close interaction between the different networks, or more accurately, the fact that individuals participated in the different nets in a parallel way. Let me point to two individualized cases of this. Ferenc (Franz) Alexander, the founder of psychoanalytically minded psychosomatic medicine and an organizer of American and international psychoanalytic training, was the son of the philosopher Bernát Alexander; and as he recounts in his partly autobiographical work (Alexander, 1960) he was influenced by the intensive academic and non-academic networks around his father and turn of century Budapest at large. Or, to take another extreme, the experimental psychologist Lajos Kardos recalled in an interview, that while he was a perceptual psychologist in the 1930s, he was also a devoted disciple of Lipót Szondi (Pléh, 1995), as was, among others, Ferenc Mérei.

Hungarian Psychology and the "Great World"

One can take three different perspectives in trying to relate Hungarian psychology to that of the world. One can talk of the stars who "made it", i.e. have contributed to world psychology, with world psychology recognizing their contribution, and examine if there any specificities either to the internal aspect of their scientific work or to their background, i.e. regarding the external net in which their work was produced. Another possibility is to take a look at the work of people who followed important international trends but remained unnoticed outside Hungary. This work might be worth pointing out because it is a part of the hidden train and trade of ideas. Finally, a third possible approach focuses on the internal trends, to see if the local nets have any substantial message about the structure and development of the discipline at large. I shall try to use a combination of these possibilities.

The Stars of Hungarian Psychology and Their Impact

There are several quasi-established ways to identify who are the real stars in the history of psychology. One is the influence list compiled by Myers (1970) based on the citation statistics of fourteen American professional journals between 1962 and 1967, analysing 7200 articles with 140.000 citations. Another one is the Boring list (Anin, Boring and Watson, 1968) based on the judgement of 9 eminent psychologists. Finally, the third is citation in the biographical dictionaries of Zusne (1975), which based on Boring, but expanded to include the recent period.

The following Hungarian names can be found in the Zusne book. The numbers indicate how important the author is judged to be by the panel. The original ranking went from zero to twenty-seven points. György Békésy is included due to his Nobel prize. The rest of the list is rather meager. If we take strict criteria and only include those who were related to Hungary only through some of their professional activity, we have: Paul Ranschburg (12), Géza Révész (23), and four psychoanalysts: Sándor Ferenczi (19), Ferenc Alexander (18), Géza Róheim (11) and Dezső (Dávid) Rapaport (21).

I took the liberty of adding to this compilation a few other authors from the academic tradition, where textbook or historical references support their international impact. I deliberately excluded living persons from my remarks.

The Philosophical Past

Three names stand out from the philosophical dawn of Hungarian psychology, who, though they did not make to the "big league" (the above mentioned impact lists), are still quoted in the literature covering particular topics.

Gyula Pikler (Julius under his German pen name) the left-wing legal philosopher and organizer of modernist social science life (*Huszdik Század, Társadalomtudományi Társaság*) was also a reknown psychologist in the German speaking world. His work (Pikler, 1908, 1917), which has also appeared in Hungarian, made a serious contribution to the issues regarding the basic units and events of mental life. His synthetizing work (Pikler, 1917) tries to promote the principle of *negation in sensation* as a result of the active components of perception. It was intended to be a notion that would subsume all the already known "counterphenomena" in perceptual organization, such as contrasts, after images and so on.

But interestingly enough, and this is a continuous symptom, he is never much cited by the later generation of German oriented Hungarian experimentalists like Révész or Ranschburg. Even present day historical summaries (Kiss, 1995b) ignore his substantial message and only mention him with reference to an earlier review of Ranschburg (1942). This has a clear explanation: though he was socially in the right circles, that was not true intellectually. He did not try to make an intellectual niche out of his speculative contributions to modern psychology. Jenő (Eugene) Posch was both a rather interesting theoretical psychologist outside academia and inadvertently became a *cause celebre* on the intellectual political scene. He was criticized in the Parliament for his supposedly atheistic teaching to high school students and even faced suspension as a teacher (Kende, 1974). His "objective psychology," which appeared in two bulky volumes at the beginning of World War I, (Posch, 1914/15), was an elaboration of Herbert Spencer's ideas about objective psychology in the direction of a motor theory of

behavior. He basically borrowed the idea of the adaptive function of the mental from Spencer. But he elaborated it in a direction where most of our higher functions would originate somehow in motor organization. This is a radical parallel to early motor theories of perception, such as the one proposed by the French Théodule Ribot, or the German-American Hugo Münsterberg (see about these developments Murphy, 1948). The radical element in Posch is that his elaborate motor theory of the mind was phrased in terms of adaptation rather than in terms of mental attitudes, as was true for some of the early German motor theories. As a matter of fact, a present-day historian of behaviorism has treated the largely forgotten Posch as pointing towards Watson and the radical motor theories of the mind (McGuigan 1978).

Lajos (Lewis) Leopold was an economist and early social theorist, who had a surprisingly influential book in his time, *The Prestige*. It was translated into German and English (Leopold, 1915). This was an early attempt to treat the entire problem of social influences on behavior and mental representation within a more general and more flexible framework than the imitation theories of Tarde and Le Bon and later G.H. Mead, which were so popular at the time. "Prestige" for Leopold is a mediating representational concept that is responsible for the spread of ideas rather than simple imitation. Prestige involves and also helps to recreate social stratification. It is this aspect of his work that drew the attention of sociological theorists such as Max Weber and also appeared in a review of the English edition (Park, 1915).

The Experimental Tradition

The heritage of **Paul Ranschburg** (1870–1945) is certainly the dominant element here. He was a key figure, not only with respect to the reputation of Hungarian experimental psychology (see already Schiller, 1947a), but also regarding our understanding of the overlapping networks in Hungarian psychology. While he was the founder of the experimental psychology tradition, due to his medical training he made his early accomplishments in a clinical setting; and after being unable to settle there, he became the founding father of the introduction of modern psychology and especially experimental psychology into special education in Hungary.

He is interesting in our context for two reasons. One has to do with his international fame. Ranschburg, after working on hypnosis, published in 1902 a paper on the difficulty of recall of similar or homogeneous elements from a learning list. He used the then classic methods of memory research and even extended them with his own mnemometer apparatus (see Ranschburg, 1912 for a comparative presentation of the sophisticated mechanical devices) to cover nonsense material. He observed a phenomenon and gave it a name: homogenous inhibi-

tion. The phenomenon proved to be of overall import. It has become customary to refer to it as the *Ranschburg phenomenon*. It is much discussed and researched even in contemporary experimental psychology (for a review of its relevance see e.g. Marton, 1971).

His case is a very telling example for the importance of an identifiable effect, not only in the history of ideas but also in the fate of individual achievements. If an effect is named after the person who discovered it (as is the case with the homogeneous inhibition concept introduced by Ranschburg in 1902), that might prove to be the royal road to "eternity". The name of Ranschburg appears in present-day discussions well beyond the range of the original effect and well beyond Hungary. His effect is called on as a possible explanation of new effects found in memory research (Fago, 1995), and detailed discussions about the explanation of the original effect still go on (Greene, 1991). The important sociological point is that the early introduction of a reliable effect into an experimental science pays off.

The other important aspect of Ranschburg is his initiation of a network of followers. Ranschburg was not the first to use methods of experimental psychology in Hungary. As a detailed report of Fodor and Kós (1995) shows, Károly Lechner (1850–1922), the first professor of psychiatry at Kolozsvár, had started to use reaction time measurements there in the 1890s. Lechner, however, used these methods only as part of his clinical practice and teaching; he did not try to get internationally accepted publications on the basis of his measurements. Ranschburg in 1912 also published a successful overall survey on the pathology of memory, where he presented his experimental studies and contrasted them with the different approaches to pathology in neuropathology proper but also in psychopathology and included a detailed account of the Freudian theory of forgetting!

Ranschburg started his work at a medical institution. His situation at the turn of the century in the Nervous Diseases Department, led by Károly Laufenauer, is usually described in an idyllic way. Experimental psychology made a breakthrough at the medical school. The situation was much less idyllic, however. It was full of occupational tensions and struggles for recognition. As Ágnes Torda (1995) reported in a philologically detailed account the inside story of the first Hungarian psychological laboratory, and how its proponent on the medical faculty had a difficult time. The idea of giving lectures on "experimental psychology" and setting up a laboratory to study the mind was not welcome at all. The faculty committees repeatedly questioned even the titles of courses proposed by Ranschburg and the official affiliations referring to a "laboratory of psychophysiology" that the author used in his publications. Thus, one could find suspicion, jealousy, and probably a bit of antisemitism as well. Was this, however, peculiarly Hungarian, peculiarly a characteristic of backwardness and being on the periphery? Definitely not. Cambridge University in England allowed a department of

experimental psychology to be established only in 1947! Similarly, French experimental psychology was mainly developing in medical and educational labs that did not become part of the established philosophical faculties. Sorbonne integrated a full scale laboratory of experimental psychology only after the Second World War. Jean Piaget thought it opportune to commemorate this event in 1968 as a victory of facts over speculations!

Thus, one interesting implication of the life of Ranschburg regarding "the networks of science" was that his vicissitudes were not specifically due to Hungarian backwardness. The other interesting aspect is what followed, which at first glance has more local relevance but may contain a more general message. The psychophysiological laboratory set up within the special education system for retarded children first on Mosonyi street in 1902 proved to be a very fruitful and consequential change. Ranschburg (1923) did not lose his ambitions in the new environment. He wrote a two volume treatise that is worthy reading even today. It was an early synthetic attempt to "reconcile" experimental psychology with experimental and clinical neuroscience.

Today two institutions, the psychological laboratory of the Training College for Special Education and the Institute for Psychology of the Hungarian Academy of Sciences both recognize their founder in Ranschburg and trace back their activity to his laboratory. This constitutes more than historic name dropping on their part. It reflects the fact that the two fields of clinically applied psychology and experimental psychology did indeed develop in overlapping networks in Hungary.

What was on the personal level an injustice towards Ranschburg (the slowdown of his process of habilitation at the medical school, and his being practically tossed out together with his lab from high brow medical academia) carried a distinctive flavor for the development of Hungarian psychology: a closer relationship between the academic and the applied networks, and a continuous special role for the Training College for Teachers of the Handicapped in the development of psychology, which was continued by Lipót Szondi and his students.

Géza Révész (1878–1955) was another Hungarian experimentalist, who achieved recognition in the "international hall of fame." He belonged to that generation of young radical Budapest intellectuals who were ambitious in their science as well as open and outgoing, to say the least, in their political views (see about this climate in Kende, 1974; Janos, 1982; Kovács, 1994; Harmat, 1995).

Révész as an experimentalist established himself while still in Hungary. After obtaining a degree at a leading German university (that was typical at the time), he established himself as a leading expert on hearing (Révész, 1913, in English 1954b). His monograph assured his entry into textbooks, or into Boring's (1942) famous history book; and he had also established his other continuous preoccupation: the study of childhood talent. His study on Ervin Nyíregyházi (Révész, 1916) was among the first of its kind. In Holland his fame was partly based on

his decade long study of touch (1938, English summary Révész, 1958) and his publications about the then outmoded and questionable issues concerning the origin of language, and the relationships between language and thought. The wide reception of these later books showed the need for continuous study of these "forbidden topics" and assured a well-deserved fame for the author in his later years.

As far the institutional aspects are concerned, Révész managed to break into the world of the philosophical faculty and have a Department of Psychology established in Budapest during the revolutions following the First World War. This was a major breakthrough on the level of institutions and networks, but one of no lasting impact. In 1920 Révész had to leave the country for Holland and he established his international fame both as a scholar and as an organizer of European psychological life mainly through the first international journal of psychology *Acta Psychologica*.

In Hungary, meanwhile, psychology itself, due to its political associations and connotations, had become discredited in the world of high academia and in the world of earthly politics as well. It took a good decade to reestablish psychology at the universities, in Budapest by Pál Harkai Schiller and at Szeged by Dezső Várkonyi Hildebrand.

Pál (Harkai) Schiller (1908–1949) seemed to be a largely forgotten author, who reentered the Hungarian scene mainly through his philosophically minded historical writings (Harkai, 1940) as a critic of Cartesian dualism and a proponent of a functional approach to the body-mind relation (Pléh, 1984). Thanks to the efforts of Magda Marton in Hungary (see e.g. Marton, 1994) and Donald Dewsbury (1994, 1996) in the United States, the heritage of Harkai is no more a blank spot on our maps of the intellectual past. Harkai Schiller was a fine experimentalist and a very erudite theoretician. In my view he tried to combine some of the best trends of the period between the two wars. He took from Kurt Lewin the idea of the contextual determination of the motivating forces in human life and characteristically applied it to the explanation of jokes (Schiller, 1938). Harkai Schiller had a general attraction toward a combination of *Gestalt* ideas, intentionality theory, and an "action theoretical approach" to complex behavioral phenomena (see Dewsbury, 1996). This is clearly shown together with his inspiration from the semiotic conception of the mind and the anti-Cartesian attitude regarding the body-mind issue proposed by Karl Bühler (1922, 1927, 1934, 1936) in his theoretical work (Harkai, 1940, 1944, Schiller, 1947b). But it has taken a concrete form in the numerous (partly posthumous) publications he prepared on what we would today call representational phenomena in animals; such as detour behavior (Schiller, 1948, 1949a,b, 1950), and the drawing of chimpanzees (Schiller, 1951, 1952, Schiller and Hartmann, 1951). He is remembered today most of all as a fine comparative psychologist (Dewsbury, 1994). As Dewsbury (1996) reports, due to the advent of more cognitive approaches to

learning and animal behavior his impact in that field was interestingly the largest in the late seventies.

As for the "networking aspect," two important moments should be emphasized in connection with Harkai Schiller. The first is that he was the first to be able to make a stable breakthrough for experimental psychology at a philosophy faculty. In this process some of his eclectic predecessors played a significant role. Especially Gyula Kornis, the prolific writer (his 1917 eclectic treaty on the mind is only one step in a long series of books on psychology) and Catholic intellectual power broker, made many steps toward rehabilitating the idea of experimental psychology after its ostracism. Harkai Schiller in a way belongs to a second generation. The members of this generation were not merely reading about experimental psychology but turned it into a working discipline at philosophical faculties. This was accompanied by a surprisingly non-aristocratic attitude regarding the role of academia on the part of Harkai Schiller. The theoretician and experimentally minded Harkai Schiller at the same time participated in the formation of networks of professional guidance and selection, as Völgyesi (1995) has documented. This was another area where in the Hungarian case, there was an interesting overlap between different networks.

Lajos [Ludwig], Kardos (1900–1985) had been the doyen of Hungarian experimental psychology for the time between 1947 and 1985. Internationally, mainly his early work done under Karl Bühler in Vienna and under the influence of *Gestalt* psychology is much appreciated. His monograph on the role of shadows and brightness constancy in object perception (Kardos, 1934) is still a classic of the field. They are standard textbook material in perception and in experimental psychology at large. He was among the first among perceptual psychologists to combine the attitudes of careful experimentation with that of courageous mathematical modeling. It is not surprising that decades later he became an exponent of the application of cybernetic principles to psychology (Kardos, 1980). The other two aspects of his work, his later achievements, are less well-known abroad. In the fifties he tried to combine serious comparative psychology with the ideas of Pavlov (Kardos, 1960), a work that is of historical interest since it shows how a scientist tried to smuggle new ideas into an intellectually closed world. His works on animal memory (Kardos, 1988) and on the filogenesis of mental life (Kardos, 1980) deserve serious study. As a critical examiner of the behaviorist learning traditions, he has developed ingenious techniques to study the organization of spatial memory in animals. His theory, based on experimentation over three decades, basically claims that animals have an image-like memory that stores things together with their localizations.

In the area of networks Kardos had a difficult time. As soon as academic psychology was established under his guidance in 1947 it became discredited for over a decade, and structurally it had to start everything from scratch in the 1960s. Kardos played the crucial role of defending principles and representing

scientific quality during these difficult years. However, if we take a look at the sequence of Révész, Harkai Schiller and Kardos as the three foremost experimentalists at the philosophy faculty in Budapest, their fate illustrates the most tragic element of the history of Hungarian psychology: politically motivated discontinuity. The thread of mentor to students relationships, that most active and most crucial element in establishing working paradigms in science, was twice broken. The living continuity is missing, and therefore the organic development of the “craft aspect” of science was seriously impaired. That has the consequence of having a technically (on the skill level) much less articulated discipline than we would otherwise have had. The multiple political “interventions” also had the consequence of *de facto* limiting rivalry, without any intention on the part of the participants. That has set up a combined set of detrimental attitudes: open discord and dissent should be limited because we (i.e. we psychologists) are living in a basically hostile environment. As ugly as it may sound, as Joravsky (1989) has pointed out regarding Russian-Soviet psychology, this is basically a Stalinist attitude towards science, even on the part of those who are the most ardently anti-Stalinist themselves. This is an attitude that can hopefully be changed by the Western experience incorporating the role of peer pressure and controversy in intellectual life.

György Békésy (1899–1972). The Nobel prize winning physicist, who won the prize in medicine, made most of his outstanding experimental and modeling research while still in Hungary (Békésy, 1928–29), which were only summarized in his famous 1960 book. He was also famous in the thirties. Boring took a detailed account of Békésy already in 1942, and in the late thirties scores of Americans visited him in Budapest (see the obituary of Newman, 1973).

At the same time he was rather unnoticed on the intellectual scene in Budapest itself. He got a professorship in 1939 at the Department of Physics in Budapest, but his work did not make much of an impression on psychological circles. That implies an interesting barrier. It seems that while the academic, psychoanalytic, medical, and educational networks were transparent towards each other and there was quite a lot of communication both of ideas and people, there were boundaries between them and natural science *strictu sensu* at the same time. That is an interesting warning for today, too. Psychologists should keep their eyes more open toward the hard natural sciences, not only towards their medical cousins.

The Missing Ones

There is another curious aspect to Hungarian related experimental psychology. Aside from the people who started their career here and made their impact from Hungary, and then left mainly for political reasons (Révész, Békésy, Harkai Schiller), there are the ones who are of Hungarian descent, so to speak, but never had a working relation to Hungarian higher education. Thus, it would be rather

generous to treat them as Hungarian psychologists. This could be said of Egon Brunswick, who was a student of Karl Bühler and later became a rather influential American psychologist, the first one to campaign for a psychology based on probabilistic ecological validity. The same could also be said of the *Gestaltist* researcher of memory, George Katona, who has become a leader in the field of economic psychology in the United States. This trend, to be sure, never stopped. We have famous Hungarian born young psychologists today as well, who have never had any contact with the universities at home, often out of fear of being rejected. That is a constant warning: our institutes of higher learning should be more attractive and open.

Hungarian Depth Psychology

This is the area where there is the most interesting modern research available, both in Hungarian and in English. Informative and at the same time intellectually stimulating evaluative reviews on special topics as by Ferenczi and Hermann (Bernard, 1993/94, Harmat, 1986, 1987, Nemes, 1988, 1990) as well as about the entire movement are provided by Harmat (1986, 1987, 1994, 1995), Déri (1990), Vajda (1995).

My intent is merely to point out again some of the basic characteristics that are usually highlighted by depth psychologists themselves. These are features that show the embeddedness of Hungarian psychoanalysis in the general issues of social science network formation in Hungary.

From the work of Ferenczi on *social engagement* of a mostly leftist nature is a dominant feature of Hungarian psychoanalysts. That originally implied positive aspects, namely the social commitments of psychoanalysis to the causes of educational reform, to the cause of the poor, and so on. Later on this social engagement, however, led to many negative experiences both due to the engagement of right wing critics and the works of fellow leftists. The social aspects of psychoanalysis were used as pretexts for its harsh ideological criticism (see Harmat, 1995 about this).

Relations with natural science were very crucial to Hungarian psychoanalysts. The typical Hungarian approach would not lead psychoanalysis into the realms of hermeneutics but rather would try to ground it in natural science. This was true both on the substantive level and on the level of methodology. **Imre Hermann** in his "clinging theory" (new edition Hermann, 1984) tried to relate the psychoanalytic instinct concept to the ethological formation of the notion of instinct. This in a way antedates the work of people like Bowlby who attempted this kind of synthesis much later. That was true on the methodological level, too. The monograph of Hermann (1929) on psychoanalysis as a method, which was reviewed in its own time (Ruggles, 1929), related the technique of psychoanalysis,

not only to the general issues of introspective knowledge and experimental psychology, but also to the then very up to date notions of operational definitions of science (like the work of Bridgmann) and the like.

David (Dezső) Rapaport (d. 1974) in his doctoral dissertation, originally published in 1939 in Hungarian, showed an early interest in trying to relate psychoanalytic dynamic concepts both to the history of ideas and to the contemporary schools of psychology. His main contribution to psychoanalysis later during his American career was in a way a continuation of this Hungarian start. He widely published on the relationship between experimental and psychoanalytic theories of forgetting (Rapaport, 1942), on the analytic and laboratory studies of thought (1951), and later on the conceptual analysis of psychoanalytic systems (Rapaport, 1959). He was a very interesting proponent of a biologically based Freudian metapsychology.

All of this is rather interesting not only from the point of view of the intellectual affinities but for the relationships between networks. Hermann was an assistant to Révész, and Rapaport worked at the same time as a psychoanalyst and a student of Harkai Schiller in Budapest. He expressed his gratitude to Harkai Schiller even in his notable American reader on thought processes (Rapaport, 1951).

Another important feature of the Hungarian psychoanalysts is their early emphasis on Ego theory and early infancy. Déri (1990) even claims that the Hungarian depth psychologists were object-relations theorists decades before the term was coined in psychoanalytic literature. They all concentrated on the earliest dyadic, mother-child relationship, and on the traumatizing effects of its unsatisfactory nature and disruption. Vajda Zsuzsanna gives a clear account of these aspects especially as they are relevant for education and the social vocation of psychoanalysis (1995).

The Issue of Networks Once More

An interesting feature of Hungarian psychology is its reliance on rather elaborate networks. Due to the small number of significant colleagues, for about 80 years "everybody knew everyone relevant", and that started to change only during the last two decades. On a day-to-day basis this network based world meant several important things. Professional relations were always personalized creating closed circles and boundaries between them, but at the same time the work on the other side of the boundary was visible and made its influence felt. Most of the networks had their own "guru." The everyday professional activity of many of the important local figures as well as of some of the internationally renowned ones took place among a circle of devoted disciples.

There were several significant figures I will not deal with here in any depth, who exemplify the relevance of this factor from early on. This was true of László Nagy, the leader of the Hungarian child study (pedology) movement. But it was true on the whole for education oriented psychology in general. Valéria Dienes (1914), the first promoter of a functionalist child psychology and the later leader of the artistic dance program named *Orchestra*, for example, always had lived in different social nets and elaborated her Bergsonian psychology as part of these nets (Pléh, 1989). Similar things could also be said of the distinctively Hungarian social psychology promoted by Sándor Karácsony (edition 1985) as well. His entire theory mainly lived in an interactive field of followers and disciples.

Because of the small size of the networks, many that were non-partisan in their outlook were indeed open to others. Recently, Paul Völgyesi (1995) has pointed out, the many overlaps between academic psychology at the universities (e.g. Harkai Schiller in Budapest, Várkonyi Hildebrand at Szeged) and the vocational guidance activity as well as psychotechnology connected with it. Similarly both social psychologists like the young Ferenc Mérei and educational innovators like the senior László Nagy then head of the Municipal Institute for Education in Budapest, had out of a feeling of social responsibility and obligation all been involved in the guidance movement during the 1930s.

Ferenc Mérei (1909–1985) was the archetypical network guru and at the same time the most internationally claimed author of the cult figures. His entire life was defined and fulfilled through the networks he not only belonged to but also had brought to life. At the same time his main scientific contributions also had to do with the issue of the relationships between the group and the individual, the relationship between networking and democracy, and individual happiness. The paper, which made him internationally known was originally published in 1947 and two years later in English. The article was included in important social psychology readers for decades. Its essential point is that group interaction can create an “experiential surplus” that is different from the mere sum of the individual experiences. Later on he developed this notion in several directions. He elaborated the notion of “allusion” as a semiotic way to remind us of our group belongingness (see e.g. Mérei, 1994, which has also triggered a psychoanalytic interpretation of his personal journals, Virág, 1987) and also worked out a theory of the relationships between leaders and groups, where efficient leaders always take over the values of the group. (For a Hungarian summary of this work see Mérei, 1989). Mérei’s life and work later on can be seen as an exemplification of the implications of some of his early insights. His life was also a living witness for the intervention of politics into the life of the scholar. As Erős (1995) has recently pointed out, the active political leader of educational reform of the forties, when fallen from grace and even put into prison learned from his own example two important things for a Central European scholar. First, the shaky nature of life and power, the constant shift between inner and outer circles, led to

a reflective consideration of the relationships between power and human groups. A theory and a practice followed, which claimed a central place for spontaneity and for spontaneous group formation on the scientific level. Hence the unprecedented and long lasting influence of the ideas of sociometry in Hungarian social and educational psychology. The guru had frozen the methodology. Second, a *de facto* practice of unofficial groups followed, almost unofficial extra-academic universities, where togetherness, training, and the supportive value of group relations against the power structure of society came to be constantly reexperienced. Primary groups and their emotional aspects had become for Mérei both the cementing factors of human life at large and the keys to survival and protection of individual integrity against officialdom.

The archetypical network man found a way for real human groups in a society that had put all its official weight into the idea of organized and institutional socialization and group life. The originally left-oriented emphasis on the non-official spheres of life in the pre-socialist times became a theoretically motivated niche of natural groupings and leadership under official socialism.

Some National Features of Hungarian Psychology the World Can Learn About

There are some features of Hungarian psychology that are worth summarizing because they carry with them some non trivial messages about the sociological determinants of psychology as a whole.

Some of these are non-specific to our discipline but originate in the general cultural context.

Culture and Politics Related

Central organization and centrifugal factors. There is always an attempt to create a type of "official doctrine" and leadership but the multiple identities, and the different role hybridization we surveyed always counteract this. This creates a curious dialogue, however. Many times the "alternatives" also wish to become the "officials" and do not always realize that their real interest is to fight against centralization rather than replacing one center with another.

Discontinuity of tradition. Due to the repeated politically motivated cleansing and the self-imposed exiles, the normal master to pupil type of transmission of traditions was disrupted several times during the one hundred year period. The cleanings were politically motivated but many times constituted new ways of continuing academic rivalries. Politics was a new means to limit academic competition. Thanks to the nature of their trade, only the psychoanalysts escaped from this and managed to preserve a continuity. This is not an exaggeration. I have

reviewed the Hungarian psychological periodical literature between 1958 and 1975 (Pléh, 1979). In this vast literature there was no single reference to a non living Hungarian psychologist! It is as if Binet or James would never be quoted by present day French or American psychologists. Certainly, there are changes towards an increased historical consciousness. That is, however, never going to replace the missing immediate links.

This does not mean that Hungarian psychologists do not have role models in their disciplinary socialization. In statistics we compiled of the solicited autobiographies of senior Hungarian psychologists (Pléh, Bodor, Lányi 1995) we found the following order of mention of Hungarian psychologists: L. Kardos, F. Mérei, Ferenczi, L. Szondi, P. Schiller, B. Radnai, H. Várkonyi, Gegesi. K. P., I. Herrmann, E. Grastyán, S. Karácsony.

This contradicts the image we obtain from the publications of the same people. It seems to be a constant interest of the political winners to put the past into oblivion. Furthermore, psychology belongs to those sciences that in the impressionistic classification of Bourdieu (1984) are always cosmopolitan versus the national ones such as literature, linguistics and so on. That means not only that they are "gauchiste" but also that they are much more sensitive to the demands of politically motivated rewriting.

The role of informal networks has been mentioned several times. I would merely like to reemphasize that it also is very important in training, in professional advance, and in the formation of professional "expert opinion."

Social Science Related

Some other features are related to social science in general in Hungary, or rather, in this part of Europe.

Responsibility. Psychology has a "vocation" centered self-image. Science should not be done for its own sake and professions are responsible not only for the individuals they deal with but also for the social good. In my view this is a clearly negative image. It has led several times to prophetic visions of the possibilities of social science, including psychology, only to be thrown away entirely for the same social and politicized reasons.

The overemphasis on the social responsibility and common interest aspects of science carries its own dangers. It certainly is a peculiar competitive advantage in our region for those who want to avoid the harsh workings of the real moving force in science, as identified by Merton (1972), peer recognition. However, it discourages and drives away those young scientists who seem to see it working only abroad, and it can slow down the intellectual development of those who obey the calls to comply with the valuation of the political peer group rather than the tougher peer group of their colleagues.

Struggling for Independence and Impact

Social scientists and psychologists are many times trapped between two needs: they want to be left alone, but at the same time gain central support. This is a tension that is typical of the countries with centralized educational systems but its past can teach many things for those colleagues who have to face these issues now.

Disciplinary Specifics

Closer relations between academic and applied fields: possible combinations and shifts between the two.

Relative autonomy. Though I mentioned social pressures several times, they have to be understood in a balanced way. Compared to other social sciences in the last three decades psychology has obtained enough distance from most of the social pressures. It has become more autonomous than philosophy or sociology, unconsciously following the advice of Mérei to value more the little liberties than great prophetic promises.

It is also important to keep the relationships between networks. As a matter of fact that might be the key for future developments. But it is also important to remember the isolation, such as the sometimes self-selected secretive networks of the psychoanalysts, and also the separation of psychology from natural science, such as the non recognition of Békésy, carry a warning. The overlapping in such small networks should be wider and broader.

Scientists in Central Europe certainly have to face the hard decisions outlined by Barry Smith (1993) for philosophers. Should they continue the national (local) tradition or become psychologists *a la* Stanford or MIT? The historian of psychology, however, should not obey the laws of cosmopolitan motion. Regarding the history and the social conditions of the disciplines the study of the "Magyar background" is and remains relevant even for a comparative study of the science. This is the sense in which the monocentric and linear image, mentioned in the introduction, is naturally compensated by the peculiar messages the detailed study of a given cultural context of a science provides us.

References

- Alexander, F. (1960): *The Western Mind in Transition: An Eyewitness Story*. New York: Random House
- Annin, E. L., Boring, E. G. and Watson, R. I. (1968): Important Psychologists, 1600–1967. *Journal of the History of the Behavioral Sciences*, 1968. 4. 303–315.

- Baldwin, J. M. (1913): *History of Psychology: A Sketch and an Interpretation. Vol 1 and 2.* London: Watts
- Békésy, Georg, von (1928/29): Zur Theorie des Hörens. *Physikalische Zeitschrift*, 29, 793–810, 30, 721–745.
- Békésy, Georg, von (1960): *Experiments in Hearing.* New York, McGraw-Hill
- Békésy, Georg, von (1967): *Sensory Inhibition.* Princeton, N. J.: Princeton University Press
- Ben-David, J. and Collins, R. (1966): Social Factors in the Origin of a New Science: The Case of Psychology. *American Sociological Review*, 31, 451–465.
- Bernard, M. (1993/94): Les innovations dans la technique psychanalytique introduites par Ferenczi entre 1920 et 1930. *Bulletin de Psychologie*. 47(416), 496–501.
- Bloor, D. (1983): *Wittgenstein: A Social Theory of Knowledge.* New York: Columbia University Press
- Bloor, D. (1991): *Knowledge and Social Imagery.* 2nd edition. Chicago: University of Chicago Press
- Boring, E. G. (1942): *Sensation and Perception in the History of Experimental Psychology.* New York: Appleton
- Boring, E. G. (1950): *A History of Experimental Psychology.* New York: Appleton
- Bourdieu, P. (1984): *Homo Academicus.* Paris: Minuit
- Brown, J. R. (1989): *The Rational and the Social.* London: Routledge
- Bühler, K. (1922): *Die geistige Entwicklung des Kindes.* Jena: Fischer. III. edition
- Bühler, K. (1927): *Die Krise der Psychologie.* Leipzig
- Bühler, K. (1934, 1990): *Theory of Language: The Representational Function of Language.* Translated by D. F. Goodwin. Amsterdam
- Bühler, K. (1936): *Die Zukunft der Psychologie und die Schule.* Vienna and Leipzig: Deutscher Verlag für Jugend und Volk
- Deri, Susan (1990): Great Representatives of Hungarian Psychiatry: Balint, Ferenczi, Hermann, and Szondi. *Psychoanalytic Review*. 77, 491–501.
- Dessoir, M. (1911): *Abriss einer Geschichte der Psychologie.* Heidelberg: Carl Winter
- Dewsbury, D. A. (1994): Paul Harkai Schiller. *Psychological Record*, 44, 307–350.—
- Dewsbury, D. A. (1996): Paul Harkai Schiller: The Influence of his Brief Career. In: Kimble, G. A., Boneau, C. A., and Wertheimer, M (eds.): *Portraits of Pioneers in Psychology.* Mahwah, NJ: Lawrence Erlbaum, 281–293.
- Dienes, V. (1914): *A mai lélektan.* (Contemporary psychology.) Budapest: Galilei Füzetek
- Erős F. (1995): Mérei Ferenc életműve és a magyar szociálpszichológia. (The oeuvre of Ferenc Mérei and Hungarian social psychology.) In: Kiss, 1995a, 123–136.
- Fagot, C. (1995): Repetition Blindness: Perception or Memory Failure? *Journal of Experimental Psychology: Human Perception & Performance*, 21, 275–292.
- Fodor, K. and Kós, B. (1995): Lechner Károly, a “psychophysiológia” kolozsvári művelője. (Károly Lechner the practitioner of “psychophysiology” at Kolozsvár.) In: Kiss, 1995a, 20–30.
- Greene, R. L. (1991): The Ranschburg Effect: The Role of Guessing Strategies. *Memory & Cognition*. 19, 313–317.
- Harkai Schiller Pál (1940): *A lélektan feladata.* (The task of psychology.) Budapest: MTA
- Harkai Schiller Pál (1944): *Bevezetés a pszichológiába: A cselekvés elemzése.* (An introduction to psychology: The analysis of action.) Budapest: Pathéon

- Harmat, P. (1986): *Leben und Werk von Imre Hermann. Psyche: Zeitschrift für Psychoanalyse und ihre Anwendungen*, 40, 640–651.
- Harmat, P. (1987): Psychoanalysis in Hungary since 1933. *International Review of Psycho-Analysis*, 14, 503–508.
- Harmat, P. (1994): *Freud, Ferenczi és a magyarországi pszichoanalízis*. (Freud, Ferenczi, and psychoanalysis in Hungary.) Budapest: Bethlen Gábor Könyvkiadó
- Harmat, P. (1995): A budapesti pszichoanalitikus iskola. (The psychoanalytic school of Budapest.) In: Kiss, 1995a, 98–113 Hermann, I. (1929): *Die Psychoanalyse als Methode*. Wien
- Hermann, I. (1984): *Az ember ősi ösztönei*. (The ancient instincts of man.) Budapest: Magvető
- Janos, A. C. (1982): *The Politics of Backwardness in Hungary: 1825–1945*. Princeton: Princeton University Press
- Kardos, Ludwig (1934): *Ding und Schatten*. Leipzig
- Kardos, Ludwig (1960): *Die Grundfragen der Psychologie und die Forschungen Pawlow's*. Budapest: Akadémiai
- Kardos, L. (1980): *The Origins of Neuropsychological Information*. Budapest: Akadémiai
- Kardos, L. (1988): *Az állati emlékezet*. (Animal memory.) Budapest: Akadémiai
- Kende, Zs. (1974): *A Galilei Kör megalakulása*. (The foundation of the Galilei Circle.) Budapest: Akadémiai
- Kiss, Gy. (1987): The First Steps of Experimental Psychology in Hungary. *Revista de Historia de la Psicología*, 8, 315–318.
- Kiss, Gy. (1995a, ed.): *Pszichológia Magyarországon*. (Psychology in Hungary.) Budapest: National Library and Museum of Education
- Kiss, Gy. (1995b): A hazai pszichológiatörténeti kutatások eredményei. (Results in the historiography of Hungarian psychology.) In: Kiss, 1995a, 8–19.
- Kornis, Gy. (1917): *A lelki élet. I–III*. (Mental life.) Budapest: MTA
- Kovács, M. M. (1994): *Liberal Professions and Illiberal Politics: Hungary from the Habsburgs to the Holocaust*. New York: Oxford University Press
- Kuhn, T. (1970): *The Structure of Scientific Revolutions*. (2nd, enl. ed.) Chicago: University of Chicago Press
- Latour, B. (1987): *Science in the Making*. Cambridge, Mass.: Harvard University Press
- Latour, B. (1993): *We Have Never Been Modern*. New York: Harvester
- Latour, B. and Woolgar, S. (1986): *Laboratory Life: The Construction of Scientific Facts*. 2nd edition. Princeton, NJ: Princeton University Press
- Laudan, L. (1977): *Progress and its Problems*. Berkeley: University of California Press
- Leahey, T. H. (1980): *A History of Psychology*. Englewood Cliffs: Prentice Hall
- Leopold, L. (1914): *A presztizs*. Budapest
- Leopold, L. (1915): *The Prestige: A Psychological Study of Social Estimates*.
- Mannheim, K. (1952): *Essays on the Sociology of Knowledge*. New York: Oxford University Press
- Marton, L. M. (1971): A Ranschburg-effektussal kapcsolatos kutatások a közelmúltban. (Recent studies on the Ranschburg-effect.) *Ideggyógyászati Szemle*, 24, 388–390.
- Marton, L. M. (1994): A nem-tanult mozgásminták kiváltásának folyamatáról: Harkai Schiller Pál elgondolásának távlatai. (On the release of unlearned movement patterns: Perspective of the views of Paul Harkai Schiller.) *Pszichológia*, 14, 405–428.
- McGuigan, F. J. (1978): *Cognitive Psychophysiology*. Englewood Cliffs, N. J.: Prentice Hall
- Mérei, F. (1947): *Az együttes élmény*. (The joint experience.) Budapest: Officiiana

- Mérei, F. (1949): Group Leadership and Institutionalization. *Human Relations*, 2, 23–29.
- Mérei, F. (1989): *Társ és csoport*. (Companion and group.) Budapest: Akadémiai
- Mérei, F. (1994): Social Relationships in Manifest Dream Content. *Journal of Russian & East European Psychology*, 32, 46–68.
- Merton, R. K. (1938): *Science, Technology and Society in Seventeenth-Century England*. New York: Harper. New edition 1970.
- Merton, R. K. (1972): *The Sociology of Science*. New York: Harcourt
- Myers, C. R. (1970): Journal Citations and Scientific Eminence in Contemporary Psychology. *American Psychologist*, 25, 1041–1048.
- Nemes, L. (1988): Freud and Ferenczi: A Possible Interpretation of their Relationship. *Contemporary Psychoanalysis*, 24, 240–249.
- Nemes, L. (1990): Die klinische Bedeutung der Anklammerungstheorie von Imre Hermann. *Zeitschrift für Psychoanalytische Theorie und Praxis*, 5, 112–121.
- Newman, E. B. (1973): Georg von Békésy. 1899–1972. *American Journal of Psychology*, 86, 855–858.
- Palermo, D. (1971): Is a Scientific Revolution Taking Place in Psychology? *Science Studies*, 1, 135–155.
- Park, R. E. (1914) Review of Leopold, Lewis: *The Prestige: A Psychological Study of Social Estimates*. *American Journal of Sociology*, 20, 546.
- Piaget, J. (1968): *Sagesse et illusions de la philosophie*. Paris: Presses Universitaires de France
- Pikler, J. (1908): *Das Beharren und die Gegensatzlichkeit des Erlebens*. Stuttgart
- Pikler, J. (1917): *Sinnesphysiologische Untersuchungen*. Leipzig: Barth
- Pléh, Cs. (1979): A magyar pszichológia fejlődésének néhány jellemzője a publikációk mennyiségi elemzésének tükrében. 1958–1975. (Some characteristics of the development of Hungarian psychology as reflected in a quantitative study of publications. 1958–1975.), *MTA II. Osztály Közleményei*, 28, 209–231.
- Pléh Cs. (1984): Hagyomány és újítás a magyar pszichológiában. (Tradition and innovation in Hungarian psychology.), *Világosság*, 25, 153–157.
- Pléh, Cs. (1985): Élmények, barátok, örömök. Interjú a 85 éves Kardos Lajossal. (Experiences, friends and pleasures. An interview with Lajos Kardos on his 85th birthday.), *Magyar Pszichológiai Szemle*, 42, 345–351.
- Pléh, Cs. (1989): A Hungarian Bergsonian Psychologist: Valéria Dienes. *Hungarian Studies*, 5, 141–145.
- Pléh, Cs., Bodor, P. and Lányi, G. (1995): *The Decline and Rebirth of a Social Science: Psychology in Hungary 1945–1970*. Paper presented at the CHEIRON–EUROPE Meeting, Passau University
- Posch, J. (1914/1915): *Lelki jelenségeink és természetük*. (Our mental phenomena and their nature.) Budapest: Pfeiffer
- Ranschburg, P. (1902): Über Hemmung gleichzeitiger Reizwirkungen. *Zeitschrift für Psychologie und Physiologie der Sinnesorgane*, 30, 39–86.
- Ranschburg, P. (1912): *Das kranke Gedächtnis*. Leipzig: Barth
- Ranschburg, P. (1923): *Az emberi elme. I–II*. (The human mind.) Budapest: Pantheon
- Ranschburg, P. (1942): Magyar lélektani törekvések. (Hungarian psychological trends.) In: Harkai Schiller P. (ed.): *A lelki élet vizsgálatának eredményei*. (Some results in studying mental life.) Budapest: Psychological Institute of Pázmány University, pp. 471–496.

- Rapaport, D. (1942): *Emotions and Memory*. Baltimore: Williams and Wilkins
- Rapaport, D. (ed., 1951): *Organization and Pathology of Thought*. New York: Columbia University Press
- Rapaport, D. (1959): The Structure of Psychoanalytic Theory: A Systematizing Attempt. In: Koch, S. (ed.): *Psychology. A study of a Science. Vol. 3*, New York: MacGraw Hill
- Rapaport, D. (1974): *The history of the concept of association of ideas*. New York: International Universities Press
- Révész, G. (1913): *Zur Grundlegung der Tonpsychologie*. Leipzig: Veit
- Révész, G. (1916): *Erwin Nyiregyházi: psychologische Analyse eines musikalisch hervorragenden Kindes* Leipzig: Barth
- Révész, G. (1938): *Die Formenwelt des Tastsinnes. I–II*.
- Révész, G. (1946): *Ursprung und Vorgeschichte der Sprache*. Bern: Francke
- Révész, G. (ed., 1954a): *Thinking and Speaking: A Symposium*. Amsterdam: North-Holland
- Révész, G. (1954b): *Introduction to the Psychology of Music*. Norman: University of Oklahoma Press
- Révész, G. (1956): *The Origins and Prehistory of Language*. New York: Philosophical Library
- Révész, G. (1958): *The Human Hand: a Psychological Study*. London: Routledge & Paul
- Richards, G. (1992): *Mental Machinery: The Origins and Consequences of Psychological Ideas*. London: Routledge
- Ruggles, A. H. (1929): Theory and Technique of Psycho-Analysis. (Book Review). *Yale Review*. ns: 18, 181.
- Schiller, P. H. (1938): A Configurational Theory of Puzzles and Jokes. *Journal of General Psychology*, 18, 217–234.
- Schiller, P. H. (1947a): Paul Ranschburg: 1870–1945. *American Journal of Psychology*, 60, 444.
- Schiller, P. H. (1947b): *Die Aufgabe der Psychologie*. Wien
- Schiller, P. H. (1948): Delayed Response in the Minnow. *Journal of Comparative and Physiological Psychology*, 41, 233–238.
- Schiller, P. H. (1949a): Analysis of Detour Behavior. I. Learning of Roundabout Pathways in Fish. *Journal of Comparative and Physiological Psychology*, 42, 463–475.
- Schiller, P. H. (1949b) Delayed Detour Response in the Octopus. *Journal of Comparative and Physiological Psychology*, 42, 220–225.
- Schiller, P. H. (1950): Analysis of Detour Behavior: IV. Congruent and Incongruent Detour Behavior in Cats. *Journal of Experimental Psychology*, 40, 217–227.
- Schiller, P. H. (1951): Figural Preferences in the Drawings of a Chimpanzee. *Journal of Comparative and Physiological Psychology*, 44, 101–111.
- Schiller, P. H. (1952): Innate Constituents of Complex Responses in Primates. *Psychological Review*. 59, 177–191.
- Schiller, P. H. and Hartmann, G. W. (1951): Manipulative Completion of Bisected Geometrical Figures. *American Journal of Psychology*, 64, 238–246.
- Shapin, S. (1992): The Externalism-Internalism Debate. *History of Science*, 30, 334–369.
- Shapin, S. (1996): *The Scientific Revolution*. Chicago: University of Chicago Press
- Smith, B. (1993): The New European Philosophy. In: Smith, B. (ed.): *Philosophy and Political Change in Eastern Europe*. La Salle, Ill.: Monist Library of Philosophy, 165–170.
- Torda Á. (1995): Egy tudományos műhely létrejötte a századfordulón. (The creation of a scientific laboratory at the turn of the century.) In: Kiss, 1995a, 31–55.

- Toulmin, S. (1990): *Cosmopolis: The Hidden Agenda of Modernity*. New York: Free Press
- Vajda, Zs. (1995): *A pszichoanalízis budapesti iskolája és a nevelés*. (The Budapest school of psychoanalysis and education.) Budapest: Sík
- Virág, T. (1987): Mérei Ferenc lélektani naplójának elemzése: A gondolkodási folyamatok és a manifeszt álomszöveg értelmezése. (A study of the psychological journal of Ferenc Mérei: An interpretation of thinking process and manifest dream text.) *Magyar Pszichológiai Szemle*, 44, 56–82.
- Völgyesy, P. (1995): A pályaválasztási tanácsadás történetének áttekintése hazánkban. (A survey of the history of vocational guidance in Hungary.) In: Kiss, 1995a, 73–97.
- Watson, R. I. (1967): Psychology: A Prescriptive Science. *American Psychologist*, 22, 435–443.
- Zusne, L. (1975): *Names in the History of Psychology*. Washington: Hemisphere
- Zusne, L. (1984): *Biographical Dictionary of Psychology*. Westport, Conn.: Greenwood Press