



EDUCATIONAL PSYCHOLOGY IN THE UNITED STATES AND GERMANY DURING THE INTER-WAR PERIOD

Marc Depaepe

Perhaps it is rash of me as a Belgian researcher to deal with the development of educational psychology in Germany and in the United States. One must recall, however, that the intellectual life in our country has always been, and still is, subject to foreign influences. This is certainly the case for the history of education. Already at the beginning of this century, Ernst Meumann considered that little Belgium, because it was situated at the intersection of French, German, and Anglo-American culture, had grown to become the center of the scientific study of the child (1). Today, too, for the construction of the educational sciences at, for example, the Katholieke Universiteit Leuven, where I work, one still looks to a large degree to the developments in Germany (particularly as regards fundamental, philosophical and/or theoretical pedagogy) and to those in America (this is obviously the case for didactics, educational psychology, administration, management, and innovation theory) (2).

Between these two traditions, the German and the American, what particularly strikes an outsider are their differences. While pedagogy in Germany after the end of the eighteenth century had the characteristics of an autonomous scientific discipline — with its own formal and material subject, to put it in old-fashioned terms — education in the Anglo-American culture, and also the French culture, for that matter (3), has much more the look of research done by philosophers, psychologists, sociologists, historians, and the like, each with their own scientific methods.

This duality in the development of the educational sciences in general naturally had repercussions on the development of educational psychology as such. In general, one may state that the educational

psychology in America in the period before the Second World War was more of an extrapolation of findings and data from "pure" psychology, while in Germany it was considered more as an autonomous science with its own problem definitions and methods.

Moreover, there was still another dividing line between the German and the American educational psychology that had to do with the development of general psychology in East and West (4). While psychology in America, educational psychology included, was marked by a rigid development of behaviorism, the German psychology, pedagogical psychology included, was affected by the more nuanced approach of the Würzburger school and of Gestalt psychology. In America, where one proceeded from the linear stimulus-response theory, attention was devoted primarily to the strictly "objective" study of externally perceivable behavior, while in Germany, the stress was primarily on the internal processes and cognitive structures at the foundation of the externally perceivable behavior.

With the present article, however, I want to demonstrate that there was not necessarily a consensus regarding the nature and identity of educational psychology in these two cultural entities so that thinking in terms of contrasts about the German and the American development must be qualified somewhat. This need not be surprising in view of the German influence that began to be felt in the United States after the end of the last century with Wilhelm Wundt as a centrifugal force for what concerns the development of psychology and Herbart as the point of reference for the construction of American education. However, what we do have to keep in mind is that, in the history of psychology and education, the mutual influences for the period of the interbellum we are dealing with here have by far not been unraveled exhaustively, so that this contribution is inevitably juxtapositional. In the recent research in the history of science, for that matter, international comparison seems to be a weak point (5). Nevertheless, and this may appear from this contribution, there were very obviously similarities between the psycho-pedagogical scientific development in Germany and in the United States, but they are not always situated on the level of conceptual development. They could also and primarily concern the manner in which socio-historical determinants influence the scientific discourse and the way in which one

tried to apply this scientific discourse in the social context (6).

1. Background and previous history

In Germany since the eighteenth century, philanthropy and later also the hygiene movement, experimental psychology, and the theory of evolution aroused interest in the study of the child (7). Nevertheless, it still took some time before this new scientific shoot came into full bloom. The first initiatives date only from around the turn of the century. Thus, in 1896 the publication of Die Kinderfehler commenced in Jena and, in 1899, the "*Allgemeiner deutscher Verein für Kinderforschung*" was formed there around it. Also in 1899, the "*Verein für Kinderpsychologie*" appeared in Berlin, which published the Zeitschrift für Pädagogische Psychologie. That this latter journal would have a significant effect on the development of German pedagogical psychology (8) is obvious.

One of the pre-war trends that could be derived from this was, meanwhile, that youth research succeeded in acquiring a more prominent position in child psychology. The contribution of experimental pedagogy, for which Wilhelm August Lay and Ernst Meumann (a former assistant of Wundt) had laid the foundation in 1905 with the journal Die Experimentelle Pädagogik was certainly not alien to this. Partially as a consequence of a dispute between them and partially because an experimental pedagogical journal as such did not appear to be viable, Meumann merged in 1911 with the Zeitschrift für Pädagogische Psychologie, so that the development lines of child psychology and of experimental pedagogy in Germany flowed together already before the First World War.

In Germany, the infrastructure for experimental research of the child and youth was relatively well developed on the eve of the First World War, certainly in comparison with most other European countries (9). Around 1912, eye witnesses counted no fewer than twenty-five journals, eight monograph series, and thirty-seven institutions and associations in the area of "*Jugendkunde*" (10). According to more recent research, twenty-one new periodicals and twenty-nine associations for child psychology, "*Jugendkunde*", pedagogical psychology, and experi-

mental pedagogy were established between 1880 and 1914 (11). The predominant role the teachers played in the development of the organization of science is striking, and it certainly was related to their desire for professionalization and academization of the profession of education. Indeed, it was not easy for child psychology, "*Jugendkunde*", pedagogical psychology, and experimental pedagogy to develop into full-fledged courses on the university level (12). In the framework of academic pedagogy, empirical research was far from dominant. Traditionally, the preference in university education went to "*geisteswissenschaftlich*" and normative pedagogical thought, which unfolded in close relation to philosophy.

After the First World War, experimental pedagogy had increasing difficulty in rowing against the historical-hermeneutical mainstream. Not only did the experimental school lose its most important proponent, Meumann, in 1915, but Germany was also virtually entirely isolated from international developments because of the War. More and more, people entrenched themselves into their own pedagogical tradition, which ended in "*eine Abkehr von der Naturwissenschaft*" and "*eine Auferstehung der Metaphysik*" (13). It is said it was not until the 1960s before contact was made again with the international — primarily American — developments in empirical-educational research (14).

In the meantime, educational research in the United States began to flourish. In the 1880s, what was called "child study" was launched under the impetus of Granville Stanley Hall, who has studied in Germany (under Wundt, among others) (15). After a professorship of four years in psychology and education at Johns Hopkins University in Baltimore, Stanley Hall became president of the newly founded Clark University in Worcester, Massachusetts, in 1888. Almost immediately after his appointment, he set up an institute for child psychology that later on also took up the study of experimental didactics (16). Moreover, in 1891, he began to publish *The Pedagogical Seminary*, which played an eminent role in the spreading of the "gospel of child study".

In American education itself, an empirical tradition was present already in the middle of the nineteenth century, and, at the end of this century, it resulted in the first forms of "objective scientific" research (17). Joseph Mayer Rice of Philadelphia, for example, investigated, albeit

with very rudimentary tests — this magic word was reported to be used for the first time in the sense that it still has by one of Wilhelm Wundt's students, James McKeen Cattell, around 1890 — school progress in spelling (in 1897), arithmetic (in 1902), and language (in 1903) of a total of more than 100,000 pupils (18).

Although his influence is often exaggerated, it cannot be denied that Rice inspired the rising generation of researchers. This has been confirmed, for example, by Edward Lee Thorndike, whose star was beginning to outshine all others in the firmament of educational research (19). The story of his success definitively commenced in 1899, when he was associated with the Teachers' College of the famous Columbia University in New York. Building on his experiments with animals, he developed there the "connectionist learning theory", which also seemed to be valid in the domain of human cognitive activity. In his book Educational Psychology, which was first published in 1903, Thorndike sought, among other things, to apply general psychological insights to education (20). Together with his statistical and methodological handbook of 1904 (21), this book was at the basis of a style of research that would continue to dominate all of international educational psychology until well after the Second World War. In the United States itself, this school of thought was expressed in such publications as The Journal of Educational Psychology, which was launched in 1910.

In his striving to formulate educationally valid statements on the basis of psychological research, Thorndike, of course, did not stand alone. Already before he was ready for it, a few others in addition to the former students of Wundt I have already mentioned, Cattell and Hall, had ventured to do so. Among them were Titchener, Münsterberg, and James. But the last two, who, like Thorndike himself, fulminated against the pseudo-scientific nature of "child study" (22), apparently did not, as academically trained psychologists, wish to be contaminated directly with the lower status education. For Thorndike, it was different. Without having to yield his identity as a psychologist, he succeeded in creating a well-defined form of educative technology that would form part of the foundation for the flourishing educational research in the interbellum.

2. The Thorndike Model

Entirely in the spirit of the late-nineteenth century positivism, Thorndike had an enormous respect for the "hard sciences". This is shown not only by his predilection for "facts" (23), but also by his faith in the omnipotence of quantitative approaches. He fervently defended the position that "objective" measurements within the scope of the human sciences are both possible and necessary. "Whatever exists at all, exists in some amount", so ran Thorndike's simple reasoning on the subject, and "to know it thoroughly involves its quantity as well as its quality"; "to measure is simply to know its varying amounts" (24). Measurement for him need not be in conflict with the existential character of human existence. Mothers who weigh their babies, according to Thorndike, do not thereby love them less, and the development of quantitative methods in botany also had not led humanity to treat flowers with less love than previously. "Of science and measurement in education as elsewhere, we may safely accept the direct and practical benefits with no risk to idealism" was the conclusion (25).

With this another important characteristic of Thorndike's concept of science is indicated, namely his unconditional faith in science as the basis for social progress. Science meant for Thorndike "a panacea for all the ills of human society" (26), which meant that science should preferably be applied science, in service of the scientific management of the life of society. As for the optimization of education, the key was the study of human behavior. As is known, Thorndike had developed a general model of behavior modification on the basis of experiments with animals. He saw behavior primarily as a response (R) to a well-defined stimulus (S). The connection that existed between the stimulus and the response or that had to be established (the S-R bond or Sarbon theory) could, he thought, be reinforced by exercise (the law of exercise) and by the effect that the response produced (the law of effect) (27).

Educational psychology for Thorndike, therefore, meant little more than applied psychology, "the knowledge of human nature which psychology offers to students of educational theory" (28). Meanwhile, four fields came into consideration for the content. First, there was the general knowledge of the psychological functioning of the person — his

instincts, habits, memory, attention, interests, intelligence, and so on — which had to be fitted into the framework of education. Second, there was the more specific knowledge of the child's feelings, thoughts, and behavior during the various developmental phases, as it had developed in such things as child study and child and genetic psychology and from which interesting "lessons" could be drawn regarding education. Third, Thorndike found that more specific knowledge could be obtained from psychology for education in the individual subjects as well as for the teaching methods to be used. Finally, and this was also the subject of his 1903 book, a kind of "dynamic" psychology had to be devised in which laws and patterns could emerge that were also applicable to learning and teaching in schools.

In the concrete, Thorndike achieved success primarily with his studies on the transfer of training, his efforts in specific course didactics, the psychological analysis of curriculum contents and teaching methods, and, last but not least, with the development of standardized school achievement tests and all sorts of educational measurement scales (29), for which he, in analogy with the intelligence quotient, introduced the idea of accomplishment quotient (30).

Thus, the involvement of psychology in education was, therefore, primarily on the level of means and methods. In the line of the experimental tradition, which was maintained in Germany by such people as Ernst Meumann (31), Thorndike initially thought that the determination of the objectives of education was beyond the limits of the scientific method. Values, norms, ideals, and the like were food for philosophers and religious and political leaders but not for scientists.

Thorndike somewhat qualified this position later on (32). Another qualification Thorndike introduced in the course of time concerned the reciprocal relationship of education with psychology. "Not only do the laws derived by psychology from simple, specially arranged experiments help us to interpret and control action under conditions of school-room life", commented the psychologist of Teachers' College in the first volume of The Journal of Educational Psychology, "school-room life itself is a vast laboratory in which are made thousands of experiments of the utmost interest to pure psychology" (33).

That with this, notwithstanding mother fixation, a step was taken

in the direction of a certain autonomy for educational psychology is obvious. But this autonomy, however, has to be clearly understood. In contrast to what is generally accepted in contemporary educational psychology, the argument of that time for relative independence did not yet mean that, proceeding from the complex educational-didactic situation, a fully autonomous discipline had to be developed with its own concepts and theoretical foundations. Thorndike and his colleagues certainly were not yet ready for such a "first principles" position. At most, they arrived at the observation that, instead of direct applications, all this had to be cast in the form of hypotheses that had to be tested in the educational context (34). Ultimately, Thorndike described the relationship of psychology to education as that of botany and chemistry to agriculture. In agriculture, too, a more or less coherent set of rules and laws had to be compiled, but that did not mean that physical research would not continue to be its basis (35).

The development of such a relatively autonomous educational psychology certainly did not do Thorndike any harm. Not only did this discipline through his efforts become the motor for the professionalization of teacher training in the United States, it also gave Teachers' College unparalleled renown (36), so that Thorndike could say for himself that he was one of the best-paid professors in the world (37). From this perspective, it caused, therefore, little stir when the lion's share of what presented itself as educational psychology in America before the Second World War was largely under Thorndike's influence.

3. American educational psychology and research in the footsteps of Thorndike

A selection from the interbellum handbooks for educational psychology suffices to illustrate how much one was obsessed in the United States by the example of Thorndike. Most authors, including Stroud, Eurich and Carroll, Cuff, Trow, and even Starch and Bagley, held, in spite of all sorts of lesser or greater divergences, to similar basic assumptions (38). What is striking, for example, is that most American authors continued to share the orthodox extrapolation position of the

young Thorndike or the more moderate translation position of his later career. For them, too, educational psychology was nothing more than a kind of application and/or translation of general psychological patterns to the domain of education.

For education itself, this was ultimately a precarious situation, for it confirmed the widely held opinion "that there may be science in education, but [that] there is no science of education" (39). "The educational psychologist", said the Vice-president of the American Association for Applied Psychology in 1939, "is the new craftsman and technologist applying psychology to education" (40), which implied that educationalists had to be informed of advances in educational psychology but that the spade work was to be done preferably by (school) psychologists, middlemen between science and technique. In the competence debate, the educationalists apparently were defeated by the psychologists.

Already in 1921, the term "experimental pedagogy", a discipline for which, for that matter, Thorndike's student William McCall stood for and that was defined by others as the "experimental branch of educational psychology" (41), had disappeared definitively from the title of The Journal of Educational Psychology.

Moreover, one can derive from this same periodical how much Thorndike had succeeded in setting the content agenda for educational psychology. From 1921 on, according to the declaration of objectives (42), one would be concerned primarily with the scientific study of problems of learning and teaching. It was thus not by chance that Frank Nugent Freeman, assistant professor in educational psychology at the University of Chicago, noted a true explosion in research in the psychology of learning and that handbooks continued to appear up to the Second World War in which the psychology of learning and teaching was conceived as the hard core of educational psychology (43).

Methodologically, educational psychology, and ultimately all of educational research, was dominated by the use of tests. As is well known, the blind confidence in the test movement and the psychology of intelligence — to which, by the way, the victory in the First World War was ascribed (44) — rested in large part on the fact that the underlying principles fit perfectly into the meritocratic world view upon which the American society was built (45). Thorndike, too, certainly contributed to

the concrete spread of the testing technique and the often uncritical use of all kinds of test scales. At Teachers' College he, and after him McCall, developed test scales for virtually all basic subjects in the curriculum. Measurement had become the new magic word in education, a word that apparently stood surety for the increasing professionalization of the field. "More than anything else", wrote McCall in 1923, "it has been the absence of exact measurement which has kept education from the rank of Science" (46).

Partially because of the stimulating example of Thorndike, the empirically oriented, American educational research gained true momentum in the period between the wars. Between 1918 and 1927, no fewer than 986 doctorates in education were awarded and some \$5,000,000 was allocated annually to empirical research (47). Around 1927, three quarters of the American states had one or more Bureaus of Educational Research — the total number of these institutions being well over a hundred (48) — and, at the end of the 1930s, the number of abstracts in The Review of Educational Research varied from 1,500 to 5,000 per year (49). Further, between 1925 and 1936 no less than eighteen handbooks were published that were concerned with the methodology of educational research and the American Educational Research Association (AERA), which originated from the National Education Association (NEA) in 1930, already had about a thousand members around 1940 (50).

In spite of the great financial investment and the methodological refinement of the experimental design, which was brought about in the comparative research of teaching methods by working with control groups, multiple cases, and factor rotation (51), the high expectations from psycho-educational research could not be realized. In comparison with physics and chemistry, which manifested a high degree of corroboration, there was very little verification and replication in empirical research in the educational sciences, which was reported to be an indication of its low status (52). Not only could most findings not be generalized, but the coordination and collaboration between the often antagonistic researchers also left much to be desired. This is why, in the framework of the education, opposition arose against the small-mindedness and the one-sidedness of the measuring and that resentment arose in educational psychology as such about the monopoly of the Sarbon theory.

4. Criticism of the quantitative approaches and the theoretical backgrounds of associationism, connectionism, and behaviorism

One of the first who, in the mid-twenties, cast doubt on the relative consensus on the applicability of the S-R model was H. Gordon Hullfish. In his book Aspects of Thorndike's Psychology, published in 1926, he stated that the psychologist of Teachers' College could not be a reliable guide for educationalists because that which it really came down to in education necessary fell outside the scope of connectionism and, ultimately, of any form of behaviorism (53). Human behavior and higher cognitive operations could not, Hullfish contended, be placed on the same level as the mechanical habits that were mapped by experimental research with animals.

In the 1930s, such insights also seeped through into The Journal of Educational Psychology, which, nevertheless, clung in a quite orthodox manner to the Thorndikeian conception. In 1932, D.E. Philips, for example, argued for more tolerance in educational psychology. In his opinion, one had to be done with the prejudice that only mathematically acquired knowledge produces true science, and he concluded his warning against "an over-passionate worship of mathematical scientific accuracy" with the position "that we must view life and knowledge in its totality and not in isolated parts" (54). Incontestably, this was a concession to the Gestalt trend, which was rising since the 1920s in Germany through the agency of Max Wertheimer, Wolfgang Köhler, and Kurt Kofka, all three of whom settled in the United States, two out of dissatisfaction with National Socialism (55).

In 1936, the influence of this new trend on American educational psychology manifested itself much more clearly. With an ironical undertone, P.F. Valentine of San Francisco sketched the decline of the "Sarban theory" in The Journal of Educational Psychology. His autobiographically colored story essentially told how the completely satisfying Euclidian design of the S-R Bond had collapsed like a pudding: "The psychologist in education is not the deus ex machina that he used to be", Valentine said. "That exalted rôle, it would seem, has flitted away with our S-R entities, and disappeared in an orgasmic haze. The psychologist will have to content himself with the humble part of experimenter,

pursuing and compiling disparate facts and findings . . . the all-inclusive design is no more. Things are at odds. There is no educational psychology!" (56).

Perhaps, as some commentators insinuated afterwards (57), such a disillusion could have been avoided in America if one had followed not so much the line of Thorndike but rather that of Charles H. Judd. A former student of Wundt, Judd, who harvested considerable renown with the translation of the work of his teacher, conceived behavior as a complex given that could not be reduced to a set of simple patterns. Therefore, he placed considerable importance on the process analysis of mental operations, which was illustrated in his psychology of the various school subjects.

However, this did not mean that Judd was simply negative toward the use of measurement techniques à la Thorndike — indeed, Judd had cast himself previously as a defender of experimental laboratory research in Chicago — but that he perceived its relative value (58). For him, the question was to construct an autonomous educational science in which diverse approaches, psychological as well as others, could be integrated and thereby greatly advanced the professionalization of education. In this sense, his concepts of education were by far not as progressive as that of his socially committed predecessor, John Dewey. And no more than Thorndike did Judd oppose efficiency thinking, Taylorism, and the notion of education as technology in service of the existing socio-economic structures. Thus, he placed himself, in the tradition of Hall and Thorndike (59), within the meritocratic and sexist colored mainstream of educational psychology (60).

As long as the fundamental philosophical questions were avoided, apparently little could be expected from the future of educational research. According to Harold Rugg, the "orgy of quantitative tabulation and measurement" missed its target because it lacked an integrative principle, "a unique body of established primary concepts" (61). Such primary concepts could, for example, be found in progressivism, the founder of which himself had challenged the separation of philosophy and empirical research (62). For Rugg, the criticism against measurement in education coincided with his dissatisfaction with the capitalistic model of society. "Assuming private capitalism, rugged individualism, and

competition", he wrote in 1934, "the leaders of the mass-school carried the competitive climate into education as well as into family and neighborhood and economic and social organizations in general" (63). Hence, the need to constantly compare children and their progress. As criterion, one invariably took the average of the age group, but that was, according to Rugg, an external norm, completely alien to the internal capacity of each child separately.

Apparently, with this, already before the Second World War in the United States, the limits were exposed of the behavioristically inspired psychology of learning, which until then had buttressed the American test and measurement culture and would continue to set the tone even after 1945 (64). Within science, this model of educational psychology raised questions because it turned out to be incompatible with paradigms developed in Europe, such as Gestalt psychology and, actually, also Freudian depth psychology (65). Outside science, because the IQ ideology and everything that was associated with it, seemed to lead to socially untenable positions that, moreover, could form the seed bed for the new racism that threatened to surface not only in Europe but also in the United States (66).

In this regard, moreover, I would point out with respect to the German development, that "die vulgärbiologistische Verkehrung der Gattungsmerkmale zu rassistischen Merkmalen, wie sie insbesondere in der nationalsozialistischen Pädagogik Ernst Kriecks betrieben wurde, durch die Begründer der experimentellen Pädagogik nicht intendiert, aber durch ihre biologische Einseitigkeit in Ansätzen angelegt (war)" (67). That people like Meumann were ultimately unaware of any harm does not seem to be so implausible. As was argued in England with respect to the work of Winch, most experimentalists, whether they were active in Germany or in the United States, had a "rather narrow view of educational research which took only immediate classroom variables into account and ignored wider sociological and political views which would have generally affected the implementation of some of their conclusions" (68).

5. Towards an integration with *Geisteswissenschaftliche* trends in the German models of educational psychology

In Germany, the experimental trend in education was overcome in principle already with the critique of Max Frischeisen-Köhler. In his analysis of 1918, this theoretician stated that the real educational problems fall outside the scope of experimental education. The experiment, "eine Schöpfung des naturwissenschaftlichen Geistes", tried "den Schein der naturwissenschaftlichen Exaktheit noch dort aufrecht zu erhalten, wo die Voraussetzungen der Naturwissenschaften bereits längst aufgegeben sind" (69). This applied particularly to education, which, above all, turned out to be a cultural science.

Generally sharing this position was Aloys Fischer, who, from 1911 on, worked with Meumann on the publication of the Zeitschrift für Pädagogische Psychologie and also continued to work as editor after Meumann's death. In origin as well as in its objective, pedagogy was for him just as much philosophical in nature, and the empirical research methods could only fully come into their own in conjunction with the philosophy (70). Very obviously, this had important consequences for the conception of pedagogical psychology in Germany. According to a programmatic article of 1917 in the Zeitschrift (71) Fisher himself wanted to produce a science that was not directly relevant in practice but that stressed primarily knowledge, insight, the *verstehen* of pedagogy. In the concrete, in his opinion, pedagogical psychology had to be concerned with the analysis of the psychological side of pedagogy. This implied, for example, the construction of a psychology of space (How does a child experience the space of the home, the school, the class, etc.?), a psychology of time (How does a child experience time in school, during the class, the seasons, the vacation, etc.?), and a psychology of the community (How does a child experience himself in the peer group, the youth organization, etc.?). All this, however, was wishful thinking, because, as Fischer himself had to admit, there were few signs of such a theoretical pedagogical psychology in Germany at the time. In his opinion, that which had been presented as pedagogical psychology up to the First World War could be divided into some seven categories, all of which were still conceived too much as linear applications to, or

translations of, psychological research in pedagogy and also clung still too much to the naive *a priori* of "reine empirie" (72).

Nevertheless, because of the developments in general psychology, the "*Abkehr vom Dogma der Psychologie ohne Seele*" would have a permanent effect on pedagogical psychology in the interbellum period (73). In addition to the expansion of the title of the *Zeitschrift für Pädagogische Psychologie* in 1925 and the rehabilitation of Lay in 1924 (74), the search for a redefinition of the sector in the journal for pedagogical psychology was certainly indicative for the changes in the offing, that is, expansions. In 1929, Arthur Kießling, lecturer at the pedagogical academy in Frankfurt, wrote that there were five trends active in psychology that ever increasingly amounted to a departure from experimental research and that could also be made fruitful for psychopedagogical research as such (75). They were, in turn, the Gestalt trend, which abandoned the splintered and overly detailed character of experimental research; the biological trend, in which the dynamics of the unconscious contrasted sharply with the mechanics of rigid laws and blind rules of the *naturwissenschaftliches* thinking; the "*Werttendenz*", which was essentially an appreciation of the "*Wert*" and "*Seinbegriff*" in psychology as a cultural science and thereby broke through the closedness of an experimental science that concentrated on exactness; the "*Deutungstendenz*", in which experience and interpretation surpassed the reflexive explanation of behaviorism; and, finally, but certainly not least, the "*personalistische Tendenz*", which stressed the complex, individual personality.

Apart from the *Zeitschrift*, Gustav Deuchler was one of the first to call attention to the importance of the new trends in research from a theoretical point of view (76). In his opinion, there was not only a need for a "*Psychologie der Erziehung*" but also for a "*Psychologie der Bildung*". In this regard, the "*Bildungskonzept*", which referred to the "*Geist der Erziehung*", must be understood as "*Wesenserfüllung, Wesensformung und Ausrüstung der psychologischen Person*" and must be pursued rather with an "*ideelle Einstellung*" than empirically. More or less on the same wavelength were also August Riekel, with his plea for a "*Psychologie des Erlebens*" and Julius Wagner, who also wanted to create space in pedagogical psychology for the psychology of the "*Bildungsgeist*", which

was, indeed, partially achieved by Waldemar Döring and Werner Straub, although the latter, somewhat misleadingly, argued for an "experimentelle *Bildungspsychologie*" (77).

In the reality of psycho-pedagogical research on children and youth, an "*Ausdifferenzierung von Wissenstrukturen und Theoriekonzepten*" became, indeed, visible, which gave rise to a large number of new paradigms. In a recent study on the history of German-language youth psychology, Peter Dudek, with whom Christoph von Bühler largely concurred, distinguishes eight divergent research models for the 1916-1933 period (von Bühler distinguishes six) (78). To them belonged the attempts, already noted, of Aloys Fischer to achieve a synthesis and the striving for an integrative pedagogical "*Jugendkunde*" by Julius Wagner.

Much more important as regards adherents and significance, however, was the personalistically colored "*Jugendkunde*" of William Stern, which was developed in Hamburg (79). It was presented as an attempt to bridge the duality between an interpretative "*geisteswissenschaftliche*" and an explanatory "*naturwissenschaftliche*" psychology on the basis of the concept of finding identity. This process was conceived as "introspection", that is, as a convergence or integration of objective values from the environment into the personal life sphere. Stern tried to support his child and youth psychology with numerous empirical studies in the area of intelligence and talent and with it laid the basis for differential psychology, which he conceived as an essential link of the "*vaterländische Menschenökonomie*". In this respect, for that matter, he looked with some admiration on the flexibility with which the Americans, thanks to their pragmatic philosophy of life, which he had learned to know and appreciate during a study trip in 1909, constantly succeeded in adapting themselves to the demands of the culture.

Another dominant model of pedagogically relevant youth psychology was provided by the Vienna school under the direction of Charlotte Bühler (80). Although this Austrian researcher was influenced by behaviorism, she developed a psychology of adolescence that was clearly a reaction to the physiological-natural science tradition but still did not break with it completely. Essential for her was the concept of biological maturing, which seemed to proceed according to immanent and sex-specific patterns and which resulted in a number of distinguishable

psychological phases. This is why her psychology of the course of human life recalled to a certain extent that of Stanley Hall, all the more so because diaries of children and youth constituted its empirical foundation.

The idea of maturing and developmental phases is also found in the so-called characterological experience psychology of Otto Tumlirz from Graz in which development was conceived as a conquering of the inner world by the construction of the individual's own value system that succeeds in integrating simultaneously the interior drives and the objective values of the outer world. Pedagogical psychology was, for him, the science on the border between psychology and pedagogy that exposed the difference and the relationships between the child and the adult and thereby was, in many respects, dependent on characterology, psychoanalysis, and "*Individualpsychologie*" (81). The conceptual path of psychoanalysis as the foundation for psychological and sociological youth research was travelled in a much more extreme form by Siegfried Bernfeld, who thus became, as it were, a maverick of German-language pedagogical psychology. Moreover, Bernfeld's own life, which had much of a constant flight about it and which ended in San Francisco (82), had contributed to this. Finally, completely of a "*geisteswissenschaftliche*" nature and conceived as a theoretical and methodological alternative to experimental psychology was the "*Psychologie des Jugendalters*" of Eduard Spranger. Spranger conceived the development of child and youth as social maturation, as the growing into the objective and normative spirit of a historically-determined cultural period (83).

With Adolf Knauer, who tried to list all the achievements systematically in 1934, it may be concluded that pedagogical psychology in Germany had become less practical and more theoretical (84). In its discourse, it had succeeded in involving the normative moment and so had become a psychology of pedagogy rather than a psychology for the educator. It was assumed that such a systematic approach of the "psychology of pedagogy" would lead to unity and would indicate the essence and the totality of the pedagogical act.

6. On the National-Socialist path and the discussion about the continuity and discontinuity in German pedagogical psychology

In 1933, the notion of totality, which started to dominate German psychology in the 1920s, came to stand in another light. Together with still other elements that had already surfaced in the beginning of the thirties — characterology and ethnology, for example — totality thought was integrated into the totalitarian ideology of National Socialism, and it even became dangerous through its immoral application in the direction of subjectivity and diagnostic arbitrariness (85). This development was reflected on the institutional and on the paradigmatic level. The once so famous "*Institut für experimentelle Pädagogik und Psychologie*" of the "*Leipziger Lehrerverein*" was closed and replaced by the "*Pädagogisch-psychologische Institut der Kreisfachschaft Volksschule Leipzig*", one of the most important centers for the scientific legitimization of National Socialism. Among other things, it conducted research on the characteristics of leadership.

In Tübingen, nobody less than Oswald Kroh taught pedagogical sciences. This professor, who replaced William Stern, who had emigrated to America, as editor of the *Zeitschrift für Pädagogische Psychologie*, would occupy the prestigious chairs for psychology and pedagogy at Munich and Berlin in 1938 and in 1942, respectively. Kroh, who is reported to have taught in uniform, developed a doctrine on the phases of youth and worked this out into an organological total concept of the developmental phases of the human emotional life of which pedagogy had to take advantage. In a programmatic article on the role of pedagogical psychology in the light of the "revolutionärer Neugestaltung des gesamten Lebens", it was stated that the question for this *Geisteswissenschaft* was to penetrate into the whole "der inner- und ausserschulmäßigen Bildung und Erziehung, des absichtlichen und unabsichtlichen pädagogischen Geschehens unter der Idee des organisch gestalteten und zu gestaltenden Totallebens vom Individuum und Volk im Kirche und Staat, Kunst und Wissenschaft, Recht und Schule" (86). The central task of pedagogical psychology consisted, in other words, of the study of the "*Bildungs- und Erziehungsprozessen*" in function of the "*völkerische Erziehung*" (87). Essential to this was the normative moment. Rather than

bringing in only empirical material, pedagogical psychology had the task of contributing to the achievement of a "*völkische Menschenkunde*" by interpreting its material "*weltanschaulich*". As an organic structure within the larger biological-intellectual whole, science had to study the problems that touched the people in its essence and to expose their truth value.

That Kroh's draft of pedagogy as the fulfillment of the human ideal of community, which would be placed in the perspective of socio-ethical responsibility after 1945, actually did offer occasion for National-Socialistic interpretations is shown by the theoretical methodological articles of Jaensch and Hische in the same journal. The former, a professor at Marburg, who already in 1928 had called for a rapprochement of "ideal" and "reality" (88), stated in 1938 as a desideratum for practical psychology that it should stand in service of the "*bevölkerungspolitischer Eugenetik*", including by means of the "*Berücksichtigung typologischer und rassischer Gesichtspunkte*" (89). By the way, the irony of history willed it that this article by Jaensch be an "improved" and "expanded" version of an article in the fiftieth volume of the American Journal of Psychology, with which the fiftieth anniversary of the journal was celebrated at Cornell University in Ithaca, New York. In the new "*Reich*", psychology, according to Jaensch, psychology, as a subdivision of anthropology and eidetics, had to contribute to the "curing" and institution of the "*einheitliche Kultur*" (90). As Hische would also state further, there should be no distinction between pure and applied psychology. The needs of *Volk und Leben* were the only starting points for psychology and pedagogy. "*Deutsche Wissenschaft dient dem deutschen Volke!*", it was proclaimed, and this applied especially for pedagogical psychology "*die — ihrem Wesen nach — nicht international, sondern nur völkisch gebunden sein kann*" (91).

In the concrete, this implied that "race" was promoted to the most psychologically relevant category and that "racial purity" had pre-eminently become the psycho-pedagogical ideal (92). In his speech on the "day of science" (sic), Gerhard Pfahler, one of the new staff members of the Zeitschrift für Pädagogische Psychologie, stated the following to the members of the National-Socialist student unions of the normal school of Esselingen and of the University of Tübingen: "nichts im Lebensvollzug eines Menschen geschieht ausserhalb des Rahmen seiner Erbwesenamt;

alles ist von seiner Rasse" (93). In conclusion, he added that the racial makeup of the person is comparable with a musical instrument, while the racial makeup of a people constitutes a great orchestra with millions of instruments that have to be tuned to each other. In a Mozart symphony, let's face it, there fit no saxophones or negroes! "Wo aber das Schicksal einem Volk den Führer schenkt", Pfahler continued, "hat jeder sein Letztes herzugegeben, aus seinem Instrument und Fügung das Edelste herauszuholen. Dann darf man getrost hoffen, daß das große deutsche Orchester sein Schicksalslied stark und sieghaft aus dem Heute ins Morgen hinübertragen wird" (94). That pedagogical psychology in Germany had thus degenerated into pure propaganda goes without saying.

Recently in Germany the question has also been raised about the continuity or discontinuity in psycho-pedagogy from before and after the National Socialist takeover. As I have already suggested, the answer has to be qualified. It is true that the Nazi position was partially induced by the biological one-sidedness and totality thinking of the twenties and thirties, but this does not detract from that fact that the Nazi pedagogy, after all, was more of a rupture with the German pedagogical tradition than its legitimate continuation (95). Indeed, one may not forget that the National-Socialist researchers, criticized in large measure the scientific traditions of the Weimar period and turned their backs on them. Moreover, their number, although it need not be underestimated, was, all in all, quite limited. In addition to the apologists of the regime itself (Krieck, Volkelt, Jaensch, Kroh, Pfahler, etc.), there was a long row of followers (like Tummlirz and Kießling), but there was also a large group of people who were indifferent (like Busemann, for example) and a number of fervent opponents and victims of Nazism (like Bobertag, E. and W. Stern, Muchow, Hylla, Fischer, and Lipmann), some of whom, as I have noted, emigrated to America (96).

7. By way of discussion and conclusion: the social meaning of the research

From what has preceded, it should be sufficiently obvious that scientific research, even what is called objective, can never take place in

a social vacuum and that the researcher, therefore, necessarily takes up a number of the premisses of the socio-historical context in which he works into his research. In America, child study formed, for example, an efficient means to "Americanize" the school, the peer group, the village community, and the church community, that is to say, to introduce the morality of the meritocratic, say neo-capitalistic, form of society (97). The more sophisticated models of educational psychology and educational research ultimately also served the same ideology. The ideal society, in which each had to receive the most suitable place, corresponded with an economically strong society. Loss of talent, waste of forces and human potential had to be avoided at all costs (98). The testing of, and research on, intelligence formed the scientific basis and legitimation of social control and selection (99). In Germany, too, the founders of experimental pedagogical research assumed unconditionally that their research into intelligence would lead to a better application of the primordial capital of the human spirit and, in this sense, was of vital importance for the "*Nationalökonomie*" and the "*Sozialpolitik*" (100).

Nevertheless, there is also the presumption that one may not overestimate the degree of social determination of educational psychology. Doubtless, social factors played a significant role in the design of the research but did not wholly control the formulation of the question, the procedures, or the results. Otherwise it would be difficult to explain the great variations or the different ways that individual researchers handled variables like social origin and sex and the different ways they reacted to social factors like war, religion, and political ideology (101). Just as experimental research in educational psychology itself was incapable of explaining the behavior of children exhaustively with mathematical formulas, it looks as though the history of the science as regards educational psychology is also unable to give a satisfactory explanation, let alone a causal one, in terms of social determinacy. For my part, further biographical research on the greater as well as the lesser gods of educational psychology in Germany and in America is needed to clarify this matter further.

NOTES

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