

Psychotechnics in the Institutes of Psychology of Florence and Bari: the scientific work of Alberto Marzi

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Summary

The current paper deals with the reconstruction of the scientific career of the Italian psychologist Alberto Marzi, who carried out his research in the Laboratories of Psychology of Florence and Bari. He worked between the World Wars as well as during the post-war period, when ideology underwent drastic changes in psychology up to today almost unexplored by the psychological historiography. Therefore, Marzi's writings provide a *key* to understanding psychology of those difficult years.

Starting from the time Marzi spent in Florence under the influence of his teachers, E. Bonaventura and F. De Sarlo, the analysis focuses on the Institute of Psychology of Bari, where Marzi offered a new vision of psychotechnics, according to which research had to pay particular attention to the human factor, to the *whole personality*. This idea led him to work also in the Centres of Professional Guidance of Florence and Bari.

Keywords: Psychotechnics, work psychology, psychological laboratories.

Abstract

In 1940 the Italian psychologist Alberto Marzi affirmed that psychologists may be said to be doing their job well when they consider the worker as a subject of his work rather than an object. A few years later he offered a view of psychotechnics very different from Taylor's idea, still popular in those days, that the psychologist's task was to measure the aptitudes and abilities of individuals to carry out certain kinds of jobs (*the right man in the right place* was the key phrase). Marzi, on the other hand, preferred to draw up professional profiles by paying particular attention to the human factor.

The current paper aims to reconstruct Marzi's scientific career. He worked in the psychological laboratories of Florence and Bari between the World Wars as well as during the post-war period, when ideology underwent drastic changes as a result of such factors as the fading of idealism, the growth of Marxism and existentialism, the rise of north American culture, and the spread of psychoanalysis. His writing on these factors provides a *key* to understanding the psychological context of those difficult years.

The analysis starts from the time Marzi spent in Florence and establishes that this period had a crucial influence on his career. He followed the guidelines of his teachers, E. Bonaventura and F. De Sarlo, who had linked psychological studies with both philosophy and natural sciences. Similarly, Marzi considered

psychology a service to human beings, and consequently believed that laboratory procedures should be based on knowledge of personality. This idea led him to work in the Centres of Professional Guidance of Florence and Bari.

The second part of this paper deals with Marzi's time at the University of Bari, where in 1949 he founded the Institute of Psychology. However, in 1951 he noted the American behaviourist influence on the studies on work. According to this new vision of psychology, research had to be based on the quantification of observed phenomena. At that point Marzi had no alternative but to call upon other *Geisteswissenschaften* to save psychology. Psychotechnics was changing into work psychology.

Keywords: Psychotechnics, work psychology, psychological laboratories.

The Institute of Psychology in Bari was founded after the Second World War. Maybe because not enough time has yet passed, or perhaps, as S. Marhaba suggested, because of changes in culture on the whole and in «psychology in particular, [...] historians have no alternatives but to use [...] different conceptual categories for the periods pre-1945 and post-1945» (Marhaba, 1981, p. 9). The lack of thorough current historiographical investigations into the 1940s and 1950s is in contrast with the increasingly extensive research into the events of the years preceding those two decades. We should therefore dedicate some attention to the efforts of those like M. Ponzo, F. Banissoni, and A. Marzi, who did their utmost in the post-war period to get psychology out of the cultural and political obscurity into which it had fallen.

The predominant role of both neo-Hegelianism and Crocean idealism in the totalitarian regime, was the main cause of the dark days of psychology. After the Educational Reform promoted by G. Gentile in 1923, psychology was removed as a subject from secondary school syllabuses. Philosophical and pedagogical subjects remained as they were thought to be useful for students intending to go on to train as teachers.

In November 1935 psychology was to some extent rehabilitated as the result of a reform introduced by the Minister De Vecchi. It was to become a main subject in Philosophy degrees and a subsidiary subject in Education, Medicine, and Law degrees, and in 1942 the Ministry of National Education made post-graduate courses in psychology available to graduates in Medicine. The subject was still omitted from secondary school syllabuses, however, although in 1939 the introduction of the «Schools Bill» would redefine the relationship between schools and psychology.

In 1943 Alberto Marzi observed that:

after being disgracefully driven out by a Reform issued twenty odd years ago, psychology is re-entering Italian schools through the main door with full honours [...] this time not as some sort of subsidiary subject of teaching [...] but as a valuable and irreplaceable aid to teachers (Marzi, 1943, p. 172).

At that time Marzi was working in Florence at the Laboratory of Experimental Psychology of the Royal Institute of Advanced Studies, set up by Francesco De Sarlo in 1903. Marzi was born on 13 June 1907 in Florence, where he obtained a first degree in philosophy. He then graduated in natural science from the University of Modena. In 1936 he became a university

lecturer on experimental psychology. In the course of his work, Marzi adopted the approach of his teacher, Enzo Bonaventura of the Florentine Laboratory, focusing on both philosophical and scientific fields. In 1948, in a memorial speech thirty days after Bonaventura's death, Marzi paid tribute to him saying that he stood for: «Multiplicity of demands, rigorous training in philosophical studies as well as natural and biological science» (Marzi, 1948, p. 98).

In fact this combining of the two fields of philosophy and science was espoused by the whole of the Florence Laboratory team, which, more than any other Italian research team working at the time, was concerned with tracing the theoretical antecedents of experimental studies. De Sarlo would have approved: in spite of his medical education and his firm belief in the usefulness of experimental psychology, he considered psychology not an autonomous science, but a link to philosophy, to the extent that he could affirm that «Psychology, including the Laboratory itself, ought to have its own seat in the Faculty of Humanities» (De Sarlo, 1905, p. VI).

In Bari it was the recently-founded Faculty of Humanities and Philosophy which, at the Faculty meeting of 28 February 1949, would introduce the teaching of psychology and appoint «Professor Alberto Marzi, who participated in the recent selection process for this position, on account of [his] experience in this field of studies». It is worth remembering that the previous opening for a chair of psychology had been announced in 1931 by the University of Rome.

During the Faculty meeting of 7 November 1949 Marzi outlined his own teaching programme and insisted on the vital importance of founding an Institute of Psychology. The following day he wrote to the rector:

with the scientific progress of this science, various applications of it have been developing in the fields of education, of medicine, of law, and above all of work through guidance and vocational selection. As the orientation universally followed is a scientific and experimental one, [...] I would emphasise that an Institute of Psychology should be founded in our University, in the Faculty of Humanities and Philosophy. Such an Institute should be equipped with scientific instruments in order that research may begin.

In the following year the Institute was opened. It was equipped with a laboratory where Marzi would continue the investigations he had begun in Florence in various fields: education/teaching, developmental psychology, films, and work. As far as work is concerned, it is worth pointing out that from the 1930s Marzi's interest was increasingly directed towards applied psychology. The foundation, in 1945, of the University Vocational Guidance Centre (CUOP), the only one of its kind in Italy, was significant. Its aim was to help school-leavers in their choice of university career, by providing advice based on their aptitudes, inclinations and interests, and by taking account of psychosomatic, social and economic factors, and home circumstances. Equally significant was Marzi's work with the Florentine Institute for Applied Psychology, which had been set up in 1930 as the Vocational Guidance and Selection Bureau alongside the «Leonardo da Vinci» Institute of Industrial Technology. Its first task was to install apparatus designed for the purpose of carrying out preliminary studies in educational and vocational guidance for pupils of the Institute and in personnel selection for adults (drivers, policemen, firemen, etc.). These apparatus were constructed in the workshops of the Industrial Institute itself by Marzi.

Marzi's decision to transpose laboratory procedures to the social field, particularly the world of work, was deliberate. In fact, it was in tune with L.S. Hearnshaw's observation at the 9th International Congress of Psychotechnics in Paris in 1953 that the year 1930 could be defined as the turning point of psychotechnics, because the main focus of psychology began to shift from work to man at work in a dynamic interaction with the social environment (Hearnshaw, 1954, p. 6). It was with this kind of spirit that on 12 December 1943 Marzi tackled the topic *Vocation and professional choice* during the first talk held at the Philosophical Library of the Florentine Division of the Italian Society of Psychology, whose inaugural meeting had been taken place on 23 November. In 1944 V. Petri pointed out that Marzi's talk was important because it explained the different meanings of the word «vocation» within psychotechnics and focused on the individual and his wishes in vocational choice.

Much interest», concluded Petri, «was awakened [...] by this topic and by the rich assortment of data [...] concerning the so-called spontaneous vocational choices and collected by the Bureau of Professional Guidance in Florence, headed by Marzi (Petri, 1935, p. 129).

Marzi's preference for the world of work was consonant with the times: as schools were off-limits, psychologists had no alternative but to make use of their abilities to tackle the problems caused by Italian economic development and focus on the applied activities of psychology, which at that time were defined as *psychotechnics*. In 1952 Marzi provided a historical reconstruction of psychotechnics (Marzi, 1952), stating that its «probable» origins were in G.T. Fechner's psycho-physical studies, whereas its «certain» origins were to be found in the research carried out in the early 1920s by W. Stern, H. Münsterberg and the Italian pedagogue Guido Della Valle, one of De Sarlo's pupils.

In 1910 Della Valle published *The laws of mental work*, a book which had been

conceived –he wrote– in the Laboratory of experimental psychology in Florence [...], and revised with the methods of the experimental technique in the *Psychophysiologischen Institut* of the University at Leipzig.

It was in this work that Della Valle labelled *psychotechnics* (Della Valle, 1910, p. 74) and, in discussing whether the experimental research should have been carried out in the laboratory or based on the observations of empirical life, he recalled the statements made in 1903 by W. Stern (Stern, 1904), according to which «Psychotechnics and Psychognostics are possible only when they are halfway between the *Lebenswahrheit* and the *theoretisches Experiment* (Della Valle, 1910, p. 227, n. 1).

Therefore, the «idea» of psychotechnics –concluded Marzi– went back to 1900, when Stern himself wrote *Über Psychologie der individuellen Differenzen*. In 1906, with Otto Lipmann he then created, the «Institut für angewandte Psychologie» in Berlin, which was the first Institute for applied psychology in the world. The following year Stern and Lipmann began to publish the *Zeitschrift für angewandte Psychologie*.

Della Valle's reference to his work in the laboratory at Leipzig allows us to categorise the initial trend in Italian psychotechnics with the Wundtian experimental trend and the tendency

to interpret psychological events as epiphenomena of their corresponding physical events. In fact, after outlining the historical and scientific basis of psychotechnics in the psychophysiology of work in his introduction to the Seventh Conference of the Italian Society of Psychology, held in Turin in 1929 and meaningfully entitled *Conference of Experimental Psychology and Psychotechnics*, Sante De Sanctis, director of the Institute of Psychology of the University in Rome, asserted the interest of «our laboratories [...] in the ascertainment, *a*) of generic fitness for work, *b*) of individual work skills for the cataloguing of individuals, *c*) of muscular, mental, global, or mixed fatigue». He also identified «sensory and kinetic ability, concentrated and distributed attention, motor suggestibility, speed and precision of movements and acts, and the resistance of the muscular and nerve apparatus when working» as «fundamental psycho-physiological operations of human work» (De Sanctis, 1931, p. 33).

Therefore, although De Sanctis considered human work a «creative activity» and proclaimed the «great advantages» resulting from the acquisition of «the concept of the uniqueness of human work» (p. 31), his lecture demonstrated how that creativity and uniqueness degenerated into their opposites, or in other words into the dismemberment of the human being into aptitudes measured as physiological reactions. Following the Tayloristic programme which aimed to increase workers' efficiency through a rational organisation of working times – a programme approved of by De Sarlo who said that «to deride or fight it in the name of the freedom of imagination, or of genius, is simply romantic bluster» (De Sarlo, 1905, pp. 31-33) – psychologists focused on work in terms of physiological fatigue, in line with the materialistic paradigm of *man as a machine*. In commenting on a book published at the end of the 1920s by Carlo Alberto Ferrari (the first university lecturer in Italy on the Psychology of Work), the author's father emphasised the importance of eliminating the causes of fatigue, «because employers also pay for the unproductive hours which lead to no profit» (Ferrari, 1931, p. 108).

Marzi affirmed that

it is not enough to be in possession of a device, but it needs to know what its calibrations are, and in order to obtain a calibration, months and perhaps years of patient, persistent laboratory work may be required (Marzi, 1940, p. 125).

It seemed to him that the assessment of aptitudes should be based on the contrary on «the knowledge of the whole personality» (Marzi, 1936, p. 3) and that «to the psychologist who accomplishes his mission with dignity, workers are to appear in their real role as subjects of work and not as objects» (Marzi, 1940, p. 122).

At the National Institute for Accident Prevention (ENPI), which he had opened in Bari in 1951, Marzi insisted increasingly on the importance of focusing on the *human factor*. This centre and others like it had its origins in the Psychotechnic Bureaux, which were established in the pre-war period at the various Institutes for Industrial Medicine. The Bureaux ceased their activity in the post-war period, but were the inspiration for the foundation in 1951 of Centres for Work Psychology equipped with psychotechnics laboratories to examine and strengthen specific professional aptitudes. At the 9th International Congress of Psychotechnics, held in Paris in 1953, L. Palma, the general secretary of the ENPI, identified their objectives as vocational

guidance and selection and highlighted three areas: personnel training, choice of tests, and job specifications. In 1951 Marzi had already provided definitions: if the word *selection* signified «the choice of the individuals most suited to a job», *vocational guidance* meant «finding the job most suited to an individual», and *educational guidance* meant «information about the most suitable kind of school» (Marzi, 1951*b*, p. 10).

This paper of 1951 is important because it shows how the world of work in Italy in the 1950s was influenced by the American behaviourism, which equated scientific research with the quantification of observed phenomena.

This psychological current –he declared– has had the merit of convincing scholars of psychological questions of the need for observation and experiment. At this time [...] the research methods promoted by the new school are applied even by its opponents as an integration of the introspective observations and of the psychological investigations by psychoanalytical procedures (Marzi, 1951*a*, pp. 2014-2015).

Marzi undoubtedly knew Freud's work very well, but the highly practical demands of the social field obliged him to concentrate on other things. Thus, his studies covered a range of subjects from furniture in the workplace to elements of social psychology, and in fact he always promoted cooperation between psychology and other subjects. According to an idea expressed in 1939 about the unsuccessful achievement of social psychology in Italy (Marzi, 1939, p. 376), in 1953 Marzi reaffirmed that:

The end of Taylorism seemed to be a kind of folding in of the technician on himself, on account of his being unacquainted with the importance of the human factor [...]. It is obvious, then, that people today are eager to demonstrate what contributions the human sciences have made [...] to the evaluation of human factor (Marzi, 1953, p. 35).

On 1 November 1955 Marzi left Bari and went back to the University of Florence, where he continued working until 1983.

Bibliography

- DELLA VALLE, G. (1910): *Introduzione a Leggi del lavoro mentale*. Torino, Paravia.
- DE SANCTIS, S. (1931): «Principi ed applicazioni della psicologia del lavoro», in *Atti del VII Convegno di Psicologia Sperimentale e Psicotecnica, Torino 18-20 Nov. 1929*. Bologna, Zanichelli.
- DE SARLO, F. (1905): *Pro Psychologia*, in *Ricerche di Psicologia*, vol. I. Firenze, Paggi.
- FERRARI, G. C. (1931): «Il laboratorio bolognese di psicologia e la psicotecnica», in *Atti del VII Convegno di Psicologia Sperimentale e Psicotecnica, Torino 18-20 Nov. 1929*. Bologna, Zanichelli.
- HEARNSHAW, L. S. (1954): «Le but et le domaine de la psychologie industrielle», *Le Travail Humain*, 7 (1-2), pp. 6-12.

- MARHABA, S. (1981): *Lineamenti della psicologia italiana: 1870-1945*. Firenze, Giunti Barbèra.
- MARZI, A. (1936): «Problemi dell'istruzione tecnica», *Vita Scolastica*, 15 (10), pp. 1-7.
- (1939): «Una nuova valutazione del comportamento sociale», *Rivista di Psicologia*, 35, pp. 376-379.
- (1940): «Gli esami psicotecnici degli apprendisti nei corsi aziendali», *L'Organizzazione scientifica del lavoro*, 3, pp. 121-126.
- (1943): «Scuola e Psicologia», *Rivista di Psicologia*, 39, pp. 166-172.
- (1948): «Commemorazione di Enzo Bonaventura», *Rivista di Psicologia*, 44, pp. 97-98.
- MARZI, A. y M. PONZO (1948): «Un nuovo schema per la redazione dei profili professionali», *Rivista di Psicologia*, 44, pp. 3-21.
- MARZI, A. (1951a): *Comportamento*, in *Enciclopedia Medica Italiana*, vol. II. Firenze, Sansoni.
- (1951b): *Il Fattore umano nell'organizzazione del lavoro*, Roma, ENPI.
- (1952): «Dalla psicotecnica alla psicologia del lavoro», *Rivista di Psicologia*, 48, pp. 141-153.
- (1953): *Problemi ed esperienze di psicologia del lavoro*. Firenze, Marzocco.
- PALMA, L. (1954): «Les Centres de psychologie du travail de l'Ente Nazionale Prevenzione Infortuni (ENPI). Fonctionnement et but», *Le Travail Humain*, 7 (1-2), pp. 54-62.
- PETRI, V. (1935): «L'attività della Sezione Fiorentina della Società Italiana di Psicologia», *Rivista di Psicologia*, 31, pp. 129-131.