

History of Psychotechnics in Italy: Application without theorization? (1920s-1940s)

Andrea Romano

Uninettuno University, Rome, Italy

Renato Foschi

Sapienza University of Rome, Italy

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ABSTRACT

This paper analyzes the development of psychotechnics in Italy between the 1920s and 1940s, highlighting how the fascist regime and the hegemony of neo-idealism shaped the discipline. The study demonstrates that during this period, the survival of psychology as a discipline depended on its practical utility, particularly in education, labor organization, and the military contexts. Applications ranged from vocational guidance and worker selection to research on fatigue and efficiency. However, this success came at the expense of theoretical consolidation, producing a “praxis without theory.” Italian psychology underwent a profound transformation described as a crisis. This crisis took concrete form in a shift from experimental research to applied practices. Psychotechnics assumed a central role in Italy during the Fascist period, practiced by the two leading figures of psychology at the time: Agostino Gemelli (1878-1959) and Mario Ponso (1882-1960). Our study highlights the fragmentation within Italian psychology. It reveals how political and philosophical pressures constrained the scientific development of the discipline, confining it within an autarchic framework and isolating it from the theoretical advances occurring in the Anglo-American world.

Historia de la psicotecnia en Italia: ¿Aplicaciones sin teorización? (décadas 1920, 1930 y 1940)

RESUMEN

El artículo analiza el desarrollo de la psicotécnica en Italia entre las décadas de 1920 y 1940, destacando cómo el régimen fascista y la hegemonía del neoliberalismo moldearon la disciplina. El estudio demuestra que, durante este período, la supervivencia de la psicología como disciplina dependió de su utilidad práctica, particularmente en el campo de la educación, la organización laboral y el ámbito militar. Las aplicaciones abarcaron desde la orientación vocacional y la selección de trabajadores hasta la investigación sobre la fatiga y la eficiencia. Sin embargo, este éxito se logró a expensas de una consolidación teórica, produciendo una “praxis sin base teórica”. En aquellos años, la psicología italiana

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Andrea Romano  <https://orcid.org/0000-0003-3387-1163> Uninettuno University, Rome, Italy.

Renato Foschi  <https://orcid.org/0000-0001-8222-9105> Sapienza University of Rome, Italy.

Correspondence Andrea Romano: andrea.romano@uninettunouniversity.net

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experimentó una profunda transformación descrita como una crisis. Esta crisis llevó a un abandono de la investigación experimental y una mayor dedicación a las prácticas aplicadas. Así, durante el período fascista en Italia, la psicotécnica asumió un papel central, practicada por las dos figuras más destacadas de la psicología del momento: Agostino Gemelli (1878-1959) y Mario Ponso (1882-1960). Nuestro estudio resalta la división en el campo y revela cómo las presiones políticas y filosóficas limitaron el desarrollo científico de la disciplina, confinándola dentro de un marco autárquico que la aislaba de los avances teóricos que se producían en el mundo anglosajón.

Introduction: From experimental psychology to psychotechnics

The history of psychotechnics in Italy is intrinsically linked to the development of psychology and its practical application within the socio-political context (Lombardo & Foschi, 1997; Passione, 2012). To fully understand the path of psychotechnics in the country, it is necessary to examine several key moments that marked its evolution. Moments, which interweave specific aspects of Italian psychology with elements related to the political and cultural context of fascism and the philosophical current of Italian neo-idealism. This paper focuses on key aspects of psychotechnics, connecting them to the social context in Italy during the 1920s and '30s. In addition, we want to demonstrate how Italian psychology was forced to shift from experimental psychology to psychotechnics to adapt the discipline to the autarkic policy of the fascist regime.

Before that, towards the end of the 19th century, psychology began to emerge as a scientific discipline within a positivist framework (Foschi, 2020). Roberto Ardigò (1828-1920) conducted the first experiments in psychology at the high school in the city of Mantua and, in 1870, wrote *La psicologia come scienza positiva* [Psychology as a Positive Science]. In addition to Ardigò, other positivists contributed to the foundation of experimental psychology, among them Giuseppe Sergi (1841-1936), founder of the Institute of Anthropology and Psychology at the University of Rome. He considered “psychic facts” arising from an underlying biological activity (Sergi, 1880). Along with Sergi and Ardigò, Gabriele Buccola (1854-1885) was among the first to contribute to the foundation of a method for psychological research. He advocated the use of the experimental method as the primary tool for psychological investigation, viewing it as a means of analyzing mental phenomena obtained by controlling and varying physical conditions. The research by Cimino and Foschi (2012, 2016) has shown that these three historical figures produced significant theoretical output. Indeed, shortly after the 5th International Congress of Psychology was held in 1905 in Rome, a period of general growth in interest in the discipline followed, marked by the establishment of the first three university chairs in Turin, Rome, and Naples (Ceccarelli, 2010).

In the following years, there was an attempt to continue psychological research grounded in epistemological reflections, although the interest in experimental psychology gradually waned from the 1920s and 1930s onward (Lombardo, 2014). This decrease consisted of a reduction in the number of university chairs and in

research activities at the various institutes¹. This reduction was one of the main signs of the crisis in Italian psychology during Fascism.

Instead, in this historical context, Agostino Gemelli,² being the only significant Italian psychologist in the first half of the 20th century, imprinted his own view on psychology (Foschi, Giannone & Giuliani, 2013). He aimed to adapt the discipline within the framework of the fascist regime and to ensure its survival against the critique of the hegemonic philosophy in the Italian scientific and cultural scene, namely neo-idealism.

Italian neo-idealism was a philosophical current that in the early 20th century gained prominence, particularly through the work of Benedetto Croce (1866-1952) and Giovanni Gentile (1875-1944). Rooted in Hegelian idealism, it opposed positivist and empiricist traditions, asserting that reality could be fully grasped only through philosophical reflection rather than through scientific methods. As we shall see in the following sections, neo-idealism thus played a significant role in marginalizing experimental psychology and framing it as a subordinate or merely descriptive practice, devoid of theoretical legitimacy.

¹ In 1922, a Chair of Experimental Psychology was assigned to Vittorio Benussi (1878-1927). In 1925, Agostino Gemelli was appointed Chair of Psychology at the Catholic University in Milan. Indeed, after the death of Vittorio Benussi in 1927 in Padua, the withdrawal of Kiesow in 1933 in Turin, of De Sarlo in 1934 in Florence, and Cesare Colucci (1865-1942) in Naples in 1937, new Chairs in Experimental Psychology were not made available (Lombardo & Cicciola, 2005). In the 1930s, only two Chair positions were occupied: that of Ponso in Rome, who took over the Chair of Experimental Psychology from De Sanctis in 1931, and that of Gemelli in Milan at the Catholic University of the Sacred Heart.

² Gemelli was a pupil of the Nobel Prize winner Camillo Golgi (1843-1926) and began to devote himself to experimental psychology at the beginning of the Twentieth Century (Gemelli, 1908). Gemelli was involved in military psychotechnics during World War I, researching soldier selection and training. He was dedicated to the selection of soldiers and aviation pilots, and subsequently, together with his collaborators, conducted research on motor skills, assembly line work, accident prevention, and aspects of workplace fatigue. His practical work aimed to enhance human efficiency by combining psychological insight with industrial and military needs, influencing the development of modern work psychology in Italy. After WWI, Gemelli established a thriving research center in Milan and expanded its influence by collaborating with fascism, protected by the mighty shield of the Catholic Church (Bocci, 2003; Foschi, Giannone, & Giuliani, 2013; Montanari, 2017; Esposito, Fenaroli, Vanetti, 2009). Gemelli, who was also a Franciscan friar, adopted neo-Thomism, a philosophy according to which man is a complex and inseparable whole of mind and body. Psychology, according to the neo-Thomistic view, must therefore propose itself as a scientific discipline, but without any concession to either pure application or pure science of the psychic phenomenon. “It is only by presupposing this ambitious, broad vision of the discipline that one can understand the multifaceted activity as a researcher carried out by Gemelli” (Dazzi, 1986, p. 35).

Thus, the history of psychotechnics in Italy needs to be situated within this ideological change in the Italian intellectual context from positivism to idealism that occurred in the 1920s. However, psychotechnics itself had already arrived a decade earlier. The term “psychotechnics” was already being used in Italy in 1910, in a work entitled “The Laws of Mental Work” by Guido Della Valle (1884-1962). Later, in the second half of the 1920s, it gained wider attention in publications, including specialized journals and books.

It should be emphasized that during the fascist period, new cultural institutions were in general founded in Italy, including the Institute of Fascist Culture, established in 1925, where Gentile served as president. Gentile’s role was key because he was one of the leading exponents of Italian neo-idealism and, at the same time, one of the first ideologues of fascism. So it is easy to understand how he could influence the school reform in 1923, which Mussolini himself described as “the most fascist of reforms”, as well as the direction of the sciences. This was followed in 1927 by the launch of the Charter of Labor and in 1939 by the Charter of “the Fascist School”. In 1931, all university professors, including psychologists, were required to take a formal oath of allegiance to fascism.

Thus, during the period when fascism took root in Italian society, almost all academic psychologists began to focus almost exclusively on psychotechnics. Most of them were doctors who had been trained in experimental psychology: A first group, formed by Agostino Gemelli, Mario Ponso,³ Alessandro Gatti was trained by Federico Kiesow (1858-1940), a pupil of Wundt in Leipzig in 1891. In Rome, Ferruccio Banissoni (1888-1952), a student of the experimental psychologist and child neuropsychiatrist Sante De Sanctis (1862-1935), after dedicating his work to experimental psychology, moved to psychotechnics. In Florence, Alberto Marzi, a student of Francesco De Sarlo (1864-1937), Enzo Bonaventura (1891-1948), and Antonio Aliotta (1881-1964) wrote his dissertation in experimental psychology, but soon turned to psychotechnics in the mid-1930s as well.

All of them participated in the VII Congress of the Italian Society of Psychology, which was held in Turin in 1929 (Bonaventura & Canella, 1931). It is interesting to note, for the topic discussed in this article, that the title of the first round table was precisely “National Congress of Experimental Psychology and Psychotechnics”. Its organizers were Gemelli and Ponso, who defined Psychotechnics in their inaugural speech as “the sum of applications of psychology to the study of problems of human activity useful for social purposes” (Gemelli & Ponso, 1966, as cited in Spaltro, 1966, p. 17).

Additionally, the space devoted to applied psychology at this congress was larger than that for experimental psychology, and it was the first time that works conducted by experimental psychologists

in the field of applied psychology were presented. With this abrupt “change of course,” the relationship between general psychology and its applications became problematic, leading to a discrepancy between the goals of basic research and those of psychotechnics. On the other hand, validation methodologies for applicative processes were discussed. Unlike the experimental psychology practiced in the laboratory, psychotechnics was appreciated and encouraged by the fascist regime, which saw in it an efficient aid to pursue the government’s policies. Marzi regarded psychotechnics as a discipline of applied psychology concerned with optimizing the relationship between individual aptitudes or workers in the industrial sector. He points out that psychotechnics developed considerably during the 1930s and 1940s due to its usefulness in social life, mainly through its application in two branches: career guidance and occupational selection (Marzi, 1949). This was achieved through the design of new methods and the use of old methods and instruments for assessing aptitude and intellectual abilities, including metric scales, ergographs, and devices for measuring responses to stimuli and physiological changes associated with emotions. Moreover, during the twenty years of fascist rule, Italian psychology – like any other scientific and professional field in Italy at the time – remained relatively isolated from international trends and research.⁴

As Amore Bianco (2017) points out, it was the Minister of Education himself, Giuseppe Bottai (1895-1959), who, in the summer of 1937, involved the universities in a “re-evaluation” of psychotechnics. This initiative urged Agostino Gemelli and Mario Ponso – in their capacity as the only full professors of Experimental Psychology at that time (in the fascist era) – to organize, for the following academic year, a special “cultural course,” a sort of training course, in labor psychotechnics. It was supposed to be the beginning of what later should become a full-fledged advanced course “[...] intended to create study centers for the selection of workers by means of an adequate psychotechnical evaluation.”⁵ Afterward, Gemelli and Ponso worked to open the courses to all those who were interested in labor problems. No entry qualifications were required because the rules governing attendance of such “cultural courses” did not prescribe the

⁴ One of the few examples of international contact is in the early 1930s when Gemelli engaged in correspondence with the Instituto Ontogenético de La Plata (Argentina), providing technical advice, methodological suggestions, and offering to send equipment for psychological testing. These letters, preserved in the Institute’s archives, illustrate the transnational dimension of psychotechnical and biotypological practices and the role of Italian psychologists in fostering international exchanges despite the political isolation of the fascist period (see also the article by Molinari, Talak & Lescano in this issue).

⁵ See Archivio Centrale dello Stato, Ministero della Pubblica Istruzione (MPI), Direzione Generale Istruzione Superiore (DGIS), Divisione II, Leggi, regolamenti, statuti, esami, corsi, statistiche, tasse, studenti, ecc., 1925-1945, b. 8, f. «Corso di cultura in psicotecnica del lavoro. Milano, Università Cattolica S. Cuore. Roma, R. Università», Il ministro dell’Educazione Nazionale al rettore dell’Università Cattolica del «Sacro Cuore», Roma, 10 luglio 1937 e Il rettore della R. Università di Roma al ministro dell’Educazione Nazionale, Roma, 26 luglio 1937. Urging Bottai to take measures aimed at the wider dissemination of psychotechnical culture had been Giovanni Scanga, head of the ministry’s Directorate General for Technical Education, who was also concerned about the gradual reduction of Psychology professorships. See Archivio Centrale dello Stato, Ministero della Pubblica Istruzione (MPI), Direzione Generale Istruzione Superiore (DGIS), Divisione II, Leggi, regolamenti, statuti, esami, corsi, statistiche, tasse, studenti, ecc., 1925-1945, b. 8, f. «Corso di cultura in psicotecnica del lavoro. Milano, Università Cattolica S. Cuore. Roma, R. Università», Appunto di Giovanni Scanga al ministro dell’Educazione Nazionale.

³ Ponso earned his medical degree from the University of Turin in 1906 and began his psychological training under Federico Kiesow (1858-1940), with whom he collaborated for approximately 25 years. In 1911, he became a professor of Experimental Psychology in the Department of Humanities at the Royal University of Turin. It was there that he initiated his research on perceptual phenomena, focusing on the sensations of taste and weight, spatial representations, and optical illusions (for instance, when two equal horizontal lines are placed within a track that converges, the line nearer to the point of convergence appears longer). He also studied phenomena related to respiratory activity and psychomotor processes.

need for such qualifications. The courses were publicized among the staff of the Ministries of War, Corporations, and Communications, to enlarge, as much as possible, the audience of those enrolled. Gemelli, in particular, was immediately attentive to the needs of fascism as a “corporative regime,”⁶ calling for equal consideration of the interests of employers and workers in the organization of the courses, and above all, hoping that the training of “suitable and capable” personnel would replace others within the unions and corporations.⁷

In the first academic year of these courses’ activation (1937–38), the Cattolica University recorded 250 enrollments and just over 450 at the Roman university, with somewhat uneven attendance. The audience was heterogeneous: Gemelli and Ponzio reported the presence of teachers, army officers (especially physicians), engineers, officials of trade union confederations, railroad personnel, and employees of private companies. They were all eager, Gemelli wrote, to “broaden their knowledge in the biological field and especially in that of mental life in order to be in the best conditions to use man and to evaluate the human factor better” (p. 2).⁸

These training courses thus continued successfully over the next two academic years and, in the 1941–42 edition, were inaugurated by Bottai in both Rome and Milan. The new initiative, which, unlike the previous ones, benefited from a financial contribution received from the government, turned out to be a success: the high attendance (in Rome, there was an average of 800 participants, primarily teachers, while in Milan, 550) convinced Ponzio to ask for authorization and funds to design a new course aimed at teaching staff.

The political and cultural bases of the emergence of psychotechnics

The spread of interest in psychotechnics applications and research in Italy, not only found its basis in the political-economic variables of

the autarchic policy of the fascist regime (Cosmacini, 1985; Luccio, 1978), but also, and very especially, in the neo-idealist conception that reduced psychology to the mere practice of describing psychological facts without recognizing in these facts any theoretical aspect (Calogero, 1935, p. 460). The neo-idealists’ criticism was directed toward science in general. Benedetto Croce’s writings argue that the physical-mathematical and biological-naturalistic sciences lack theoretical value. Croce defined the general propositions, on which natural sciences are based, as “pseudo-concepts.” He used this expression to point out that these sciences pursue an eminently practical purpose. Therefore, their concepts have only instrumental and empirical value. In other words, they are not concerned with the fundamental questions of “Truth” or “Falsity”, which are needed to deal with the most relevant metaphysical questions (Barone, 1982; Geymonat, 1972).

Similarly harsh were the neo-idealists’ criticisms of psychology. They focused on the reductionist, positivist approach of scientific psychology, which was deemed insufficient for understanding the complexity of human experience. Croce and Gentile rejected its reduction of the individual to a series of measurable and manipulable data. For them, this type of method was incapable of grasping the uniqueness of the human experience, reducing individuals to mere objects of study. In sum, we can see that according to the neo-idealist perspective, the qualitative aspect of human experience was lacking.

In this challenging context, psychologists no longer referred to specific psychological schools or theoretical models (e.g., phenomenology, psychoanalysis, Gestalt, behaviorism) as they had before fascism, as was freely done in other Western countries, for fear that the discipline itself would be delegitimized by philosophical criticism and by fascist control. Thus, it found its place as a helpful discipline only for solving practical problems. From that moment onward, Italian psychology maintained a modest presence in Italian culture, mainly as psychotechnics (Lombardo & Foschi, 1995, p. 38). While the number of university chairs in experimental psychology decreased from 1930 to 1939, the number of psychotechnics institutes began to increase in the north and central parts of the country.⁹ In 1939, the Consiglio permanente per le applicazioni della psicologia [Permanent commission for the applications of psychology] was established at the National Research Council. This Commission, just after WWII, became the Experimental Center for Applied Psychology of the CNR [National Research Council] (Mecacci, 1989).

Gemelli and Ponzio: Psychotechnics in Milan and Rome

Gemelli in Milan and Ponzio in Rome were the academic psychologists most active in psychotechnics (Cimino & Foschi, 2012). Alberoni (1959) divides Gemelli’s work into several phases, emphasizing that between

⁶ Fascism reorganized the state according to a corporative logic. In Italy, trade unions were replaced by labor corporations, inspired by medieval guilds, which were controlled by the dictatorial government. The goal was a state in which working-class dissent was limited.

⁷ See Archivio Centrale dello Stato, Ministero della Pubblica Istruzione (MPI), Direzione Generale Istruzione Superiore (DGIS), Divisione II, Leggi, regolamenti, statuti, esami, corsi, statistiche, tasse, studenti, ecc., 1925–1945, b. 8, f. «Corso di cultura in psicotecnica del lavoro. Milano, Università Cattolica S. Cuore. Roma, R. Università» Il rettore della Università Cattolica del «Sacro Cuore» al ministro dell’Educazione Nazionale, Milano, 30 luglio 1937. In the missive, Gemelli proposed as the experimental title of the course The physiology and psychology of human labor in regard to the preparation, choice, and assistance of the Italian worker. For his part, Ponzio presented the program of his course under the title The Psychotechnics of Labor in its Relations with the Labor Charter and the provisions of the Labor Code. See Archivio Centrale dello Stato, Ministero della Pubblica Istruzione (MPI), Direzione Generale Istruzione Superiore (DGIS), Divisione II, Leggi, regolamenti, statuti, esami, corsi, statistiche, tasse, studenti, ecc., 1925–1945, b. 8, f. «Corso di cultura in psicotecnica del lavoro. Milano, Università Cattolica S. Cuore. Roma, R. Università», Programma delle lezioni del corso di cultura di «Psicotecnica del lavoro», Roma, 26 luglio 1937.

⁸ Archivio Centrale dello Stato, Ministero della Pubblica Istruzione, Direzione Generale Istruzione Superiore, Divisione II, Leggi, regolamenti, statuti, esami, corsi, statistiche, tasse, studenti, ecc., 1925–1945, b. 8, f. «Corso di cultura in psicotecnica del lavoro. Milano, Università Cattolica S. Cuore. Roma, R. Università», *Relazione sul corso di cultura di psicotecnica del lavoro tenuto presso l’Università cattolica del Sacro Cuore*, Milano, 10 luglio 1938.

⁹ If we look closer, we see that in 1930, the *Ufficio comunale per l’orientamento professionale* [Municipal Office for career guidance] was opened in Florence, directed by Alberto Marzi (1907–1983). In Turin, the *Centro di studi del lavoro* [Center for Labor Studies] was established thanks to Augusto Venturi, who entrusted its direction to Alessandro Gatti (1901–1938) (Venturi, 1936). In Milan, the *Istituto di psicologia sperimentale per il Comune* [Institute of Experimental Psychology for the Municipality] was founded and directed by Casimiro Doniselli.

1915 and 1928, a transitional period occurred, characterized by the study of psychology and psychotechnical experience in the field of military aviation, which had previously focused on an exclusively medical and pathophysiological approach. The same author identifies the period from 1928 to 1935 as one devoted to psychotechnics. An interest in the labor issue characterized this phase. Indeed, in 1928 Gemelli published his research *Sul valore dei tempi di reazione semplice specie in ordine all'applicazione di essi alla selezione personale* [On the value of simple reaction times especially in order of their application to personal selection], as well as in 1929 *Contributi all'applicazione della psicologia all'industria: la diagnosi di abilità manuale* [Contributions to the application of psychology to industry: the diagnosis of manual skill] in which, going beyond the psychophysiological approach, he shows how manual skill is closely integrated with higher psychic processes, so the working man must be studied as a global entity. In his 1928 study, he critically analyzes the use of simple reaction time as a psychological index for assessing individual efficiency. Through experimental measurements, he shows that reaction time is influenced by many uncontrollable variables (attentional state, fatigue, practice, interindividual differences) and is therefore not a stable parameter. In his 1929 study, he examines how experimental psychology can contribute to the evaluation of manual skills in industrial settings. The article presents a series of psychomotor tests developed and tested by Gemelli himself to measure precision, speed, eye-hand coordination, and consistency of performance. The research shows that these skills can be reliably quantified through standardized and repeatable tasks, providing useful indicators for assigning workers to specific tasks.

From the 1920s onward, Gemelli was involved in applying psychotechnics to practical fields, particularly in shaping Italian industrial psychology. One of his key contributions was the establishment of the Istituto di Psicologia [Institute of Psychology] at the Università Cattolica del Sacro Cuore [Catholic University of the Sacred Heart] in Milan in 1924, which became a hub for research in psychotechnics and industrial psychology. Under Gemelli's leadership, the institute made significant contributions to the application of psychology in fields such as education, work efficiency, and military training (Spaltro, 1960). He outlined methods for scientifically evaluating workers' aptitudes through testing, helping place them in roles best suited to their abilities. In 1930, Gemelli published a list of the studies carried out at the Psychology Laboratory of the Catholic University under his direction. These were divided into two areas: the first concerned various applications for selecting and organizing workshop work, while the second concerned the study of workers' specific abilities. Through these works, Gemelli indicates how psychotechnics must contribute to harmony between the individual and the community. During the years of autarchy, Gemelli emphasized the national function of psychotechnics, focusing on optimizing human resources, increasing work efficiency, and training skills beneficial to the community. In other words, Gemelli conceived psychotechnics as a discipline serving the rational organization of work and the productive well-being of the nation. Gemelli (1930) himself stated that his Institute at the Catholic University in Milan achieved remarkable results in the field of psychotechnics, because numerous industries posed practical problems. Similar to other psychotechnicians of his time, Gemelli (1937) emphasized

the importance of matching workers to tasks not only to boost productivity but also to enhance worker satisfaction and well-being (see also Venturi, 1936). In another important study, Gemelli (1940) examined the psychological and physiological factors that affect worker efficiency, fatigue, and motivation. He applied experimental psychology techniques to study workers' mental processes, reaction times, and problem-solving abilities in various industries.

From 1931, at the University Institute of Psychology in Rome, Ponzo also conducted psychotechnical interventions, focused particularly on the school and work environments (Ponzo, 1947). In 1936, the Institute of Psychology of Rome was relocated by the regime to a newly established City University. This move established an institutional base for the Roman Institute, with the condition that its director, Ponzo, should apply psychological techniques in the nation's goals. As a result, Ponzo's research could no longer follow the trajectory of his Turin years but had to serve the regime's efforts to build a totalitarian state (Morgese, Lombardo & Albani, 2016).

Ponzo's psychological research, such as his experiments on tactile illusions (1910), the influence of habitual associative complexes (1913), and motor manifestations during mental activity (1920), aimed primarily to understand the fundamental mechanisms of the mind. In these studies, Ponzo investigated perceptual, sensory, and representational processes under controlled conditions, seeking to explain the universal principles that govern perception, attention, associative dynamics, and movement. His approach was both experimental and theoretical: he talked about "illusions", "distortions", and "associative effects". His concepts serve as tools for uncovering the internal structure of perceptual and cognitive functioning, but they do not point to any practical applications. In contrast, his psychotechnical studies, such as *Alla ricerca delle attitudini dei giovani* [In Search of Aptitudes in Young People] (1929) and, especially, *La psicotecnica nell'ordinamento del lavoro industriale* [Psychotechnics in the Organization of Industrial Labor] (1934), shifted psychological inquiry toward concrete applications. Here, the objective was no longer to explain perception for its own sake, but to use psychological methods to identify aptitudes, skills, and traits relevant to vocational guidance, personnel selection, and the rational organization of work. Ponzo focused on standardized tests, performance measures, and diagnostic procedures to place individuals in roles that fit their capabilities, while improving efficiency and reducing human error in industrial and educational settings.

In summary, general psychology in Ponzo's work sought to uncover the laws of mental processes. In contrast, psychotechnics applied this knowledge to solve practical problems related to aptitude assessment, vocational placement, and workplace organization. In his practical work, he also contributed to the establishment of medical-psychological assistance services at three National Boarding Schools, providing orientation services to direct students towards the field of study most suited to their abilities. These services also aimed to enhance "the physio-psychological qualities of young people" by identifying and treating any psychological disorders (Canestrelli, 1943). In this program, a so-called "medical-psychologist" conducted unstructured interviews aimed at probing the boy's mind to understand, in some way, what was defined as "his general personality" by evaluating temperament and character traits. The medical psychologist's goal

was also to highlight specific spontaneous inclinations in academic, artistic, and professional fields (Ponzo, 1947).

Ponzo classified students into characterological groups based on dominant personality traits, including intellectual, volitional, affective, and practical types. He aimed to establish reference points and general guidelines for applying pedagogical criteria. However, the implementation of his classification attempt, also designed for clinical applications, proved somewhat challenging, mainly because it was based on overly generic personal criteria that lacked a theoretical and methodological foundation specific to the psychology of the time, such as those derived from international psychometrics.

Different perspectives on the developments of psychotechnics

After analyzing a series of publications from the 1930s by Gemelli and Ponzo on psychotechnics, we found it difficult to discern the theoretical basis for their practical work. It is reasonable to assume that certain theoretical and methodological uncertainties among Italian psychologists determined this state of affairs. In other words, we think that in their attempt to defend themselves against the attacks of the neo-idealists, they probably lost sight of the need to reflect on the relationship between theoretical assertions and scientific method. We can point out that the split between general psychology and psychotechnics, typical of the Italian case, is evident in the epistemological positions developed over the years by its leading exponents. The split will be dealt with in more detail in what follows.

If we compare the attitude of both psychotechnicians, we see that in fact, Gemelli maintained a more nuanced position regarding psychotechnics due to his worldview and epistemological stance, which were based on a neo-Thomistic conception (we will return to Gemelli below). Ponzo, on the contrary, remained firmly convinced of the relevance of his psychotechnics by situating it within the field of general psychology.

The previous sections highlight various cultures present in Italian psychology during the pre-fascist period that changed to fascism (Landra, Gemelli, & Baniisoni, 1940; Morgese, Lombardo, & Albani, 2016). Especially in Rome at the beginning of the 20th century, there was a school of psychology that tended to apply the principles of experimental psychology to pedagogy and professional orientation (Foschi & Romano, 2022). In particular, the educational application of De Sanctis and Montessori seems to have predated the psychotechnical activities carried out by Ponzo at the Laboratory of Experimental Psychology (De Sanctis, 1922). For Ponzo, who arrived in Rome in 1931 after his experience in Turin with Kiesow, a follower of Wundt, it was therefore natural to focus on education. However, he was influenced by fascism and neo-idealist criticism, proposing a psychotechnics at the service of the authoritarian state. Therefore, the history of psychotechnics in Rome indicates a change in the trajectory of Italian psychology from an initially liberal and original approach to one subsequently conditioned by the new culture of the regime.

Throughout his career, Ponzo extolled the achievements of psychotechnical application and defended it against attacks from the hegemonic culture of neo-idealism. In 1947, he stated that, in Italy as in other countries, psychotechnics had to fight against dangers that

threaten it from the very beginning of its development. According to Ponzo, the psychotechnician had to struggle against those who considered this discipline a technique, against those who separated it from general psychology, and against the unpreparedness of those who were supposed to apply it without sufficient preparation. He argued that the psychologists had to fight off supposed amateurs continually (Ponzo, 1947). He also extolled the achievements in testing, made possible through collaboration with engineers, labor technicians, athletes, and school physicians. Ponzo was vocal about the “idealist culture” opposing scientific psychology in the design of a school guidance intervention (Ponzo, 1947, p. 83).¹⁰

While Ponzo’s position with respect to psychotechnics remained unchanged over the years, Gemelli’s varied. Moreover, Gemelli’s approach emerged in a different context. His studies in psychotechnics began in response to the needs arising from the outbreak of World War I, with an initial focus on aviators. Later, they shifted toward measuring workers’ manual skills for personnel selection and career guidance, during a period when neo-idealism began to dominate Italian culture. In fact, Gemelli was initially committed to demonstrating the legitimacy of psychology as a science; he believed that through the application of psychotechnics, he could also demonstrate this legitimacy. However, at a later stage in his life, when he spoke about the work done under his direction at the Institute of Psychology, he pointed out that “only a small part of the activity of both managerial and assistant staff was devoted to psychotechnics” (Gemelli, 1930, p. 164). Moreover, Gemelli considered the tests administered during worker selection as diagnostic of manual skills rather than psychological experiments in the strict sense of the term (Gemelli, 1930).

Thus, a discrepancy emerges in the two positions indicated by Gemelli. While committed to psychotechnical applications, he emphasized that this area does not fully belong to the field of psychological research in the strict sense and that he regarded it as a secondary activity within his research at the Institute of Psychology (Gemelli, 1933). Between 1930 and 1940, Gemelli initiated a polemic against the scientific organization of labor. He argued that modern industry required a more rational organization of production to facilitate its rapid and prodigious development. Echoing earlier attacks of the 1910s and 1920s (see the article by Mülberger in this issue), he reproached Taylor for completely neglecting man in order to concern himself exclusively with production. In essence, Gemelli meant that it is not man who must be adapted to the machine, but the machine to man. In summary, following his view, the task of psychotechnics was to make the organization of work as helpful as possible to both the worker and productivity.

¹⁰ In 1936 Ponzo made a proposal to institute a medical examination at the beginning of technical schools to ascertain the presence of medical contraindications to certain professions. The Ministry of National Education ordered the practical implementation of this proposal at technical schools in various parts of Italy. Through that proposal Ponzo also obtained the establishment of a National Commission to study the problems of Vocational Orientation within the technical schools themselves and extended to all school orders following the declaration of the School Charter in 1939. However, within that commission were philosophers and pedagogists who sharply criticized the concept of Vocational Orientation and opposed its spread, fearing that it might replace or overlap with that of education.

Gemelli had already voiced these criticisms in the 1930s, probably influenced by a phenomenological and religious conception. He believed that although psychotechnics could offer advantages in economic efficiency and accident prevention, it could also reduce individuals to a series of measurable aptitudes, ignoring deeper aspects of personality and human aspirations. Subsequently, Gemelli began to develop a more severe critique of the utilitarian approach to psychotechnics, which tended to view human beings primarily as resources to be placed “in the right place” to optimize productivity. Furthermore, for him, psychotechnics partly reflected a Taylorist mentality at the expense of a more holistic view of the human being.¹¹

In some ways, Gemelli could be said to have developed a more conscious strategy than Ponso in redirecting research activities into the psychotechnical field to defend the discipline of psychology against neo-idealism’s attacks. Gemelli proceeded with extreme caution in the field of psychotechnics, also because he was aware that it could become a mechanistic technique rather than one aimed at the wholeness of the human being. Moreover, he opposed the use of psychotechnics solely to increase productivity. Since Gemelli’s shifts were influenced by “political” changes, it became easier for him to downplay the value attributed to psychotechnics as the fascist regime entered into crisis. In a book dedicated to Gemelli by one of his pupils, Enzo Spaltro (1929–2021), a social and applied psychologist, sustained that after an initial period of enthusiasm, “[...] to the security of the neophyte [...], there succeeded the insecurity of the mature researcher and the expectation and suspicion of a uselessness or rather a dangerousness of the discipline to which he had been devoted for so many years” (Spaltro, 1960, p. 66).

The role of Italian psychotechnics during the fascist era (1922–1945) reflects the difficulty of Italian psychologists in maintaining a scientific and professional identity in an illiberal period. With the liberation of Italy, Italian psychologists were accused of having been in the service of the fascists, and Gemelli was put on trial, risking expulsion from Italian universities (Bocci, 2003). Psychology in particular was identified entirely with psychotechnics and accused of being a kind of pseudoscience in the service of the regime, promoting the exploitation of workers in industrial labor (Berlinguer, 1960; Massucco Costa, 1963, 1965). Proof of this came in a long controversy that took place shortly after WWII in the pages of *L’Unità*, the newspaper of the Italian Communist Party, between Antonio Banfi (1886–1957) and Cesare Musatti (1897–1989). Banfi was a politician and philosopher who accused psychology of being “[...] like a girl who has just left boarding school, who acts a little like a grown woman, flirts a little without restraint, now giving herself an air of strict scientificity and claiming to dictate rules to judges, teachers, legislators, entrepreneurs, and business executives, now enjoying commenting on current events and history, joking about morality, art, and literature,” warning psychology against missteps dictated by a naive presumption of scientificity (Banfi, 1950, p. 3). Banfi gave voice to a culture widely shared by the new post-fascist ruling class, which was critical of psychology as a bourgeois science that could be exploited

by both the right and the left, as demonstrated by psychotechnics during fascism. Musatti responded by saying that what Banfi was criticizing was not true psychology but only psychotechnics. Musatti explained that psychologists, himself included, were forced to practice psychotechnics, but that it could not be considered an actual science, but rather “[...] only an applied science, psychology applied to technical problems at work, and it relates to true psychology in the same way that construction science relates to physics or accounting relates to mathematics” (Musatti, 1950, p. 534). Musatti’s words revealed an attempt to distance himself from fascist psychotechnics, aiming to present a more distinctly scientific and experimental characterization of psychology, free from practical contamination (Lombardo & Foschi, 1997). This occurred during the early Cold War, a period of reconstruction of Italian psychology, when academia favored basic and experimental research over all forms of application. Over the years, Italian psychologists reopened themselves to applications, but the word psychotechnics almost disappeared from the psychological lexicon, and it was preferred to speak of work psychology, school psychology, etc. (Marzi, 1953; Lombardo & Romano, 2022).

Conclusions

Italian psychology originated in an experimental tradition shared with other European countries, particularly Germany. Figures such as Ardigò, Sergi, and Buccola laid the foundations for a scientific approach that sought legitimacy within the natural sciences. However, the post-World War I period introduced a rupture. On the one hand, the autarkic policies of the Fascist state demanded that disciplines demonstrate practical utility in service of national objectives, especially in education, labor organization, and military preparation. On the other hand, the philosophical dominance of neo-idealism, particularly under the influence of Croce and Gentile, undermined the psychologists’ aspiration towards scientific legitimacy. Neo-idealism questioned the very possibility of a science of the mind, relegating psychology to a purely descriptive, non-theoretical activity.

Within this framework, psychotechnics was introduced, not as the “natural” evolution of experimental psychology but as a survival strategy. It allowed Italian psychologists to maintain institutional presence and funding by reframing their area as a technical discipline, devoted to measurable problems—aptitude testing, manual skill assessment, personnel selection—that were deemed acceptable within the Fascist state and the neo-idealist academic system.

This delicate situation is reflected in the diverging positions of two central figures in Italian psychology: Agostino Gemelli and Mario Ponso. Both were trained in experimental psychology and engaged in applied research, playing a key role in the institutionalization of psychotechnics in Milan and Rome, respectively. However, their epistemological orientations differed significantly. This divergence reflects not only personal convictions but also the different “schools” they were positioned in, which determined their institutional and cultural environment: Ponso “inherited” the pedagogical-experimental line of De Sanctis and the Roman school. Gemelli integrated his psychological agenda with Catholic neo-Thomism and a certain political prudence within a corporative state. Their positions

¹¹ One of Gemelli’s sources was also Elton Mayo (1880–1949), who, as early as 1933, in his volume *The Human Problems of an Industrial Civilization*, implicitly criticized the economic view of profit as the sole driving force.

illustrate how Italian psychology, far from being a unified field, constituted a fragmented and contested terrain.

During the Fascist period, psychology was a discipline in crisis, struggling to survive censorship, top-down rule, and the monolithic ideological dominance of the Regime. This problematic situation forced the psychologists to reject international schools and theoretical models on which psychology was becoming increasingly established. Before fascism in Italy, there were *Gegenstandstheorie*, Gestalt theory, Brentano's phenomenology, Wundt's structuralism, psychoanalysis, and French pathological psychology. With fascism, the diverse cultures of Italian psychology were repressed, and in the end, only a psychotechnics without a strong theoretical foundation remained (Lombardo & Foschi, 1995, 1997). During fascism, Gemelli and Banissoni, a Roman academic psychologist, clearly rejected all forms of new theories of psychology that they considered too theoretical:

Just as there is no 'theory,' 'system' or 'conception' of physics or any other experimental science, so there cannot be one for psychology. At most, there may be a preference for one methodological approach or another. Going beyond these limits is the realm of philosophy, not scientific research (Gemelli & Banissoni, 1941, pp. 801-802).

So, Gemelli distanced himself from the major psychological paradigms of the twentieth century and, for this reason, encouraged psychological research that would set aside the theoretical frameworks that were spreading during the first half of the century. On the other hand, by doing so, Gemelli sought to avoid fragmentation and keep Italian psychology alive.

Thus, we can conclude that during Fascism, Italian psychologists avoided problems with the dictatorship by proposing a utilitarian techno-science, such as psychotechnics, to manage behavior and organize the totalitarian state without recourse to any philosophy or theology. The decision to favor psychotechnics during Fascism was, in fact, dictated by the regime's policy of social control. Psychotechnics promoted, indeed, psychological devices that neither citizens requested nor aimed at the well-being of individuals, but were, above all, technical applications useful to the totalitarian regime established by Benito Mussolini to attain and maintain power. This kind of applied psychology was thus implemented during the dictatorship to control people's lives and serve its objectives, particularly in the fields of work and education. Within this framework, the Fascist regime employed political and cultural strategies to penetrate all spheres of social life, subordinating individual interests to collective goals and promoting a hierarchical and organic vision of society (De Felice, 1974). Psychotechnics during the dictatorship, therefore, also had a biopolitical function (Foucault, 2015).

Propaganda and education were central instruments in this process, as exemplified by Giuseppe Bottai's *La carta della Scuola* (The charter of the School) in 1939 (Amore Bianco, 2017), which aimed to consolidate the regime's values through a lasting cultural reorientation. Science, including psychology, was increasingly mobilized by government as a tool of legitimation and social regulation (De Felice, 1995; Romano & Foschi, 2026). Academic psychology was, thus, encouraged to adopt applied and socially "useful" orientations, as can be seen by the

turn of the Institute of Psychology at Sapienza University of Rome under the direction of Mario Ponso, which aligned its activities with the regime's totalitarian demands (Morgese, Lombardo & Albani, 2016). At the same time, experimental psychology was increasingly marginalized, regarded as too closely associated with positivism and incompatible with Fascist spiritualist and nationalist ideology. This tension became explicit in 1938, when the Institute of Experimental Psychology at the University of Rome officially lost the designation "experimental" following Bottai's educational reforms (Lombardo & Romano, 2023).

In sum, the present research shows that the political changes in Italy in the 1920s and 1930s led to the identification of scientific psychology with psychotechnics, and, as a result, the postwar generation of psychologists faced the challenge of redefining the discipline's identity.

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