

Bookreview - Buchbesprechung

Paolo Bozzi's Experimental Phenomenology, ed. by Ivana Bianchi & Richard Davies (2018), London: Routledge, 430 Pages, 14 Color Illus, 132 B/W Illus, € 145,93 (Hardcover, also Paperback and eBook available), ISBN-13: 978-0815378464.

Paolo Bozzi (1930–2003), an Italian experimental psychologist and philosopher, was one of the most brilliant exponents of experimental phenomenology. His scientific and theoretical contributions to vision sciences, cognitive psychology and philosophy of perception are original and wide ranging. Moreover, his reflections and experimental findings are well expressed in an accessible and inspiring style, and can be attractive not only for academic readership but also for a wider one.

Prior to this anthology, the majority of Paolo Bozzi's publications (about 100 articles, book chapters and monographs) had not been translated into English, except for a few papers, and he is still not as well-known internationally as he should be, except to the scholars who have met and appreciated him. This edited volume, conceived by Ivana Bianchi (University of Macerata, Italy) and Richard Davies (University of Bergamo, Italy), is therefore welcome, as it translates and introduces part of the work of Paolo Bozzi to a wider world.

This book not only attempts to give a better appraisal of the historical and scientific profile of Paolo Bozzi in the history of psychology and epistemology of perception but also aims to place his thinking in the light of recent progress in vision sciences and cognitive psychology. For this reason, the editors of the present anthology invited a team of scholars, experimental psychologists and philosophers to provide commentary for each article included, showing that it is possible to conduct productive and fertile dialog between contemporary vision scientists and epistemologists around Bozzi's insightful and fruitful ideas.

The main fundamentals of experimental phenomenology itself – regarded as a natural science of perception, as Bozzi states – are still relevant topics of discussion, as evinced by many publications, for example, the reprint volume by Thinès, Costall and Butterworth, *Michotte's Experimental Phenomenology of Perception* (2014), Albertazzi's *Handbook of Experimental Phenomenology* (2013), the new edition of Don Ihde's *Experimental Phenomenology: Multistabilities* (2012) and Niveleau and Métraux's *The Bounds of Naturalism: Experimental Constraints and Phenomenological Requiredness*. In addition, as noted by Maurizio Ferraris in

his commentary on *Phenomenal Experience, Epistemic Experience and Psychological Experience* (p. 76),

“the last book on which Hilary Putnam was working before his death in 2016 focused on perception (and he claimed that, unless one understands that, one cannot understand anything in philosophy), or that the title of the most recent book by John Searle, *Seeing Things as They Are* could have appeared half a century ago from Paolo Bozzi’s pen, so innovative was he as to seem out of joint with his times”.

The anthology presents a selection of 18 previously published papers and chapters of his main books, *Fisica ingenua* [Naïve Physics] (Garzanti, Milan, 1990) and *Fenomenologia sperimentale* [Experimental Phenomenology] (Il Mulino, Bologna, 1989), only three of which were originally published in English. The selections are thematically grouped into four parts, plus a section of afterthoughts at the end of the book, in which Paolo Bozzi illustrates his original contributions to the theoretical and methodological assumptions of gestalt psychology and experimental phenomenology.

The goal of experimental phenomenology, states Paolo Bozzi, “is to build a theory of perception that is empirically grounded, which is to say naturalistically respectful of the events that it takes as its proper subject” (p. 81). The object of experimental phenomenology, in comparison to alternative perceptual theories, is “phenomenal experience”, that is, “what is directly under observation”. Phenomenal experience has to be distinguished from epistemic experience (i.e. the kind of experience described by means of instruments and measurements, generally taken as the realm of facts that are truly real, beyond all the factors due to the imperfections of the human senses) and psychological experience (i.e., individuals’ psychological experience, the psychism of each of us). Paolo Bozzi’s original contribution is to ground the theoretical bases for a science of observables *iuxta propria principia*, independent of any type of physical reductionism or neuroreductionism. A crucial principle in this direction is also to draw a clear distinction between seeing and thinking, i.e., the distinction between what we see and what we know about what we see, without falling into the different variants of stimulus errors.

From a methodological point of view, on the other hand, the scientific aim of experimental phenomenology is to discover structural laws of experience by the systematic and controlled variation of a phenomenal variable as a function of another phenomenal variable. In other words, independent variables (for instance, the angles subtended by the two arrows in the Müller-Lyer illusion) and dependent variables (the apparent difference in length of the two parallel lines) are both individuated on a perceptual level. While the first three parts of the book collects papers aimed at giving a theoretical and methodological background of

experimental phenomenology, the last part presents a selection of the scientific discoveries made by Bozzi. They regard the phenomenological analysis of pendular harmonic motion and the conditions for “natural” motion along inclined planes (studies that now are known as part of a research area called naïve physics), directionality as a new factor of perceptual grouping, two factors of unification for musical notes: closeness in time and closeness in tone (he was also a passionate violinist and an esteemed musical composer), observations on some cases of phenomenal transparency with line drawings, original observations on certain characteristics of afterimages and the perception of tertiary qualities.

I will focus on the last subject, tertiary qualities, to give a taste of the contemporary importance of Bozzi's theory. “Perceptual events” – says Bozzi, referring to the gestaltists and also to Michotte's paradigm of phenomenal causality and to the Gibsonian concept of *affordance* – “are always the vehicles of “expressive” or “tertiary” qualities, that is they always convey meaning”. “A sound or a face may be aggressive, a melody like a dish may be sweet, a thing may provoke fear or attraction” (p. 410). Not only faces or anthropomorphic bodies but even simple geometrical shapes, since Heider & Simmel's demonstration (1944), despite their inanimate character, can express aliveness, emotions and intentional attributes by virtue of their motion. In recent years, there have been a wide range of experimental results related to the perception of *animacy* and *intentionality* from motion cues, which have given a strong psychophysical and neurophysiological support to this view, demonstrating that the impression of aliveness and meaningfulness of these events is surprisingly vivid, immediate and compelling and that they are strongly related to low-level visual processing, despite the seemingly higher level impressions they prompt. According to several authors, we perceive animacy and intentionality automatically, in the same manner that we perceive spatial depth or optical-geometrical illusions (see Wagemans, van Lier, & Scholl, 2006; Parovel, Guidi, & Kreß, 2018; Scholl & Gao, 2013 for a review).

More generally, in my opinion, the power and timelessness of experimental phenomenology, a line of thought that Bozzi traces back to Goethe and Kant, and even to Plato and Aristotle (see Costall, p. 424), is the fact of being focused on the empirical knowledge of the perceptual world, the real world of our living experience *hic et nunc*. Even if perhaps we refuse to believe this, it is still a mysterious world, about which, paradoxically, we know little. Kanizsa's triangle (Kanizsa was Bozzi's mentor), one of the most experimentally and neurophysiologically explored perceptual phenomena, was not known before 1955; in the same way, stroboscopic motion, with all its cinematographic applications, was not even conceivable two centuries ago.

“What I'm emphasising is that our knowledge covers only about 10% of the properties present in the world that surrounds us and that the remaining

90% has still to be discovered. If we do not seek, we shall not find. These are the kind of facts that physiology will have to explain, and not a simplified perceptual world that simply does not exist. This more complex world is what has to be explained by informatics or by the different branches of the neurological sciences, because this is the real world of vision, not that impoverished and approximate world that we carry in our heads as our image of visual reality” (Bozzi, 412).

Many recent works, both in the area of artificial vision and informatics, and in neurophysiology, testify to the strong need for these disciplines to face the phenomena themselves, by correlating phenomenological observations with psychophysical measurements and neurophysiological recordings (see for instance Spillmann, 2009; Reeves & Pinna, 2017). Examples of these include neural–network computer models that have to be fooled by optical illusions and other “illusory” contextual phenomena like humans (Mély, Linsley, & Serre, 2018), and algorithms and neural models that can recognize emotions from body expression (de Gelder, 2017) to be applied in human–robot interaction.

As optical illusions, Gestalt effects in general, and even emotional and expressive qualities of events, are no more to be considered a bug of the visual system, or the results of high-level judgments and categorizations based on visual input, but structural laws of visual processing itself (Firestone & Scholl, 2016). These dimensions of the visual field cannot be ignored in an interdisciplinary organic approach to vision science but have to be recognized and appreciated in all their richness and complexity. Most of them are still awaiting to be discovered.

The reviewer hopes that this anthology will further encourage the growing and fruitful connections between experimental phenomenology – too often considered the younger sister – and other scientific approaches to human perception.

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