Introduction
The Meaning of Gestalt Psychology

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The papers presented in this issue address the following question: What is the status of the psychology of Gestalt in contemporary experimental psychology? Of course, everybody agrees that today the Berlin school as such does not exist anymore. The problem is, if something of seminal survives among its ideas.

Our introductory paper presents what are in my opinion the most important concepts of Gestalt psychology: auto-organization, isomorphism, field theory, *Prägnanz,* and the distinction between global and local factors. My aim is to show that these ideas have inspired much current research. I argue that by considering three approaches: field dynamics, non-linear systems, and computational Gestalts.

Dejan Todorović's article is mainly concerned with the problem of the origin of Gestalt factors – i.e., Wertheimer's principles of perceptual organisation. There is a long European (and Japanese) tradition, according to whom Gestalt psychology is basically a sort of experimental phenomenology – nothing to do, of course, with "phenomenological psychology". According to this approach, phenomenal objects must be explained "*iuxta propria principia*". Todorović rejects this conception, and after discussing the role of past perceptual experience, supports the view that the origin of perceptual factor must be traced back to the activity of the nervous system. However, he stresses that this debate is more matter of speculation than of empirical evidence.

The paper by Cees van Leeuwen, David Alexander, Chie Nakatani, Andrey R. Nikolaev, Gijs Plomp, and Antonino Raffone, is focused on a theme that may appear peripheral in this context: the lack of the concept of attention in

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Gestalttheorie. Instead, attention is one major topic in cognitive psychology; in some sense, one may say that the cognitive revolution began just by putting this concept in the centre of the interest of experimental psychologists. But is it true that attention is missing in Gestalt theorising? Van Leeuwen and colleagues persuasively argue that this concept can be appropriately reconceptualised in the terms of figure-ground articulation, a matter, on which Gestalt psychology gave the most valuable contributions.

Sergei Gepshtein, Ivan Tyukin, and Michael Kubovy focus their attention on one principle of perceptual organisation, the proximity principle. They convincingly demonstrate that this principle, invoked by many authors as a possible candidate for a single unifying factor, does not generalise to dynamic scenes, for no spatiotemporal proximity principle governs the perception of motion. Instead, two characteristics of the visual systems, that is, the intrinsic limitations of visual measurements and the constraints on the number of measurements that the visual systems can perform concurrently, can explain the perceptual results where the proximity principle fails.

In the last paper, Raymond Pavlovski shows how Recurrent Neural Networks (RNN) can reproduce typical Gestalt properties of the visual system. In this case we have an inversion of perspective: Pavlovski does not try to investigate the compliance of Gestalt principles to experimental results, but starting from the simulation he argues that the mathematical category modelling RNN describes both perceptual gestalt and large-scale neural network states.

We are aware that the contributions herein gathered offer only a limited glimpse on what Gestalt psychology is able to say to contemporary psychology. Nevertheless, we hope that they sufficiently demonstrate that Gestalt psychology is not just a chapter of a textbook about the history of psychology.