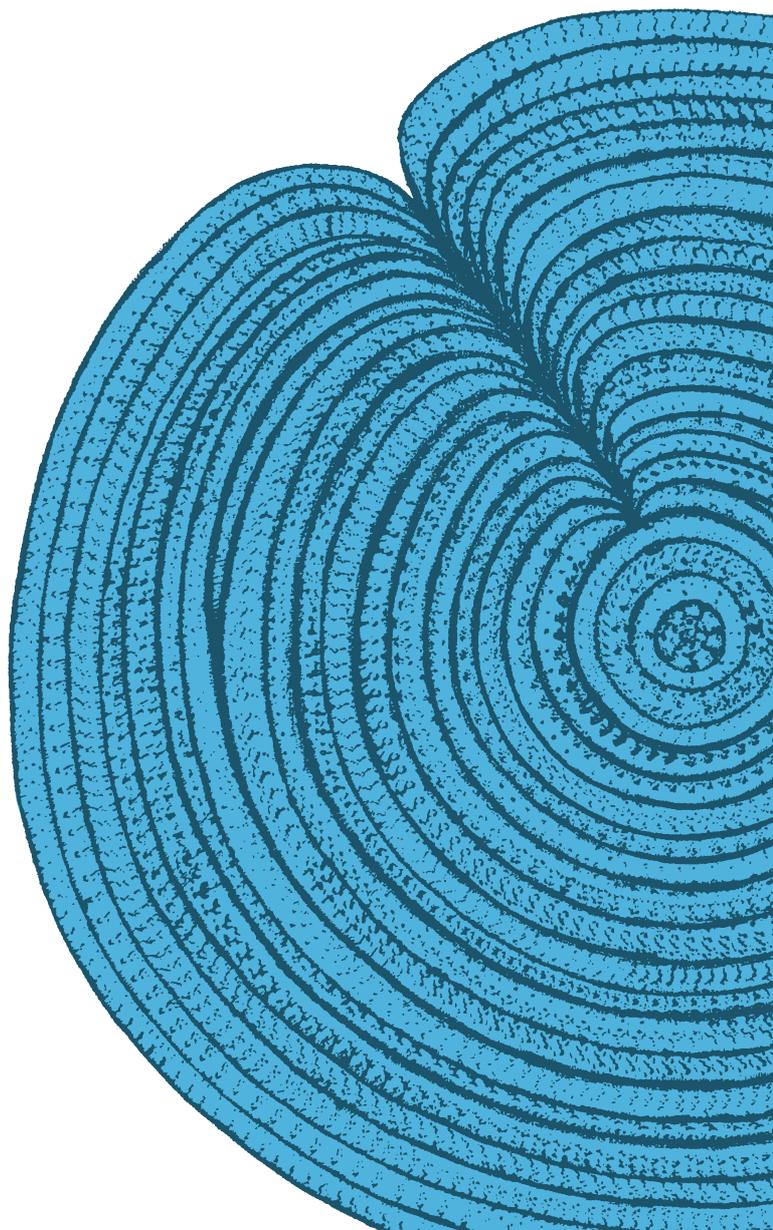




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TSPC2016

Proceedings of the
Trieste Symposium on Perception and Cognition
November 4



edited by
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Carlo Fantoni
Walter Gerbino

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Preface

This book of proceedings collects the abstracts of talks and posters presented at the *Trieste Symposium on Perception and Cognition 2016*, organized by the Psychology Unit of the Department of Life Sciences, University of Trieste, and held at campus on the 4th of November.

This year TSPC2016 did also include the 24th annual *Kanizsa Lecture*, which has been delivered, as a special event fitting into the long tradition of *Kanizsa Lectures* opened in 1993 by Irvin Rock (see The Kanizsa Lectures list).

The TSPC2016 book of proceedings opens with the abstracts of the 24th Kanizsa Lecture held by the 2016 invited speaker W. Tecumseh Fitch, Department of Cognitive Biology, University of Vienna, Austria.

A second contribution of the TSPC2016 book includes abstracts from the "Roundtable Comparative Perception: A tribute to Professor Mario Zanforlin" (Organizer: Cinzia Chiandetti). The roundtable featured 5 key speakers – Osvaldo Da Pos, Yegor Malashichev, Christian Agrillo, Daniel Osorio, and Meta Virant-Doberlet - in the field of comparative perception and cognition honouring the memory of Professor Mario Zanforlin, who has recently passed away. The invited speakers show that the comparative perspective with which to look at various phenomena that has been Mario's approach will continue to prompt works in the broad fields of perception and cognition. Osvaldo Da Pos, worked on aggressive behaviour and steroid hormones in human and non-human species but later he focused on perception and specifically on colour perception. His main contribution has been the application of the model of transparency to chromatic colours. Within this roundtable, he witnessed the everlasting bond between Padova and Trieste and discussed about the relationship between Stimuli and Context in perception. Yegor Malashichev, works on lateralization and his contribution follows the guidelines of the true European ethological school: observing an organism in its own environment. From

reptiles to whales, from frogs to kangaroos he showed that humans aren't all that unique and claimed about Mother-infant lateral biases in humans and wild animals: conservatism of the phenomenon and its benefits for fitness. Christian Agrillo, after studying biological motion in the chicks, has specialized on numerical representation running experiments with different animal species and recently has started to investigate visual illusion in animals. Christian presented his latest studies in monkeys and fish. Daniel Osorio, studies colour vision and object recognition by observing different animal species from butterflies to primates. He has also investigated symmetry perception in the chick with two influential Mario's students, Lucia Regolin and Giorgio Vallortigara. Daniel is involved in animal welfare and is part of a team writing the guidelines for the use of cephalopods. In his talk, he provides insights on How Cuttlefish see objects. Meta Virant-Doberlet studies vibrational communication in insects. She investigates this intriguing, and unsuspected, signalling trying to respond to all 4 Tinbergen's questions and has presented "A day in a life of a bug linguist".

The third part of the volume collects abstracts of talks and posters presented at regular oral and poster sessions of TSPC2016.

Each abstract published in the proceedings has been evaluated by an anonymous expert reviewer and by the organizers. The list of anonymous reviewers who supported the editorial process is reported in the next section.

About 54 active participants gathered at TSPC2016, coming from Italy and other European countries (Serbia 7, Germany 2, Greece 1, Slovenia 1, Hungary 1). It featured 9 talks and 45 posters. The book of proceedings includes written reports of all talks, and 40 out of 45 posters. Several areas of cognitive science were covered, including: perception (talks 4, 6, 8; posters 4, 5, 17, 24, 27, 29, 36); mindfulness (talk 1); action and perception (talk 6; posters 4, 19, 22, 30, 34); attention (posters 7, 29); memory (talk 3, 7; posters); learning (poster 17); development (posters 14, 23, 25, 31, 33); language (poster 13, 39); problem solving and reasoning (poster 20); personality (posters 11, 18, 25); decision-

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making (poster 20); concepts and categorization (talks 2; poster 4, 16, 33, 38, 39); social cognition (talk 4, 5; posters 6, 9, 40); animal cognition (talk 9; posters 1, 3, 8, 15, 36, 37); neuropsychology (poster 2, 10, 12, 22, 26, 28, 35, 38); rehabilitation (posters 22); developmental disorders (posters 2, 5, 10, 12); applied psychology (poster 7, 21, 28, 30, 32, 34); executive processes: monitoring, inhibitory control (posters 7, 14, 18, 23, 35);

In terms of disciplines, contributions included modelling, behavioral experiments with humans and animals, cognitive neuroscience, linguistics, philosophy, and vision.

We thank all authors who submitted an abstract to be included in the proceedings, and the reviewers who supported the editorial process with their fast and constructive reactions.

Finally, for their institutional and financial support to TSPC2016 we thank the Department of Life Sciences and the PhD program in Neural and Cognitive Sciences of the University of Trieste.

Paolo Bernardis
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Does the dimensionality of the perceived size play a role in the SNARC-like effect for visual illusions?

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The Spatial-Numerical Association of Response Codes (SNARC) effect is considered evidence of the association between number magnitude and space, and consists of faster left key-press responses to small numbers and faster right key-press responses to large numbers [1]. Recent studies found that this association extends to non-numerical magnitudes, such as to luminance [2] and to the physical size of pictorial surfaces [3]. Sarcetta, Prpic, Murgia, Galmonte & Agostini (2015) [4] investigated whether this effect extends to phenomenal size of two-dimensional figures. Authors found a SNARC-like effect associated to the physical size of the inducers used in the Delboeuf size-contrast configuration (i.e., closed rings) and the Kaniza's triangle (i.e., pacmans). No SNARC-like effect was instead observed for the phenomenal size of the two-dimensional figures (i.e., filled circle and illusory triangle). The present study further extends this line of research aiming at investigating if a SNARC-like effect occurs for the phenomenal size of one-dimensional (rather than two dimensional) figures. The Muller-Lyer and the Ponzo illusions were considered. For the "Muller-Lyer" experiment, participants were required to compare two equally long, but perceptually different lines presented simultaneously to the left and right side of the screen. In the first session participants had to press the left key when the (apparently) longer line appeared on the left side of the screen and the right key when it appeared on the right. In the second session participants had to detect the line that appeared shorter rather than longer. For the "Ponzo" experiment, participants were required to compare two equally long lines simultaneously presented to the left and right side of the screen, that were displayed within the Ponzo's inducers. The procedure and the response assignments were the same as in the Muller-Lyer experiment. Results suggest that the phenomenal size experienced in both geometrical size illusions did not elicit a SNARC-like effect. Similarly, no evidence was found that the physical dimensions of the inducers elicit a SNARC-like effect in neither the Muller-Lyer nor the Ponzo configuration. This result, taken together with the result of Sarcetta et al. (2015), suggests that a SNARC-like effect can be elicited only by the physical size of pictorial surfaces and not by the phenomenal size of neither two-dimensional nor one-dimensional figures.

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