

# The double constraints of convention and cognition in successful graphic design

Pino Trogu

*cognition, context, convention, shared knowledge, working memory*

*Using insights from cognitive psychology this paper develops a theoretical orientation to graphic design critical of Bertin's structuralist doctrines, but highly respectful of the insights offered by art historians like Ernst Gombrich, who stress the sociality and cultural contingency of visual forms. The paper discusses the constraints imposed by cultural expectations as well as the universal constraints imposed by working memory. Cognitive science has found that closure must occur in any perception within a stringent time limitation of just a few seconds. While this time limitation cannot be overcome directly, the designer can employ culturally conditioned devices that minimize its adverse effects. This speed-up effort can be aided by taking into account the finding that visual experience is unconsciously attended by a verbal component – a duality that should be exploited even when designing a mute visual artifact such as a poster. In sum, perception is construction, and an effective graphic can overcome the inherent polysemy of signs and forms only by exploiting the shared knowledge that is quickly available to the viewer's mind within a specific cultural moment. Visual examples, including subway maps, and an 1869 historical map are used to illustrate the key concepts of the paper.*

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