
**Abstract**

We adopted the Psychological Refractoriness Paradigm to study whether visual pattern Goodness affects central processing load in a same-different task. In a dual-task experiment, 2-Alternative Forced Choice auditory classification was followed by a same-different task in which Garner’s classical five-dot patterns were presented. Goodness of these patterns and stimulus-onset asynchrony (SOA) between the first and second task were varied between trials. Participants used a physical sameness criterion; only patterns of the same shape and orientation were responded to as same. Strong effects of pattern Goodness and SOA were found, and both factors had additive effects on response latencies. This result was taken as evidence that pattern Goodness determines central processing load in the physical sameness task. The result is consistent with Lachmann & van Leeuwen (2007 a), in which a categorical sameness task was used. Comparing both studies it was concluded that Goodness reduces the central processing load of visual stimulus information independently of task variation.