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Beyond Faces and Expertise:

Face-Like Holistic Processing of Non-Face Objects in the Absence of Expertise

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Supplementary Statistical Results

In **Experiment 1b**, the 2 (Alignment) by 2 (Congruency) by 2 (Task) ANOVA also revealed an alignment effect, $F(1,19) = 6.30$, $p = .021$, $\eta_p^2 = .25$, and a significant interaction between congruency and task, $F(1,19) = 7.11$, $p = .015$, $\eta_p^2 = .27$, which was driven by a large congruency effect for line patterns than for faces (see main text).

In **Experiment 2**, the three-way ANOVA also revealed a significant effect of task, $F(1,21) = 26.78$, $p < .001$, $\eta_p^2 = .56$, showing better performance for faces than dot patterns (2.83 ± .10 vs. 2.01 ± .18), and a significant effect of alignment, $F(1,21) = 22.90$, $p < .001$, $\eta_p^2 = .52$, showing better performance for aligned than misaligned trials (2.61 ± .10 vs. 2.23 ± .14). The interaction between alignment and task was significant, $F(1,21) = 21.18$, $p < .001$, $\eta_p^2 = .50$, which was driven by a significant alignment effect in dot-pattern task but not in face task (see main text).

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Figure S1. All stimuli of line patterns used in Experiment 1. Pairs 1-20 are used for Experiment and 21-24 for practice. Dot patterns used in Experiment 2 are identical to line patterns except that the lines were replaced with dots. The exemplar stimulus sequences shown in Figure 1b of the main text was based on the two line patterns illustrated in the pair 4.

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Table S1. Analogue of faces to Gestalts in selected face perception literature.

Sources	Quotes
Young, Hellawell, & Hay (1987)	*We take in a seen face as a 'whole' … This importance of the facial gestalt has perhaps been most neatly expressed by Carey and Diamond (1977), who drew a distinction between individual facial features themselves and the configuration formed by these features (p748)*
Farah, Wilson, Drain, & Tanaka (1998)	*Most hypotheses about face representation highlight the importance of the overall structure or "gestalt" of faces relative to other kinds of objects that people recognize (p482)*
Maurer, Le Grand, & Mondloch (2002)	*When adults detect the first-order relations of a face, they tend to process the stimulus as a gestalt, making it harder to process individual features (p256)*
Pellicano & Rhodes (2003)	*… recognition accuracy decreases when the [face] halves are aligned compared with when they are misaligned, because a new "Gestalt" emerges when the two halves are aligned (p618)*
Le Grand, Mondloch, Maurer, & Brent (2004)	*[Facial] parts are integrated into a whole or Gestalt-like representation, thereby reducing the accessibility of information about individual features (p762)*
Richler, Gauthier, Wenger, & Palmeri, (2008)	*Holistic processing of a face during encoding creates a holistic representation of the study face in memory, in which the face parts are notexplicitly represented but the entire face is represented as a whole or gestalt (p341)*
Gold, Mundy, & Tjan, (2012)	*… similar to the Gestalt notion that the whole is more than the sum of its parts, a face is analyzed as a single unified entity, and the spatial relationships among the features are encoded as part of the representation (p427)*
Rossion (2013)	*Human face being considered as the quintessential whole, or Gestalt … in a composite face the whole is different than the sum of its parts, the whole taking properties that are novel, unpredictable, or even surprising. These elements of novelty and surprise, referred to as "emergent features" (Pomerantz & Portillo, 2011), are at the core of a Gestalt (p144)*
Curby, Goldstein, & Blacker, (2013)	*If face perception is governed by the same gestalt grouping principles that apply to nonface objects, misaligning the face parts should impact on the integrity of a face's "objecthood"—that is, the strength with which the parts*

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are grouped into a single entity (p83)

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