When Context Hinders: Learning-Test Compatibilities in Face Recognition

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Various competing models exist in regard to the representation involved in face recognition. The holistic approach proposes that faces are represented holistically, and cite empirical evidence found in studies in which recognition of facial parts was superior from facial context (Tanaka & Farah, 1993, QJEP). Alternative approaches emphasize the special role of relational features in face processing (Leder & Bruce, 2000, QJEP). To test whether the context generally provides a superior condition for face recognition, we present two experiments in which complete faces as well as isolated facial parts are employed as conditions in test and (between subjects) in the learning phase. When context was identical in all faces recognition rates were higher in the conditions that corresponded to the learning condition. Using real faces in experiment 2 likewise did not reveal an advantage of the "full face" conditions. The results are not in accordance with the holistic approach but point to the importance of learning-test compatibilities.