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Thorsten Scheiner* (thorsten.scheiner@googlemail.com). *Mathematical Concept Construction through the Interaction of Reflective and Structural Abstraction*. Preliminary report.

The purpose of the theoretical work presented here is twofold: On the one hand, this work intends to advance our understanding of the interrelationships between reflective and structural abstraction, two cognitive processes underlying different ways of concept construction. Embedded in a broader theoretical framework in the context of knowledge formation considered on a fine-grained level of knowledge structures, the question is addressed whether these two cognitive processes are exclusively distinct. On the other hand, this work gives new insights into two theoretical perspectives concerning knowledge formation, namely the knowledge-in-structures and the knowledge-in-pieces perspective. In this presentation, it is assumed that these perspectives are rather complementary than mutually exclusive. (Received September 17, 2013)