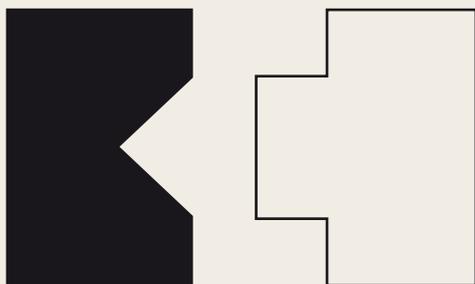


A key notion of pivotal significance, introduced into quantum physics by Niels Bohr, is the notion of complementarity. Broadly speaking, descriptions are complementary if they are incompatible with one another and yet all together needed for a complete picture of the situation described. In quantum physics, this can be precisely formalized by the non-commutativity of system properties. But Bohr always insisted that the actual meaning of complementarity far exceeds the limits of physics. Recent work by several research groups worldwide shows that this idea is indeed viable. Examples in psychology include decision making, learning, associative memory, and order effects in questionnaires. A further interesting example is the perception of ambiguous stimuli which will be addressed in particular.

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ICI Lecture Series – On Complementarity 'Our positions are complementary, not in conflict!' – Recognizing complementarity offers an attractive model for the coexistence of different knowledges, systems, and cultures. However, different positions rarely simply add up like pieces in a puzzle to provide a full, harmonizing picture. The pieces usually seem to be too large and it requires violence to make them fit – for instance, by constructing others as a complement that provides just what one misses – or to make them compatible where they overlap. Instead of being visualizable in terms of a jigsaw puzzle, the principle of complementarity such as it was introduced by Niels Bohr in order to address the apparent particle-wave duality in quantum physics remains puzzling. It allows for the possibility that different perspectives not only constitute objects differently, but constitute different objects. While there may be no perspective from which the different objects can be seen together, considering them nonetheless as equally necessary for a fuller account stimulates a radical rethinking that unsettles traditional positions of identity and difference, subject and object, epistemology and ontology. Conceived within the framework of the ICI Core Project Tension/ Spannung, the ICI Lecture Series **On Complementarity** explores the critical potential of complementarity in the Sciences, the Arts, and Politics. Others talks will follow.



Harald Atmanspacher

Complementarity and Bistable Perception