



## **What is meant by the term acceptance of technology and locating the acceptance of the CCS Technology?**

Mario Harz and Anton Vesper  
BTU Cottbus, Germany (mario.harz@tu-cottbus.de)

abstract: The formal language of logic expresses concepts and statements exactly. The logic of relations can serve as an important resource for the philosophical analysis of technology and the construction of philosophical propositions about acceptance of technology. The theory of logical relations is used to investigate the theoretical structure of how acceptance of technologies can be revealed. The term "ordered tuple" helps to define the basis of the concept of logical relations. The term "acceptance of technology" refers to neither a thing nor a property; but to a complex relationship. The research refers to the study of the properties of this complex relationship. It examines the properties of reflexivity, total reflexivity, symmetry, transitivity, irreflexivity and asymmetry. Using these properties and the rules for forming converses-relations and partial-relations the question is analyzed: What, in general, is meant by the term "acceptance of technology?" These properties have been observed empirically at a discussion forum for the key players in the Brandenburg discourse on the acceptance of CCS technology. The meeting was held on the 8th of May 2012 in St. Nicholas Church, Cottbus (GER). The pragma-dialectical theory of argumentation is used to locate the acceptance of the CCS technology. With the ideal model of critical discussion as the methodological starting point the term "acceptance" can be defined in terms of the four meta-theoretical principles of the theory. That boils down to the findings that acceptance is the externalization of a positive commitment towards a proposition, acceptance is expressed by the speech act "to accept" and acceptance occurs in the dialogical, interactional setting of a critical discussion with the aim of resolving a difference of opinion. In the study differences of opinion about (descriptive, normative, evaluative) standpoints about the CCS technology from everyday problem-solving discussions are investigated. The resolution of a difference of opinion means either acceptance of the standpoint about CCS, non-acceptance (rejection) of the standpoint about CCS or partly (non-)acceptance of the standpoint about CCS. In the resolution through four pragma-dialectical stages acceptance can be found in any stage. Observing the complex inner structure of critical discussion with regards to acceptance innovative findings are presented: in a critical discussion of a standpoint about CCS the (non-/ partly) acceptance of the objectives of the stages of critical discussion hints at the (non-) resolution of the initial difference of opinion. That brings about the practical relevance of the research. The ideal model itself seems to be equipped with diagnostic power with regards to everyday problem-solving discussions about the CCS technology. It can tell where (non-/ partly) acceptance is about to occur. Besides (non-/ partly) acceptance of the objectives of the stages of critical discussion helps arguers orientate on their way to terminate the discussion. Moreover (non-/ partly) acceptance of the objectives of the stages of critical discussion has a feedback function for arguers in problem-solving discussions. For an analyst (non-/ partly) acceptance of the objectives of the stages of critical discussion about a standpoint on CCS reveals to which common ground the arguers can be considered to be committed, i.e. what counts as accepted. Finally (non-/ partly) acceptance of the objectives of the stages of critical discussion can be used in the practice of mediation by providing cornerstones in resolving differences of opinion about standpoints which deal with the CCS technology.