



## **Harz/Vesper: Acceptance Research with Logical Relations and Pragma-Dialectics**

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Abstract: We use two different theories for our research on the acceptance of carbon capture and storage (CCS), geothermal energy and shale gas: logical relations and pragma-dialectics.

With the theory of logical relations we can describe the structure of the terminus "acceptance" as a three-place or more relationship. We use the Newtonian binominal coefficients order to reflect on the complexity of the concept of acceptance. We are exploring relations between citizens, politicians, scientists, businesses and technologies. The technological-philosophical reflection on the topic "Determinants for acceptance of new technologies" concerns the issues of "Trust", "Security" as well as "Interest and Use" as the essential constituents of acceptance.

Trust: Politicians, scientists and entrepreneurs need to understand themselves as advocates of acceptance. Acceptance is not automatic but requires a great effort and continuous personal commitment, as you want to secure acceptance not only for the short-term but for the long-term. The confidence curve follows a hysteresis loop as known from the magnetization of materials: It requires a significant effort. If the existing trust is lost due to erroneous communication or incorrect political action, the restoration effort is significantly greater. Citizens need to understand themselves as being asked for acceptance and as actively influencing the shapes of their life. They may not feel as victims or sufferers from technological developments but should have a realistic feeling of being able to influence - in fact - anything. "Openness creates openness." (H.-J. Bullinger)

Security: The advocate promoting acceptance must take into account the security needs of the citizens with regard to the technologies which are supposed to be accepted. Even irrational fears are actual fears that can prevent acceptance.

Interests and Goals of Usage: The advocate promoting acceptance must – sincerely and publicly – express his interest in the use and goals of the new technology. Politics must focus on the majority's needs. Businesses must openly commit themselves to their interest in maximizing profit by using the new technologies. Science must contribute to the effective and independent function of the technologies and claim true statements about them.

Using the pragma-dialectical theory of argumentation we define "acceptance" in terms of the "acceptance of a standpoint" as an outcome of the protagonist's attempt to justify the "acceptability of a standpoint". The pragma-dialectical ideal model of critical discussion provides a number of norms for a dialectical discussion process leading to the "acceptance of a standpoint". These norms make a systematic analysis of accomplishments and flaws within a critical exchange possible. One of these norms is the sound use of argument schemes which connect a standpoint with an argument. An arguer using the argument scheme of pragmatic argumentation presents the desirable or undesirable consequences of a certain action to back up the (un)acceptability of the standpoint. Critical questions are used to reveal the (in)correct use of pragmatic argumentation. We argue that accomplishments and flaws in the pragmatic argumentation of the four parties observed are closely related to the acceptance of the technology CCS.