

What is the transdisciplinarity?

The transdisciplinarity concept was developed in France by Basarab Nicolescu (cf. “Nous, la particule et le monde” (We, the particle and the world), Monaco, Rocher, 2002).

The transdisciplinarity studies, in a complex manner, the reality which forms itself among and beyond the disciplines and the cognition areas, considering that “always something slips out any observation” and that this fundamental contradiction, on which is based any real thing, may be understood if we consider the existence of some different levels of reality. There are some reciprocally excluded pairs of contradictions: wave and particle, continuity and discontinuity, separability and non-separability, local causality and global causality, symmetrization and the breaking of symmetry, reversible time and irreversible time. It has been ascertained that such pairs are reciprocally opposed when they are analyzed by the help of the classical logic and its axioms: identity (A and A), non-contradiction (A and non-A) and the excluded third party (*tertium non datur*) (there is not a third term T, which is at the same time A and non-A). Nevertheless, we cannot affirm, at the same time, the legality of a fact and its opposite: A and non-A, black and white, the good and the bad. That is why an alternative logic appears, which modifies the principle of non-contradiction with different values of truth, instead of those of the binary pair (A, non-A). This mutation was mainly concretized in the ternary transdisciplinary logic of “*tertium non datur*”.

Let's imagine the three terms of this new logic (A, non-A and T) and their associated dynamics, in a triangle in which one of the angles is situated on a reality level, and the other two on another level of reality (for example macro and micro physics). If we remain on one single level, any manifestation will appear as a struggle between the two contradictory elements (for instance, the wave A and the corpuscle non-A). The third aspect of *tertium non-datur*, the state T, acts on another level of reality, where what seems to be detached (wave or particle) is, in reality, united (quantum) and what seems to be contradictory is perceived as non-contradictory and paradoxical. Different from the triad of Hegel, whose terms alternate in time, in the triad of the *tertium non datur*, the three terms coexist in the same moment of time and, that is why, this triad may promote the conciliation of the opposite terms.