

Towards the better interdisciplinary collaborations 1

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It is widely recognized that highly-qualified research requires interdisciplinary cooperation. Another widely known fact is social agreement (collective knowledge) is often observed in geoscience, where aggregates multiple fields from physics, biology, natural resource, environment, society, and governments. Most researchers have experienced the difficulty, while a few have considered and analyzed its dynamics and mechanism. We claim that most interdisciplinary conflicts are caused not by evidence (data and logic) but by other factors, which hardly are logically described by aesthetic sense, intention, morality, world views. The non-logical systems have been constructed as survival strategies for environmental adoption and have evolved to complex systems. We need to clarify how those non-logical systems effect on our decision making in order to propose a theory of collective agreement. Moreover, they are artifacts which demand responsibilities of human beings. We thus call the artifacts as backgrounds of decision making "mind climate (MC)" and will scientifically analyze them.

Our current work is to formulate a three-layered MC model: (1) physical: geography and climate, (2) biological: genetics, epigenesis, and physiology, and (3) social: imprinting, culture, religions, education and policies. Those layers intricately form MC. Scientists already have working on (1) and (2), whereas most areas of (3) are open. This paper will classify MC formulations and possible effects on individuals and groups of researchers.

Moreover, we propose solutions of discoordination of transdisciplinary activities, such as dialogue as life-long education, school education, and self-reflection.

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