



Abstract



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Uncertainty studies in developing better future models

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Uncertainty arises in many different ways in model development. The most striking appearances of uncertainty are random variables that can be studied by distribution functions and their derivatives. But uncertainty in future modeling is much more general, and cannot be always expressed in stochastic terms. We should not disregard the fact that even completely deterministic models describing social phenomena do not possess variables with defined values. If the deterministic dynamics is chaotic, uncertainty will grow large fast in time. But uncertainty does not only arise the model within, but also from the interpretation of our results. New modeling techniques are developed to measure the uncertainty of choosing the specific model (out-of-model uncertainty). These studies help to increase the efficiency of future models.