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Fifteen years of econophysics: worries, hopes and prospects

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This anniversary paper is an occasion to recall some of the events that shaped institutional econophysics. But in these thoughts about the evolution of econophysics in the last 15 years we also express some concerns. Our main worry concerns the relinquishment of the simplicity requirement. Ever since the groundbreaking experiments of Galileo some three centuries ago, the great successes of physicists were largely due to the fact that they were able to decompose complex phenomena into simpler ones. Remember that the first observation of the effects of an electrical current was made by Alessandro Volta (1745-1827) on the leg of a frog! Clearly, to make sense this observation had to be broken down into several separate effects. Nowadays, with computers being able to handle huge amounts of data and to simulate any stochastic process no matter how complicated, there is no longer any real need for such a search for simplicity. Why should one spend time and effort trying to break up complicated phenomena when it is possible to handle them globally? On this new road there are several stumbling blocks, however. Do such global mathematical descriptions lead to a real understanding? Do they produce building blocks which can be used elsewhere and thus make our knowledge and comprehension to grow in a cumulative way? Should econophysics also adopt the "globalized" perspective that has been endorsed, developed and spread by the numerous "Complexity Departments" which sprang up during the last decade?

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