Cooperative Learning and Teaching in a Simulated Environment
A Research Project in Progress

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Purpose and Nature of the Research Project

Purpose of this research project in progress is the construction, empirical validation and experimental application in university courses, of a web based system for teaching topics of Business Administration. This system realizes a human cooperative behavior of human agents (learners) who make decisions in an interactive way for a simulated organization profit oriented. Its design is based on System Dynamics and Artificial Agent modeling (Scholl, 2001). Subsystems represented concerns acquisition of resources, production of goods and services, capital investments, research and development expenditure. External stimuli are responses of markets and supply. According to the traditional use of the above cited modeling, the design of a whatever economic system being simulated provides a discussion of its results "at the end" of simulation, and the traditional transfer of knowledge suffer of the paradigm of "coeteris paribus" i.e. its teaching is concerned on the behavior of given variables keeping the remaining ones "still". Conversely in our approach, the learner (or better the team of learners) during the whole decision making process, "moves" the whole system through its overt decisions, "does learn" through the web interaction and realizes a process of "role playing" within the group.

This system has a nature of a "behavior game" where learners are motivated by the attainment of purposes like profits, a reasonable development etc. In fact, this game offers a natural domain for empirical observation of the human agents dialogue (Airenti, Bara and Colombetti, 1993).

A "Terra Incognita" of Research.

Trough the past experiments (Bussolin,1979) and the present project we envision a new kind of researches concerning the processes of transfer of human knowledge in the field of complex economic systems (Pironti, 2004). This transfer may be realized with these systems or "interfaces" where the inner environment is the model and its computer implementation, and the outer environment is the class of learners molded by the artifact (Simon,1981). The purpose of this interface may be viewed as a special case of organizational learning (Simon,1996).

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