

Brief CV

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Gender	male	Title (Pro./Dr.)	Professor, Doctor of technical Sciences	
Position (President...)	Professor, member of the Russian Association of artificial intelligence.	Country	Russia	
University/Department	Department of Informatics and applied mathematics			
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Research Area	subjective choice, distributed artificial intelligence, theory of active systems, theory of distributed artificial intelligence, theory of decision-making, theory of multi-agent systems.			
Brief introduction of your research experience:				
<p>Human behavior (hereinafter goal-oriented agent - GA) is the result of man's cognitive activity. In psychology cognitive activity is regarded as a process of forming a mental image (the result of conception) and a model of cognizable and analyzed objects, processes, phenomena. According to a model formed and based on the mental sets, rules, customs, past experience and knowledge a person ideates his attitude to the observable and analyzable. Then, depending on this attitude and the assessment of the object adequacy to the result of mental image and analysis, a person constructs his behavior and develops the program of his actions beginning from participation (or fractional participation) to a complete non-participation in the events, processes, phenomena which he considers important. Therefore, one possible approach to overcome shortcomings of traditional methods of describing the agent behavior in organizational systems is a rational behavior model modification. That is achieved by implicating of so-called unobservables which are human behavior characteristics used in psychology, sociology, etc. For example we introduce parameter r which characterizes the type of agent, with $r \in B$ (r might be termed an agent characteristic). The objective agent function f depends on the ambient environment $\theta \in \Omega$, performance $o \in A$ based on the agent mode of action $c \in C$, centrogenous control $u \in U$ and the type of agent r. Following the hypothesis of agent' rational behavior, the agent tries to get a result $o^* \in A_o$ which maximizes his objective function</p>				

$$o^* = \text{Arg max } f(o, u, c, \theta, r); o \in A, c \in C .$$

This permits to speculate about function f regarding $s = F(\theta \in \Omega_o, z = G(o) \in A_o, q = H(c) \in C)$. Such an approach is to use some idealized construct (model) that describes the behavior of GA in decision-making.

Goal-oriented behavior is always associated with the decision which is made in the goal-oriented condition. Goal-oriented condition consists of the following components:

- Behaver making a decision (GA), $k \in K$;
- Decision environment (S), which refers to the set of elements and their intrinsic properties, (changes in any of them can cause or produce a change in the condition of goal-oriented decision);
- Available modes of action $C_{ij}^k, j = \overline{1, n}$ of the k-th agent, which are at his disposal and can be used to achieve the i -th result (also called alternatives);
- Possible results under environment (S) (significant for GA) - $O_i^k, i = \overline{1, m}$.
- The method of estimating the properties of the obtained data as a result of the action mode decision;
- Restriction to the output variables and control actions that reflect the requirements caused by the goal-oriented decision.
- Subjective decision making model, which is a set of relations describing the dependence of control actions, parameters, and disturbances on the output variables.

Let us introduce measures for the above-described components. They will be used to estimate the goal-oriented condition.

*******All the columns need to be filled in.**