

Metacognition and decision making

Metacogniția și luarea deciziei

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Abstract

This article focuses on metacognition of reasoning and decision-making process rather than metacognition of learning and remembering. It elucidates the strategy of information gathering, discovery of options strategies, and self-regulation in the field of decision making.

Keywords: Meta-level, cognitive development, experience-based metacognitive judgments, theory based metacognitive judgments, Automatic System 1, System 2.

Rezumat

În acest articol se analizează metacogniția raționamentului și procesul de luare a deciziilor și metacogniția învățării și memoriei. Autoarea elucidează strategia de culegere a informațiilor, descoperirea strategiilor de opțiuni și autoreglementarea în domeniul luării deciziilor.

Cuvinte-cheie: metanivel, dezvoltare cognitivă, judecăți metacognitive bazate pe experiență, judecăți metacognitive bazate pe teorie, sistemul automat 1, sistemul 2.

Students are subjects to various problems to cope for; they are to take

decisions daily but they always have to know how to choose their options. The information-processing mechanism depends on the cognitive development supported by „experiential system” which is preconscious activation of memory, heuristic facilitating formation of knowledge categories, alteration of the conscious strategies into automatic procedures (from declarative to procedural memory); and „analytic system” which is metacognitive functioning: metacognitive abilities, metacognitive dispositions and metacognitive monitoring [3, pp. 40-44].

J. Flavell (1979) considers that cognitive processes develop through interactions of: metacognitive knowledge, metacognitive experiences, goals or tasks, actions or strategies.

According to E. Jacobs, P. Klaczynski people use, firstly, strategy of information gathering, discovery of options strategies which „meet a person’s adaptive multidimensional goal” and then the construct of adaptation [Idem, p. 13]. Here should be also mentioned the construct of self-regulation to the field of decision making.

Self-regulation means: the tendency to use strategies to overcome impediments, being aware of what you know or you don’t know, ability to respond to decision making deficiencies or achievements [Idem, p. 15].

The process of decision making consists of variance in performance of option strategies, information gathering and construct of adaptation strategies embedded in the context of their values, memory capacity, personality traits. Decision making competence consists of: accurate knowledge regarding different events, value of physical, emotional, financial health, accounts of previous experiences [Idem, p. 22]. The research results show that much depends on „the content of decision, the complexity of decision, and the particular aspect of decision-making competence” [Idem, p. 34]. Age differences in decision-making are more emphasized when complexity boosts and expands.

Our metacognitive capabilities are very important while we take decisions, pick the right answer from a wide range of options. Cognitive processes can be explained through a two level scheme: the object level and meta-level. „Meta-level controls the object-level by initiating an action, continuing an action or terminating an action” [7]; the meta-level controls, regulates and monitors the object-level, the object level encodes, rehearses, saves, deletes, pastes the information.

A. Koriat states that there are [Apud 7, p. 287]:

1) Experience-based metacognitive judgments (judgments and decisions based

on our metacognitive feelings, which are not observable).

2) Theory based metacognitive judgments (judgments and decisions based on our metacognitive knowledge: person, task and strategy knowledge [1].

V.A. Thompson states that „reasoning and decision making are accomplished by the joint action of two types of processes”: Automatic System 1 (S1) – „highly contextualized representation of the problem” and slow decontextualized System (S2) explained in Dual-Process Theories (DPT). The functioning of the two systems ensure the assimilation of the relevant information, which can be omitted by system S1 and picked up by the system S2.

D. Kahneman states that system 1 „operates quickly and automatically with no effort”, System 2 „allocates time to effortful mental activities, including complex computations” [4, p. 22].

V.A. Thompson developed an argument that concludes that the information retrieved by S1 and analyzed by S2 is also determined by the second-order judgment which is associated with the execution of S1 and S2 processes and how S2 processes are engaged.

D. Kahneman [Apud 7, pp. 288-289] presents four ways in which decisions or

judgments can be made and take the shape of:

- 1) accepted by System 2 (type 2 deliberate, analytic processes),
- 2) adjusted (many times insufficiently when e.g. primed or anchored),
- 3) corrected (or overcorrected) when the judgment or decision is biased by irrelevant information to the task,
- 4) blocked: after D. Kahneman least possible. The effect of emotions on thoughts and behavior can be blocked.

People have the tendency to take decisions based on their intuitive feedback, use wrong metacognitive monitoring and metacognitive control and get to the imperfect impressions of the objects and phenomena that surround them.

The study of reasoning and decision-making leads to „dual-system theory” that are two different systems referred to as System 1 and System 2. L. Fletcher and P. Carruthers advocate that System 1 processes are associative or heuristic, while System 2 processes are always rational i.e. appeal to rational reflection. System 1 consists of varied schemata that work simultaneously, giving fast and intuitive feedback answering unconsciously, automatically and being conducted by innately fixed and universal laws. System 2 reasoning is conscious and reflective which works on the information slowly being conducted by individual traits

of the character and micro-cultures people live in. System 2, which is metacognitive and has 3 basic features: responds of intentional control, re-examination of System 1 responses and is guided by normative beliefs [2, p. 1367].

System 2 resources control the System 1 processing by intentionally restructuring or retargeting attention away from the sensory empirical representations produced by System 1. „The ‘control’ component of the meta-reasoning system would then be realized through the normatively guided use of System 2 to displace, modulate or suppress System 1” [2, p. 1367]. So, System 1 is intuitive and System 2 is reflective, meditative.

Some individuals depend on System 1 to elaborate judgments or take decisions, immediately approving the response without any reflection. Other individuals refer to critical thinking, appeal to rational reflection, and are effective in taking the right response. However, it should be regarded „reflective reasoning as, to a large extent, an acquired habit, which has been cultivated more successfully in some individuals than in others” [Idem, p. 1368]. So, it means that some individuals possess „special-purpose machinery for overriding System 1” to reflect deep in the System 2 reasoning.

Reflective reasoning and reflective thinking can be viewed as a skill, which has been formed/trained in some students more than in others. The students have not explored the natural competence in assessing their own Systems 2. L. Fletcher and P. Carruthers call System 1 „black box” unknown mystery, the only thing people can explain are sensory inputs and intuitive outputs meanwhile System 2 is a conscious and available for the person.

D. Kahneman exemplifies some automatic activities [4, p. 23]:

- detect 2 objects at a distance
- complete a phrase
- make a „bitter face”
- answer 2*2
- detect sorrow in a voice
- understand simple phrases

Examples of system 2 activities:

- focus on a voice in a noisy room
- fill out a tax form
- park in a narrow space
- compare two laptops for effectiveness
- check a valid argument

System 1 and System 2 are always working: S 1 is providing constant information in the shape of intuitions, impressions, intentions, S 2 shifts them in beliefs and voluntary actions. When S 1 gets in trouble S 2 is getting over the problem and says the last word.

T. Strle concludes „we should consider the entanglement and co-determination of metacognitive experiences, beliefs, theories, post-decisional evaluations and the context in which we make decisions” [7, p. 293].

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Surghiunul poporului meu

My people's surge

Güner Akmolla,

membră a

Uniunii Scriitorilor Tătari din Cimeea,

**membră a Uniunii Scriitorilor din
România, filiala Dobrogea**



Rezumat

În articolul *Surghiunul poporului meu*, Scriitoarea Güner Akmolla povestește despre drama tătarilor din Crimeea, trecuți prin surghiunul stalinist din 18 mai 1944. Statistici, eseuri, articole, poeme, filme, având sprijinul omenirii, încearcă să mențină vie amintirea despre neamului tătarilor crimeeni, să ceară pedepsirea celor vinovați, să atribuie drepturi urmașilor celor deportați pe nedrept.

Cuvinte-cheie: deportarea tătarilor din Crimeea, surghiun ilegal, statistici, eseuri, articole, poeme ca mărturii ale comemorării genocidului.

Abstract

The writer Güner Akmolla, in the article *Survival of my people*, tells the story of the Tartars in the Krimeya, passed through the Stalinist siege of May 18, 1944. Statistics, essays, articles, poems and films attempt to keep the attention of the Krimeyan Tatar people, with the support of mankind, ask for the punishment