



Intuition in Managers' Mental Models

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Managers' thinking is based on a mental model developed over years. Elements of this model are derived from the experience, observation and rules referring to the market phenomena. There are also numerous areas of ignorance and uncertainty. Even the important features of the distant future are only hypothetical. In order to get rid of the uncertainty managers use intuitive thinking. It contains the creative root in itself. Intuition is able to fill up some areas of the ignorance and gives managers the impression of the full knowledge about surrounding world. Finally an intuition becomes a test of the quality of managers and the evidence of their intellectual efficiency.

Managers' thinking. Mental models. Managers' cognitive maps.

Recognizing the specific mode of managers' thinking about the market and about the enterprise helps us to understand managers' behavior and comprehend their market activity. Managers' thinking can be simplified and transformed into the model which is interesting because in both their mode of thinking and in their mental model exists an area which is occupied by the intuitive thinking. An ability of weaving intuitive suppositions into rational frames of the mental model isn't only a natural way of overcoming the uncertainty; it is also a valid factor which gives stable bases for managerial decisions.

The meaning of the notion „intuition“.

Management is a kind of activity which is directed toward the future, where exist important goals; referring to the future managers makes efforts to create the plans and strategies. The specific worth of the future orders managers to overcome the uncertainty and makes them to exactly determine characteristics of the future environment. The ignorance can cause that any business action becomes impossible. It is necessary to know the future in order to make decisions in the present time. However there are some disturbing factors: complexity of considered problems; their changeability in the time and space; the ambiguity and the multifaceted-ness of transformations taking place. In the firm often appear the states, when decision-makers have a problem of predicting the consequence of their decisions. The ability to imagine the future surrenders to the disruption. An uncertainty appears, resulting from: gap in the wisdom of the manager; due to the speed of environmental transformations; organic unfitness of the manager for recruiting and the processing of information, with possible multitude of interaction between the organization and environment^[1].

This situation is devastating any decision-making processes. Nevertheless manager tries to build in his mind stable model of surroundings so that decisions let be linked into the logical sequence. Simultaneously predicting results can arise from adopted premises and form the knowledge about the market. The specific worth of the future orders managers to overcome the uncertainty and makes them to exactly determine characteristics of the future environment. The ignorance can cause that any business action becomes impossible. It is necessary to know the future in order to make decisions in the present

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The gap between the knowledge which is needed to perform managerial functions and the knowledge existing in the firm must be supplemented in some other way. Useful can be some advices, suggestions, pressures of outsiders, but first of all the managers' intuition manifest its applicability.

However it seems interesting in which way we can comprehend the term „intuition“, it can be described as:

1. judgment vague, incomplete, difficult to verbalize, partly only aware,
2. clear judgement, it being possible at least partly to verbalize but deprived of rational premises.[\[2\]](#)

According to this first understanding of the term intuition decision-maker something knows, but doesn't still know exactly what; however in the second case - decision-maker „something certainly knows, but doesn't realize where is the source of their knowledge“. In this way the intuition becomes something like a manifestation of the premonition.

Managers feel that one of choices is better than other, and simultaneous they perceive the lack of logical grounds. Decision-makers uses not-realize processes of storing and date transforming. Some managers tend to have both feet on the ground, they claim that: intuition help them to link distant seemingly not-connected information with oneself, therefore the one demonstrates its creative features; the intuition isn't irrational but at the same time the process causing its appearance doesn't let regenerate[\[3\]](#).

Decision-makers use intuition very often, however they aren't sure what the intuition is really.

Figure 1:

Figure 1: In which way decision-makers comprehend the term „intuition“.

Source: Laszczak, Mirosław. *Intuicja w podejmowaniu decyzji strategicznych*. Bielsko-Biała : Wyd. ATH, 2010, pp. 163.

The premonition manifesting itself in different ways but always helps managers to structuralize the perception of the environment. The one becomes a help in our present days of the chronic uncertainty. The premonition manifests itself in different ways and helps managers to structuralize their imaginations of world. It becomes a help in the days of the chronic uncertainty. Thanks to the intuition the attempt of constructing future states of surroundings can succeed, and thanks to intuition managers are able to get rid of doubts destroying the decision making process. The intuition becomes a long-lasting element of thinking about the market, finding the place for itself in the manager's mental model.

Manager's mental model.

Manager's thinking about world assumes the figure of certain models. Using models they exercise different variants of their decisions, juggling with models and assumptions they are able to test hypotheses referring to reality. Managers have the right to behave in this way, because the management

is something like an artistic work, so they feel partly like artists. Managers strive for the intuition in forming multiple ideas about the enterprise and the market further transformations.

Figure 2:

Figure 2: Perceiving management as an art or a craft.

Source: Laszczak, Mirosław. *Intucija w podejmowaniu...*, op.cit. pp. 188.

Expecting future events extremely often requires that decision-maker has an internal representation of external reality, which is constructed on the base of the assembled company of observations and experience.[4] In this way evolves a „... speculative judgement - the assumption, that certain cohesive concept (that is abstract set of elections connected with oneself [...] will let the company better than for competitors meet environmental challenges“.[5]

So the mental model is being created. Kenneth Craik is the author of comprehending the mental model. He claimed that the model appeared as a result of manipulating many subjective representations of the imaginations states of world really existing.[6] Manager put oneself in the center of these problems which they regard as important and endeavor to protect the firms against some stressful situations or the circumstances which seems to be too complicated, as A. Einstein stated - man continually seeks the simplified and clear image of world. Also managers are striving to create mental models, which contain some ready answers about everything what requires analysis: behaviors of competitors and customers, transformations occurring in firm's surroundings, appearance of the future; possible innovations in the industry. They mentally test different forms of the management and in their mind juggle with resources and manipulate the components of organizational culture. However mental models play perhaps a greater role in those situations when managers try to formulate forecasts: as they have less certainties so the greater role of imagination to develop not enough explored areas of strategic problems. Imagination and the intuition are shaped according to managers' experience. The experience is something like a control factor helping test models and throwing ones models away - because are unrealistic; disagreeing to other models - because are already outdated, and using these models which seem to harmonize with the knowledge, experience and the intuition.

Mental creating the market topography, takes into account the time of the realization of strategic goals and it is not only an intellectual entertainment, it is something much more important, because lets anchor important goals in model which is - to tell the truth - rough but close-fitting to the inner managers convinces. As time goes by a large number of specifying points are entered into the model, it obtains some additional variables, for example coming from competitors and buyers. Nevertheless every simplified mental projection and spontaneously appearing mental model rely on dubious Laplace's thesis saying, that if we know some initial conditions which are able to determine the state of the market and if simultaneously we have at our disposal an appropriate knowledge about directions of influences of observed parameters, we can explicitly predict the future.[7] Under the rule of this thesis are some matrix methods of strategic analysis (BCG, ADL, ...).

According to Ph. N. Johnson-Laird (Princeton University) managers first of all are trying to understand world to create the most basic level of their mental models. Therefore they create different not always right ideas referring to the market and led the business activity compatible to the ideas. Models are incomplete, there are much simple than real objects. Existing in models some dependences are only an imitation scarcely the one existing in the real market. In those models exist areas of which models aren't able to explain and at the same time these fragments are essential to understand, how the market really run. In this moment managers start forming intuitive associations between some model's objects, and they proceed in this way as long as an effective standard will be created[8]. In this way mental models referring to the market are able to depict, how the enterprise should behave and simultaneously it open the huge space for intuitive conjectures and premonitions. According to examinations conducted in Rand Corporation (Santa Monica in California) we know, that: 1. mental simulations take into account features of reality, in which they are settled,

2. thanks to mental simulations it is easier to notice links between individual elements of reality and to predict possible obstacles.[9]

The moment, when managers start thinking about the market and conditions of competing, involuntarily

starts the process of mental model creation, next elements assemble the model and improve the one. A compression of the available knowledge is a feature of the model. Managers don't pay attention to details, they are looking for the base for their own points of view to anchor one's decisions in just enough long-lasting beliefs. Mental models can implement the order into world imaginations, it is particularly important, when managers have to take fraught with consequences, often long-term decisions. The desire to introduce order into thinking about the market imagination is very intense, they want to possess a model without uncharted territory and without areas of irritating ignorance. Therefore managers with the greater willingness are inclined to use the intuitive thinking. For supporting the faith in the own infallibility and the practical resourcefulness manager want to convince both oneself and partners that his intuition doesn't lead him.

Figure 3:

Figure 3: Efficacy of intuitive forecast.

Source: Laszczak, Mirosław. *Intuicja w podejmowaniu...*, op. cit., pp. 195.

Managers prefer to trust the intuition, they allow for intuition influence, even if such model is inaccurate and in spite of some incorrect answers suggesting by the one. The point is that decision-maker should be capable to introduce corrections into their model according to the new facts and new valid information. Decision-makers must have an anchorage for own thinking about world. As well they want to believe in the rightness of their ideas. When they were asked, what for them is more important: intuitive conjectures or computer calculations, without a second thought they admit that their own intuition is more important, figure 4. Their own mental model and inner premonitions become more important and have the unique worth, therefore take the important place in the mental model.

Figure 4:

Figure 4: What is the better: to trust oneself or to trust the computer analysis.

Source: Laszczak, Mirosław. *Intuicja w podejmowaniu...*, op.cit., p. 191.

Thanks to mental models managers identify details, join them to themselves into connections and can have own, individual point of view. There is important both for their fettle and for their position in the organizational hierarchy. Intuitive abilities can sanction the decision power in the organization and the mental model of the manager becomes a model of his partners, and with time become a model of the entire company.

In the enterprise only rarely one mental model is used (mainly in a microenterprise or a little family corporation) more and more often exist many models comprising technology features, cooperation, relations with employees, competitor's behavior. Those different models most often coexist and permeating into the bottom organization structure to constitute the base for shaping new mental models. In this way manager's imagination helps to construct new organizational culture and helps employees to standardize their points of view.

Mental models can be as numerous as creative is manager's approach to analyze problems and how crucial is their ability for the abstract thinking. Some models are realistic, but there are also symbolic models, and occur models which can be written in the form of signs or symbols. On account of the fantasy of authors and their intellectual impetus, the mental models are either realistic or completely visual. All the models are however scarcely approximation of the reality.[\[10\]](#)

Managers' cognitive maps

Trying to understand how managers' mental models look, we can try to create so-called mental mapping or cognitive mapping.[\[11\]](#) After numerous examinations it is allowed to distinguish five basic models of cognitive maps being characteristic for managers.

First one puts emphasis for focusing the attention managing, which are putting two and two together and

are trying to find the way how solving business problems. Researchers being in contact with documents pay attention to conducted analyses. There are visible a thought and a criticism of proposed proposals. Reflection outweighs the speed of action; the one can notice the willingness to reach and disclose the nature of managerial issues. Managers are based on the assumption that there is no evident of simple or well-trying solutions. They assume that every strategic problem is peculiar and play an unique role in their circumstances. This map demonstrates, in what way managers perceive strategic problems and to what extent they can deep get in its ontological being to find the reason of its existence.

The second category „map of aims“ takes back to the span of action and refers to the hierarchical model in which goals make up the logical relationship. In such a way one result gets from second. A long chain of goals comes into existence, the end of this chain is located in the imaginable place where some intuitive presumption aren't only some funny speculations out of touch with reality.

The third category of cognitive maps is called causal maps, because decision-makers' associations make up into cause-and-effect relationships. These maps can help us to understand the layout of market forces which rules on the market and on the industry. Here appear such notions as dynamics of the industry, the coincidental events, unpredictability and intuition. Also managers' beliefs become perceivable, we can start describing in which way components of enterprise and its surrounding affect mutually, and what kind of forces we can observe in environment.

The fourth type of cognitive maps shows the structure of argumentation, with the help of which managers justify their idea about the strategy. The way of convincing can be analyzed by specialists of rhetoric and communication. How important is this type of maps we can realize, when we consider a social context of decision-making processes. We ought to notice that strategic decisions occur controversial. People are opposed to new strategic decisions. Therefore the persuading ability is the key manager's skill helping him to force their ideas. These maps demonstrate diplomatic abilities of the boss and are connected with an intuition of interpersonal contacts.

To most general is the fifth type of cognitive maps. In fact they build the framework in which entire reasoning is located. In this model we can point the system of codes, signs, language i.e. what is an important part of organizational culture.

To understand the way, how managers create their cognitive maps it is sufficient to take the following elements into account:

- perception of the organization and surroundings (understood as granting the meaning observed and perceived components of the company and its surrounding),
- manners of the learning (for example using the trial and error approach),
- thorough the choices making and taken action,
- codification some observation into set of rules and principles (transformation the knowledge implicitly - intuitive knowledge as well - into the knowledge explicitly).[\[12\]](#)

And so the cognitive map appears as a result of interaction between such components of the manager's thinking as: perception/giving the meaning = > act/decisions = > learning = > norms and standards codification. There are a broad space for the intuition in each of these stages, everywhere intuitive suppositions can find their pragmatic dimension and finally can be manifested in taken action.

Conclusion

What would be the difficulty in managers' work, if they had all needed information and the effects of their every decision would be obvious? The managers' mental activity consists in constructing the image of world using only small fragments of information and using always incomplete knowledge. It isn't enough for building the cohesive model which can be utilize in practice. Areas of the ignorance must be completed with the intuition, i.e. something like a mélange of the premonition, relying on experience, but also containing a mysterious creative root. In this way the intuition helps to construct a mental model, and simultaneously shapes manager's thinking. Intuition appears in managers' thinking about market - not only current market but also the future one, in which managers' decision will come true. Managers want to believe in own intuitive abilities, they want to have a model which has many pragmatic advantages. In this way intuitive abilities can diversifies managers and divides them into better and

worse, into ones who are able to grant the new dimension to their decisions and those who continuously make the some decisions. Thanks to intuition managers can perceive tiny signals of future market transformations. Those signals are still invisible for the managers who are mainly craftsmen and their mental models are reluctant for intuitive conjectures. Nevertheless intuition always accompanies managers' thinking and can diversify them according to effectiveness, creativities and the approach to the risk involved.

Intuicja w modelach myślowych menedżerów

Czymże byłaby praca menedżerów, jeśliby mieli do dyspozycji wszelkie potrzebne informacje a skutki każdej ich decyzji byłyby oczywiste? Zawodowa aktywność menedżerów polega na konstruowaniu obrazu świata korzystając z fragmentów informacji i zawsze niepełnej wiedzy. Nie wystarcza to do zbudowania spójnego i dającego się wykorzystać w praktyce modelu rynku. Obszary niewiedzy muszą zostać uzupełnione myśleniem intuicyjnym, rozumianym jako forma przeczucia, bazująca często na doświadczeniu, jednak zawierająca pierwiastek twórczy, kreatywny. W ten sposób intuicja pomaga w budowie modelu myślowego, a jednocześnie nadaje kształt myśleniu menedżera o świecie, i to nie tylko obecnym ale tym przyszłym, w którym spełniać się mają podjęte decyzje. Menedżerowie chcą ufać własnym zdolnościom intuicyjnym, pragną, by ich modele posiadały walor pragmatyczny. W ten sposób zdolności intuicyjne różnicują menedżerów na lepszych i gorszych, na tych, którzy są w stanie nadać nowy wymiar swym decyzjom, dostrzegającym w świecie ślady przemian, dla innych jeszcze niewidoczne oraz na tych, którzy są głównie rzemieślnikami i których modele myślowe niechętnie są intuicyjnym domniemaniami. Tak w jednym, jak i drugim przypadku intuicja towarzyszy myśleniu menedżerów i różnicuje ich pod względem skuteczności, kreatywności i ich podejścia do ryzyka.

[1] JĘDRALSKA, Krystyna (Ed.). *Zarządzanie niepewnością*. Katowice : Wydawnictwo Akademii Ekonomicznej w Katowicach, 2010, pp. 10-14.

[2] NĘCKA, Edward. Garść intuicji o intuicji. In: *Charaktery*, 2000, No. 3, pp. 14.

[3] LASZCZAK, Mirosław. *Intuicja w podejmowaniu decyzji strategicznych*. Wyd. ATH, Bielsko-Biała 2010, pp. 66.

[4] HALPERN, Paul. *Na tropach przeznaczenia*. Warszawa : Wyd. CiS, 2004, pp. 215.

[5] OBŁÓJ, Krzysztof. Niezmienne cechy dobrej strategii - kluczowe wybory i prostota. In: *Przegląd Organizacji*, 2009, No. 6, pp. 3.

[6] Managers can imagine oneself model in small scale which help them testing some decisions and analyzing its effects. Finally managers choose the best one. In this way the managers can react against unfriendly situations before those situations come to true. This practice helps managers to use past experiences and more and more competent respond to the events which can come into existence in the future. FOSTER, Richard - KAPLAN, Sarah. *Twórcza destrukcja*. Łódź : Galaktyka, 2003, pp. 75.

[7] WALDROP, Mitchell M. *The Emerging Science at the Edge of Order and Chaos*. New York : Touchstone Books, 1992, pp. 68.

[8] JOHNSON-LAIRD, Phil N. *Mental Models*. Cambridge : Harvard University Press, 1999, pp. 47.

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[10] According to Kurt Goedel no system can be simultaneously complete and coherent and no one can avoid errors creating any models because errors are inseparably tied with mental models.

[11] PORAC, Joseph - THOMAS, Howard. Taxonomic mental models in competitor analysis. In: *Academy of Management Review*, 1990, No. 15, pp. 224-243.

[12] OBŁÓJ, Krzysztof - OBŁÓJ, Tomasz. Dominująca logika skutecznych strategii - wyniki badań jakościowych. In: *Przegląd Organizacji*, 2006, No. 4, pp. 9.