



PSYCHOLOGICAL ASPECTS OF INFORMATION BEHAVIOUR

ESSAY

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INTRODUCTION

Since the human had invented handwriting thousands of years ago, our great journey to get information has begun. There was another invention connected with handwriting as well – information explosion, which has been surrounding us until the present time and what more, its power grows up all the time. As many things it has its positive and negative sites. For instance, presently the Internet represents the main wave of information stream and Google, microblogging, Facebook and many other services gives us a great opportunity to communicate with other people, tell others our opinion or look up meaning of any word we do not understand at the moment. The Internet hit the human civilisation much stronger than TV or radio, but does not represent the only channel used for communication today yet. The negative influence is represented by various undesirable effects that often happens and disturbs process of communication. Those factors are to be described in detail below.

To give the people better opportunities to orient in contemporary information world we need to understand what affects them and what is their approach to seeking, handling and dissemination of the information.

But at first there is a need to define some essential words, because from my point of view it is necessary to know their meanings in order to understand the whole problem.

DEFINITION OF ESSENTIAL WORDS

INFORMATION

The first and most problematical word is **information**. Everyone says this word several times a day, but what exactly does it mean? There are many definitions depending on sciences using this word. For purposes of information science we can define information as following:

- *The level of uncertainty reduced in system after receiving the information* – the more possible decisions (results) exist in system the higher value of information is (IVÁNEK, 2009), . Theoretically if there is the only possible result, then information has zero value. Also if there are many possible results but due to our experience we surely know which one will happen (for instance sun rising happens every day so information about sun rising the next day has zero value for us).
- Other definitions more or less correspond, that *information is a message that must be recognized and understood by recipient* (IVÁNEK, 2009), (SHANNON, 1948). So if we don't understand the message, we couldn't consider it as information.

KNOWLEDGE

Another word that should be defined is **knowledge**. Although it is related to information there is a quite substantial difference between information and knowledge.

- *Knowledge is needed for successful data transformation to get the information* (MARTIN, 1995). Basically knowledge comes up from experience – even a baby can be surrounded by amount of scientific information but is not able to absorb it because it has just basic knowledge of language. This shows a strong difference between knowledge and information.
- *Knowledge is mostly generalized information* (IVÁNEK, 2009). It is an ability to use the information for more general situations.
- *According to Fritz Machlup the information can be obtained just if anyone expresses it, but knowledge can be produced by individual's thinking without expression* (PŘÍBRAMSKÁ, 2008).

These thoughts also imply that information is relative for every recipient and level of understanding depends on state of his knowledge.

INFORMATION BEHAVIOUR

The term **information behaviour** represents various activities of individual in information environment. *"It contains conscious information searching as well as various activities of unintentional or passive behaviour, which needn't include information seeking – in this case there could be mentioned conscious avoiding the information"* which will be described further (PŘÍBRAMSKÁ, 2008).

Information behaviour has been a subject of scientific study for more than 30 years. It is focused on how the people are affected by information or how they handle with information. There is a critical need to study these aspects of human being, because the information explosion has been generating strong information pressure for human mind. Understanding the information behaviour can give us an opportunity to resist the pressure of large amount of information and develop systems easier for orientation (FOSTER, 2004).

INFORMATION ABSORPTION AND MENTAL FILTERS

UNCONSCIOUS ABSORPTION

The range covered by information behaviour is very wide according to its definition and can be divided in various categories depending what point of view is chosen. For instance information absorption can be divided whether is conscious or unconscious. Even before coming of the Internet, TV or radio there had been invented an advertising, which is a good example to show how the people absorb the information without any will. Mostly we do not want to perceive advertising around us, but unfortunately we do without any involvement (LINDSTROM, 2009).

Because the maximum level of brain perception is limited, there exist certain mind filters which helps us to resist the information pressure by admitting only perceptions found useful or important. Those filters change over time and adapt to information environment around us (PSTRUŽINA, 2009). This adaptation was documented by several scientific reports. For instance it can be seen in the case of human ability to resist advertisements. In 1960's the pressure of advertisements wasn't so heavy and human mind unconsciously memorized about 60 percent of them. Nowadays the world is full of advertisements and all the Internet works first of all due to advertising¹. But mind filters have adapted this change and now human brain perceives just about 3 percent of all advertisement (LINDSTROM, 2009). This fact implies that we have been getting reserved towards the exogenous stimulation.

CONSCIOUS ABSORPTION

Conscious absorption of information appears when individual feel a need to get certain information. *„The most of people often feel no information needs until faced any problem or when they know that their current knowledge is insufficient“* (PŘÍBRAMSKÁ, 2008). I think that this idea could be just an analogy to a statement of classical Greek philosopher Sókratés: *„I know that I don't know.“* („Scio me nihil scire“) (PLATO, 2008). This could be also the main motivator which affects individual's information behaviour,

¹ *The majority of Internet sites and services are funded mainly by advertising placed on their sites*

because when the individual finds out that he doesn't know something, at the same time there also comes uncertainty which excites the need to find an answer to the question.

Why does the brain develop its mental filters?

As everyone is individual our personalities obviously differ. This is also why everybody understands any information in a different light (HEINSTRÖM, 2003). Since the birth every human absorbs different information than another one. This information received represents a very important role in forming our personality. From my point of view the relation between information and personality is very simple: according to one of basic physical laws by Isaac Newton which simplified tells: *"Every action causes some reaction"*² we could derive something similar to the problem mentioned above: Every situation requires the man to decide how to behave according the situation. After the decision there comes the information (sooner or later) that gives him certain feedback. Then he can evaluate a pertinence of his behaviour and decide for different behaviour the next time. This implies that every information situation can affect our personality during all the life.

² *„The third law states that every force has associated with it an equal and opposite force.“ (Oxford Reference Online, 2010).*

MOTIVATION AND AVOIDING THE INFORMATION

Another part which affects the human information behaviour is motivation. It could be considered as the driving force of human technological advancement. Motivation gives us necessary power to overcome certain problem.

In relation to information behaviour the motivation is represented by the inner need of human to change his situation. There could be mentioned a very simple example: Somebody falls in love with a girl who he doesn't know. He has a motivation to get the information about her in order to change his situation and build the relationship between him and her. On the contrary: *"If people do not believe that knowing more about a topic will allow them to effect a change, then they are not likely to seek the information"* (CASE, 2005).

Changing of the situation may be also meant as increasing knowledge in certain topic to become more skilled without any expecting of higher income. Motivation could be represented by pure interest in the topic.

I think that the previous paragraph mentioned a very important matter regarding the education. The teachers at schools or other educational institutions bear a critical role in learners' lives, because except of teaching the teachers are also responsible for the way how they teach – I mean that every teacher should try to induce at learners an interest in topics he teaches. The reason is simple: *"The more interested we are in the topic, the more information we seek about it"* (HEINSTRÖ, 2003). Even in relation to this theory I think it could also be said: *"The more interested we are in the topic, the more efforts we make to memorize the information on it."* But the level of effort that the people make mostly depends on level of their personal interest. It is obvious that the personal interest is much stronger motivator than another else (NAHL, 2005). In my opinion the people see their personal profit, which is absolutely natural way of men's thinking. This implies that the people are more efficient in seeking when they are personally interested in certain problem. Then they are also more open-minded towards new stimuli and their seeking is much more flexible, because they can react very dynamically to the new findings and change their goals.

Contrariwise if we are not interested in certain topic we do not feel any need to seek or memorize the information on it. ...that is a quite common problem of children at school, that the teachers are not often able to induce any interest of students in taught topics.

Moreover the teachers sometimes induce in students a negative interest in topic which causes that they start avoiding any information on the topic. This situation is not matter of just relationship of teachers and their students. As an example of negative interest (consequently motivation) in information behaviour there could be mentioned an advertisement. The most of people are not any interested in commercials while watching television or surfing the Internet and what more, they are annoyed by commercials, so they naturally try to avoid it. I think this is the most frequent situation of avoiding the information.

Other situations when people are likely to avoid the information are described by D.O. Case et al. According to their work: *"the people tend to seek the information that is congruent with their prior knowledge, beliefs, and opinions and to avoid this exposure to information that conflicts with those internal states."* (CASE, 2005). Surprisingly this phenomenon is very common. People often tend not to respect the information which differs from their opinion. It can be easily seen in the case of religion in the past or now in the case of global warming. Without any respect for scientific evidences or respected authorities they don't want to get any information which would be in conflict with their opinion. For instance this feature could be shown on everyone's choice of the newspaper he read – the most of people buy those newspapers which they agree with the information produced in. According to this fact there comes a very interesting theory: *"People should choose the newspaper which opposes their opinion because this kind of literature forces them to contemplate actively and defend their own opinions against ones"* (SMETÁČEK, 2008).

To a certain degree it is a positive feature because everybody should be able to hold and defend his opinion. But in some cases people show their obstinacy towards the information which could lower their self-confidence or just invoke any complications due to changes related with accepting the "new paradigm."

The people naturally try to avoid all unpleasant feelings (it could be meant just as asking somebody for favour or painful surgery experience; it depends on character of each person) (SMETÁČEK, 2007). Experience of receiving the information which interferes with individual's opinion might cause unpleasant feeling as well.

There is a very similar situation of avoiding the information. Not because of incommunicativeness towards different opinions but because of expectation that the reality is likely to differ from original opinion and it's relative character is likely to be negative. For instance the case unfortunately happens very often when people are about to find out the information about their real health state (CASE, 2005). Even if they expect that something is not in good order sometimes they rather choose to avoid seeking the information because it is much easier for their mind to live in uncertainty.

From my point of view it is possible to deduce from previous paragraphs that avoiding the information is caused mainly by fear. But there should exist a way how to reduce avoiding the information....by reducing the imbalance:

First: One of the factors causing that people avoid the information is imbalance in available information – as mentioned at the beginning of the essay we have been living in the world heavily influenced by the information explosion. There is a lot of information available to anybody. But in the age of the Internet there exists uncertainty about trustfulness of the document found and orientation in the world of information gradually gets harder. The formal media (newspaper etc.) should provide the objective information, but they do not. The information are often changed according to the publishers³. Because of these facts the people can be uncertain about which information they should trust – the trustfulness of the information is often not obvious – so they may consider the new information as wrong. Theoretically increasing of information transparency might slightly enhance people's reliance and their willingness to accept information which differs.

Second: The second factor is related to the first one. The people avoid the information because they unconsciously tend to avoid unpleasant feelings. I think they do not often consider positives against negatives. It is caused by imbalance in their mind -

3 Publishers often change the information due to the goals of the producer – for instance the newspaper are often oriented towards some political parties and that fact influences character of the news published.

Negative feelings are likely to outweigh the positive ones and the people may often lose the objective view. When thinking whether to seek (or how to seek as well) the information the people should be in mental balance.

These two factors aren't the only ones. Since the beginning of human civilisation the people have been creating more and more complex systems. System of receiving information is complex as well (MILDEOVÁ, 2009), so there is a lot of factors participating in avoidance the information.

PERSONAL DISPOSITIONS IN SEEKING THE INFORMATION

When seeking the information there are also some other factors which influence the results we get. But there could be found some relation to motivation and their interaction.

HURRY AND MULTITASKING

In the next paragraphs I will try to describe two most critical factors which heavily affect seeking or handling with information in negative way.

As mentioned few times above one of present age's attributes is hurry. In this relation it means that the most activities we do in hurry. Seeking the information is an activity which is done very often and is also very often done under a time pressure (which is for the most of people stressful). When stressed, the people may act with a lack of objectivity. The pressure pushes them to make non-objective decisions or to proceed unsystematically which may cause reaching wrong results.

The way how to solve this problem is obvious – people should not underestimate the process of seeking the information but devote enough time to think about the problem they are about to solve. Then they could reach certain level of mental balance which enable them being more open-minded and thereby finding more relevant information or handling with them easier.

Another factor related tightly to the previous one is multitasking⁴ - with coming of computers which are capable to process a lot of tasks at the same time people are trying to do the same in belief that they can handle more activities in shorter time. But the contrary is probably the case. Human brain needs a concentration and mostly cannot solve more than the only intellectual⁵ problem. The people are very often used to work on their tasks or project, read the newspapers or e-mails and listen to music at the same time. But

⁴ *Could be defined as: "The act of undertaking more than one task at one time" (Wiktionary, 2007) or "Ability to initiate one task while another is already taking place" (Olson Brothers,).*

⁵ *...except the basic life processes such as breathing, heart beating etc. which are processed subconsciously*

the effectiveness is likely to rapidly decrease while trying to do multitasking (SILVETHORNE, 2002).

SERENDIPITY⁶ EFFECT AND OTHER PHENOMENA AT PRESENT TIME

There is a very common aspect which has been known for centuries⁷ but has become a part of our everyday lives with coming of Internet culture – serendipity effect. Hyperlink structure of the Internet tends to raise appearance of serendipity, because those related or unrelated links which appears on display with the content the user wants to read often interfere his concentration by evoking new associations. This weakening of concentration decreases efficiency of work and causes worse results.

It is a very common situation that the user comes across a suggestion which interrupts his concentration while solving a problem. Then he follows another thoughtwave because his information needs has just changed. This situation often happens right during browsing the Internet. The negative impact is that when concentrated the individual's mind is deeply meditating on the topic – there are many mental associations which is very hard to call up again after interruption.

KNOWLEDGE OF THE ENVIRONMENT

There exists a simple theory that work is likely to be easier when working in known environment. This just confirms the fact that we tend to decide for seeking the information in sources we know which is a natural pattern of our behaviour. This fact also obviously influences differences in knowledge of everyone. The choice of source for seeking the information depends on individual's previous knowledge of the topic, language skills and knowledge of sources⁸ suitable for searching. Everyone's spectrum of possible resources refers to his abilities and his openness towards new knowledge and opportunities over time.

⁶ *Serendipity is defined as „The faculty of making happy and unexpected discoveries by accident. Also the fact or an instance of such a discovery“ (OXFORD REFERENCE ONLINE, 2010).*

⁷ *Scientists, philosophers and others have been founding revolutionary discoveries by an accident, for instance Christopher Columbus etc.*

⁸ *The sources could be meant not only as electronic resources but also as people, books or other sources the individual knows.*

Recently the electronic communication has been considered to be a standard way of seeking, processing and dissemination of information. The ability to handle electronic resources became a part of present information literacy (PAPÍK, 2001). Nevertheless the users tend to search only throughout the resources they know and to look over the sites or search engines they are not familiar with because the efficiency of searching in this kind of systems decreases.

When meets a new system for the first time, there may figure feelings of disbelief in that unknown system. But I think that the major aspect in meeting unknown system is a lack of knowledge how to handle it and the most of feelings are only prejudices. This implies that comprehensibility is a critical attribute which should not be missing in any system. Nowadays the technological advancement allows us to develop very complicated systems, but this opportunity may be considered to lead towards raising of information load, thereby raising impact of information explosion on user (NAHL, 2005).

From my point of view a common user gets confused when facing a highly sophisticated system, display which is filled by control elements to specify his information query. Some people may feel very happy for the services provided, but the efficiency of solving their information problem is not likely to increase.

Graphical user-interface of Google main page could be mentioned as a handy example. It is the most favourite tool for seeking the information in the web....why? I think that the most of people which are not highly educated in research strategies require an information system to perform **simplicity**. They prefer entering a simple combination of few words and then getting some results (SYNEK, 2009). Very interesting fact is that they do not care about the way how the search engine finds the results...they accepted a search engine as a 'black box' – that might be explained as natural way how to reduce the amount of information load.

I think that in present environment of growing information load the simplicity represents one way how to increase efficiency of handling the information because it is natural to human mind and user feels better and more secure when working in simple 'user-friendly' environment. Otherwise there may appear uncertainty which I consider as possible opposite to simplicity. If the user gets in contact with system that offers him to

set many advanced option for searching, then he may feel disoriented and confused, because a common user often perceives that he is not skilled enough to set advanced options. Then he may realize, that the search is not precise, because there were some possibilities which he didn't use.

CONCLUSION

In this paper I tried to mention the main processes related to information behaviour. I considered the factors that I assume to be the most important. From my point of view the people heavily tend to underestimate the value and importance of information. The trend of present time is to get any information (mostly regardless of its credibility) as soon as possible. The people become neglectful of quality of information and they mostly do not feel any need to confront the new information to their previous opinion.

Another symptom of underestimating the value of information is that the people consider the Internet as the tool which solves their information needs. But from my point of view they should think the Internet to be just another way how to get relevant information and realize that it has also its negative traits.

To improve themselves the users should think more about information they are looking for or handling. Before seeking the information (no matter whether they seek on the Internet, among their friends or anywhere else) they should pay an attention to meditation about their information need. Then they should put down all the possible prejudices about fail seeking. If they are about to search information, there should be balance in their mind, they should not be stressed by lack of time or by expected search difficulty. If they succeed to control their mental balance, they make the first successful step towards the right information, because their ability to focus on problem with clear and open mind dramatically increases the accuracy of search.

Other problems decreasing efficiency of information seeking are serendipity effect and the breaking of individual's concentration mentioned above. I think there is a lot of ways how to precede those problems – particularly in the Internet there exists a lot of tools and software plugins which can help to keep a good concentration, for example tools that ban displaying the advertising.

In the case of multitasking which is a trend of the present time I think the theories of raising man's capabilities by multitasking are just a myth and people have been adapting subconsciously to the system of computer 'thinking'. Contrary we should learner

to concentrate again and adapt machines to our system of thinking as the original idea was.

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