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Upbringing from the statistical perspective – circulating of information in science and culture

A human existence is meaningless if not surrounded by other people. This blunt statement may rise objection if we understood it as an attempt to determine a superior role of a community above every one of us. However, it is merely an obvious statement indicating that the human species is social species. Its evolutionary past, as well as biological baggage, are connected with functioning within a society.

Our social competence was shaped during the time when our ancestors – gatherers and hunters – were traveling through the plains of the Old World, merely two hundred thousand years ago. It was at that time when the solutions to basics problem were created and recorded. How to get food? How to avoid predators? Where to find shelter? How to recognize those, whose best interest is to help us? Since then our brain has not changed.

Nowadays, gatherers and hunters live in huge clusters of modern cities. They meet thousands of people every day and their cognitive systems are forced to recognize intentions based on fragmentary and deformed information, fragments of conversations, messages and gestures out of context.

Our natural penchant for seeking and gathering data, although useful in time of information shortage, becomes dangerous when we are flooded with information.

Our ancestors lived in small groups of 150 people and were subjects of socialization, the process of passing on cultural components (Dunbar 2010). The quality of that process was strongly connected with abilities of the whole group. The future of the group depended on the success of the process.

With cheap and easy access to information the authority of experts diminishes. Encyclopedic knowledge is less valued when we do not need a specialist to get it. All we need is a phone and access to the Internet. Obviously, there is a huge gap between a professor's mind the content of the Internet, but, honestly, how often does our life put us in the situation in which we would need deep and working knowledge in the field of building bridges, integration or theory of literature?

Everything that constitutes culture, including jokes, pop songs, recipes, religious beliefs and scientific theories, is **a mem**. They are influenced by processes of the memetic selection. The mechanism behind this process is very similar to the genetic selection (Richerson and Boyd 2005).

A single mem, as well as a single gene, are meaningless. As well as humans, mems only make sense in functional clusters. We call those clusters **memeplexes**, which contrary to isolated mems are subjects to distribution.

Every human receives and integrates specific meme clusters. This way a memetic baggage is created which enables us to solve problems. A functional meme cluster which we have at a given moment is called a memetype (Blackmore 2000). It determines current behavior, borders of our abilities and specify competence¹.

School is a place where we try to support memes which we recognize as important. We facilitate conditions in which these memes can be transferred to the minds of our pupils and students. Then, in properly created clusters, these memes can produce specific competence. Our attempts are planned, described and evaluated (that is how syllabuses are made). We think that in the appointed areas, school actions may be successful and efficient to the extent, which could be planned and evaluated. This assumption entails taking the responsibility for the results of our actions and for quality of the competence created in memetypes. Nonetheless, are we completely aware of the conditions in which the memetic game takes place? This awareness is an important factor as it provides us with the correct perspective determining the needs, abilities and responsibilities.

Modern world with its annoying information overload is at the same time full of challenges which are almost infinitely more complex than those which were shaping our species in the past. We live in not one, but in many environments simultaneously: house, school, job... Each of these environments is a subject to a different set of rules which governs the memetic game. Memes and their clusters may change meaning in different environments because a different configuration of memetype is suitable only for that specific place. Competence used in school may be less meaningful in house and lost entirely in the group of peers.

School understood traditionally tries to provide its students with memetype which will make them successful in solving problems outside school environment. However, this attempt is obviously impossible. Assuming that we were able to recognize every single problem in social environment, there is no way that we could foresee problems of the future adult life.

Ecologists often emphasize the connection between diversity of the species in the given ecosystem and its stability. Poor biotic communities are susceptible to rapid collapses. In those environments it is more likely that problems which cannot be solved by small number of solutions provided by few inhabitants of

¹ Competence may be understood as a cluster of memes working together. To simplify, meme relates to the competence in creating which it participates in the same way as gene relates to, determined by it, characteristic.

that environment will occur. Rich, diverse biotic community is less prone to the challenges of the future. This biodiversity ensures survival despite severe external conditions. No matter how hard the future will be, there is a chance an organism will survive (Dawkins 1976).

Similarly unpredictable is the future of memetypes and the only thing that will be able to overcome it is its memetic diversity. However, this diversity cannot be granted by a homogeneous environment.

The future is unforeseen, its challenges are only possible and the only solution is the diversity of competence. Even though some of them seem rather useless nowadays and sometimes even conflicting with social interest they may prove to be crucial to the survival not only for individuals but also for the whole groups.

Multidimensional nature of memes means that all changes present in the cultural environment are as fast as the reproduction of Memes². Today, Memes thrive: television, radio, cell phones and above all the Internet with its almost unlimited applications in the distribution of information. All those media facilitate memes reproduction. On the other hand, the memetic market is extremely crowded. All components of the culture compete for human's limited attention and memory. They are like toys on a big stall in front of which a confused child stands with little cash in hand.

It is worth asking one more crucial question. Taking into consideration everything we have already learnt, is it possible to say that there is some specific superior social environment which has the monopoly of key memes delivery? Maybe it is home, school or any other place of social influence?

If the key to success is variety then also in that case, in the presence of changeable and unpredictable future the safest meme is the one deriving from diversity. Determining the dominant course of memes' influx would entail a restriction in just one profile of action and the loss of potential opportunities. Some of the latest research and analysis of the previous results confirm the lack of a dominant and specific social environment in the development of memetypes³

Every teacher believes, or at least assumes that their work has an influence on their pupils' future. If they believe in a way to achieve univocally specific results and in the possibility of existence of some sort of educational pattern, then while

² This rule is also present in the world of genes. The difference between genes and memes is only in the motion and direction in which those two duplicate. The evolution of memes surpasses the evolution we undergo in terms of biology however, this obvious disproportion does not justify the thesis that people do not evolve biologically any more.

³ Especially noteworthy here is the research of Judith Harris who strongly criticizes the opinion of the dominant role of the family environment. Her controversial works and conclusions have been the topic of many debates among psychologists, sociologists, educationalists and tutors. Calculated, scientific approach to the issues of the meaning of the upbringing in the family causes almost primitive objection. However, examples given by Harris make it impossible to immediate rejection of her theses and force us to think more about the problem.

searching for the connection between the intensity of their actions and their effects they will be disappointed. Is there any point in engaging in the educational process the degree of their influence may be statistically neglected? It is one of the possible and of more convenient conclusions.

The fact that it is impossible to determine conditions in which we get the largest influence means that we cannot predict the significance of particular actions. Restricted or sometimes even non-recurring influence on somebody may often be crucial in the process of shaping one's meme. Many people have experienced such phenomenon. Single, short contact with somebody who represents in a given area a very attractive meme decides about one's interest. It may be a politician, artist or musician whose lecture or exhibition we attended (Harris 2006).

To summarize, the above-discussed issues are not an acknowledged scientific theory but the author's point of view. The meaning of such interpretation of phenomena, as well as of all memes, must be verified in practice.

Bearing in mind this reservation, the teacher's responsibility should not be underestimated. If a minor effect may have a serious educational consequences than the unpredictability in this field should make us accept responsibility rather than reject it.

CONCISE DICTIONARY:

MEME – a conventional information unit which is distributed in the culture among people through the process of teaching and upbringing. It is difficult to establish the confines of this concept. A Meme may be a symbol, gossip, scientific theory or a simple recipe. A Meme is everything that may be passed on in an understandable way and has a meaning for people's actions in the society.

Research in Memes limit the meaning of this concept to language and the information conveyed by it. However, for the concept proposed in this article it does not seem right. A Meme may be a piece of information passed on without the use of language, for instance gestures, behavior, etc. Memes are everything that stimulates humans' brain mechanisms.

MEMETYPE – A collection of Memes present in one's mind. Memetype determines a person's behavior, world view, relations with others. People absorb new Memes all their lives and verify memes they have already absorbed. That is why we may assume that a Memetype is still changing and modifying. Collections of Memes in a Memetype create competence. Their collections are changeable and also the competence is subject to modifications.

MEMPLEX – a collection of Memes connected with something in reality. It is a system in which Memes complement each other and define their meanings. Memplex, however, as a whole is not connected with any person, it is not a component of a Memotype. It exists in the exchange of information in a social space.

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Upbringing from the statistical perspective

Abstract

Everything that constitutes culture, including jokes, pop songs, recipes, religious beliefs and scientific theories, is a mem. School is a place where we try to support memes which we recognize as important but there is no some specific superior social environment which has the monopoly of key memes delivery. The fact that it is impossible to determine conditions in which we get the largest influence means that we cannot predict the significance of particular actions. Restricted or sometimes even non-recurring influence on somebody may often be crucial in the process of shaping one's meme. Single, short contact with somebody who represents in a given area a very attractive meme decides about one's interest. If a minor effect may have a serious educational consequences than the unpredictability in this field should make us accept responsibility rather than reject it.

Key words: socialisation, a meme, teacher's responsibility

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