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The Growth of Awareness and Introspection in History. Mystical Interpretations of Mental Activities and of Social or Physical Incidents

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Abstract: Historians, philologists and scholars of antiquity have described how people in pre-modern societies tend to see their own thought processes, decisions and actions as being influenced and made by external forces. It was recognized early on that this mystical interpretation of actions could be an indication of a different structuring of the archaic psyche. It was claimed that this psyche was characterized by a lower reflexivity. Modern cross-cultural psychology has the experimental methods and theoretical concepts to test these bold theses of historians. In particular, Piagetian psychology has carried out countless experiments on people from pre-modern societies, which have served to test the level of reflexivity. Pre-operational thinking is characterized by irreversibility, i.e., by the lack of ability to grasp the starting and end points of actions and the transformations of objects that occur in perception. This corresponds to a lack of introspection and reflexivity. It is therefore possible to connect the merely descriptive procedures of historians and social scientists with the experimental test methods of psychologists. One arrives at surprising results that go so far as to better understand the internal psychology of the people depicted in the Homeric epics.

Keywords: Mind, Reflexivity, Consciousness, Psychological Stages, Pre-Modern Society, Ancient Culture

Introduction

Historians have described over generations that ancient literature describes the actions of people in a strange way. In the Homeric epics, for example, the heroes regularly cannot rationally explain their own actions and refer to gods and other mystical powers that caused them to act. It is regularly claimed that the gods have clouded or altered their senses and are thus the actual causes of their thinking, decisions and actions. Early on, scholars of antiquity, philologists and historians pointed out that these formulations could not be literary stylistic devices, but rather indications of a different mentality or rather a different, namely archaic psyche (Snell, 1980; Fränkel, 1962; Dodds, 1970; Jüttemann, 2008; Dux, 2014).

Now, for generations, ethnology has been reporting the same phenomena from recent pre-modern societies, which is sufficient proof that the ancient documents do not reflect stylistic means, but rather report observable behavior. However, even with this situation, the question remains open at first, whether it is a matter of rhetorical conventions or of references to other psychological structures.

Both scholars of antiquity and psychologists have put forward the thesis that archaic people possibly learn to think about their own thinking less well than modern people, who have learned methodical thinking in school for a few years, due to a lack of school education. A less developed reflexivity could be the reason why people are not fully aware of the thoughts and motives that led them to their judgments or actions after they

have completed their actions or even after they have made a judgment or decision. It could be that, due to a lack of reflexivity, they are so unable to observe their own thoughts that they are less present.

These bold theses of ancient scholars such as Otto Seel, Wolfgang Schadewaldt, Theo Reucher, Hans Schwabl, Martin P. Nilsson, Werner Jaeger, Bruno Snell, Eric Dodds, Hermann Fränkel and many, many others have indeed already been experimentally confirmed by the neurologist and cultural psychologist (Luria, 1982) already in 1931. With the help of modern methods of developmental psychology, this question can thus be operationalized and verified. Preoperational thinking is indeed characterized by irreversibility and lack of reflexivity. Irreversibility means that thinking cannot return to its starting point even during a simple thought process. When a child pours water from one glass into another, the starting point is no longer present in the consciousness after the process is being completed. So it cannot see the beginning and the end of the action simultaneously in its mind. From this it can be concluded that the child has difficulties in observing, steering and controlling its own thought processes. Its thinking is therefore pre-reflexive. Only at the level of concrete operations does thinking become reversible with regard to the control of perceptions and physical transformations. Furthermore, only at the stage of formal operations does thinking become completely reversible and reflexive. For it is only at this stage that there is an actual thinking of

thought, i.e., a systematic reflection on one's own thoughts and the structuring of one's own thought worlds (Piaget and Inhelder, 1941; 1969).

Piagetian Cross-Cultural Psychology has shown in over 1,000 empirical studies over the past 80 years that pre-modern cultures do not reach the adolescent stage of formal operations, but remain at the level of pre-operational or concrete-operational thinking (or mixtures of these two). Hundreds of these studies accordingly examined the topics of reversibility and reflexivity of thinking. There is thus evidence that the thinking of larger parts of pre-modern humankind was structured by irreversible and pre-reflexive thought processes (Dasen and Berry, 1974; De Lemos, 1973; Hallpike, 1979; Irvine, 1983; Kelly, 1971; 1977; Lloyd, 1983).

Human Development and the History of Humankind

In this way, the bold theses of historians and scholars of antiquity can indeed be made concrete and detailed. The conclusion to be drawn from this is that the consciousness of humankind has indeed increased in depth, sharpness and reflexivity in the course of history. This commonplace of the human sciences, already emphasized by Voltaire, Schiller, Herder, Marx and Feuerbach, is thus not a groundless and far too sweeping assertion, as one might think at first. Rather, this fact can indeed be tested and even verified by experimental and modern psychological methods (Table 1).

Table 1: Psychological stage development in history

Average age in modern societies. Likewise "mental age"	Psychological stage	Type of society	Main characteristics of the psychological stage
From birth to 2 years 2-8	Sensory-motor Pre-operational	Mammal societies Some premodern societies	Practical intelligence in space and time without language. Weak reasoning abilities and childish view on the probability of incidents. Fairy tale worldview. Missing or weak understanding of causality, chance, probability, necessity and possibility. Lack of logical and abstractive mental competences. Numbers are unknown or weakly developed. Animism and personification of nature. ³ in magical power over things and beings. Belief in immanent justice (ordeals), objective responsibility (punishment of consequences) and eternal rules (non-differentiation between physical and social rules).
6-12	Concrete operations	Some premodern societies	Logical operations on the handling of objects appear. Belief in such as immanent justice or realistic dream understandings. Belief in magic disappears gradually, likewise animistic schemes and other irrational belief systems in fairy tales, mystical belief systems and superstitions dilute.
10-20	Formal operations	Modern, industrial societies (after 1700)	The emergence of the adolescent stage of formal operations, of a new stage of psyche and personality, not before the era of Enlightenment existent. It exerts a breakthrough of rationality, foresight, responsibility, morality and social competences. Disappearance of magic and superstition. Emergence of sciences and modern, industrial society.

The Lack of Introspection in the Mental World of the Child

The ability of a person to reflect on his thinking or his reflexivity increases in the course of childhood and adolescence. Self-awareness and the ability to introspection are not originally given. Piaget attempted to prove this fact by setting children tasks and asking them for their answers and how they arrived at their results. These answers show that children are usually unable to give a correct account of the considerations that lead them to their results. They do not manage to describe, recall and reproduce the thought processes they have just completed. They do not know how they have thought and reflected in detail. They know the result of their considerations, but they do not know which thought processes led them to the results. In this case the child invents any thoughts that he thinks he has had before. He simply fantasizes and fills in the gaps in his memory as he wishes. It often starts from the end point of the considerations and assumes that this was known from the beginning. However, if the thoughts that guided the child in the task are no longer available to him at all, when the result is available, then this shows that the child's ability to dispose of his own thinking and to think about his thoughts is limited. It shows that the child cannot observe its own thinking. Its ability to introspection and reflexivity is therefore limited. Piaget concluded that the child's thinking is closer to the unconscious. It arises more from a semi-automatic adaptation and is still close to the action. It is a thinking that is hardly conscious of itself. The ability to think is limited and therefore the child has no overview of its own thinking processes.

Here are some examples: "Wenig (7 years): This table is four meters long. This one is three times as long. So how many meters is it long? - '12 meters' - how did you find out? - 'I added 2 and 2 and 2 and 2 and 2, always adding 2.' - why 2? - 'to have 12' - why did you take 2? - 'not to take another number' ... Gath (7 years). You are three little boys and you get nine apples. How much does everyone get? - 'three each' - how did you calculate that? - 'I looked' - what did you say? - 'I've looked, how I did it. I looked in my head' - what did you say in your head? - 'I counted' - what did you count in your head? - 'I guessed. I counted. I looked in my head. I tried to see how many was there and I found three.'" ... "Bel (9;2): You walk to Carouge in 50 min. By bicycle you will go five times faster. How much time do you need by bicycle? - '45 min' - How did you calculate that? - 'I said 50 less 5, then I went back to 40 and I saw that it was 45' ... Spie (9;3) gives the answer 25 to the same question, but he doesn't know how he came to it: 'I can't explain it to you, but I can calculate it, it's easy, but I can't say it.'" (Piaget, 1981: transl. by G. O.)

As one can see, the children assume the final result as if they had known the result at the beginning. Or they give arbitrary answers and also leave gaps open. According to Piaget, introspection is completely absent until the age of seven. Between the ages of seven and twelve, the child's first efforts to become aware of his or her thoughts begin. After that, older children and adolescents succeed in becoming sufficiently aware of their thoughts to be able to report on them. This greater proximity of the child's thinking to the unconscious is related to the fact that the child does not understand logical implications of thoughts and judgments. It is only when thoughts are available that they can be put into a logical order. Reflexivity is the prerequisite of logic. Since the child's thinking is less conscious (i.e., unreflective), the child understands neither definitions nor classifications. The child's thinking is neither free of contradictions nor systematic. The child cannot therefore logically justify assumptions and views (Piaget, 1981).

Piaget also referred to two phenomena that should confirm his theory of the lack of reflexivity of the child's thinking. On the one hand, he referred to the phenomenon of the absence of logical thinking and, on the other hand, to the phenomenon that children can more easily name the differences than the similarities between two objects. When children are asked about the similarities between bee and fly, they usually refuse to answer. They claim that there are no similarities between the two species. However, they can certainly name the differences. The explanation for this is that it is easier for primitive thinking to name the differences than the similarities of objects. The differences are often already present in the sensory perception and only need to be read out. The similarities, however, must be found out by reflection. The similarities are produced by thinking, while the differences offer themselves in perception. In this respect, the similarity test is regarded as a test for determining the lack of abstract and reflexive thinking in the child (Piaget, 1981; Vygotski, 1981; Claparède, 1918).

The pre-school child's lack of ability to think logically can be seen in his classifications, in his deductions and in his definitions. Only a reflexive thinking (a thinking of thinking) classifies according to logical rather than pragmatic aspects. Only a reflexive thinking is able to list all necessary determinations and to omit all superfluous ones, if it wants to determine the concept of an object or if it wants to define it and only a reflexive thinking is capable of logical deductions. A more unconscious, dreamy, naïve, superficial and unreflective thinking, on the other hand, has none of the three abilities mentioned.

These interrelationships are illustrated here only by the example of logical deductions. Children of the first decade do not yet master hypothetical deductive

reasoning. "Some inhabitants of the town of St. Marcel were Bretons. All Bretons of the city of St. Marcel died in the war. Are there still inhabitants of St. Marcel?" Children usually answer that there are no inhabitants left in the city. Only after their 10th year or so are syllogisms of this simple type answered correctly (Piaget, 1981).

The lack of introspection and reflexivity of the child's thinking can also be demonstrated by the fact that children are not capable of describing their character, their person and their particular traits. Only a thinking of thinking is capable of going into depth in order to fathom the psychological characteristics of individuals. When children up to the age of seven are asked to make statements about themselves, they usually refuse to answer and are completely at a loss. Or they describe their games and their own physical appearance. Up to about the age of 12, children describe their own person only with information about appearance or activities. They have not yet developed a perspective from which they could describe themselves. They do not succeed in making specific statements about personality and character (Secord and Peevers, 1982; Selman and Essen, 1984; Oesterdiekhoff, 2009).

The Lack of Introspection in Adults of Premodern Societies

Many authors have described or claimed that the majority or larger parts of adult population of earlier societies also had no reflected mind and were not or very poorly capable of reflecting on their thoughts (Dux, 2014; Dux and Rüsen, 2014; Jüttemann, 2008; Spinner, 1978; Rüsen *et al.*, 2012a; 2012ab). It has been argued that the thinking of adults in pre-modern societies was equally superficial, little conscious, unreflective and logically inconsistent. From the multitude of relevant assertions, only the opinion of (Jung, 1991, translated by G. O.) is quoted here: "According to all that we know, it is certain that the original psyche does not yet possess a consciousness of itself. This has only emerged in the course of development, which partly falls into the historical epoch. Even today we know of primitive tribes whose consciousness is not too far removed from the darkness of the primordial psyche and even in civilized man there are still numerous remnants of the original state."

It is indeed possible to operationalize this question and verify Jung's thesis, which at first seems extremely bold and even absurd. Namely, with the same experiments that Piaget and his colleagues conducted on children. These were also applied to adults in pre-modern societies. A. Luria subjected illiterate Kashgarians from Uzbekistan to the similarity test in 1931. The results were the same as those obtained by developmental psychologists with pre-school children. Today's research shows that the results of the Luria study can be generalized with regard to

illiterate pre-modern cultures, both from synchronous and diachronic aspects. Only when people have a few years of schooling do the answers succeed:

- "Subject: Khadzhy Mar., age forty-five, peasant from village of Yardan, illiterate
- Q: What do mountains and a poplar have in common?
- A: Mountains - these are mountains. But a poplar grows because it drinks water. If we plant a poplar on a mountain, it won't grow. It needs good soil
- C: Tries to link objects in one situation.
- Q: In what way are they alike?
- A: If you look at them from far off, the mountains are huge, whereas the poplar's small
- Q: But what likeness is there?
- A: There's a little bit, seeing a poplar's also tall...
- Q: What do a landowner and a farmhand have in common?
- A: There's a huge difference between them. What a landowner's been able to get for himself, the farmhands never have
- Q: What likeness is there between them?
- A: What's alike is that a landowner has got something and a farmhand hasn't. When a landowner wants to eat, he eats, but when a farmhand wants to eat, he first has to go to the landowner" (Luria, 1982)

As mentioned above, Piaget also operationalized the weak awareness of infantile thinking with regard to the weak development of logical thinking (using the examples of classifications, definitions and syllogisms). Cross-cultural psychology has shown that pre-modern cultures classify like pre-school children and are not capable of either definitions or syllogisms (Hallpike, 1979; Cole and Scribner, 1974; Dasen and Berry, 1974; Tulviste, 1979; De Lacey, 1974; Oesterdiekhoff, 2009; 2011; 2012a; 2013a; Dux and Rüsen, 2014). Luria himself had already demonstrated all three phenomena mentioned above to the Kashgars. Just as above with the children, only the example of syllogistic thinking from the field of logical thinking is given here. The vast majority of adults in pre-modern societies did not understand even simple forms of syllogism. The lower levels of verbal logic are also not developed, as in children of the first ten years. The reasons for this inability are the same in children and pre-modern adults: The general character of the statements of the premises is not understood, the propositions are not brought into a logical relationship with each other and the expressions such as "all" and "some" are not understood"

- "Subject: Abdurakhm, age thirty-seven, from remote Kashgar village, illiterate
- The following syllogism is presented: In the Far North, where there is snow, all bears are white.

Novaya Zemlya is in the Far North and there is always snow there. What color are the bears there?

(Answer) There are different sorts of bears

(Commentary) Failure to infer from syllogism.

- The syllogism is repeated
(Answer) I don't know; I've seen a black bear. I've never seen any others... Each locality has its own animals; if it's white, they will be white; if it's yellow, it will be yellow
(Commentary) Appeals only to personal, graphic experience
- But what kind of bears are there in Novaya Zemlya?
(Answer) We always speak only of what we see; we don't talk about what we haven't seen
(Commentary) The same" (Luria, 1982)

Against this background, the question arises whether large parts or even the overwhelming majority of adults in pre-modern societies are not capable of self-description, too. It had been shown at the end of Chapter 1 that the lack of reflexivity of thought causes the inability of children to characterize themselves psychologically. Instead, they only describe their games or their appearance. Not only ethnological representations, but also psychological procedures suggest that even larger parts of adults in pre-modern societies refuse to characterize themselves psychologically. Luria himself has carried out corresponding studies that prove the lack of reflexivity also in the area of self-description. He „attempts to determine the extent to which our subjects were able to treat their own inner life in a generalized fashion, to single out particular psychological traits in themselves, to analyze their interior world and to evaluate their intrinsic qualities" (Luria, 1982):

- "Subject: Karambai Khamb., age thirty-six, peasant from village of Yardan, illiterate
- (Question) Well, now, take yourself, Karambai and your guest here, Ismat. What is the difference between you?
(Answer) There's no difference at all. Once there's a soul, it means we're the same
- (Q) What shortcomings and good qualities do you have? What's your character like? You know what character is?
(A) Yes!
- (Q) People can be good or bad, hot-tempered or calm. What sort of person are you?
(A) What can I say about my own heart?
- (Q) But who could tell about your heart other than you yourself?
(A) How can I talk about my character? Ask others, they can tell you about me. I myself can't say anything" (Luria, 1982)

Luria interpreted the behavior of his test subjects as follows. Instead of describing their intrinsic qualities, they described concrete forms of their outwardly visible behavior or even the objects they possess. Or the test person refuses to answer the question on principle or asks the examiner to ask other people from her circle of acquaintances who are certainly better able to assess him than he is himself. The inability or unwillingness to characterise oneself has also been noticed by ethnologists (Hallpike, 1979; Oesterdiekhoff, 2009).

The question arises whether there are also procedures that can prove that illiterate adults of pre-modern cultures also have difficulties in describing their own thought processes. It is recalled that this analysis began with the phenomenon that the child's thinking is so lacking in reflexivity that children cannot describe their own thought processes and therefore cannot reconstruct them. The missing or incomplete memory had been taken as an indicator for the little conscious character of the children's thinking, i.e., for the lack of reflexivity and disposition over their own thinking. In fact, there are test procedures that can empirically prove of this phenomenon. Moreover, this test procedure proves that large parts of pre-modern humankind were characterized by the phenomenon of the lack of control over one's own thinking. This is the test for measuring the conservation of volume, which was used in hundreds of developing regions. Children from industrialised countries learn to master it between their eighth and twelfth year. Children who understand this task are at the level of concrete operations. They reach the volume conservation very late, while in other areas they have already established the level of concrete operations.

The test concerning the conservation of volume is one of the most famous examples to show both the existence of preoperationality and the emergence of the concrete operations (Piaget and Inhelder, 1941). Two identically formed glasses containing the same water volume are being presented to the child. As late as to the age of four the child realizes that the water volume in both glasses A and B is the same. Then, the content of B is poured in C, a glass that is formed more broad and lower than A and B. The child is then being questioned whether A and C contain the same volume. The preoperational child will usually reply that the volumes of the glasses differ from each other. To make it sure, the experimenter or the child pours the volume of C back to B in order to confirm again the equivalence of A and B. Then the experimenter or the child pours the volume of B in a tall and narrow glass D, asking again for the identity or non-identity of volume. The preoperational child will again deny the identity. The next procedure consists of pouring of B in four small glasses E that contain altogether the same amount as B. The typical answer expresses again the non-conservation (Fig. 1).

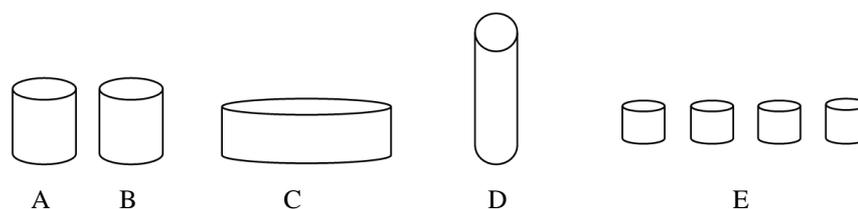


Fig. 1: Conservation of volume

The child explains the alleged lower volume of C by saying that it is „less tall“. D contains both more than B and C because it is “taller”, he or she maintains. The child focuses only one aspect or one dimension and does not consider simultaneous changes of two dimensions. The child solely focuses the height of the column and neglects the minor diameter. The child does not consider that the rise in one dimension is counterbalanced by a decline in the other dimension. The preoperational mind is not capable to see height, width and depth as a system of compensating relations. Only a person in the concrete operational stage is capable to recognize the several aspects simultaneously as parts of a balancing system. Concrete operations enable to recognize the reversibility of dimensions and aspects.

The conservation of volume depends on the understanding of reversibility, too. A cognitive reversal of the action of pouring leads back to the original state. The ability to this cognitive reversal belongs to the higher consciousness that defines the concrete operations. This fact implies that the practical ability to pour water does not base automatically on the ability to represent both actions simultaneously. Therefore, the preoperational child does not consider that neither the act of pouring nor the forms of glasses influence the volume. He or she has not anymore in his mind the act of pouring. He or she cannot return to the beginning of the action. The preoperational child knows the result but he or she does not overlook in his or her mind the total process of action and therefore also not the beginning. As the child does not overlook what he or she has thought or has done he or she cannot give a detailed record on his past thought processes. Preoperationality is a street with only one direction, whereas the concrete operations are running on ways with two directions.

The volume test thus proves that the child has no overview of the course of an action and of a simple transformation. He cannot see the beginning and end of an action at the same time. The thinking cannot yet return to its starting point and compare the beginning of a thought or action with its end. The beginning of the action or thought process is no longer present in consciousness. Not even in such simple cases as observing the volume in glasses and pouring liquids around them. Preoperative thinking is therefore

irreversible. The test provides direct evidence of the low level of consciousness of childlike thinking. This is close to the action instead of overlooking it. The child's thinking can therefore be described as pre-reflexive.

Children from industrialized countries often master the volume test at the age of 10 and at the latest at 12 years. Hundreds of tests to maintain or measure the actual operations have been carried out in developing regions in recent decades. Among them are also many tests for volume conservation. Adults from some developing regions do not master it at all, while other cultures host both percentages that pass this test and percentages that fail it. The percentages of those who fail are 20, 50, or 90%, depending on the culture being tested. In the 1960s, 80% of the adult illiterate rural population of Sardinia did not master this test (Peluffo, 1962; 1967). Underprivileged milieus in the USA (Graves, 1972) also showed the phenomenon of non-conservation. Similar results are available from hundreds of developing regions in Black Africa, South America and Australia (the Aborigines) (Dasen and Berry, 1974; De Lemos, 1973; Irvine, 1983; Kelly, 1971; 1977; Greenfield, 1966; Lloyd, 1983; Laurendeau-Bendavid, 1977).

The simpler a culture is, the greater the likelihood that it will be completely at the preoperational stage. The more exposed it is to the influences of modern culture, the greater the proportion of people who are already at the stage of concrete operations. If in the illiterate rural population of Sardinia in the 1960s the share of non-conservers was 80% or in developing regions of the South in the same period it was 30, 50 or 70%, it is obvious that in the Middle Ages, in Homeric Greece or in Ancient Egypt only small percentages of the population were at the stage of concrete operations.

This means, however, that Piaget's description of the low level of awareness of the child's thinking, the lack of reflexivity of the child's thinking and the inability of the child to describe and reconstruct its own thinking can be applied to most of pre-modern humankind. Piaget's description encompasses the greater part of pre-modern humankind. As claimed above, Jung's bold thesis of the low awareness of the thinking of premodern humankind can indeed be empirically operationalized and scientifically confirmed.

The Lack of Introspection in Humans of Pre-Modern Societies According to Ancient Studies

Many ethnologists and historians have pointed out the fact that people in pre-modern societies had a lack of introspection or a lower reflexivity. References of this kind were commonplace in the historical sciences. Representatives of Egyptology, Greek Studies, Medieval Studies, etc., thought they had to state again and again that the historical documents and legacies proved that archaic people were endowed with a non-reflexive consciousness. Homer studies in particular and studies on early Greece in general very often address precisely these phenomena (Schwabl, 1954; Nilsson, 1924; Snell, 1978; 1980; 1939; Dodds, 1970; Fränkel, 1962; Jaynes, 1993). It can be argued, however, that only the reference to developmental psychology and Piagetian cross-cultural psychology provides the opportunity to verify and possibly prove the historians' theses. Without the theory and method of developmental psychology, the theses of historians remain difficult to verify and bold. This is why these theses have been fizzled out in the course of the rise of cultural relativism since the 1970s and are now less and less represented, even though they were virtually at the centre of ancient studies for more than 100 years. In the following, it will be shown that these theses were essentially correct, but that they can also be deepened considerably.

Before we go into detail, a few general judgments by well-known philologists and scholars of antiquity will be presented to give a first insight into the subject. Hermann Fränkel defines the problem as follows: "The precondition is that Homeric man actually had a different structure than the one we know today. Man is by no means always the same at all times and under all zones. Humankind also has its history and of all historical events, the changes in humankind are perhaps the most serious and the most interesting" (Fränkel, 1962, transl. by G. O.).

Bruno Snell claims that the study of ancient culture leads to the realization that a reflexive or self-conscious spirit did not exist in Homeric or Archaic Greece at first. America also existed before its discovery - but the self-reflective mind appeared only at the moment of its discovery and did not exist before. Throughout his work, Snell attempts to show that the development of thought, poetry, religion and philosophy in ancient Greece demonstrated the transformation from a pre-reflexive to a reflective stage of the mind. Even more, according to Snell, this development of thinking forms the basis for the development of these mentioned cultural areas.

"In order to follow the process leading up to European thinking in the development of early

Greekism, one must radically understand the 'elevation' of thinking among the Greeks: The Greeks not only gained new objects (such as science and philosophy) and expanded old methods (such as a logical procedure) with the help of a pre-existing thought, but they first created what we call thinking: The human mind as an active, searching, inquiring spirit was discovered by them; a new conception of the human self underlies this. This process, the discovery of the spirit, is before our eyes in the history of Greek poetry and philosophy from Homer onwards; the poems of the epic, poetry, drama, the attempts to understand human nature and being rationally, are the stages on this path. Discovering the spirit is different from saying that Columbus 'discovered' America. America also existed before the discovery, but the European spirit is only won by being discovered; it exists in the consciousness of man of himself" (Snell, 1980, transl. by G. O.).

Historians and philologists also illustrate these facts using the example of how ancient literature represents decisions and actions of ancient people. Ancient literature is full of descriptions according to which people are not aware of the considerations on the basis of which they arrived at their decisions and actions. They often cannot explain their own actions and have no overview of their own thinking that led them to take action. The parallel to the lack of introspection in children is thus indicated.

Homer is claimed to describe not once in the *Iliad* the non-spatial, non-material structure of thinking and cognition. Not once is a complex train of thought in a person's head presented in context. "At no single point, however, is this concluding process itself hinted at; rather, the cognition of truth always comes as a sudden intuition. The truth is 'seen'. This is the essential point that applies to the whole area of the spiritual and mental" (Snell, 1980, transl. by G. O.). Homer knows nothing "that corresponds to our 'the head thinks', 'the heart feels' or even to 'he is straining his head'" (Snell, 1978, transl. by G. O.). This phenomenon is an indicator of the eidetic organization of perception and imagination. The lack of separation between these two areas of cognition is characteristic of both children and archaic people (Jaensch, 1923; Jaynes, 1993; Oesterdiekhoff, 2015).

This corresponds to the fact that at the time of Homer there was no expression for mind and thinking as central concepts (Snell, 1939). What was later called mind and thinking was at Homer's time attributed to different organs such as *phrenes*, *thymos* and *noos*, which act as independent organs and communicate with people or with his other organs. "What we interpret as the soul, Homeric man interprets in such a way that three entities are there, which he interprets by analogy with physical organs" (Snell, 1978, transl. by G. O.). Man enters into dialogue with his organs or with gods or the gods act on

these organs and control them (Fränkel, 1962; Snell, 1980; Sonntag, 2008; Oesterdiekhoff, 1997; Dodds, 1970). This lack of a unified organ of thought helps to understand how the gods influence the thinking of human beings or, as it were, how they themselves are this thinking and deciding. "Above all, Homer does not yet know real, own decisions of man; therefore, the intervention of the gods plays such a role also in the scenes that represent considerations" (Snell, 1980, transl. by G. O.). It is always the objects and situations themselves that necessarily force the decision. Man never weighs up in his own considerations and never struggles with decisions within himself. "It turned out that in Homer's work no personal decision, a conscious choice, is ever noticed in the person acting, that therefore no person before whom various possibilities open up has to meet personal decisions" (Snell, 1930, transl. by G. O.).

Eric Dodds has also studied this phenomenon in more detail. Especially the *Iliad* and the *Odyssey* are full of corresponding depictions. Agamemnon explains his robbery of the beloved of Achilles by divine inspiration. "I was not the cause of the act, but Zeus and my fate and the Erinyes walking in the dark: They lowered the wild *átē* into my mind in the gathering, the day I snatched Achill's booty from him. But what could I do? The Godhead will always reach his goal... But since I was blinded by *átē* and Zeus had taken away my mind, I will reconcile and make abundant reimbursements." (Homer cited in Dodds, 1970, transl. by G. O.).

Everywhere in the *Iliad* and other ancient texts there is talk of gods, God, Zeus, spirits etc., influencing, clouding, changing, destroying etc., the mind of a person in order to push his behavior and decisions in a certain direction. *Atē* is a state of mind of temporary confusion due to the action of an external force. This is almost always of a mystical nature. The actions that came about in this way were not in the power of man, but were determined by the mystical power and were therefore usually an expression of necessity. The gods tempt a man to act by placing *ménos* in his chest, i.e., they endow him with energy and determination - or, alternatively, they prevent his action by making him limp and unwilling. A god can breathe in *ménos*, place it in his chest or transmit it by touching him with a staff. People themselves sometimes feel this transmission of the foreign power and formulate that the deity has filled them with energy or has caused them to do this or that action.

"Whenever someone has had a particularly witty or equally stupid thought; when he suddenly recognizes the identity of another person or the meaning of a sign flashes into his mind; when he remembers something he should have forgotten; or forgets something he should have remembered, he or anyone else will see in it - if we may take the account literally - a psychic influence of

one of these anonymous supernatural entities." (Dodds, 1970, transl. by G. O.)

The normal course of activities, such as the habitual walk home or the trouble-free putting on of clothes, usually gives no reason to refer to mystical activities. But in all actions and decisions which seem even a little unusual or which are especially important, the mystical power comes into play very quickly, which is the actual responsible factor for people's actions. "Recognition, sudden insight, memory, right or wrong thoughts have this in common: They appear surprisingly, or as we say: They suddenly come to mind. Often one is not aware of any observation or thought that could have been the cause. So how should one call these processes one's own? Just before they were not yet in consciousness; now they are there! Something has inspired them and this indeterminacy is something different from oneself. Man knows nothing more than that. Therefore he speaks reluctantly of 'the gods' or 'a god' or more often (and especially if the inspiration turns out to be disadvantageous) of a demon. He applies the same explanation analogously to the thoughts and actions of other people when he has difficulty understanding them or when they seem to contradict his character." (Dodds, 1970, transl. by G. O.)

The archaic person thus tends not to feel responsible for his or her own behavior, but to anchor the responsibility and the cause of his or her actions in other people. In the same way, he sees the actions of other people as not caused by themselves, but as determined by gods and demons (Fränkel, 1962; Oesterdiekhoff, 1997; Schwabl, 1954; Sonntag, 2008). "Similarly, in problematic or dangerous situations; a way out is not found through cognitive effort and decision, but 'the best advice' comes from outside, felt the way as one feels fear, for example" (Sonntag, 2008, transl. by G. O.).

Achill wants to kill Agamemnon, but at the last moment he changes his mind. More precisely: Athena comes down from heaven, steps behind him, grabs his blond hair and pulls him back. Athena admonishes him not to resort to deathblow, but to react to Agamemnon with violent words. All this happens after Achill had already drawn the sword and before he pushes it back into the scabbard, in a short moment. Athena was visible only to him and he says he must obey her (Fränkel, 1962).

So people attribute their decisions to the fact that they hear the voices of gods whom they have to obey. Or the gods decide instead of humans, who only carry out what the gods have imposed on them in the manner of robots. The gods give the humans their feelings and thoughts. "It is also gods to whom Homer attributes the feelings and often even considerations and decisions of his actors. Where we would ask for psychological reasons why a person feels this way and not another, why he makes a

certain decision, Homer let a god intervene" (Herbig, 1991, transl. by G. O.).

The archaic person, like the child, tends to be more impulsive than the more highly developed person. Like the child, however, he then wants to shift the responsibility for the action away from himself. The affect that has driven him to act spontaneously is no longer accepted as part of the ego but shifted to the outside. "The Homeric man is subject to the dominion of the affect of the moment; when the intoxication is gone, when the disastrous consequences arise, he says: I did not want this, therefore also: I did not do this. His own behavior has become alien to him. He does not understand it. It is not a part of his own ego, but appears to him as something foreign that has penetrated him from outside... He speaks, for example, of the *até* that entraps him, or of the demon that has betrayed him" (Nilsson, 1924, transl. by G. O.).

The connection between the mystical explanations of actions and decisions on the one hand and the volume test on the other hand becomes obvious. The irreversibility of the thinking process is obvious: Thinking cannot return to the beginning of the action and decision and cannot bring this beginning into a relationship with the end of the action. To the mind, the beginning of the action is almost incomprehensible. Furthermore, the mind is not introspective and little conscious, so the mind does not fully master the reasoning and cannot overlook or remember his own thoughts. Just as the child, prompted to describe his just finished thought process, begins to fantasize, the archaic person fills the gap by pointing to the intervention of mystical forces. The fantasized reference to mystical forces is the confession that he no longer has any access to the thought and decision-making process that has just ended. Lack of reflexivity, irreversibility of thought processes, loss of overview and loss of memory as well as acceptance of mystical influences form a syndrome that belongs together.

The connection with the volume test is also interesting from another perspective. For, the children believe in an increase or decrease in the volume of water also as a result of the act of decanting. Thus, the failure to maintain the volume is related to magic. Similarly, the inability of archaic man to bring the beginning and end of an action into a reversible connection is related to his mystical interpretation of the action. Mysticism fills the gap that results from the lack of explanation and from the lack of overview and this concerns both physical phenomena (example volume) and psychological ones (actions, decisions).

Usually modern adult people know from where their new beliefs and new information come. Gopnik and Graf (1988) conducted experiments to show some problems children have with this regard. Children aged 3, 4 and 5

learned about the contents of a drawer in some different ways: They saw the contents or were told about them. Immediately or after a delay they were then asked from which source they had received their knowledge. The youngest children frequently could not tell, while the older ones knew whether they had seen or had been told about the contents. More, when children gain new beliefs they often forget that they had had other ones time before. Probably Homeric Greeks would accomplish the drawer task mentioned. However, the test shows that people on elementary stages have more problems to identify the sources of their knowledge and their decisions. The origins of their wishes, ideas and decisions are less clear to them.

The Mystical Interpretation of Social and Physical Incidents

Already (Dodds, 1970) pointed out that the ancient Greek mystical explanation of actions and decisions has its parallels in contemporary ethnological accounts from Africa and Borneo, which document how primitive peoples explain unusual events such as a fall over a tree trunk or a cold by the intervention of mystical powers. However, neither he nor others in this discussion context have pointed out that both ancient peoples and recent primitive peoples explain both physical events and psychological phenomena mystically.

The *Iliad* explains not only decisions and actions, but also events by reference to mystical intervention. "One could assume that in the ideology of the 8th century BC, gods played the same role as causation and psychology do in ours. While we try to trace natural processes back to causes and explain human behavior psychologically, Homer had a god intervene." (Herbig, 1991, transl. by G. O.) Archaic Greece has a magical-animistic understanding of nature. Events are not empirically and causally explainable, but are the result of magical influence. Not laws of nature, but gods and intentions guide events (Herbig, 1991; Jaynes, 1993). Even in a chariot race the gods intervene. Apollo takes the whip from Diomedes so that he falls back, but Pallas Athena gives it back to him and he rushes forward again (*Iliad* 23.378). Patroclus is sentenced to death by Apollo. He strikes him on the shoulders, rips the helmet off his head, breaks the spear and exposes him to the armour. Thus Apollo delivers Patroclus to the Trojans for execution (*Iliad* 16.776). Where Homer tries to explain events, he does not ask for causes but for intentions (Herbig, 1991).

One sees the parallel to the volume test and to preoperational thinking in general. Just as the ancient Greeks explained actions and thought processes mystically, they also explained events mystically. Magic and animism instead of empirical causality provide the basis for explaining natural processes. All things and

events are persons with intentions. They are under the control of higher beings who create or manipulate events by means of magic. More precisely: Events are also actions and are therefore mystically explained. But this is precisely the child's worldview (Piaget, 1926; 1969).

The parallel to the findings of ethnology is clear. Pre-modern peoples around the globe tend to mystically explain all kinds of events. A sudden rainfall, a lack of success in hunting, a cold, a small quarrel, the loud barking of a dog, a overcooked meal - immediately people tend to interpret these events as the result of the influence of a god, a spirit, a sorcerer or a fetish. Or vice versa: Beautiful spring weather, rain at the right time, wind coming up after a calm at sea, a good harvest, a good-tasting meal - all this cannot be a coincidence, but must be the result of the intervention of a mystical power or the result of magic. Pre-modern peoples tend to interpret all sorts of events with reference to the intervention of mystical powers. Such explanations therefore do not refer to rare or extraordinary events, such as religious interpretations in modern industrial societies. Rather, mystical interpretations belong to the daily repertoire of all people in all pre-modern societies with regard to all possible actions (Evans-Pritchard, 1987; Lévy-Bruhl, 1931; Oesterdiekhoff, 2009; 2011; 2013a; 2013b; Signer, 2004; Hallpike, 1979; Dux, 2014).

This corresponds to the fact that pre-modern peoples have neither an adequate understanding of causality nor of chance. All events are the result of intentions, intentions of magicians, spirits and gods. "They have no concept of the natural as we understand it and therefore no concept of the supernatural as we understand it" (Evans-Pritchard, 1987, transl. by G. O.) The "senseless" course of empirical causalities and of chains of overlapping factors is not seen. Accordingly, any understanding of chance, the sister concept of causality, is also missing. Two overlapping chains of causalities that generate new, unforeseen events - there is no understanding of this in the minds of pre-modern people. What appears as chance to modern people is for pre-modern people always the result of purpose or planning, of course of the mystical powers. Archaic people have no understanding of chance (Evans-Pritchard, 1987; Oesterdiekhoff, 2009; 2011; 2013a). "Pour cette mentalité, d'une façon générale, il n'y a pas de hasard, et il ne peut pas y en avoir. Non pas quelle soit persuadée du déterminisme rigoureux des phénomènes, bien au contraire, comme elle n'a pas la moindre idée de ce déterminisme, elle reste indifférente à la liaison causale, et à tout événement qui la frappe, elle attribue une origine mystique" (Lévy-Bruhl, 1960).

Developmental psychology can explain these relationships. The child of the pre-operational stage knows neither empirical causality nor chance. „There is no contact, during the primitive stages, between cause

and effect. Immediacy of relations and absence of intermediaries, such are the two outstanding characteristics of causality round about the age of 4-5" (Piaget, 1969). *Precausality* is the name of the schematism that the child uses instead. Children interpret natural phenomena in terms of intentions that pursue goals in order to use people. Everything that is there is there to serve a purpose. „Nature is a society of living beings of whom man is the master and at the same time the creator. All recurring movements are explained primitively in this way. The movements of the sun and the moon, that of the clouds, the return of the night, the course of rivers and of waves - all these are subject to the same principle: Things have obligations to us. Before the age of 7-8 we found no example of movement regulated by purely physical laws... Before the age of 7-8 the child seeks, as far as possible, to eliminate chance from nature... chance is banished from nature, for everything admits of justification or of motivation, since everything in nature has been willed" (Piaget, 1969).

Therefore, the child mystically explains the physical objects, events and regularities. People or gods cause the events and movements. The transition to the understanding of causality and coincidence then takes place at the level of concrete operations and continues at the level of formal operations. „But the clearest index of all is the appearance of the idea of chance. At about 7-8 the child begins to admit that there are things which serve no particular purpose and events due solely to chance encounters." (Piaget, 1969) The assumption of mystical influences on physical phenomena and psychological processes ceases completely at the age of 10 or 12.

Conclusion

Children and the majority of pre-modern mankind interpret decisions and thought processes mystically. Both actions and events are explained mystically. Only the overview of events enabled their causal explanation and the understanding of coincidence. Just like events, actions and their underlying thought processes cannot be overlooked. Therefore they are also interpreted mystically. Consequently, the thesis of historians can be confirmed, according to which the consciousness of people in earlier times was less developed. Since people were less capable of introspection, they were less able to develop and control their own thoughts. They were less able to think about their thoughts than people at the level of formal operations. As a result, often minutes later they no longer have access to the thoughts they had before making a decision or judgment. Since they cannot observe their own thought processes, their own decisions and considerations are often almost incomprehensible to them. Irreversibility is a basic feature of the pre-operational thought process. After an action has been completed, it is sometimes regretted and people cannot

explain why they decided to do it and why they did it. This is a typical childlike behavior.

Dodds and Snell see the clear connection with the lack of a *culture of guilt* and an educated conscience in Homeric Greece. One is not responsible for one's actions, but the mystical powers are. This phenomenon has been generalized with regard to primitive cultures: They are *cultures of shame*, not of guilt. It is not one's own conscience that is feared, but the ostracism of the community (Piers and Singer, 1953; Havighurst and Neugarten, 1955; Kittsteiner, 1995). This fact can also be explained by developmental psychology. Conscience develops only gradually during the child's development (Gesell, 1954; Ellwanger, 1979).

Generally speaking, a less developed conscience is prone to endure and inflict more suffering. It is more negligent both in controlling its own life and in social cooperation. It is also more negligent in tolerating morally questionable practices and living conditions (Oesterdiekhoff, 2011; 2012b; 2013a; 2013b; 2016; Rindermann, 2007; 2009; Rindermann *et al.*, 2014).

A less developed awareness is certainly the general condition for the fact that primitive peoples very often practiced cannibalism. Attacking other tribes to eat their members requires a dull awareness. However, cannibals have often also eaten members of their own group. Ethnology has shown that cannibal cultures have not practiced cannibalism simply as a result of scarcity and emergency situations. The reports show beyond any doubt that moral concerns and a guilty conscience played no role (Oesterdiekhoff, 2011; 2013a).

A weaker developed consciousness is probably also the general condition for the existence and acceptance of slavery, brutal criminal law, human sacrifice, ordeal and arena games. A weakly developed consciousness comes more easily to terms with the fact that a part of the population consists of slaves who can be bought and with whom one can do anything. It is easier to cope with the fact that large quantities of people are sacrificed to the gods and the dead, who are killed so that they have something to eat. It's easier to deal with torturing people in the ordinary course of criminal justice. The brutal-sadistic criminal law can be found among primitive peoples and advanced civilizations from the Stone Age to the eve of modernity around the globe. For often minor offences, people are subjected to unimaginable corporal punishment with the consent of the people, who usually watch the tortures with approval and out of curiosity. A weak consciousness is the prerequisite for people to accept that legal questions of life and death are made dependent on reaching into hot water or a flame, on taking poison or drawing straws. However, the ordeal was one of the most common judicial practices of all pre-modern humanity.

A weak consciousness is also the general condition for people to have watched in arenas how humans against humans, animals against animals and humans against animals fight with each other on life and death. These games were held for the sole purpose of entertaining people, to make them happy (Oesterdiekhoff, 2011; 2013a; 2012a; Hallpike, 2004).

In general, it can be said that a weak consciousness has been a general precondition of the often irrational and inhumane practices of pre-modern cultures. Of course, the category "consciousness" cannot be understood in isolation. However, it is possible to shed light on the psychological stage of development of individuals or groups from this point of view and this is exactly what this essay was designed to do. A pre-reflexive consciousness is, however, a manifestation of the pre-operational stage of development in particular and to a large extent also of the concrete-operational stage of development. A reflected consciousness in the true sense of the word is only given at the stage of formal operations. Only now is there a thinking of thinking (Piaget, 1981; Piaget and Inhelder, 1969) and this stage of development - the basis of a more highly developed consciousness - is the prerequisite for the part of humanity that lives in today's advanced nations, but probably better said: The majority of people living today, to no longer accept cannibalism, slavery, the brutal-sadistic criminal law, human sacrifices to the gods and the arena games (Oesterdiekhoff *et al.*, 2020). Because modern people have a more developed consciousness, they can neither enjoy nor bear these atrocities today.

Author's Contributions

Georg W. Oesterdiekhoff: Contributed by the conception of the idea and writing most parts of the article.

Joern Ruesen: Contributed by discussion of ideas, writing the last chapter and reading for corrections.

Helmut Spinner: Contributed by discussion of ideas, adding some sections in writing and reading for corrections.

Ethics

The authors confirm that the content of the article does not violate the dignity of any minority or ethnic group.

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