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THE CONCEPT OF HISTORICAL AND PHILOSOPHICAL RESEARCH FROM THE POINT OF VIEW OF THE APPLICATION OF ALGO-HEURISTIC METHODS

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Abstract: Over the centuries, historical and philosophical thought has developed various principles and methods for understanding the historical process, moving from objective-idealism and subjective-methodology to civilizationalism.

This article discusses the application of heuristic methods and algorithmic patterns in historical philosophy.

The aim of the article is to identify the advantages of the applicability of heuristic methods and algorithmic patterns, the use of which will contribute to conducting historical-philosophical research, also outlining the biases (or, in other words, flawed thinking) of heuristic methods, discussing and revealing the practical and theoretical consequences arising from them.

In historical philosophy, there are a number of still unexplored and unexplored problems, and when there is a need to divide them into a predetermined structure and sequence for the purpose of analysis, historical-philosophical algorithms are developed, that is, precise instructions. According to this theory, all cognitive and cognitive processes can be analyzed or divided into algorithmic, semi-algorithmic, heuristic or semi-heuristic content.

Heuristic methods and algorithmic patterns make it possible to best identify and compare the stages of development of the historical event under study, the changes that have occurred.

Keywords: algorithmic heuristic patterns, heuristic methods, cognitive and cognitive processes, principle of analogy.

Introduction

Heuristic methods and algorithmic patterns

have specific technologies, methodologies and rules: analysis, synthesis, generalization, comparison, deduction and induction, certain

aspects of historical events or facts (Documentary historical data can be considered not only official laws or regulations issued in the era under study, but also inscriptions found on objects, etc.), observation, chronology, which, when preserved and applied, will help in the process of studying, researching, revealing, describing a historical event, historical material through the prism of a given era.

Historical-philosophical heuristic methods are intuitive reasoning processes that operate under uncertainty, quickly generating a generally adequate, though not ideal or optimal, decision, solution, prediction, or conclusion. Because heuristic methods do not lead to an ideal or optimal outcome, but simply a “good enough” outcome, they significantly reduce the complexity of a decision, problem, or issue.

The basis of the activity of heuristics, creative research, is the methods of trial and error, the search for possible options. If we, for some important information, hastily study a separate section of the historiographical material, or, as much as possible, focus only on those parts that we want to understand best, we resort to the historical-philosophical heuristic method.

The main function of historical-philosophical heuristics in historiography is the study of historical events, research, the peculiarity of discovering something new, describing it, and making decisions for non-standard situations.

The facts of the philosophy of history are mainly those materials thanks to which the construction of a scientific theory or historical concept is created.

Those conducting research in the field of historical philosophy do not limit themselves in their studies to collecting purely historical facts. They face many problems, they strive to see internal historical and philosophical patterns, to reveal their interconnection and the logic of historical development.

These patterns can be used in historical and philosophical thinking as a clear chain of periodicity. Thanks to them, studying various changes and phenomena of historical samples or events of a given era, based not only on the validity of individual historical events, but also on the logical correspondence of actions and details of certain historical sources, to reconstruct, recreate knowledge about a given era, to study cultural life, the psychology of

historical figures, to “touch the atmosphere of that very era.”

Studying the process of decision-making and the psychology of their formation in the philosophy of history, we can notice certain similarities between the heuristics of history and the algorithmic regularities of history and philosophy. However, let us note that these are two different modes of cognition.

Heuristic methods of history and philosophy define the most probable strategy of the solution process, while stimulating not only the intuitive thinking of the researcher, but also the generation of new ideas, which often leads to the effective solution of historical and philosophical problems. This experimental strategy significantly reduces the time for decision-making, enabling researchers to take accurate and effective steps in their subsequent actions (Gavrilov & Yolkin, 2018).

As we know, science, including historical and philosophy, is a continuous and uninterrupted process. Over time, new approaches to the study of historical and philosophical phenomena are being developed, new methods of processing and database analysis are emerging. Solving a problem, due to the diversity of data, requires a proper classification of methods. In order to make the latter easier and faster, the heuristic method can be considered one of the most optimal and best (Bush, 1986).

Researchers rely on a limited number of heuristic principles that reduce complex tasks of probability estimation and magnitude prediction to simpler judgmental operations (Kahneman et al., 2005).

Unlike heuristic methods, algorithmic patterns are comprehensive, step-by-step processes that reliably end with the correct solutions to specific situations.

Algorithmic patterns in historical research best express the interconnectedness of historically documented realities.

Algorithmic patterns are based on the principle of historical-philosophical analogy and help to find differences or similarities in certain historical events, even if there are no obvious facts at first glance. One of the advantages of using algorithmic patterns is chronology. It allows you to consider historical phenomena and events step by step.

Discussion

Heuristic Methods

Heuristic methods play an important role in both problem solving and decision-making processes. We often resort to these mental shortcuts when we need to solve problems or make decisions quickly and efficiently.

The German mathematician and philosopher Joachim Jungius was one of the first to use the terminology *heureka*, calling for the creation of a research society in 1622. Jungius distinguished between three stages or levels of learning and cognition: empirical, epistemic, and heuristic. Those who had reached the empirical level believed that what they had learned was true because it corresponded to experience. Those who had reached the epistemic level knew how to derive their knowledge from principles based on evidence. Those who had reached the heuristic level had new methods for solving unsolved problems, formulating new theorems, and introducing them into science (Ritter et al., 2017).

Heuristics are often described as procedures with basic rules that can be used to speed up the decision-making process. To make sense of the decision-making process and analyze vast amounts of information, our brains rely on mental strategies to simplify the situation, allowing us to avoid wasting time on every detail.

Heuristics are reliable, but not perfect. In the application of broad decision-making “shortcuts” to respond to specific situations, random errors are both inevitable and have the potential to catalyze persistent errors (Del Campo et al., 2016).

In the philosophy of history, a heuristic is a mental shortcut or rule of thumb that facilitates decision-making and problem-solving. While heuristics often speed up the process of finding a satisfactory solution, they can also lead to cognitive biases, without guaranteeing a successful outcome. Still, biased thinking can handle uncertainty more effectively and robustly than unbiased thinking, which relies on more resource-intensive and general-purpose processing strategies.

A cognitive bias is an erroneous but pervasive judgment that results from an illogical pattern in cognition. In simple terms, a cognitive bias

occurs when a person accepts a subjective perception as reliable and objective truth.

The trade-off between thoughtful rationality and cognitive efficiency encompasses both the advantages and disadvantages of heuristics, representing a fundamental concept in historical and philosophical inquiry.

When studying heuristic methods, one must consider their relevance to all areas of the interaction of phenomena and the performance of events.

Heuristics are ingrained cognitive processes that are used by people and can lead to various biases. However, this does not mean that the biases induced by heuristics are inevitable. Since the widespread impact of such biases on social institutions has become a popular research topic, researchers have focused on techniques for making more informed, thoughtful, and fair decisions in our daily lives.

To focus on the main details of a given problem, one can make a mental list of clear goals and values. To clearly identify the effects of a choice, one must imagine its impact over time from the perspective of all parties involved. Most importantly, one must develop a conscious understanding of problem-solving techniques and the common errors they cause. This awareness allows you to quickly identify and eliminate the biases (or, in other words, faulty thinking) that they tend to create.

Heuristic methods have been studied in various fields. These methods can be used deliberately, consciously, and subconsciously. In recent years, the concept of “heuristics” has attracted considerable attention in fields such as philosophy, history, psychology, cognitive science, etc.

There are many heuristic methods, each of which plays a certain important role in analysis and decision-making.

Heuristic methods are often used in historical and philosophical research because they can be fast and accurate in certain contexts, reducing the time and mental effort required to make choices and decisions (Brighton & Gigerenzer, 2012).

The use of heuristic methods can help us better understand which ones we use and when.

However, when it comes to historical and philosophical heuristics, they have both advantages and disadvantages.

There are pros and cons to using heuristic

decision-making in historical and philosophical research. While they can help us find a solution to a problem more quickly, they can also lead to inaccurate judgments about a given event. Some researchers argue that heuristics are actually more accurate than biased (Schwartz, 2016).

However, there is one feature that distinguishes heuristics from other, usually more complex, procedures: Heuristic methods are problem-solving methods that do not guarantee an optimal solution. Therefore, the use of heuristics is inevitable when there is no method for finding an optimal solution, in particular when the problem and/or the optimality criterion are poorly defined. However, the use of heuristics can be beneficial even when the problem to be solved is well-defined. The latter is due to the fact that definitions of optimality usually ignore the existing constraints on the problem-solving process. Compared with infallible but elaborate methods, heuristic methods can provide a faster and more efficient final result. In 1637, the French philosopher René Descartes published one of his first major works, *Discourse on Method*. Descartes proposed four simple steps that should contribute to the solution of problems. First, accept as true only that which is beyond doubt. Next, break the problem down into as many subproblems as possible. Then, organize the ideas in an orderly manner, starting with the simplest and gradually moving to the most complex. Finally, make the enumerations so complete that nothing has been omitted (1998). Referring to his other methods, Descartes (1908) began working on appropriate heuristic rules, converting each problem into algebraic equations whenever possible, thus creating a *mathesis universalis* or universal science. In his unfinished *Rules for the Direction of Thought*, Descartes proposed 21 heuristic rules (out of an intended 36) for scientific research, such as simplifying the problem, rewriting the problem, and so on.

In historical and philosophical studies, search is a vivid example of assessing the value of time, since one of the most important criteria is to obtain acceptable results within the specified time frame. In a complete search algorithm, especially in the case of studying large events, the recovery of optimal results can take a huge amount of time, which makes it necessary to use heuristic search. Heuristic search is a type of

search algorithm that is used to find solutions to problems faster than exhaustive search. It uses specific criteria to guide the search process and focuses on the most favorable search domains. The latter can significantly reduce the number of nodes needed to find solutions, especially when performing complex searches.

Many emotional reactions are the basis for simplified thinking patterns that help make quick and effective decisions, without spending unnecessary time or energy on long discussions, guided by heuristic methods.

The main point is the ability of heuristics to replace complex problems with simple models, which, thanks to it becomes possible to quickly find intuitive solutions. If the decision has provided a positive result, as is often the case, then we do not even realize what actually happened. However, sometimes simplified schemes lead to cognitive distortions, that is, incorrect judgments that are not based on a correct assessment of the situation. Distortions cannot be eliminated, but they can be recognized and neutralized if we are attentive and strategic.

Affect and Effect Heuristic

One of the most common types of heuristics used is the affect heuristic. Affect is an emotional impulse that arises suddenly and unexpectedly. Affect-based judgment occurs when subjective ideas about good and bad act as heuristics and can lead to quick, perceptual judgments and systematic errors. It is the tendency to see the world in black and white, to believe that positive emotions are devoid of negative characteristics and negative emotions are positive. The affect heuristic is the tendency to use a simplified decision-making framework based on the intensity of positive or negative emotional reactions to choices.

The affect heuristic causes a tendency to be guided by a strong emotional response to choices, even if the emotional response is misleading.

If we have a conservative mindset, we tend to evaluate conservative arguments positively and arguments of the opposite nature negatively. And vice versa, if we strongly associate ourselves with liberal politics, then liberal ideas seem convincing and useful to us, and their opposites

seem unfounded and harmful. Isn't this too radical and simplistic a picture?

If something seems good, then involuntarily, naturally, we underestimate the negative aspects of this phenomenon. It is equally natural to ignore the merits and advantages of a subject that seems dangerous or bad to us. When we try to make an alternative choice, the emotional impact outweighs all other factors.

Today, due to the frequency of dissemination of information about events, assessments are distorted due to emotional intensity. The human brain is more interested in making a hasty decision than in making it analytically accurate. As a result of this tendency, it is unable to take everything into account. The roots of this go back to the depths of time. As they say: "He who thought long, quickly disappeared into the jaws of the predator." We are the descendants of quick decision makers. Therefore, we use a type of thinking shortcut called the affect heuristic.

Information that increases the perception of risk decreases the perception of benefit. Information that decreases the perception of benefit increases the perception of risk.

Michael Finucane (Finucane et al., 2000) found that time pressure tends to increase the negative relationship between perceived risk and perceived benefit, probably because time pressure increases the prevalence of emotional judgment patterns over analysis.

The affect heuristic simplifies our lives by presenting the world as much more organized than it actually is. Technologies developed in our imagination have fewer negative aspects, poorly developed technologies have no advantages. If something seems good, then naturally we underestimate the negative aspects of this phenomenon. It is equally natural to ignore the merits and advantages of a subject that seems dangerous or bad to us. When trying to make a choice between alternatives, the emotional influence outweighs all other factors.

The affect heuristic in historical and philosophical studies describes how we often rely on our emotions, rather than specific information, when making decisions. This helps us to come to a conclusion quickly and efficiently, but it can also distort our thinking and lead to a suboptimal decision.

The affect heuristic can affect any decision and is especially effective in situations where

there is significant time pressure. This means that if we need to make a quick and important choice, then resorting to this heuristic can lead us in the wrong direction.

That is, in the affect heuristic, judgment is guided by strong emotions, even if this leads to misconceptions.

The influence of the heuristic can also lead to systemic problems. If one of the historical and philosophical researchers needs to come to an important conclusion based solely on his feelings, and more likely, if he is under time pressure, that is, in a hurry, relying on the heuristic, not having sufficient mental resources, it is unlikely that he will make a well-founded decision. In this situation, the emotions of one person can negatively affect the lives of many.

That is, when we are short on time or energy, we are more likely to fall victim to the affect heuristic. This means that our emotional vulnerability can play a huge role in how effectively we use software.

Dual-process theory argues that we have two cognitive systems: one that is automatic and the other that is effortful. It suggests that people have two distinct cognitive systems for making decisions. The first is fast, easy, automatic, and emotional, and the second is slow, effortful, deliberate, and logical.

Research shows that the affect heuristic is a product of the first system. Moreover, the affect heuristic arises because our affective state (in other words, our current emotions) changes our perception of the risks and benefits of a particular outcome.

There is a common misconception that an emotion-based system is inherently flawed and always leads to wrong decisions. decision-making, while the reasoning-based system is superior in every way. However, as Daniel Kahneman noted in his book *Thinking: Fast and Slow* (2013), both systems have their pros and cons.

Thinking with the first system is useful when there is no time to think, because we need to make a decision immediately. This type of automatic thinking allows us to make instinctive choices. In emergency situations, there is no time to sit down and make a decision slowly. It is not surprising that the affect heuristic is a result of thinking, instead of making an informed decision, we make quick choices based on our

emotional state. When we need to make quick judgments, the first system can be useful. But when we need to take time to weigh our options, the affect heuristic can guide us in making decisions, making us make them differently.

Another factor that contributes to the affect heuristic is our perception of the risks and benefits of making a particular decision. Our mood affects our risk assessment, which in turn affects our behavior.

Our emotions can also change our perception of the risks and benefits of a particular outcome, affecting the likelihood of choosing it.

When we are positively affected, we tend to perceive the second system as having low risk and high potential reward. In contrast, when we are negatively affected, we perceive the first system as having high risk and low potential reward. Naturally, if we feel that choosing a particular system will lead to a high reward with a low probability of negative consequences, we are more likely to make a decision in its favor. By the same token, if we feel that choosing a particular system is too risky and we believe that we will not get any tangible results from it, we are unlikely to choose it. Thus, the influence of our emotions on the perceived risks and benefits of a given outcome can significantly influence our decision-making.

Every day we are faced with the need to make decisions. Of course, some are more important than others, but even seemingly insignificant decisions can have significant consequences. In order to make the best choices, we need to be aware of the various heuristics and biases that can influence our decision-making. This way, we can avoid them and make more informed decisions when necessary.

We should not rely solely on mechanical thinking when faced with big decisions. Taking the time to think logically about the choices we face and considering all possible options prevents us from taking mental shortcuts to reach a conclusion.

Moreover, being aware of one's own emotional state is useful in avoiding the affect heuristic. We need to realize that each of us feels and expresses happiness, sadness, and anger in our own way. In this case, we can accept that our emotions can influence our own decision-making, without forgetting to activate the second system, the Affect heuristic, slow, effortful,

deliberate, and logical thinking. It is better to postpone making an important decision if we are particularly emotional, whether it is strong excitement or sadness. This will help ensure that extreme emotions do not influence our choices. In 1980, social psychologist Robert B. Zajonc (1980), in his work "Feeling and Thinking: Preferences Do Not Need Conclusions," emphasized the importance of emotions in the decision-making process. According to him, all perception includes an affective component. Moreover, Zajonc showed that our first reaction when perceiving a new stimulus is often emotional. This contradicted the generally accepted view of the time that affective states arise only as a result of cognitive and perceptual processes. However, Zajonc argued that affect is the only constant. When we perceive a stimulus, we always have certain feelings about it, but our cognitive activity can change.

The theory that we can have emotions before or even without cognitive activity has expanded the field of discussion about how affective states influence decision-making. P. Slovic et al., 2007 published the article "The Affect Heuristic." He presented experimental results that show how our emotions influence our assessment of the risks and benefits of a given behavior.

The affect heuristic refers to how we can make more effective (though not always more accurate) judgments and decisions based on our emotions.

Being aware of the affect heuristic can help us remember to take the time to make important decisions. This way, we can make decisions using sound judgment instead of making impulsive choices based on our emotions.

The first step in reducing the affect heuristic in our lives is to understand and apply the affect heuristic.

Here are some strategies that may be helpful:

Before drawing conclusions, it is worth collecting and analyzing statistical facts. Turn to reliable sources of information and try to objectively assess the situation.

It is important to be critical of the very first information. Why was this event easy to remember? Is it really frequent or just bright and memorable?

Today, with information available and accessible to everyone in the most vivid and dramatic ways, striving for more objective and

critical thinking can help us make more informed and rational decisions and maintain an appropriate level of probability perception in order to avoid unnecessary fears and mistakes.

Stereotypical thinking is a universal feature of our perception not only of strangers, but even of many people we are familiar with. This is just the tip of the iceberg of social bias - prejudices that influence our judgments about others.

One variant of this phenomenon is the focus effect, the tendency to pay excessive attention to a conspicuous feature, which leads to an unbalanced assessment.

This scientific term implies one simple thing: People are often more influenced by the persuasiveness of the presentation of information than by its reliability. It is clear that the inherent desire of each person for a coherent, consistent narrative can lead to a false confidence in the accuracy of judgments that meet this requirement.

Researchers often rely on a clear set of already established heuristics in their analyses.

Below we will get acquainted with brief descriptions of some heuristic methods in the process of studying historical philosophy.

Availability heuristic – The availability heuristic is one of the most common cognitive biases. It is based on the idea that we make decisions based on a set of relevant examples. Because these are more easily stored in our memory, we are more likely to find outcomes that are more common or occur frequently.

This phenomenon describes the tendency for people to judge the probability of events based on the ease of recall of relevant examples.

Simply put, we tend to judge events that we can easily recall as more likely, even though this does not always reflect their actual frequency of occurrence.

The availability heuristic has a powerful influence on our lives, shaping our preferences, reflecting our fears, and influencing our behavior. It distorts our perceptions, so we often make decisions based on emotions and vivid memories rather than on sober analysis of data.

Availability Heuristics are related to the way our memory and attention work. The brain tends to simplify complex problems, and when assessing probabilities or making decisions, it often relies on fast, automatic processes that are in turn emotionally charged.

When we are faced with the question of how likely an event is, we do not perform complex statistical calculations. Instead, we recall the examples that are most vividly remembered and have the greatest emotional intensity. The easier it is to remember an event, the more likely it seems.

This heuristic method refers to the common mistake that, having some historical information, imagining and assuming the events preceding a given event, we base our judgments on the probability of that event.

The availability heuristic method can assume tangible results when human judgments about historically observed events correspond to the true frequency of events, otherwise this can lead to incorrect assessments.

This heuristic describes our tendency to judge the probability or importance of an event or phenomenon in direct proportion to the ease with which it comes to mind.

In other words, a single story that is widely circulated can have a greater influence on people's beliefs than any actual measure of probability or importance.

In general, the ease or difficulty of remembering certain information becomes a direct indicator for us of the probability of the event. In particular, it follows that the more often a statement is repeated, the more likely people are to believe it (this vague sense of habitual truth, even in the absence of evidence, is best captured by the concept of "likelihood").

The availability heuristic gives rise to many interesting phenomena. Of particular note is the tendency to overestimate the importance of recent events because they are easier to remember.

It is well known that we know much less about the distant past than about recent history.

Representativeness heuristic – The representativeness heuristic involves making decisions by comparing the current situation with a mental prototype (AlKhars et al., 2019). It allows us to quickly assign probabilities and predict new events using historical prototypes derived from past experience. This heuristic is the most studied by historical and philosophical researchers in relation to the development of stereotypes.

When we try to determine whether a hypothesis is reliable, we can compare these aspects

with other examples we have.

In the process of this heuristic method, by comparing the prototype or stereotype of a given historical event and the event we have already created in our minds, we predict the outcome of a new event.

Statistical facts are generally viewed as evidence of scientific, accepted truth. Consequently, it is expected that the true historical-philosophical result will be presented as a significant result, and as a consequence, researchers tend to overestimate the probability of a significant result (Kahneman et al., 2005).

This heuristic describes our tendency to look for the closest match to a stereotype rather than meaningful data when evaluating such events. The more a description matches our expectations of what an individual is like, the more likely we are to stick with it. The representativeness heuristic examines how closely an object or phenomenon matches our expectations, but when used incorrectly, it can lead to unfounded judgments, leading to cognitive biases. This is most likely to happen when we are in a hurry, inexperienced, overwhelmed by information, deliberately manipulated, or when we are subject to stereotypes and social biases.

Now consider the risks of misapplying the representational heuristic discussed above. While the technique encourages us to categorize situations into broad categories based on superficial characteristics and past experiences for the sake of cognitive expediency, such thinking is the basis for stereotyping and discrimination.

In practice, these errors lead to disproportionate favoritism of one group and/or oppression of other groups in a given society.

Indeed, the most influential research on heuristics often focuses on the connection between them and systematic discrimination.

Familiarity heuristic - The familiarity heuristic refers to how historians tend to have more favorable opinions about previous studies of a given event than about new studies. In fact, given both options, they may choose the version with which they are more familiar, even if the new version offers more benefits (Schwartz, 2016).

This technique can also be used in historiography to guide actions in familiar situations.

Scarcity heuristic - This method of decision-making is based on the perception of rare events in historiography as inherently more valuable, rare cases and facts.

In historiography, researchers rely on the scarcity heuristic method when, having incomplete information, it is necessary to make a quick choice and decision.

Trial and error - This is the main and, perhaps, the most frequently cited historical-philosophical heuristic method. Trial and error can be used to solve any historical problem that has a certain number of solutions and involves the possibility of experimentally applying a number of options until the correct solution is found.

The technique of this heuristic method is usually used at the initial stage of research in the philosophy of history, since it clearly presents the main goal of historical-philosophical heuristics.

Anchoring and refinement heuristics - The anchoring and refinement heuristic refers to the tendency to have expectations about new historical material based on already established information. The anchoring heuristic guides judgments based on the first information received, even if it is misleading. The anchoring effect occurs when a phenomenon is given a certain direction, turning it into an anchor for judgment.

This tendency may also help to explain the historiographical observation that established information often hinders the assimilation of new information, a concept known as feedback inhibition.

Natural heuristics - In historiography, those methods, tricks and mechanisms of problem solving and effective thinking that arise naturally during the ontogenetic development of human cognitive processes (individual development) and are used automatically and subconsciously when solving historical and philosophical problems, proposing new plans and hypotheses (Nalchajyan, 1984).

Behavioral heuristics - Heuristics define a method of behavior and establish rules that help achieve a set goal. However, a heuristic, unlike an algorithm, which describes a set of actions or procedures that are strictly defined (with a finite number of steps) to achieve a specific result, is a general recommendation based on statistical evidence or theoretical reasoning. The purpose of

a heuristic is to build models of the process of solving some new problem.

Accessibility Heuristic - Increasing awareness of cognitive biases helps us to better understand our own thoughts and decisions. Knowing that the accessibility heuristic exists, we can be better informed about its manifestations.

Try to get information about a given subject or event from a variety of sources and perspectives. This will help create a more complete and balanced picture of reality.

According to the philosophical definition, accessibility is the ease of understanding that generates a certain thought or conclusion. Many people use this type of heuristic when judging the probability of an event that can or will occur in the future. Therefore, people tend to overestimate the probability of a rare event if it easily comes to mind because it is frequently mentioned in everyday discussions (Kahneman, 2013).

How Heuristics Affect Decision Making - In the philosophy of history, heuristics are ingrained cognitive processes that are used by researchers and can also lead to various biases.

The range of heuristics is very wide. The application of heuristics requires intuition, study, or experience; some heuristics are quite elaborate, others are really shortcuts, some are described in somewhat vague terms, and still others are well-defined algorithms.

Strategies for making quick decisions are called heuristic algorithms, or simply heuristics. They can be studied experimentally.

Algorithmal Examples

Those who have studied the psychology of decision-making may notice similarities between heuristics and algorithmic patterns. However, it should not be forgotten that they are two different modes of cognition.

Heuristics are methods or strategies that often lead to solutions to problems, but are not guaranteed to succeed. They can be distinguished from algorithmic patterns, which are step-by-step procedures that sooner or later always yield a solution and can be reliably used to solve a specific problem (Kahneman, 2013).

For example, if we thoughtfully read every line of an article, we are using an algorithm. On

the other hand, if we quickly scan each section for important information, or perhaps focus only on parts that we do not yet understand, we are using a heuristic.

Historical heuristics can be distinguished from historical algorithmic patterns, which are methods or step-by-step procedures that always provide a solution to a problem sooner or later.

Our brains rely on historical algorithmic patterns every day to solve a specific problem. That is, historical algorithmic patterns are a set of mental instructions that are unique to specific situations, while historical heuristic methods are a set of general rules that help the brain process and overcome various obstacles (Kahneman, 2013).

Both of these concepts are established facts. However, this does not mean that the biases caused by historical heuristics are inevitable, since the great influence of such biases has become a topic of research, and researchers have focused on collecting more solid, thoughtful sources.

Historical-philosophical algorithmic patterns are algorithms for solving problems intuitively and are based on process analysis, decision-making, intuition, ingenuity, analogies, and experience. Today, the use of historical-philosophical algorithmic patterns is considered quite effective and innovative.

Algorithmic patterns work by evaluating possible search paths or states and expanding them for further study. They use a heuristic function that measures how close a given state is to a goal state to guide the search. This allows the algorithm to prioritize some paths or states over others and avoid exploring areas of the search space that are unlikely to lead to a solution. The solution obtained is not necessarily the best, however, “good enough” is found “fast enough” in time. This technique is an example of a trade-off between optimality and speed.

Historical-philosophical algorithmic patterns provide a clear plan of action that transforms a complex task into a series of accessible steps (actions), which are systematic sequences, and in order to apply them, it is necessary to divide the problem into smaller tasks through decomposition, then look for certain patterns in these tasks, and finally, based on the initial data of the historical problem, separating the unimportant parts, we can obtain the desired

result of solving the problem of any historical event.

This makes the development of the problem fast and predictable and is effective because it saves both time and effort.

“The journey from understanding the task of the problem to arriving at the final solution can be long and winding. The main step in solving the problem is to develop an idea of a plan” (Poya, 1961).

These patterns are mental shortcuts or basic rules that facilitate research, studies and decision-making in historical philosophy, the process of finding a satisfactory solution to the problem.

Historical-philosophical algorithmic patterns contain the following properties and requirements:

Discreteness - In the study of historical philosophy, the features of this algorithmic pattern should consist of separate simple actions, steps that follow each other, and these intended steps should be selected sequentially correctly, that is, the general search approach: start from the initial state and continue to study subsequent states until the target state is reached. This is called the best search approach, which will lead to the required result.

Specificity - Based on the historical database, it is necessary to have specific, sequential, understandable, user-interpretable steps of historical-philosophical algorithmic patterns, and after each step the next step should be indicated.

Simplicity - Each step of the historiographical-philosophical algorithmic patterns must be clear and unambiguous, with only one possible meaning, otherwise vague instructions will lead to inaccurate results. One of the most important tasks of historiographical-philosophical patterns is the analysis of the resulting database. As a rule, such data are the results of historiographical-philosophical studies. Interpretations are considered from different perspectives, comparing them with those previously obtained. It is also necessary to remember about the conditions for the implementation of the synthesis, since any discrepancy may be due to specific circumstances (Bush 1986).

Universality - In philosophy of history, each algorithm should be applicable to all problems of the type under consideration.

Efficiency - In philosophy of history, after

correctly given initial data and summarizing the final steps, the algorithm of the patterns of philosophy of history should give the correct answer, that is, the researcher should get the desired result.

To focus on the main details of a given philosophy of history, one can create a mental list of clear goals and values. To clearly identify the effects of choices, one should imagine their impact after some time, from the perspectives of all parties involved.

Most importantly, the researcher must consciously understand the methods of solving problems used and the common errors that arise from them. Awareness of these imperfect but consistent paths makes it possible to quickly identify and eliminate the biases (or, in other words, flawed thinking) that tend to arise.

Thus, we have considered the generalization of two complementary processes: historical-philosophical heuristics and historical-philosophical algorithms, as intermediary objects of historical knowledge.

Conclusion

Each scientific discipline uses certain methods and techniques to study various problems, and historical philosophy is no exception. The use of the presented methods allows the researcher to adequately assess the events of the historical period under study, their cause-and-effect relationship, based on historical patterns, especially valuing the subjective, heuristic (inventive), inductive actions of those individuals who had a turning point and a special impact on the key processes unfolding in the period under study. For the analysis of these historical problems, with the help of the strategy of historical-philosophical algorithmic methods, it is possible to create a mental list of clarified goals and values. The effects of events and incidents are characterized by the retrospective disclosure of historical reality, the activities of historical figures, consistent changes in historical reality in the process of development, based on cause-and-effect relationships, patterns of historical development. Thanks to the strategy of algorithmic patterns, people expand their knowledge base, as a result of which they make more correct decisions. In a changing world, this skill is only becoming more

relevant.

The use of these methods allows historical researchers to gain an idea of the problem and possible errors with the help of algorithmic regularities.

Thus, we considered the generalization of two complementary processes: historical-philosophical heuristics and historical-philosophical algorithms, as intermediary objects of historical-philosophical knowledge.

References

- AlKhars, M., Evangelopoulos, N., Pavur, R., & Kulkarni, S. (2019) Cognitive biases resulting from the representativeness heuristic in operations management: an experimental investigation. *Psychol Res Behav Manag*, 12, 263-276. doi:10.2147/PRBM.S193092
- Brighton, H., & Gigerenzer, G. (2012). Homo heuristicus: Less-is-more effects in adaptive cognition. *Malays J Med Sci*, 19(4), 6-16.
- Bush, G. Ya., (1986). *Strategic Evrilogy*. Riga: Latvian SSR, Society "Znanie".
- Del Campo, C. Pauser, S. Steiner, E., & Vetschera, R. (2016): Decision making styles and the use of heuristics in decision making. *Journal of Business Economics*, 86(4), 389-412:
- Descartes, R. (1908). Rules for the Direction of the Mind. In: Oeuvres de Descartes, vol 10. In: Adam C, Tannery P (eds). J Vrin, Paris
- Descartes, R. (1998). Discourse on the method for conducting one's reason well and for seeking the truth in the sciences (1637) (trans and ed: Cress D). Hackett, Indianapolis.
- Finucane, M., Alhakami, A., Slovic, P., & Johnson, S. (2000). The affect heuristic in judgments of risks and benefits. *J Behav Decis Mak*, 13(1), 1-17. doi:10.1002/(SICI)1099-0771(200001/03)13:1<1::AID-BDM333>3.0.CO;2-S
- Gavrilov, D. A., & Yolkin, S.V. (2018). *Izbrannie lektsii po kursu "Zapusk silnovo mishleniya"* (Selected lectures on the course "Starting strong thinking", in Russian). Part 1: "Heuristics and Development of Creative Imagination" / Foundation for Assisting Technologies of the XXI Century. Moscow: Publisher Vorobyov A.V.
- Kahneman, D., Slovic, P., & Tverski, A. (2005). "Decision making in uncertainty. Rules and prejudices". Kharkiv: Ed. "Institute of Applied Psychology "Humanitarian Center", 632 pages.
- Kahneman, D., (2013). *Think slowly... solve quickly*. Moscow: AST.
- Nalchajyan, A. A., (1984). *Hogebanakan bararan* ("Psychological Dictionary", in Armenian). Yerevan: "Luys" publishing house.
- Poya, D. (1961). "How to solve a problem". Moscow: /. Ed. 2-e. Teach Trans. with English V. Zvonareva and D. Bella; Ed. Yu. Gaiduka, 207 pages.
- Ritter, J., Gründer, K., Gabriel, G., & Schepers, H. (2017). Historisches Wörterbuch der Philosophie online. Schwabe Verlag
- Schwartz, PH. (2016). Comparative risk: Good or bad heuristic? *Am J Bioeth*, 16(5), 20-22. doi:10.1080/15265161.2016.1159765
- Slovic, P., Finucane, L. M., Peters, E., & MacGregor, G. D. (2007). The Affect Heuristic. *European Journal of Operational Research*, 177, 1333-1352.
- Zajonc, R. R. (1980). Feeling and Thinking: Preferences Not Needing Inferences 35(2), 151-175. https://doi.org/10.1037/0003