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Cognitive biases – a threat to objectivity in field investigations and in decisions based upon them?

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Abstract

One of the societal arenas for cognitive biases is investigative methods concerning human beings. Can cognitive biases undermine investigations and decisions, e.g. by the social services, by psychologists, by police and by prosecutors and courts? Cognitive biases are here defined in a broad sense as faulty or highly questionable thinking. The author has critically examined many child custody investigations, child protection investigations and preliminary inquiries by the police, which are the factual ground for the prosecutor's decision to prosecute or not and are used in court. Among the most common cognitive biases found are some of the most well known in cognitive psychology. But others that are common seem to have received little attention in cognitive psychology. Without doubt several kinds of cognitive biases pose a threat to the validity of many field investigations. The risk for adverse human consequences is high. A way to handle this problem could be meta-investigations of samples of investigations in a certain field to use as factual grounds for education and training of investigators. But there exists much resistance against critical examination in the system – a kind of cognitive bias.

Introduction

It has been shown by philosophers and psychological researchers that there exist many cognitive errors. But few of them seem to have been subject to empirical research. Some of them are called cognitive biases – a concept introduced by Tversky & Kahneman in the early seventies (e.g. 1974). This was the starting point for much pioneering and valuable psychological research on cognitive biases by them and other researchers. This concept seems more limited than concepts like "fallacies of thinking" or "errors of thought". In Swedish I prefer the broader term "tankefel" – i.e. errors of thought. Philosophers have thought about errors of thought for a long time. For instance, in 1941 the Swedish philosopher Alf Nyman wrote a book about errors of thought. The concept of "cognitive biases" that is often used means predictable tendencies for thinking, judgment and memory to go in a certain direction that deviates from some normative standard. A cognitive bias is more or less systematic in many situations of thinking. Many different biases have been detected in research and there seem to be at least hundreds of them. Examples of the most common and well known are confirmation bias, overconfidence and base rate neglect. Several researchers have argued that cognitive biases mostly are adaptive heuristics, that generally make us more effective. For instance, heuristics can be time-saving or give a correct judgment in most situations, but not

in all. Even if many cognitive biases can be adaptive or have no or small adverse consequences some of them can be very harmful. One of the areas for cognitive biases is investigative methods of human beings.

Can cognitive biases undermine investigations and decisions? For instance, by social workers, psychologists, police, prosecutors and courts in their investigations. In The Swedish Constitutional Law there is a requirement for objectivity within public decision-making that sometimes is not observed.

My experience

During 30 years of experience as an expert witness I have critically examined child custody investigations, child protection investigations, expert reports from child psychologists, and preliminary inquiries by the police. In more than a hundred of my expert reports in the last couple of years I have tried to point out and summarize the errors of thought I have found in these investigations. Systematic errors that are common are for example ignoring alternative hypotheses, ignoring to critically examine information, ignoring to reasonably ensure details. Without doubt, these types of cognitive errors pose a threat to the validity of many field investigations. The risk for harmful consequences is high, for example faulty decisions about children. Some of the errors have devastating effects and are definitely not compatible with the demand for objectivity in the Swedish law. If the errors are adaptive in some way the question is for whom. Errors could be time-saving or giving prestige benefits to the investigator but lead to the wrong judgment and harmful consequences.

Hypotheses about causes

There are several possible causal factors behind cognitive errors. It is clear that the human information processing system has limitations. It also seems clear that education, knowledge and training in the areas for the investigations could be much better. Different sociopsychological factors such as group think, group pressures, conflicts, friendships and loyalties seem to influence. Economic factors such as amount of time and the possibility of consulting experts may play a role. Cultural ideas and stereotypes can contribute. At the individual level factors such as mental distractions, moral opinions, and strong feelings can interfere with objectivity.

It is possible to consider several points of view on cognitive biases in the investigations here discussed. I will here propose three compatible theoretical views on the cognitive biases in investigations.

One perspective is that the situation around an investigation can be seen as a power-interest-field with those involved often having different interests and different possibility to influence what happens. Use of cognitive biases, for instance confirmation bias and overconfidence, can increase the power of the investigator or the decision maker over a client criticizing the investigative work.

A second point of view can be role theory. In this theory a role can here be seen as the behavior associated with a professional capacity, for example in the position as investigator or decision maker. At least some cognitive biases can strengthen the participant in a role or suppress another participant, for instance treating him from a stereotype or from biased selection of evidence.

My third theoretical view comes from learning theory. It is evident that the cognitive bias behavior exist in a context that can be analyzed by behavioral analysis. Some cognitive biases

could get positive reinforcement from colleagues, superiors or decision makers . Or an investigator can get negative reinforcement, for example avoid criticism, by using a cognitive bias in the investigation. Eliminating a bias in a report could mean punishment from others. For instance, conformity of thinking and behavior is very strong in groups of Swedish social workers. A group member that deviates can be punished psychologically.

What can be done - possibilities?

It is evident that many serious errors of thought occurs in many investigations concerning humans. To reduce or eliminate errors of thought may not be as simple as doing more research and educating investigators to prevent and detect errors of thought. Power-interest-fields may have to be restructured, role expectations discussed and modified, and behavioral contingencies changed. In organizations basic objectivity rules can be better clarified and emphasized and social support can be given for objectivity behavior. Critical examinations and discussions of investigative thought are needed.

A starting point for improvement could be exploratory meta-analyses of samples of investigations in a certain field to use as factual grounds for educating and training of investigators. Examining investigative thought in its context could clarify socioecological and psychoecological factors influencing cognitive biases. The points of view of both investigators and those under investigation should be considered.

However, there is much resistance to critical examination of the investigative systems that could at least partly be viewed from sociological, sociopsychological and behavioral theories. What is adaptive and advantageous for the investigator or organization may be derogatory or extremely harmful for the individuals under investigation.

References and examples of literature

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Appendix

Some examples of common errors of thought in investigations in the social services and in some preliminary investigations concerning crimes against children

- alternative hypotheses are not used or are ignored
- belief perseveration in the investigative process
- biased selection of evidence
- circular "logic", i.e. with help of several cognitive errors the investigator can return to the start hypothesis as result (e.g. by ignoring counter evidence and alternative interpretations)
- confabulation by the investigator
- decision is made without investigation, or the investigation is made, not before, but after the decision
- explicit purpose or questions that logically direct the investigation are lacking
- information or alleged evidence is used without critical examination
- influence from the investigator is not taken into consideration
- overconfident statements
- overuse, faulty use and faulty interpretation of psychological testing, e.g. use of tests that have no validity for the question to make statements about parental ability
- partiality in child custody investigations
- people who are under investigation are not given the possibility to reply to the statements from the sources
- proposals are made for a child but the investigator has ignored to talk with and ask the child
- reasoning, judgments and analyses are made based upon evidence that has not been controlled by the sources

Many other errors occur repeatedly in the investigations within these societal areas.