Cognitive Bias and Reason

The Talent of Excuse Making

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Mankind, through its complex history has developed very specific natural talents. Some believe these are wrought by adaptation, some through pure chance, and some by intelligent design. All of these are conducive to the fact that there are indeed virtuosos among us. When Thomas Hobbes wrote in his seminal work *Leviathan* that we are all naturally equal.[1] He is referring to the fact that the sum of our strengths can equal anothers. In this viewpoint all people have varying natural talents. This gives rise to the question; is there a quality that we all possess? Humans are rational animals so we are all adept at thinking. This special function binds all people together. Human beings are talented thinkers simply by virtue of having the capability. However, in the rational mind there is a skill that often presents itself. This skill is so deeply rooted in behavior that it is generally accounted for in all interactions. All people have a natural ability to justify ends after the fact. This natural ability is an active danger to knowledge in the form of confirmation bias.

The brain makes so many decisions every day that it is absurd to hold that every single maxim has been filtered through a complex web of rational decision making and then outputted immediately like an easy bake oven. This can be experienced when objects are identified in everyday life. If a person sees a red motor vehicle that looks like a honda civic, the brain will use the shortcut of previous experience with cars to make that judgment call. We do not have time to rationally inspect every single aspect of what makes a car a car and what constitutes a red one. In a study by Dr. Zoe Kourtzi from the University of Birmingham[2]subjects were asked to recognize certain patterns and certain faces in crowds. Over the course of the study these participants were

[1] Hobbes, Leviathan 77
[2] Kourtzi, Socio-cognitive profiles

able to use previous experience to interpret the visual cues faster and with ease as was seen in brain imaging. Reasons for beliefs are often tools for making the world digestible. However, sometimes these observations are plain wrong. For example, say the red honda from before was actually an orange hyundai. There was reason based on experience to believe it was a red honda, but that belief did not make it true. The previous knowledge utilized the assumption that all objects that have such characteristics which were observed must constitute a specific object. These assumptions are dangerous because simply assuming things to be true makes the job of science infinitely harder. Science is testing new evidence against a baseline of commonly held knowledge and when this knowledge is based solely upon an assumption then there is no comparative basis. This dichotomy is a debate between empiricism and rationalism.

Empiricism argues that everything we know is gained by experience. John Locke famously argued that humans are blank slates with no preconceived knowledge[3]. What we know is gained through observation and experience. In tandem with empiricism is rationalism. People only know what they have found to be true through pure reason. How do these two theories of knowledge seeking relate to excuses? People often make decisions based on previous experience and when somebody asks why an action was taken the natural answer is to say “I don’t know, I just did it.” as though it was some sort of intuition. A well thought out decision is premeditated, meaning all of the evidence has been assessed and an answer has presented itself. Typically when examining why an action was taken or a belief was held this forethought consideration is weightier. Because of this it seems obvious that knowledge should rely on pure reason alone because it is a certain way to factual understanding. Unfortunately, this is not the case. We cannot know everything by only thinking about it. A researcher must experience and gather sense data in order to have any sort of legs to stand on in scientific inquiry. David Hume contributes to

[3] Locke, External Knowledge

empiricism in the famous situation of two billiard balls coming into contact[4]. Our eyes are used to seeing that one hit the other and caused it to move, but how it did so is not immediately perceivable. It was assumed that one ball had the ability to move the other ball and acted upon that ability.

It is becoming clear that the excuse making talent has fatal flaws. The ability to make excuses can be helpful in explaining things quickly in order to make judgment calls in real time, but it can also be highly flawed and based upon false information. The senses of smell, taste, touch, hearing, and seeing while being the first line of scientific observation can also be terribly inaccurate. The largest problems in scientific research are found in the form of biases. Confirmation bias is when one gives reasons for a belief already held, rather than forming a belief based on observation. When people make excuses for their actions it is in truth an internalized confirmation bias at play. Very rarely will an action taken be truly wrong or stupid because of the typical feeling that we are intelligent. Therefore evidence from experience says we will do something smart and the excuses we make, which typically were not premeditated reasons, will be confirming this perceived fact. This shows our arrogance in a whole new way.

In a famous experiment photographs of people were shown side by side. A subject was asked to pick which of the photos they liked more. No reason had to be given, just a simple choice. The person conducting the experiment then switched some of the preferences before showing them to the subject again. The subject was then asked to provide justification for their choice. Remarkably the vast majority of subjects provided sound reasons for choosing all the faces, even those that they had not actually chosen.[5]

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[4] Hume, Human Nature 77
[5] Lindsay, Hagen, Read, Wade, & Garry, 2004

The evidence presented shows that the reasons given are not reasons at all, but excuses that are presented as reasons. In science it is impossible to have excuses serve as evidence. It is simply not conducive to scientific theory. A reason is formed beforehand while an excuse is thought up post action. Because of this a distinction is important in discerning what is and is not science. The philosopher Karl Popper argued that there is a type of inquiry that seeks to confirm information and one that seeks to disconfirm[6]. In his view science is meant only to disconfirm what is typically known based on new evidence. It is contrasted with pseudoscience. This seeks to confirm a theory or law. If all scientists were only looking to confirm what they believe there would be a lot of theories out there and not a lot of concrete agreed upon facts. Scientists do not only test their own observations, they also test those of other scientists. All of academia is responsible for keeping itself honest so that a general sum of knowledge can serve as a baseline to be tested against. In this model science serves in the most cohesive way possible.

Academics now have, all evidence considered, a significant obligation to remove this confirmation bias wherever it is seen. It is an absolute danger to reason. In an age where information is so easily accessible, it is part of the researcher's job to actively seek out phenomena to scrutinize as well as seeking out the flaws in the work of the community. With each and every person working to get ahead of the latest breakthroughs patience and a careful eye are required to keep information strictly factual.

If making excuses for results is so terrible, why are humans so skilled at it? It can be simply put that it is useful to appear to be rational. It is objectively useful to give off the disposition of helpfulness assuming it will make others like us. When humans were liked by the crowd or seen as useful, they were more likely to survive. Folks can live longer and easier when they are seemingly helpful. However, to truly be helpful, people would be working hard

[6] Popper, Science and Pseudo-Science 42

constantly. All humans would be incredibly self motivated machines. Scientists are motivated by the endeavor of investigating phenomena and gaining a greater understanding about the universe. That is a trait that would be desired in a scientist or a philosopher, but is not guaranteed. It can sometimes be easier to appear like hard work was done. Laziness is indeed one of the most bitter enemies of inquiry. Sometimes it is easier to match the experiment to the desired results than it is to observe an unexpected result out of an experiment. This is confirmation bias at play once again. The desired outcomes being specifically tailored by the scientist is a form of making excuses. This is a shame for greater science, but is an even greater shame for the public view of science. When an experiment is altered to match a desired result and this fact is revealed, then the public loses faith in good science.

Arrogance is another motivator behind these excuses that we make. This was touched on earlier with humankind's brazen belief that our actions must have been rational because we assume that we are knowledgeable. Those who work in science are often so well studied that it can seem absurd that a mistake could have been made. An academic might scoff at this and turn their nose up at the idea of not acknowledging their own faults, but very few people will actively seek out their biases. This is evident even in the reading of this essay which uses primarily empirical evidence collected by an author and then explained using reason and explanation. However, it is done knowing fully well that confirmation bias has the potential to be at play. Personal experience and the influences of specific research influence how this argument regarding excuses is written and in order to best mitigate bias, same as scientists conducting an experiment, writers must plan the expected result before putting pen to paper. Using an outline and template, using collected data, and then presenting an explanation for a human phenomena (in this case the uncanny ability to make excuses) will avoid finding evidence out of a desired

result, but rather create a thesis out of collected evidence and knowledge. In this way, the scientific method is demonstrated.

All of this seems within the perimeters of solid reason, but that will be left up to others to decide. Interlocutors are certain to find flaws in the blaming of the talent of excuse making on the omnipresent confirmation bias and is thus a detriment to scientific advancement. Sometimes the pursuit of proving an excuse to be true can be useful and should not be shunned, but when there is even a sliver of a chance that the bias might corrupt information that is significant to the understanding of the world and human's experience in it, one can never be too careful. The prescription for this is to have patience and try to be rational in all things. Act not on impulse and make an excuse later on. Rather, ask permission instead of forgiveness as is colloquially said.

Perhaps these talents have had and continue to have uses in everyday life to make decision making and observation easier, but practicing a more patient form of decision making will have a decidedly positive effect on understanding and knowledge. Sometimes it takes less work to think out a plan or experiment and perform it than it does to shape every detail into a story after the fact as a lawyer might do with an alibi. In this way the ability of cognition is also utilized in a more full and complete way and perhaps with practice this mindfulness could become as involuntary and obvious as making excuses is today.