Critical Thinking

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> *The essence of critical thinking is suspended judgment; and the essence of this suspense is inquiry to determine the nature of the problem before proceeding to attempts at its solution*
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The principles of critical thinking can be traced back to Socrates under the belief that people should themselves assert the authenticity of the beliefs held by those in power. The phrase was not coined before the early twentieth century by Dewey(1910) and it relates to the way one can, not just think, not just think through, but think and opine in a thorough, reflected, critical, analysed and reasoned manner that, through its process, decides upon, includes, questions and filter the valid and important positions, viewpoints and considerations under a sufficedly, unbiased, ethical and moral approach.(Dictionary.com, 2013; Tittle, 2011)

Paul and Elder(2002) raises, in building their three component framework, nine standards for what they consider to be fundamental for critical thinking and is comprised of clarity, relevance, logicalness, accuracy, depth, significance, precision, breadth and fairness. By applying these intellectual standards to the thought process; the resolution, conclusion, result or outcome would be adhering to a higher quality.

These intellectual standards thereby work as a model (and there are many more like it) for aspects to consider during ones train of thought.(Paul & Elder, 2002; Tittle, 2011; Horvath & Forte, 2011; Rhoder & French, 2012) What these standards immediately highlight is just how much actually goes into critical thinking, how much of an active cognitive process is required.

In this essay, I will lay out three experiences of critical thinking that I have had in order to highlight this aspect of critical thinking. These will cover the consequences of a lack of critical thinking, the act and balance of sufficing and using heuristics, and lastly an situation of successful, larger scale, critical thinking.

Critical thinking, drawing from personal experience, is often easier said than done. We, as beings are programmed to suffice through our habits and heuristics, and any other way would potentially make every decision and action exponentially more difficult and cognitively demanding.(Kahneman, 2011)

Were we to actively think for every decision, we would drain our cognitive capacity just by getting up in the morning; deciding what foot to start bringing out of the bed, deciding what to wear, what to eat, where to walk, what objects to avoid.

The act of sufficing in our daily lifes is an absolutely essential part of human life; our automatic, fast and decisive System 1 frees up capacity for us to make the decisions and actions that are truly important under our System 2.(Kahneman, 2011)

Just as sufficing by heuristics makes life easier, it lures us, as humans, organisations and societies in its dug in way of executing just in the same way we as have done before, and critical thinking ensure that we break out of this; that we question before we act.(Kahneman, 2003)

The reason for the modern day importance of critical thinking, if one need an explicit reason for operating in the most rational fashion, can be found in just that. As we learn in order to understand, as individuals and as a society, we become more aware of what we don't know, and what we cannot indeed control—somewhat like the space between the Dunning-Kruger effect and its corollary effect on the skilled.(Kruger & Dunning, 1999) We come to an understanding that our mind isn't pure, that our sense of morality can never become Kant's(2005) conception of pure reason and that engagement and a strained chain of thought is the best way we can fight our predisposition.

In my professional work, I have had the opportunity to be involved in a broad number of different settings; from infrastructural operations at music festivals, to developing applications and websites, to technical and creative planning of events, theater and commercials, and to lighting productions.

At some point in all of these settings, bringing in a broad range of intelligence that covers the issue at hand, will be necessary. Most often, it is not brought up under the explicit term of thinking critically, but as thoroughly discovering and evaluating all of the (roughly) viable options available and as looking at the broader picture. And before starting this subject, I cannot say that I was familiar with critical thinking as a terminology, but that might just as well be due to cultural issues.

When I was doing my undergrad, we (my cohort) were to create an awareness event for the Fairtrade organization. For this, a number of concept proposals had been drawn up and presented, of which one was interesting to execute in terms of publicity of novelty, but would not be the best way of communicating the organization's values.

The professor, which also acted as a project owner, favoured this proposal for egocentric reasons, and under a disunited compromise, this proposal was merged with other proposals by cherry-picking and thereby further diluting the message to be communicated.

To counter this ineffective, but favoured proposal, the students opposing this proposal had to reason forward an option and alternative that would be able to communicate the right message, capture the rest of the cohort's voices and unostentatiously point out the flaws of the current proposal.

In the end, our voices for a change of direction weren't strong enough to fight the project's sunk-cost, but the new proposal was a solid effort of constructively and critically assessing the possible ways of doing something about a situation that was not meeting the standards we set for ourselves. I believe that the cause of the original problem in this situation was due to a direct lack of critical thinking and an egocentric bias from someone acting out of their place.

We fought as best as we could, and our motives were merely to create a better product, event, and result for our client, but critical thinking can also be used for any purpose and moral motive. It can just as well be used to deceive someone by going down the path of focusing the energy on what would be the best way to lure another party in to their, possibly ill-conceived cause.

Going back to the act of sufficing, which I consider to be critical thinking's sometimes devilishly opposing force. Just as Kahneman(2011) considers that the best way of counteracting bias is to lean on someone else because we can not always see it clearly ourselves, we do, under too many circumstances, suffice our way to a solution by the way of heuristics or biases without critically thinking through our options.

A perfect example of when we hastily and possibly imprecisely reach a conclusion would be when we are inflicted with larger amounts of stress. Stress is not a bias in itself, rather it is defined as when we are, or expect we soon will be in a state of homoeostatic imbalance. (Sapolsky, 2014) Stress will inevitably make us rely more on our System 1, making us more prone to 'bad' heuristics and bias.(Zakay, 1993)

Productions, such as concerts, theater, music festivals, events and so on, all have a tendency to reach a good amount of stress as they approach their climaxes and tasks are piling up. Sometimes it is possible to keep a cool head, and see things for what they are, and some times, there is just chaos. The brain—due to chaos, pace and tasks—is simply inept at thinking beyond its immediate sphere, and critical thinking, to the level of something that adheres to Paul and Edler's(2002) standards, does not occur.(Zakay, 1993) From personal experience, this is especially the case when the risk of failure is low; when the tasks are rather non-demanding and their implications are minor.

A few years ago, I worked as a freelance lighting technician for a couple of audiovisual companies in Norway. The productions ranged from small corporate venues to larger festivals and shows. Sometimes the productions were well planned and sometimes, there was only an array of equipment delivered, and for me to figure out the rest (usually alongside an sound technician doing his part). Of course, the goal was always to manage the time well, get a plan up and running, and be ready for show start, but time is sometimes a scarce resource and things could get hectic. And the more hectic things get, the more tasks just has to be completed; and stopping and critically thinking about the situation become more difficult and one relies more on heuristics.(Goodie & Crooks, 2004)

It is not that these situations required the most explicit form of critical thinking, but I consider the definition of critical thinking to apply as soon as one reflectively stops and thoughtfully considers more than one perspective. And which then would apply to a good number of minor situations.

This understanding of critical thinking can be said to follow that of Kant's(2005) categorical and hypothetical imperatives in that the process of thought and of will that is desired should as best as possible follow a categorical imperative; an unconditional requirement that is justified as an end in itself; the most moral solution is the rational solution.

I also do think the same can be said for Schlick(1992) in claiming that "critical thinking skills are not pervasive in the work force" and that solving problems and making decisions require critical thinking skills—no matter the apparent limpidity of the question.

My sharpest examples of critical thinking; where I consider that I have best used critical thinking in bringing in, reflected over, assessed and reasoned by way through all the available data are also the same situations as what I consider my most creative situations.

Again when doing my undergrad I had an experience in which me and one classmate had teamed up to create a creative concept for an educational game aimed at adolescents. We both knew that we trusted each other and we both wanted to create the best solution for the problem at hand. As we opted out of the elective workshop being done at school, we had a lot of time to sit down and constructively research our way to the direction that would be best fitting for the client. We drew on empirical and statistical knowledge of the client and the target group, on current movements in technology, on previous experiences and on game design theory in the most constructive and reasoned way we could.(Eikaas, 2014; 2015) We drew on all the knowledge that we could manage to get our hands on with the purpose of being as thorough as possible.

I consider this both to be a creative situation and a situation of critical thinking in that we reasoned our way to a broader horizon, we saw and created relationships that was not immediately apparent, and strategically filtered the findings down in order to reason our way to a solution that met the goals set forth by the client.

In summarizing; Critical thinking is a term that covers a central part of logic, of reason, of rationality. It can involve large theoretical and practical situations, and it can involve the smallest of decisions. It is a mindset more than anything. Most prominently—to me at least—it is characterised by a heightened focus on broadening the intelligence horizon and taking measures to limit bias. This sometimes include broadening the horizon even further. Once the horizon has been widened and the intelligence assessed, an appropriate amount of shortcuts and sufficing ensure that the issue or process reaches a well-reasoned conclusion.

As I have attempted to lay out, critical thinking requires us to be cognitively present, it requires us to critically synthesize a multitude of perspectives until we reach an understanding that is appropriate for the situation and process at hand. And this is not an easy task (especially when we want to get things out of the way), mental stress, cognitive depletion and a surfeit of bias all colour our decisions whether we like it or not.(Kahneman, 2011; Zakay, 1993; Tittle, 2011) But when we do, when we do open up for the plethora of perspective and options available, when we do put options next to each other and measure them up, we open up for concluding at a better, a more efficient, reasonable and precise solution.(Tittle, 2011; Horvath & Forte, 2011)

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