

REASON

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Abstract. The confrontation between rational / irrational takes new forms every century. In fact, the two camps had never parted ways irreversibly and have indulged themselves into a cooperation marked by supremacy aspirations. The overzealous positivism has been followed by Kuhn, Feyerabend and Lakatos on the topic regarding the validation of theories. In more recent times, critic reviews of rationalism take extreme forms, starting with Max Horkheimer in his “Eclipse of Reason” (1947) and William Ophuls in his “Requiem for Modern Politics” (1997). The present overview of these currents leads the author towards drawing attention to a series of papers which do not share the burst of devastating critics against reason, but point out the weaknesses of its classical form in an ever changing world. They suggest amendments which would strengthen reason instead of producing damage. Thus, Toulmin makes fully justified and constructive proposals (although we regard as unnecessary the replacement of the term “reason” with the term “reasonability”). At the same time, the constructive critics of Newton-Smith (although we are of the opinion that the replacement of the term “truth” with the term “plausibility” is not fortunate). These two authors, contrast in their approach with the destructive critics of the postmodernist Rorty. In the end, mentions are made regarding the application of rationality in contemporary negotiations. By glossing over the unfriendly tone of the ideas that are fashionable nowadays, which reject reason at the same time with industrialism, uniformity and damage to nature, the conviction that reason will be able to reassert its role and fully deserved authority, through continual assimilation of new methods practiced by science and through the enlargement of the field of applications within essential domains for society is stated.

Few topics have elicited as many writings and such extensive and ardent debates as *reason* which was considered from its onset, by science and philosophy, as the supreme and distinctive ability of man. Research and the entire edifice and activity of science are regarded as the excellence field for practicing reason and its methods. Any economist can confirm that his / her science stems from the basic hypothesis of “human rationality”. Negotiating diplomats are striving to use rational arguments, whereas military people try to come up with rational strategies in order to win wars. Science persists in validating its rational approach through spectacular results when exploring the great infinity of the universe as well as when researching the tiny infinity of the cell and mastering the nanotechnologies.

Nevertheless, the present day stands out through a renewed advent of critics against reason, with radical overtones pertaining to certain philosophical currents, which spare neither science, nor technologies, reviled for all evils ailing today’s humankind.

I have in front of me a book called *The return to reason* by an author who had excelled in the philosophy of science, Stephen Toulmin. He makes an overview of the pinnacles of rational science and its accomplishments in setting the

boundaries of a personal and standalone domain in its own right, sheltered from outside interferences or supremacy of beliefs, myths and false opinions.

Reason, as opposed to thought which contains, according to Descartes, everything that is produced within us and which affects us at once, is the ability to put together a faultless reasoning, to distinguish between alternatives (good/evil, true/false) “without the benefit of being helped by the lights of faith” as Leibniz used to say. He believed reason to be “a daisy chain of truths”. All those who referred to reason, would have ended up drawing the same conclusion. Behold a land of harmony that inspired Leibniz into a universal language of certainty. Of relevance is the observation of the fact that, although already well on their way towards emancipation since as early as 1600, reason and science had gained respect half way through the century, by the time the 30 year war was over, a monument of sacrifices on the altar of useless religious disputes that had consumed Europe. Changes were springing up in other fields as well. The advent of printing and of widely circulated literature, as well as the humanist movement for instance, represented development vectors for culture, different from the paths trod by science. But, Toulmin states, “within an Europe torn by war, the modesty of the XVI century humanists regarding the human intellect and their penchant for diversity and ambiguity, seemed like luxury objects”. The certainty pertaining to science was, by contrast, reassuring.

Nothing would better illustrate the rigor of rational judgement as mathematics, language out of which Galileo unlocked all the laws of nature which had to be read by people. Laws are nothing more than regularities which we observe in nature, in the processes of life, in the functioning of live organisms, in the pathways of the planets and, more within reach, in the motion and fall of objects. The crown jewel of the current of the century was Newton’s mathematical rewriting of the movement of planets within the solar system, thus also adding to the precious message of exactness and certainty, the demonstration of the system’s stability. And the message of stability had significant echoes in society.

Toulmin never ceased to pay visits to contiguous fields which were alien to the method employed by sciences on their way towards mathematical formalization such as history, ethics and subjects related to man and society. The English empiricism, counter to the French rationalism, signals the existence of a balance of reason, between its stern style, on the one hand, and the nuances of humanities, on the other hand.

Around 1700 the version of rationality had won the battle. Newton enjoys huge popularity on the continent. Even the work of the French encyclopedic rationalists shows signs of the balance when the Encyclopedia project is started off by a mathematician (d’Alembert) and a humanist philosopher (Diderot).

The French Revolution elevates the rationality cult to paroxysm and mythology, by the walkabout goddess of reason in the streets of Paris.

The triumph of rationality is however reinforced by less spectacular events. They are made up of the advent of scientific disciplines, with a genuine work division and assignment of researchers within teams of specialists. Science becomes institutionalized, while education participates in its efforts, such is the case in the Humboldt universities or the polytechnic schools founded by Napoleon, to name but a few. All fields of study, confined within clear boundaries, employed *theory* as their basic instrument, a concept strictly defined by logic as a producing machine of all true sentences from fundamental hypotheses (axioms), in an accurate conceptual language, by paying heed to the mathematical model and making use of rigorous norms and rules. One by one, all sciences which were dubbed exact or natural sciences endeavored to emulate this model, which human sciences and those of the society sought to draw near, by introducing “yardsticks” and quantitative laws wherever possible.

Throughout the XIX century which gave rise to the modernization of the western world, which had entered its industrial phase, rational science was acknowledged as the fulcrum of the economic and social progress. In order to apprehend the climax of a secular evolution, suffice it to recall the Mathematicians Congress, at the dawn of the XX century, when David Hilbert’s wing of axiomatic and logical rationality prevailed over Poincaré’s intuitionism.

But the feeling of success led to a mistake which would be paid dearly later on. A smug movement, defiant towards other fields of investigation and analysis, set off since the time of Auguste Comte, denies the scientific value and the rationality denomination of any initiative that does not fall in line with the rigors of logic positivism. Philosophy takes a hard blow and metaphysics gets sacrificed whereas physics, awarded for its mathematization, becomes the universal standard of genuine science. It was a colossal mistake which turned against rationality throughout the rest of the XIX century.

An elementary analysis along the lines of this scientific ethos encompassing modesty, would have underlined the system’s weaknesses and overratedness. Here are the salient points and I follow Toulmin again: 1. Insistence upon employing a single scientific method for all fields and problems, at a time marked by the proliferation and diversification of the latter. 2. Historical research is completely different and how would it guide itself after theoretical disciplines such as cosmic physics? 3. The issue of objectivity of a successful discovery. 4. The unbiased approach required of the researcher. 5. The elitist temptation, which endangered professionalism, in contrast to the fledgling democracy. 6. Lack of recognition of the merits of those dealing mostly with practical matters and less with theories.

Tokens of the imbalance of the rational scales were left unsolved such as the ousting of values from the arsenal of theoretical research, the ever-growing separation between theoretical science and practical applications, the excessive abstractization and utter blotting out of contrasts or circumstances pertaining to problems under observation.

The postwar era marks the flourishing of antipositivist literature committed to criticizing the essence of the dominant scientific initiative and its logical-mathematical foundation. *Kuhn* (in his book entitled *The Structure of Scientific Revolutions*, 1961) undertakes to clarify the connection between theories cut off by scientific revolutions, by asserting that the criteria of rationality change from one stage to the other and theories are not measurable. *Feyerabend* (*Against method*) was more radical. He stands up in a sort of “epistemological anarchism” against any fixed rule imposed to scientific researchers, who need to enjoy the same degree of freedom as music composers or screen writers. The immeasurability extends to experience, and the falling in line of theory with the underlying experiences is declared as “specific” and ad-hoc. *Lakatos* (*Proofs and Refutations*) introduces history in order to examine the evolution of such concepts as “validity” and “rigor”. He also underlines the fact that empirical truth circulates from the particular to the general, in the opposite direction to that of the theoretical truth. Finally, *Karl Popper* opts for a negative criterion to validate theories: the principle of falsifications, the criteria for dismissing being more conclusive than the ones for validation, whereas the concept of *plausibility* is preferred to the detriment of the one of the *truth*.

At the same time, another family of papers, dealing with the fundamentals of science, identify the boundaries of the rational approach. Gödel’s famous theorem (1931) demonstrates that any given system of mathematical axioms, in particular the positive integers with addition and multiplication rules, is incomplete: true theoretical affirmations may exist, but they are impossible to demonstrate. Gödel’s incompleteness theorem has a similar effect to that of Heisenberg regarding uncertainty in physics.

In the vast development triggered by the fundamentals of science, the critic of formal rationality does not target rationality per se. Instead, there are philosophers who detract from it. *Max Horkheimer*, one of the founders of the Frankfurt school, makes the following allegations in his *Eclipse of Reason* (1947): “Since the times when reason had developed into an instrument of domination of man and of extra-human nature by man – that is right from its beginnings – it became entangled in its own intent to discover the truth”. The picture is one of a blind instrumental reasoning, devoid of possibilities to formulate its own purposes, therefore fatally abiding by the negative ones. Here is the conclusion of the book, which is so important to the author that it is shown on the cover: “If by luminism and intellectual progress we mean the emancipation of man from the superstitious belief in the forces of evil, daemons and fairies – in short, liberation from fear – then detracting from what is currently called reason is the ultimate service reason can bring”.

During the age that fostered reason, iluminism finds itself the subject of an utter disparagement in the book of *William Ophuls* “Requiem for Modern Politics. The Tragedy of the Enlightenment and the Challenge of the New Millennium” (1997). Statements of the following kind are made: “The lights have tried to cure

the diseases of civilization through means that ensured its psychopathology". "Philosophers have nurtured greed and whetted the desire for power". And to set aside any possible doubts regarding the opinions of the author, we produce the relevant references to the term of rationalism as found in the index of the book: cause for moral entropy, contemporary collapse, as opposed to profound psychology, separated from meaning, economic prejudice, ideological prejudice, mechanistic, pathogenic, predatory and megalomaniac. Here have we an author who plans to solve the problems of saving the environment by opening a front of exacerbated hostility against reason, the one that guides the research activities taking place in laboratories and classrooms all over the world, by seeking to gather new knowledge and producing rational strategies for promoting environmental friendliness and saving nature.

The tone of the critic against science expressed by philosophers or researchers themselves was, by all means, different, but even when moderate and urban, still as damaging and extremist as in the case of Hockheimer or Ophulus.

Let's look at the case of the postmodernism embodied by *Richard Rorty*. In "*Objectivity, relativism and truth*" (1991), he develops the antifundamentalist program of his school. Objectivity and truth were earmarked for demolition, as basic concepts of rationality and science, in such a way that the overthrowing of the former two led to the obliteration of the latter two. Rorty thinks they are related. The battle against realism had been carried out by employing the same strategy: the annihilation of the possibility to illustrate the world during the process of knowledge resulted in the fatal conclusion that this world was not accessible. There is no point in engaging in battle with something that is not there, so Rorty does not fight reason. Quite the contrary in what regards realism, because if it vanishes, then away goes objectivity and with it truth. This makes no sense anymore in the absence of an undefeatable truth criterion. Being unable to relate and confront with reality "To a certain extent ... being rational means being methodical: and this means having success criteria set beforehand". This means making the result lead the research and thinking of it as an end to follow. If we knew the purposes of culture, there would be no need for humanities anymore. Why the need for truth confronted with reality as long as we set it in stone in our assumptions? The pragmatic formula persists: knowledge and truth are mere compliments to beliefs which we consider justified without demanding any proof. And indeed, in the most extremist and incredible way conceivable, Rorty's science would be a collection of beliefs enjoying mutual consensus.

Another variant for positioning rationality would be the one of a "healthy" or "reasonable" meaning. Although, by being associated with tolerance, respect for opinions and acceptance of persuasion instead of deed, this does not raise serious objections. But the fear that the science man reverts to being a savior priest upsets Rorty to such an extent that he is not even ready to accept the role of rationality as

method. Not even a trace of distinction between objective and subjective, between knowledge and opinion, between deed and judgment seems acceptable to him. Thus, notions such as science, rationality, objectivity and truth are left out of the entire philosophical construct and postmodern practice.

Despite this antirational attitude, gliding from denigration to eradication, and enjoying wide circulation and appreciation in nowadays culture, those who have dispassionately analyzed the critics pertaining to the universe of science are not pleading for irrationality, but instead argue that reason, rather than being torn down, should be granted with reviving and healing approaches. We will cite two of those, before moving forward to reflections inferred from personal experiences.

After an ample discourse on the series of philosophical and historical critical papers on rationalist concepts, the philosopher, Newton-Smith, in his book *The Rationality of Science* (1981 and in its Romanian edition supervised by Angela Botez in 1994) puts forward the new profile of *moderate rationalism*. He maintains that these papers do not destroy the foundations of rationalism, but instead, they bear pertinent observations to which internal needs for restoration are added. A minimal requirement turns up in rational human behavior: based upon his convictions, the subject undertakes what is right for his purposes. Of relevance is the author's remark according to which "the general interest to pursue the dictate of reason stems from the requisite for a strategy to ensure the success of survival". The imperative of rationality emerges from the fundamental and imprescriptible interest for survival. When it comes to the scientific rationality however, the purpose has to be scientific, which means that the researcher chooses the most appropriate theory. But not the reference to a social paradigm – Newton-Smith mostly tackles the issue of changing Kuhn's theories – is the key to the choice, but rather its alignment to a historical process marked by ongoing progress. Science demands a purpose, and needs to have it tied to the truth whenever considering the possibility of giving explanations and making forecasts. Seeing as a truth in itself does not exist, we have to make do with a growing plausibility and, therefore, Newton-Smith accepts this concept suggested by Popper and Lakatos. We can not reduce the purpose of science to that of increasing the ability to solve problems (Laudan) without complementing it up with the objective of plausibility. In short, the moderated rationalist adds to the classical version: history (by contrast to the ahistoricism of science), dynamics (as opposed to a statical design), sociological openness (contrary to logical reductionism), progress, purpose, function of the researcher, rehabilitation of experiment and induction (in opposition to a theoretical and deductive model).

Stephan Toulmin is not part of the crowd of furious "irrationalists" either, but he is more generous than Newton-Smith when it comes to the extension of the fields with which rationality has to cooperate in order to strike a balance. He goes as far as a possible change of its name to "reasonability", which had been time and

again mistaken with. These areas encompass pragmatism and skepticism as an antidote to the exacerbation of theory or of certain truth. He also reviews the practice (he reminds us that ever since Aristotle and up until Kant, reason had a practical approach which was as valid as the theoretical one) as well as the experience. He sets Bacon's English empirism on an equal foot with the hermetical rationalism of Decartes. He reminds us that we are living in a world of uncertainty and he also places the probabilities next to (or a notch above) the apodictic reasoning. No mention is made of the method's uniqueness, when not only every discipline, but even every researcher carefully portions the right recipe from within the laundry list of available methods. He is a proponent of history when faced with stactical rationality. Not only does he demand a stronghold right for values, but he also does not forget the emotions, expelled by classical rationalism. It is a large-scale reconciliation. Why is it that in Antiquity and Middle Ages, Logic and Rhetoric were equally-entitled neighbors? Toulmin wants to reassert the reputation of a XVI century Montaigne, who had faded away from the spotlight when humanism got discredited during the science rationality dominated following century. Not only do sociology and psychology get rehabilitated, despite their inexact and equivocal methods, but also ethics, kept away for so long from the scientific discourse.

Under the guise of a bare reversal from (demanding) rationality to (nuanced) reasonability lies hidden an ambitious program. Instead of the "purposes" that Newton-Smith had requested, Toulmin wants "ideals". And this is what he says in his conclusion "Allied hearts and cool heads are looking for a middle path between the extremes of the abstract theory and those of the personal impulse. The ideals of practical thinkers are more realistic than the optimistic dreams of limited calculated minds that ignore the complexity of real life, or than the pessimistic nightmares of their critics, who find sources of desperation within these complexities".

I will now recall a few personal experiences related to defining human rationality, gathered during my activity as a diplomat and from studying international relations.

1. *Rationality in negotiations.* There are rules undertaken in a century-long effort in defining and conducting negotiations as the primary means to solve conflicts. They have a universal value and are part and parcel of the educational development of any diplomat anywhere in the world. What struck me the most was the difference between the styles of the Japanese or Chinese in comparison to the ones characteristic to the Euro-Atlantic region. They were just simply making use of a different logic when constructing and asserting arguments. I had known already and was willing to accept that there were certain differences between the deductive style of the French, on the one hand, and the inductive one of the English, on the other hand. However, they belonged to the same logical family. The Japanese reasoning was neither deductive, nor inductive. It was analogical. Are we allowed to call it irrational, on this logical basis? After all, it did meet the

universal rationality requirement to pursue a goal by adopting adequate attitudes and decisions. Furthermore, the fact that we understood each other's arguments was remarkable. Consequently, the "immeasurability" did not take place. Why is the tradition of the European rationality such, that an effort to encompass the use of analogicality into a true logic was never undertaken?

By comparing, in different circumstances, the behavior of the Swiss negotiator to that of the American one, both belonging to the same family of economic development, I had noticed there were considerable differences and even about-face individual features. The Swiss wanted a small but secure reward, with a long-term effect and stability. The American wanted a big reward, with an immediate effect, at the price of a greater risk and a more insecure future. Does this mean that one was more rational than the other? In fact, both pursued the same objective of maximizing the reward, albeit through different strategies. The same method and objective can thus lead to different answers within the same rationality. The paradox disappears if previously neglected factors, such as time and risk, are included into the definition of rationality. Whenever these factors are left out, the financial strategist, irrespective of his reasoning abilities, can stumble on a crisis, bankruptcy or depression.

2. The political sciences as well as those pertaining to international relations not only imply the rationality of their own initiative, but also that of the players within the respective fields. There are at least a dozen different theories, as to the basic, decisive elements (power, cooperation, legal norm, international law etc.), on the foundations of which axioms (basic hypotheses) are built, which are later on logically explored until a consensus for sorting out and prescribing the common action is reached. The competition between theories is as strong in this field as it is in natural sciences. But how many new elements, hazard, subjectivity, roles of individuals, undeletable mixture of elements that nurture peace or war, do not spring up in between?

Here we therefore have the great challenge: the role of the circumstance, situation, happening and level of civilization or culture of the respective players.

Everything that is left out by the formalized, normed, rigid, classical type of rationality in international relations runs counter to the neglected elements: clear-cut location in space (context) and in time (personal history), abidance by random elements as well as the rules of blind competition between cultures (irrational beliefs) and civilizations (rational knowledge).

Rationality remains the sole hope not only for finding solutions to international problems, but also for pinpointing the methods of implementation which rely upon norms, institutions, persons, groups of interests and passionate communities. But this is a type of rationality which is stretched out to new areas, and which is lean, flexible, nuanced and dependent upon the situation at hand.

Evidence underpinning the contribution of reason to a vast field of research is fully provided by the *evolution of mathematical models* which were made available to political, economic and social sciences. The method stems from new theoretical fields, such as game theory or operational research and from the development of probability theory and statistics, but it is also borrowed from profoundly mathematized sciences such as physics and mechanics. The models embodying the purest form of scientific rationality have become current working instruments within new fields. The most prolific years for the mathematical model used in international politics and its strategies had been those between 1960 and 1980 (the game theory had been perfected in 1944 by John von Neumann and O. Morgenstern), whereas the mathematical models used in economy had been regularly rewarded with Nobel Prizes for decades in a row.

Bayes' probability models are particularly noteworthy. They consist of the values initially rejected by logical rationality, under the name of utilities, in the theory of decision making. The idea of objective or purpose was also represented. The gist of the method consists in multiplying a probability (between 0 and 1) by an utility (measured within the same infinite interval) in order to get an expectation (hope) of a future event. Traditionally humanist fields became ever more mathematized and embraced new research methods such as mathematical linguistics. The theoretical model functioned not as a consequence or direct application of the propositions inferred from principles, but rather as an extensive repertoire of abstract schemes, capable of handling concrete situations, according to their respective circumstances. By using probabilities to a great extent, they had removed from sight the insistence upon a certain and stable truth, the results being articulated in terms such as evaluation, mathematical expectation or odds. If during the theoretical phase science had kept true to the classical rational methods, in the modeling one, rationality operated by choosing the most appropriate model in a given situation. Mathematics had turned from the accurate science of data pertaining to a phenomenon into an approximating science of relating processes.

In spite of this whole evolution, the need for a renewed enlargement had arisen. This does not presume the transformation of the truth proposed by Newton-Smith (we know of its relative, temporary and improvable nature) in a way that makes it preferable to reality, convenient as an explaining power and more useful in applications than other potential truths in truthfulness or plausibility. The replacement of *reason* by means of Toulmin's reasonability is also not necessary because represents a stance rather than a feature of one of the varieties of human thought. Reason is in fact endowed with an enormous arsenal of means to acquire knowledge and solve problems, built up over a long historical cumulation. There is also no point in weakening its confidence in its own potential, now at the peak of its discoveries and innovations and when it is virtually open and much in favor of an enlargement. A large-scale process: at the top it supports wisdom, applications are at the bottom and it is flanked by new fields of problematics as possible

partners. I believe not only philosophy is called upon to encourage this process, but also other disciplines as well as the pluri-, trans- and inter-disciplines of science and especially an audience no longer addicted to those mythologies and irrational passions that hinder the present and dim the future.