Fiction, truth and method

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Abstract. How does fiction help to build a consensual narrative of the time we live? How necessary is this narrative and how close it should resemble the reality? Since its inception, fiction can state and frame ideas and concepts through the refutation of the established aesthetical, ethical, hermeneutical, ontological and political consensus. This inverted logics that Aristotle regarded so dangerous is in fact the ultimate capability of the fictional narrative to capture the reality *in vivo* and to describe it with its full colours. However, it is undeniable that this intrinsically disruptive strength can be particularly unsettling. The very imagination that turns Gregor Samsa into an insect and transforms David Kepesh into a huge breast can very well distort reality and pretend that a lost election have been rigged and won by a lot. How can one be sure that a culture is mature enough in exercising fact verification and in analysing reality with scientific tolls that it is shielded against ideological, political or religious fictions? How to ensure that society has means to deconstruct distortions and lies engendered by social agents with specific interests? We believe that just a blend of objective means of fact verification, scientific analysis and an uncommitted ethical bond with truth can ensure that society is not misled by lies and misrepresentations of reality.

Keywords: Fiction; Reality; Truth and Refutation; Culture and Science

1. Fiction and truth

At some point during Winston's ordeal, the inner party member tells him that two plus two might be either four or five depending on what the Party thinks more convenient. This quintessential scene of Orwell's 1984, which nowadays is not just fiction, exemplifies how truth can be hijacked by a party, an enterprise, or an economical group. If from one hand, the XXth century has been rich in examples of the terrible political side of this disturbing deformation, more recently we are witnessing more than ever the increasing interference of agents that do not have a direct political motivation, but are motivated by economical and other social interests such as enterprises, financial agents, lobbying groups, etc.

Any detached and critical historical evaluation of the literary examples mentioned above allows concluding that even the wildest forms of literary fiction, artistic manifestation, or deviation from the prevailing aesthetics have been never a threat to society, but very much on the contrary. Historically, they have proved to be invaluable in providing means for a critical evaluation of anthropological, cultural, economical, ethical, and socio-political values, helping humanity to historically evolve and become more inclusive and equalitarian. In this respect, fiction and the whole range of artistic manifestations constitute a fundamental asset to positively transform society and in the understanding of the uniqueness of the human condition in the world and in the totality of the Cosmos.

For sure, fiction and artistic manifestations are the result of a complex web of interactions of which cultural, religious, and ideological influences are an important component. However, by its very nature, fiction and artistic manifestations are driven by the pressure of originality [1] and as such, they are invariably led to break free from the bonds of religion, ideology, etc. A simple exercise of memory can remind us of the masterpieces of art and fiction that have been created during the worst periods of oppression under the nazi-fascist, soviet, military, religious, and all types of dictatorships and oppression throughout History, and how they have guided society away from the grips of tyranny, stressing that any trustful narrative of the time must keep unbreakable bonds with humanistic values.

In the opposite direction, political parties, enterprises, financial agents, lobbying groups, and so on, giving their interest, have a problematic relationship with the truth and, traditionally, their *modus operandi* involves manipulation and, in a certain sense, fiction creation. The recent emergence and the growing influence of social networks have endowed these groups of interest with a new channel of communication. In fact, a particularly suitable one, given that social networks provide a fertile ground for the spread of lies, fake news, and idiosyncratic opinions of all sorts. For sure, likewise, any other media, the purpose, motivation, depth, and capability of mobilisation of the social networks vary in range and effectiveness; however, the main difference between the social networks and the traditional media is that social networks allow those that were once passive recipients to become agents and spreading vectors of ideas, news and also of lies and distortions. The danger embodied by these new agents is their lack of training, habit, time, and/or the intellectual skills and honesty for judging, validating, and verifying facts/interpretations and for discriminating them from lies and gross manipulations. We risk saying that the heart of the matter lies in their inability to distinguish literary and artistic fiction from the bad fiction of the fake news and alternative realities, making them not only easy preys, and most often the very agents of the ideas and forces that enslave them.

2. How to avoid errors of judgement

Thus away from the Eden of the aesthetic manifestations, there exists the greyish and shady ground of manipulation and distortion of facts aiming at economical, military, and political purposes. Inevitably, intellectuals are asked, coerced, enrolled, or recruited to give their creative contribution for the masters of the hour. There is abundant literature to exemplify coercive situations, George Orwell's 1984 being a supreme example (see also Refs. [2,3]). Under normal conditions, the well-known discussion of Gramsci [4] about the role of the so-called organic intellectuals in the capitalist society provides an interesting context to try to understand how, collectively, and, in particular, among intellectual circles, errors of judgement arise and are spread out. Naturally, this is a complex issue and our discussion will be necessarily sketchy.

Since its primordial manifestations, philosophy has thread on the path of setting means and methods to achieve trustful judgements and avoiding mistakes. The peripatetic method of Socrates, Plato, and Aristotle, and Confucius's golden rules are early examples of how, since early times, thinkers strived to capture truth and to lead a conscientious and philosophically meaningful life.

Centuries later, the religiously inspired medieval scholastic philosophy was replaced by the Cartesian method, the Spinosian epistemology and ethics, and, above all, by the procedures that emerged from the Scientific Revolution that took place in Europe at the XVII century, which put at the centre of the discussion of any empirical and theoretical truth, the scientific method and the mathematical principles that it ensues and uses. The roots of the scientific method can be found much earlier at the work of the Oxford monks, Roger Bacon and Robert Grosseteste, but it was only through the deductive reasoning preconized by Descartes and the inductive procedure defended by Francis Bacon, both extensively used and developed by Galileo, Newton and others, that the encompassing and multipurpose scientific method tool was universally employed to examine complex phenomena and to verify the suitability of hypotheses and mathematical models to explain and understand them.

The transformational power of the physical sciences has prompt many attempts to bring the scientific method at the core of the discussion of all human affairs, from economics to other branches of knowledge nowadays referred to as social sciences. These, in opposition to broader sense humanities and philosophy, were under pressure to evolve and to be driven by methodological procedures that encompassed steps such as data recording, replication, gauging, sampling, and so on, of the hypothetic-deductive model inherited from the physical sciences.

However, in what concerns mundane affairs, the most common source of mistakes of judgement are due to manipulation, distortion, or plain ignorance of the relevant facts pertaining to a particular development or process. Fact verification allied to an overall literacy in culture, ethics, and science is, of course, a mandatory requirement, but besides these, without a reliable method and a strong commitment to truth, one is liable to reach wrong conclusions and to defend odd ideas. It would be a mistake to assume that this is an issue that concerns only the illiterate and the citizens impregnated by religious, ideological, unscientific, or pseudo-scientific reasoning. Most surprisingly, among the groups of those who defend the oddest interpretations of reality, one can find, historically and at present, intellectuals who defended that Earth was at the centre of the Universe, that Darwin's evolution theory was untenable, who supported nazi-fascism, Stalinism and other tyrannies, who deny the Holocaust, who refuse the relationship between climate change and

human activities, and who embrace the wildest interpretations of reality and facts. And all that despite well-known analytical tools such as Popper's refutability principle, which clearly draws a frontier between the above-mentioned irrational believes and those based on science, and many other procedures one can use to distinguish facts from the bad fiction of reality distortion and lies.

Another relevant point is the logical-mathematical issue of establishing whether statements can be shown to be true or false. The fundamental work of Kurt Gödel (see for instance Ref. [5]] has shown that an axiomatic system cannot be simultaneously complete and consistent, that is to say, a formal system starting with a set of axioms cannot contain all possible theorems or, if it is complete, then there will be theorems whose false or true character cannot be established. In fact, the veracity of some statements can only be settled in the context of a wider axiomatic system. These shortcomings do not concern real facts and experimental sciences but are a warning to scientific theories and utopic social systems constructed out of purely theoretical arguments as they inevitably give rise to unsolvable dilemmas.

In fact, in his search for a method to avoid reaching wrong judgements, Edgar Morin [6] has set up his method to understand the complexity and his inter-multi-disciplinary approach to reach reliable conclusions out of the complex web of interactions and contradictory forces that typically are in action in any relevant phenomena in society. Morin's approach stresses the importance of using the whole body of scientific knowledge in order to obtain criteria of refutability and scientific assurance to test the factual veracity of statements and verifying hypotheses of explanation. Morin's method reinforces the deep connection that always existed between science and culture. In fact, the challenges of our times and, in particular, those posed by the human changes on the patterns of the climate require a multidimensional approach. Indeed, in order to properly cope with the complexity of the problems that humankind is now facing, a unified view of the human problems based on all known sciences, biological, human and physical, is asked and within an ethical context and renewed economic principles [7-10]. We have recently argued that only a broad approach can be effective in preventing and mitigating anthropic risks (pandemic, climate, environmental, etc) and in setting up resilient societies, that is, societies capable of coping with risks in an inclusive, humanistic and rational way [11].

3. Conclusions

In this reflection, we have argued that a systematic approach based on fact-checking, on the scientific method, and on an ethical commitment is essential for reaching the ultimate understanding the facts and the processes. None of the elements of this continuous exercise that must be carried out by all citizens can be split from the individual existential experience and detached from the deep roots that connect science with cultural and humanistic values [12,13] and, in this respect, literary fiction and artistic imagination play a fundamental role. Possibly, it has never been so necessary to be reminded of one of the most fundamental tenets of Orwell's thinking: "In a time of deceit telling the truth is a revolutionary act." We can only hope that future will unfold itself along the path of humanist values and truth. However, in what concerns the future, technological developments are a continuous source of unsettling. Let us mention two examples: the threat that an economy based on robotic technology creates massive unemployment and generalized poverty; the danger that artificial intelligence (AI) algorithms become ubiquitous instruments of control [14] and that, in their stronger form, can put at risk the very existence of humankind. Indeed,

these are possible scenarios, but instead of discussing these alternatives, let us consider the role of AI on the matter we have been discussing here.

For sure, the role of technology in human affairs is not new. In the 1989 acclaimed film of Steven Soderberg, "Sex, Lies, and Videotape" the emotional charge caused by the tension between loyalty and sexual freedom was unexpectedly resolved by two key protagonists through the recording videotapes, a technological toy that has then become widely available. Thus, in this instance, the moral dilemma found its solution through a technological devise that could help to discern truth from lie. Could AI relieve us from moral decisions that were thought to be fundamentally human and decide on the merits of considering whether a fact or a development is true or false? It is quite likely, in our opinion. Does that mean that there is the risk that we might be stripped from the basic human responsibility of choice? We believe that this may be inevitable as AI algorithms are likely to become so subtle that they will outperform humans even on matters that were thought to be quintessentially human. If moral and ethical matters can be decomposed in elementary programmable steps, as originally envisaged by George Boole, [15] one the pioneer of computational science, or to be approached by the maximization of possible gains (or minimization of losses), then AI algorithms can become more human than any human being. Indeed, AI is computationally free from having selfish ambitions, of being driven by greed, meanness and other human shortcomings, as these may lead to poorer outcomes. Can this empirical approach replace an ethical system based on highbrow principles? Utilitarian philosophers believed that social calculations aiming to reach common good and happiness were the very purpose of any serious philosophical system [16]. More than a century later the Nobel laureate economist, Amartya Sen, argued that the economy had to get back to its roots as a branch of

philosophical ethics and be redirected towards the common good and to eradicate inequalities [17], a goal that could, if wished, be achieved via a thorough examination of alternative public economy policies. Hence human decisions and social happiness may be reached algorithmically either by humans or by AI. Thus, given the proper resources, distinguishing truth from lie depends on a method, which with a proper ethical guidance can be encapsulated in an algorithm. From this point of view, AI is not necessarily a menace, but it may, in fact, play an important role in the fate of humankind (see e.g. Ref. [10]).

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