



Article

On Desired Remote Possibilities of the Future: Could Counterfactual Analysis Challenge Prognostic Reflexes?

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Abstract

The current text pursues an argument in favor of unorthodox and unrestrained futures thinking defying what is usually considered to constitute a sound political judgement. Accordingly, the efforts in this paper are directed at finding a way to establish the reasonableness and coherence of alternative images of the future that are usually deemed implausible remote possibilities by the political realm. The problem that this endeavor represents will be approached from two conceptual vantage points that would eventually converge – the first one concentrating on the issue of plausibility, and the other – on the utility of counterfactuality.

Keywords

Futures Research, Counterfactuality, Plausibility, Scenario Building, Desired Remote Possibilities

Introduction

The current text pursues an argument in favor of a peculiar mode of imagining the future, one that could easily be repudiated as ridiculous, unreasonable, or utopistic vis-à-vis what is considered to constitute a good political judgement, or realistic attitude on social change.

Against the backdrop of settled attitudes on the future as to what is sensible to expect, the article will make an effort to provide conceptual justification for trying to bring alleged “utopias” closer to reality. We reckon this much needed not only in view of the chain of crises that we have been experiencing in the last few decades, but also drawing hope from some witnessed shifts in the normative landscape where more and more representatives of the new generations are considering the prospects of a business-as-usual world simply unacceptable. Then, would it be really so preposterous to evoke, for example, a future of prohibited nuclear weapons, one that denies war as a means of conflict resolution or one that achieves full circularity of resources in the context of nationalism or the pressures of late capitalism? Our answer to that is negative.

It goes without saying that the futures studies realm has a rich tradition in conceiving desirable transformative images of the future that stand against policy limitations and institutional inertia on what is “reasonable to expect”. Accordingly, the aim of the paper will not be to advocate the merits of alternative futures to the futurists’ community; instead, it will attempt to address a bigger problem – how current political rationality could accommodate desired remote possibilities of the future without compromising on sound judgement.

We approach this problem on two fronts. First, we argue that the conceptual justification of integrating such future accounts into the “workings of politics” can be supported with more reliance on the notion of plausibility. Plausibility, as opposed to probability and possibility, could be crucial in demonstrating the acceptability of such unorthodox images of the future by putting the emphasis on their consistency and reasonableness rather than their likeliness of occurrence. That is why the first half the paper is devoted to explorations as to the notion of plausibility in search for its value. Then, we propose to consider the potential of counterfactual thinking and counterfactuals as viable means for conceiving images of desired remote possibilities of the future. The focus on them will represent

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the second, more tool-oriented contribution of the text. This might come as a surprising move since counterfactuals are a prominent instrument in analyzing developments in hindsight by applying “What if/ If only” inquiries to the past (the well-known example being Robert Fogel’s study from 1964). We, however, will try to illustrate that reflexive counterfactuality is worth considering in futures scenario-building as well.

Given that, the text will proceed as follows: in the first sections we will pay attention to the way the futures studies realm has addressed the problem of plausibility and we will point to three strategies of evoking unconventional images of the future, one of which is of particular interest for this text, namely, desired remote possibilities. We will provide brief justification of their merit in terms of epistemological, ontological and political considerations. Then, in the sections that follow, we will introduce the nature of counterfactual thinking, classify counterfactuals and explain the differences between counterfactuality and counterfactuals. Finally, we will conclude with some remarks on the dire need to consider the future in a way that makes more room for “thinking the unthinkable” in order to advance desired alternative states of affairs.

The Plausibility of the Seemingly Implausible

One of the positions that we advance in this text is that plausibility is an appropriate concept for analyzing a very broad span of assertions about the future irrespectively of their estimated likeliness of occurrence. This is very important as we would like to underline the need to strip the concept from its quotidian uses and its unconscious coupling with the notion of probability that is often expressed in the assumption that plausible futures are futures that are reasonable to expect, i.e., they boast with significant chance of happening. The advocated in the current paper take on plausibility opens the path for attempts to marry reasonableness with unconventional futures thinking and eventually redirect the political attention on social change from what is reasonable to expect to what could be reasonable to dare imagining and act upon.

Although plausibility receives occasional scholarly attention, assumptions about it are almost always underpinning accounts on the future in the intricate interplay of discursively established ascriptions such as “possible”, “probable”, “preferable”, “surprising” or “desirable”. In the futures research literature, one can stumble upon some efforts to conceptually clarify the matter. Van der Helm (2006) makes a significant contribution in this direction by offering insight into the semantic confusions accompanying plausibility vis-à-vis a couple of other well-known qualifiers – the possible and the probable. So do Ramírez & Selin (2014) but in the framework of three cultural divides within scenario planning: qualitative vs. quantitative; “art” or science”; appreciating plausible futures (multiple) vs. predicting the future (single). As to these incompatible cultures the focus on either plausibility or probability is not conceived a matter of methodological preference rather than a result of different conceptions on how to effectively manage uncertainty.

Within the latter outlook, elaborating plausible scenarios allows for embracing uncertainty as an opportunity to change one’s cognitive stance; using probabilities, on the other hand, is believed to be an effective way to reduce epistemological uncertainty. Angela Wilkinson (2009) also considers the focus on either plausibility or probability to be underpinning what she delineates as different communities of scenario practitioners – the Homo Deductivist (focused on formal expertise, qualitative evidence, computer modelling, probabilistic futures) and Homo Constructivist (led by qualitative evidence, intuitive causal logics, storytelling, plausible or possible but certainly not probable futures). Inayatullah (2008), in his turn, takes a more balanced approach in defining the plausible future in his Futures Triangle as a perspective emerging out of the simultaneous push of the present, pull of the future and the weight of history.

As already emphasized, our own take on the matter will be much in line with this recently discovered interest in the productive aspects of relying on the notion of plausibility. In that respect, we will side with Selin & Pereira (2013) in their conclusion that plausibility is about

inviting a reasoned ambivalence towards prediction; it is about keeping logic in clear view without rushing to assign probabilities. When there is high uncertainty about the casual relations, nurturing openness to the future and sustaining curiosity may be more useful than definiteness. (Selin & Pereira, 2013, p.106, italics added).

Then a sensible question becomes how such unconventional and yet reasonable future accounts look like. Stepping on the futures studies' own tradition, we hereby outline three types of accounts and their underlying three types of futures thinking that advance the plausibility of what is commonly perceived to be implausible. Such strategies of conceiving unorthodox images of the future shift the focus from plausibility as having to do with the perceived likeliness of occurrence towards plausibility as having more to do with logic and consistency of the accounts. These three paths of evoking the plausibility of unconventional futures may be summarized as follows: the first one – to focus on surprising events; the second path – to make projections led to extreme; and the third way – to conceive desired remote possibilities. Throughout this paper we will use the terms remote possibilities or unconventional images of the future to denote images of the future that defy commonsensical projections and initiate counterfactual imagination as to already crystalized expectations about the future.

We must point out that the lines between the three types are not strictly set, and one could probably find other sources of discontinuity that deserve attention. Nevertheless, these present three major avenues of conceiving alternative images of the future that could boast with unconventionality. As already claimed in the introduction, we are particularly interested in the third type and we will pay due conceptual attention to its merits within the framework of a more interventionist approach to social change.

The first source of unconventional and yet plausible futures (in the sense advocated by the current paper) is what is considered to be surprising and very unlikely developments, sudden by occurrence and with high impact. We might find them in the future-related literature under the rubrics of “black swans”, “wild cards”, “out of the blue” events, “inevitable surprises”, “game changers” etc. (Taleb, 2007; Petersen, 1997, 1999; Barber, 2006; Cornish, 2003; Day & Schoemaker, 2005; Mendonça et al., 2004; Schwartz, 2004). Although there might be found conceptual differences among them, they share two very important features. First, their likelihood of occurrence is estimated as low by conventional forecasts (ex. terrorists obtain and use biological weapons; permanent change in oceanic currents). Second, they are intellectually attainable. Their occurrence could make sense either by hindsight (e.g., black swans) or by foresight activities concentrating on what may lie on the periphery of our futures-oriented horizon (marginal events, weak signals, seeds of change) (Mendonça et al., 2012; Masini, 2002). Either way, they come to fill in epistemological deficits when dealing with uncertainty (Nikolova, 2017) and provide original insight as to dependencies and weaknesses into the operation of different systems and structures.

The second avenue for advancing the plausibility of unorthodox images of the future is by projecting a systemic breakdown. This approach relies on “thinking the unthinkable” and assumes the plausibility, and most importantly, the feasibility of a catastrophic event caused by a systemic logic led to its extremes. It might seem close to the first strategy above as they both could picture disastrous events. However, their epistemological presuppositions are not the same.

The wild card problem above is a problem of visibility – the foresight effort is aimed at evoking possibilities that lie on the periphery of forecasting proper. The problem of a system failure is not a problem of epistemological deficit as to the sources of the catastrophe. It is in assuming that the anti-entropic systemic processes will not sustain. It imagines a situation in which visible mechanisms are led to extreme and eventually the incredible happens. A prominent example for such an approach is the pioneering work of Herman Kahn who famously advanced controversial scenarios of turning the Cold War into a thermonuclear war by presupposing the feasibility of a fully-fledged conflict between the USA and the USSR (Kahn, 1960, 1962). The catastrophe in his writings is not a result of epistemologically ignored causes; it is an extension of the logic of the Cold War conflict to an extreme. Images advancing the plausibility of a systemic breakdown could serve as a learning tool which can expand the attention span of management, reveal unnoticed points of vulnerability and opportunity, increase sensibility to discontinuities, stimulate creative ways for reaction in situations of turmoil. They provide mirror for institutional self-reflection and stimuli for overcoming biases in order to inspire organizational change. Kahn's methodology indeed triggered shifts in US nuclear military strategy.

Then, the third type of futures thinking that evokes the plausibility of unconventional images of the future is what we denoted at the beginning as conceiving desired remote possibilities. This class of images does not deal with catastrophic events (be they surprising or system-generated). It aims at “thinking the unthinkable” but under the auspices of “the desired” and “the preferred”. This makes them automatically instances of more radical normative foresight. Certainly, the latter can very easily be expelled from the conventional political debate under the label of “utopia”. However, in contradistinction to the pejorative flavor that the latter is conveying for many, we hereby regard them as practices of exerting rational imagination¹ as to what appears to be highly improbable in view of familiar extrapolations. Their role is not in maintaining an unattainable image of the future but more in challenging institutional inertia and conventional wisdom in order to open political space (both ideological and practical) for

social change. Such attempts at advancing reasonable fantasies of tomorrow rely not only on attractive images of the future but more importantly, on consistency and coherence of argument as to the feasibility of such future. A close example of such visioning is Attali's concept of hyperdemocracy entailing the primal role of solidarity networks, participative democracy, responsible companies, NGOs, micro-credits and collective intelligence in the functioning of societies (Attali, 2011). Another attempt in this direction is Gunter Pauli's "blue economy business model" advancing open-source scientific solutions based upon physical processes common in the natural world (Pauli, 2010, 2015, 2017). Even if we reach for recent events that evoke the need to consider desired remote possibilities, we can very easily take the war in Ukraine as an appealing occasion to exert our rational imagination as to "incredible" scenarios of forsaking war and nuclear weapons as a means of finding political solutions. The goal of such endeavor, again, is not to produce a dramatic result at once, but to prepare the steps for arguing the reliability and reasonableness, i.e., the plausibility of such seemingly implausible strategies.

Given the skepticism with regards to bridging the gap between what is considered a desired remote possibility and reality, we need to pay closer attention to the reliability of such images of the future in ontological, epistemological and political terms. This will be done in the next section.

The Plausibility of Desired Remote Possibilities of the Future

In this section we will briefly sketch some aspects of the epistemological, ontological and political justification of images advancing desired remote possibilities of the future. The notion of plausibility is crucial in this endeavor as it allows us to establish the actual merits and the rightful place of alternative images of tomorrow in the political navigation of social change. Stepping on that, in the next sections we will introduce counterfactual analysis and its practical utility as a tool to elaborate images of desired remote possibilities of the future in a reasonable, coherent and consistent way.

Can we argue that desired remote possibilities of the future are epistemologically sustainable? The mere idea of a remote possibility creates uneasiness as to whether such seemingly implausible (in view of conventional wisdom) images are reasonable to uphold and advance. The common pragmatic attitude would dismiss those as nonsensical, ridiculous and utopian. Our contention, in contrast, is that a truly pragmatic mind would iteratively inquire the parameters of possible action in that direction, however difficult that might seem. Nevertheless, the question of plausibility becomes crucial since the way it is semantically deployed influences the perceptions about the actionability upon such unorthodox images. So, is it epistemologically justified to argue the plausibility of desired remote possibilities? Our answer to that is assertive.

We acknowledge that the future is not knowable in the strict sense of the word as there is nothing principally certain in it. It is not a domain of verifiable facts; hence, it is beyond the domain of the true and the false (De Jouvenel, 1967, p.5). We can have assertions about the future, statement of intentions about the future, we can form opinions about the future, etc. But all those represent conjectures and no actual knowledge about it. That is why de Jouvenel talks about the "art of conjecture" while Wendell Bell recognizes that "knowledge" about the future can be used only in quotation marks as there are no future facts and the best we can do is to formulate assertions about the future on which we can act as if they were true (Bell, 2009, pp.148–149). It is, we might add, an inquiry into the future. Our mental aspirations to grasp, imagine and anticipate the future in a stable picture is close to the drive for knowledge. But if knowledge is denied, what are the epistemological foundations of this aspiration?

As we mentioned, as long as certainty is repudiated, the legitimate epistemological means remains conjecture. Then we are left with good old assessment of probabilities as a way to conceptually tame uncertainty. This seems self-understanding for the great majority of the analysts of social change, but it omits an often-forgotten methodological detail as regards the place of probability in social sciences. Johannes Gabriel puts it very clearly in his seemingly counterintuitive contention that "prognoses by definition are scientific statements about the past, not about the future" (Gabriel, 2014, p.3). The lack of universal laws in social sciences leads to using probabilities as criterion of reliability of explanations about what most likely happened in the past, which we readily project as knowledge about the future. "Knowledge" - in quotation marks.

Summarizing the crux of Gabriel's position, we could claim that the scientific inquiry into the future is a process of anticipation whose criterion for reliability is plausibility and not probability; whose instruments are illustrative thought experiments and not explanatory prognoses; whose conceptual vantage point is not determinism but a complex analytical worldview. We need to highlight once again, plausibility is conceived as a criterion for reliability, not a criterion for truth. We concur with Cellucci (2014) that plausibility, not the truth is the ultimate

goal, even for the natural sciences. With regards to plausibility as criterion for reliability, we maintain that it has to do with the way a hypothesis, an assertion or a scenario for the future is elaborated and not the estimated likelihood of occurrence².

Thus, we question the practice of presenting plausibility as a degree of “occur-ability” that is negotiated between the possible and the probable since this could limit the perceptions on the span of viable solutions. We focus our attention on plausibility as dependent on consistency, logical reasoning and cause-and-effect relations under the assumption of an objective real possibility (Bloch, 1959). The etymology of the word plausible hints us its deeper semantic message. The Latin *plausibilis* means “deserving applause, acceptable”. Understandably, the modern use of the latter carries connotations of trust, reliability and lack of contradiction. Then a narrative about a remote possibility can be plausible if it conceives a credible, trustworthy, reasonable and logical illustration of alternative future developments, just like plausible hypotheses, plausible stories and plausible explanations do. And since we cannot pursue claims about the truth-value of any assertion about the future, under the auspices of plausibility we strive towards their credibility and truth-likeness. Therefore, within our account, an unorthodox image of the future, one promoting a desired remote possibility, is plausible if it convincingly narrates a consistent, coherent, and logical account about the attainability of what the conventional wisdom dismisses as improbable. Or, to summarize it with Arthur Shostak’s definition of a “viable utopian idea” – it is possible as long as it is an artful combination of dream (beyond the present), detail (to keep the latter doable) and determination (commitment to realization) (Shostak, 2003).

If the epistemological argument for the sustainability of images of desired remote possibilities of the future feels a little disturbing for the truth-aspiring mind, the ontological one seems much more commensurate with the general attitude of perceiving the future as open for human action. Not surprisingly it touches on the well-known discussions as to the tension between voluntarism and determinism, the strivings of the will and the structural push-backs, the possibility to intervene and bend the course of events, and the limiting pressures of the environment. We adhere to the futures studies’ own tradition and embrace the future not that much as area of exercising unrestrained freedom but more as an occasion for initiating social change with a particular normative focus. After all, we cannot conceive of desirable remote possibilities without considering the axiological dimension of such an endeavor.

Whereas wildcards and catastrophic scenarios in the tradition of “thinking the unthinkable” have exploratory character with organizational implications, desired remote possibilities of the future have clearly normative vantage point. In this we are siding with Wendell Bell who highlighted the role of ethics, morality and human values in futures research in the quest for proposing preferable futures (Bell, 2009, 2003). Expectedly, when we advance notions of desirable or preferable possibilities, we cannot but come across the age-old difficulty of reaching a public normative consensus on what “ought to be”. The normative fragmentation of contemporary societies as regards conceptions of the good life, the overemphasis on individual values versus collective ones, and the crisis of grand progressive narratives – it all makes it difficult to derive a normative consensus on what is a desirable or preferable version of the future. The ambivalent imprint of science and technology on the course of human and societal evolution makes the task even more challenging, especially for the political elites who currently fail in their basic function to produce powerful politico-philosophical visions that would mobilize citizens for collective action³.

Crafting plausible images of desired remote possibilities of the future by the means of counterfactual analysis could fill in this enormous gap. The aim is not to produce yet another utopia with questionable implementation potential but to argue the plausibility of such future by proposing a consistent and sensible exploration into possible practical steps to reach it. After all, futures studies is “action science” – it entails active attitude towards the future (Bell, 2009; Godet, 1994; Tsoukas & Shepherd, 2004). It is closely connected with existing centers and instruments of social and technical power and as such it needs to exploit the transformative possibilities of working with the already powerful (Slaughter, 1996/2012). Then, a legitimate criterion of its quality and significance could be the eventual impact on the process of decision-making.

This endows it with the responsibility to not only conceive of desired futures but also in doing so to come up with new means for initiating alternative state of affairs. We claim that counterfactual analysis could be a helpful instrument in building desired images of remote possibilities of the future. It could challenge common assumptions about social change and turn into a source of social innovation efforts. Of course, this would be futile without assuming the malleability of human institutional arrangements provided there is a political will, and the plasticity of public perceptions with regards to new inspiring accounts. Stepping on that, counterfactual analysis, as an exercise of rational imagination, could ensure a reasonable, logical and consistent account on the necessary means for bringing a desired remote possibility closer to reality.

Counterfactuals and Counterfacts

In this section we will introduce counterfactual thinking in order to prepare the ground for claiming its appropriateness and usefulness for the purposes of futures research in general and for elaborating desired remote possibilities in particular. We examine the potential of counterfactuality as a means for what some have already denoted as prospective sense-making (Wilkinson, 2009; Ramírez & Selin, 2014). Accordingly, we will take up Fred Polak's conceptual stance and will concentrate not on the question of the reality of the future itself but on the one concerning the reality of the images of the future and their role in social processes at a societal level (Polak, 1973).

Then a counterfactual operation will not seem that problematic as it will step on the factuality of conceiving, disseminating and consuming images of the future. If our vantage point is the facticity of the image of a remote possibility (ex. posthuman future), we might construct a counter-image, that is, a counter-fact of (the image of) that remote possibility. By the same token, if we embrace the factuality of crystalized images hailing familiar trend extrapolations, we could counter-imagine the plausibility of unconventional alternative developments. In this vein we would be able to exercise not a wild speculation about the future but what we already emphasized as rational imagination (Byrne, 2005) as to what is perceived to be remote possibilities given the current state of affairs.

As a first step we will demarcate the difference between counterfactuals and counterfacts. Counterfactuals are conditional statements of the type "what would have happened if...", which are often used in psychology, historiography and, most of all, in everyday thinking, in order to (mentally) trace some possible alternative way of development. Counterfactual conditionals are purposeful analyses of the possible past, aiming to retrospectively uncover the mechanisms in which a course of events develops. They aim to assess to what extent a separate event (counter-fact) has had the potential to change the course and the direction of this development. They are in the spirit of Fogel's analysis of the railways or of familiar speculations of the kind "What if Napoleon was not born...". Counter-facts, in their turn, are acting as non-facts, which are announced and function as facts and have the potential to alter the course of events.

Counterfactuals are also close to Sohail Inayatullah's concept of Casual Layered Analysis (Inayatullah, 2014) insofar as they operate through the hidden potential of various phenomena – quantitative trends, social, political and cultural factors, discursive analyses, myths and metaphors. The difference is that the types of counterfacts can be independent of each other or in horizontal connections, rather than being arranged in layers.

Todorova (2015) has classified several types of counterfacts. The first one is what she coined as dormant facts. They refer to an existing situation or reality whose potential impact has remained unrecognized or unfulfilled. They have "slept" (remained latent) in the past, but may be activated and become manifest if and when the social, economic, political, or religious context changes thus producing dramatic and often violent shifts. Frozen conflicts are dormant facts. The war in Ukraine, for example, is the result of a frozen conflict (dormant fact).

Counterfacts may also be subject to reinterpretation or even reinvention and assume new meaning or content when political, social, religious, or economic developments take a significant turn. The reinvention of a fact is often used for propaganda and ideological purposes. We witness the active employment of this type of counterfacts in attempts for history rewriting or identity redefinition with the aim to mobilize public support. We, for instance, could anticipate that Ukraine will rewrite its history to construct a new identity (subject of reinterpretation) after the end of the war with Russia.

A third category of counterfacts consists of rumors and hypotheses, which, though not yet universally accepted as facts, nevertheless can have immediate and potentially lasting impacts on reality equally to or even stronger than established facts. We can provide a myriad of examples here from divine theory, through Brexit, to bank bankruptcies. Even political elites sometimes rely on rumors, fake news or conspiracy theories in promoting their goals.

In addition to that we can hereby consider some subtypes such as:

- Fake news – pretending to represent the truth, they are being constructed as facts, whose aim is most of all to impact reality in two directions – either to inspire and impose certain state of affairs, or to refute an already existing fact. We may consider fake news to be the contemporary incarnation of propaganda. Although it is classified as subtype of the third category of counterfacts, we cannot but notice a meaningful distinction – whereas rumours and hypotheses may be exposed as untruthful, fake news claim to be truthful. The structure of a fake news is such that it always contains an element of truth, so it sounds credible, and

advances distortions at the same time, which inspire the desired perception and interpretation.

- Intentional and unintentional self-fulfilling and self-denying prophecies (normative forecasts). Intentional self-fulfilling and self-denying prophecies (purposeful interventions) are constructed counter-facts that aim to mobilize support or to provoke rejection. They are (intentionally) shaped like the driving forces of a process. They also might be trends or trend-setters. An example for an unintentional self-fulfilling prophecy is the placebo effect of mock medicines. Unintentional self-denying prophecies also reveal an interesting mechanism. For instance, quite often on a state or supranational level, certain goals are announced, worked for, planned and programmed to attain. The respective structures and systems adopt a behaviour in line with the hailed “new reality”. Long periods and years pass by and these goals and policies may not be realized. They turn into unintentional self-denying forecasts. A prominent and often cited example is the EU’s Lisbon Strategy which was adopted to transform the Union into the most dynamic and competitive economy of the world by 2010. Or, if we fast-forward to this decade, in view of the global energy, economic and food crisis, the “Green Deal” could become an unintentional self-denying prophecy, as it would probably self-correct in line with the current energy situation. In contradistinction to unintentional self-denying prophecies, intentional self-denying prophecies may be used and planned as a political instrument to divert social energy and public attention in a desired direction. Often politicians deal with people’s fears – for example, they could advance a dreadful scenario as foreseeing a probable event in order to mobilize efforts to prevent that same event of happening.

The value of counterfactuals and counter-facts is different. Counterfactuals focus on the process and speculate on its possible alternative dynamics; they break clichés and uncover possible mechanisms for social change. In the analysis of counter-facts, the emphasis is rather on the event – a non-fact, which may alter the course of the processes and provide insight for possible points of intervention in terms of the future. The combination of the two is very useful as it can offer a mechanism of reflexive counterfactual analysis, which has the potential to challenge and renegotiate existing cognitive and epistemic frameworks.

Counterfactuals and counter-facts provide an opportunity to introduce reflexivity in anticipatory activities. Futures research may be enriched as counterfactual reflexivity opens additional analytical space and elucidates alternative mechanisms of social change instead of engaging mostly with projection of trends (extrapolation). Counterfactuals could provide rather huge range of possible reflexive feedback for the purposes of future political action. In addition, by uncovering and evaluating all of the appearances of counter-facts in the process of counterfactualities, we could build a completely new vision of the world. This could be a new world of unfulfilled and unrevealed potentials of reality. It could be a possible world with the same potentiality as the one we currently inhabit. By detecting different types of counter-facts, we may identify seeds of the future, possible discontinuities, Black Swans or prospective anchor points that could unleash the realization of desired remote possibilities.

Counterfactuality and Anticipatory Thinking

In a second step of arguing the adequacy of counterfactual analysis as a tool for building desired images of remote possibilities we need to establish the compatibility between counterfactuality and anticipatory thinking. We will hereby engage in a brief philosophical discussion as to the potential of counterfactual analysis as a means of prospective sense-making. The process of the realization of a desired remote possibility needs to begin with a consideration of the normative underpinnings of such an image of the future. Then the issue we debate is whether a synthesis between counterfactuality and normative anticipation is possible. Finding a conceptual common ground would provide ample opportunities for exchange of ideas, approaches and results between them.

A proper basis for this may be the notion of an unrealized possibility, which is articulated and discussed in one way or another in the counterfactuality-related literature as well as in the future studies realm. It is so because in both cases non-facticity is a common terrain for conjecture: retrospectively – as an unrealized possibility into the past; prospectively – as yet-to-be realized possibility into the future. According to Sanford (1989) the mysterious asymmetry between the open future and the fixed past is nothing else than the asymmetry of the counterfactual dependency. The forking roads in the future – the real and all the rest – are the many alternative futures, which would happen in different counterfactual propositions concerning the present and even the past. In his opinion, the only real, fixed past is the only past that would remain real in this same scope of propositions (Sanford, 1989, p.184).

If we are to bridge counterfactualities with prospective thinking, we must also define what their relation to reality is. Counterfactual analysis explores a possibility, which refers to the past, for which it is known not to be real. Anticipation in its many forms conceives a possibility for the future that may become real. Its connection to reality is more indirect. May we then call the counterfactual analysis anticipatory thinking in the past, and anticipatory thinking – a counterfactual analysis of the future? One way of using counterfactual analysis for the purposes of creating alternative futures is to juxtapose images of remote possibilities of the future with conventional projections. We might identify this as an “objective” approach. It may be opposed to another, a “subjective” approach. If some images of the future are overruled to a decisive degree by the future itself and if the arising from that insecurity is a distinctive feature of the modern age, those prospective conjectures themselves prove to be to a certain extent “counterfactual”.

Then, we can talk of dynamic contradictions, where one leading projection and its counterfactual alternatives develop in parallel (Estrella & Fuhrer, 2002). If a crystalized image of the future (“default” or “baseline”) is available, its alternative development(s), which may be provisionally called counterfactual(s), will offer us what de Jouvenel (1967) called a “fan of possibilities”. Such types of multi-directional anticipatory effort possess greater potential in terms of managing uncertainty. Whereas probability-oriented models aiming at the most likely future (singular) focus on reducing uncertainty and ensuring greater visibility as to what is shaping the future, applying counterfactual analysis to already projected futures offers the opportunity for seeing anew while conceiving plausible unconventional images of the future. It also allows the analysis of the future course of events to be concentrated on areas of uncertainty and insecurity, which could serve as bifurcation points of the historical process for the emergence of new possible worlds.

It is not by a coincidence that David Lewis (Lewis, 1986, 1973) employs the semantics of the possible worlds to clarify the nature of counterfactuality. In particular, for a certain totality of possible worlds, including our real world, a relation of attainability exists that correlates each possible world in this totality with the number of its alternatives, or the ways in which it could be. From Lewis’ point of view, possible worlds are entirely real scenarios depicting what the world may also be.

The relation of attainability may be interpreted not only ontologically, but also epistemically. Then those future worlds will be closer to our world, their description would be more compatible not only with the real world, but also with our knowledge of it as well.

Within the new concept of the possible parallel world, we are trying to imagine and construct another reality. By using counterfactuals and counterfacts we revise the past, change our attitude to the present, and make different conjectures about the future. This is related to the notion of quantum counterfactuals which we use here as a metaphor to emphasize that counterfactualities make us active observers capable to intervene in the processes. The counterfactuals have always played an important part in the discussion of the quantum measurements. A pertinent issue in the core of quantum theory is whether the measurements detect pre-existing properties in the measured system and how they create such properties (Griffiths, 2003). If we adopt the hypothesis of quantum physics whereby the observer impacts the object of the observed, as we stare at the past and offer its alternative and counterfactual variants, we already change it and therefore affect the present and the cognitive framework through which we relate to the future. This assertion already opens room for the afore-mentioned reflexive counterfactuality.

Reflexive Counterfactuality for Conceiving Desired Remote Possibilities of the Future

We abide by the classical statement on reflexivity stipulating that both the cause and effect affect each other in a new relation already beyond them. The reflexive self-reference of counterfactuality and counterfacts may be deconstructed as a process where individuals are shaping their own norms, tastes, politics, desires, etc. But how to trigger and achieve this self-reinforcing effect?

Let's adopt a certain totality for scenarios that advance conventional images of the future ("baseline" projections). Each one of them is doubled by the means of a counterfactual alternative, i.e., a counterfactual "reflection", an "image". The initial prerequisites in the original version of the scenario vary somehow according to:

- newly entered data (counter-facts);
- change of perspective as to relevant factors: each scenario is separated not only by a group of factors, but also by their relative weight, which impacts the realization of the scenario. In essence, this is a change in the "gestalt" of the perception of the data or the interpretation;
- adding new factors or removing existing ones. When this concerns anticipated future, it could be done according to change of paradigms and in view of newly made projections about the future (counterfactuality).

As a result, each of the chosen scenarios acquires a counterfactual twin which may be metaphorically called its "copy, seen from the other eye"; so, the duo: "scenario – counter- scenario" is perceived as a volume, a "3D" totality, which allows better temporal orientation.

Reflexive counterfactuality stretches the horizon of counterfactuality itself: it is considered not only as some concrete alternative image of the future, but as openness of thinking as well – as self-evolving and self-correcting system. In this new factual and counterfactual 3D reality we just have to elicit the plausible desired remote possibilities while trying to achieve cognitive resonance with current societal values.

Crucial question in this endeavor is how to establish the plausibility of the elicited counterfactual images of the future. We may combine the two approaches above (the subjective and the objective) to attempt at refining iteratively the images through corrections and verifications. In the previous sections we engaged with a certain understanding about plausibility, one that has to do more with consistency⁴ and logical reasoning rather than calculated likeliness of occurrence. But how to practically ensure plausibility of the prospective counterfactual accounts?

In the futures-related literature we can come across some elaborations on the matter. For example, Victor van Rij (2012) points out that a plausible storyline with regard to wild cards entails logical connections of the story to the impact and to perceived facts, observations and evidence. Roy Amara (1991) sees plausibility as a quality criterion for the art of the possible that stipulates general conformity with physical and behavioral principles and entails internal consistency. Then Wiek et al. (2013) note that "while all consistent scenarios are not plausible, in order to be plausible a scenario must be consistent" (Wiek et al., 2013, p.139).

A consistent scenario is one not holding internal conflicts – all scenario elements fit together, and the occurrence of any scenario element does not make impossible the occurrence of any other element. Plausibility requires enough evidence (in the past, present, as a proof of concept or pre-test evidence in view of the future) that a scenario can be qualified as "occurable" (Wiek, 2013, p. 138). It needs to be compatible with our present experience of some phenomenal properties of reality (Cellucci, 2014). However, if we need a formal procedure for that, we can employ Cellucci's Plausibility Test procedure:

1. Deduce conclusions from the hypothesis;
2. Compare the conclusions with each other, in order to see that the hypothesis does not lead to contradictions;
3. Compare the conclusions with other hypotheses already known to be plausible, and with results of observations or experiments, in order to see that the hypothesis is compatible with them (Cellucci, 2014, p.528).

The resulting counterfactual account can be approved temporarily (until new data emerges). Then the anticipatory endeavor could be re-initiated in a reflexive process of elaborating images of desired remote possibilities anew.

Conclusion

We inhabit a peculiar situation with regard to our relation to the future. Complexity, uncertainty, insecurity and tightened global interconnectedness are the new normal. Economic, health, security, inequality, food, resource and environmental crises are sweeping and restructuring our political, communal and personal lives. Sound leadership and the legitimacy of democratic mechanisms are continuously doubted. New and emerging technologies are posing unprecedented challenges to the human condition. In this context the modern linear paradigm of progress is deemed obsolete. The future is not necessarily a temporal space for improvement of the human or the planet's state of affairs. Prognostics and foresight are functioning more and more vis-à-vis the specter of a potential catastrophe, which most likely will be the result of current trends led to their logical culmination.

As a consequence, desired images of the future are not built as stand-alone normative forecasts but rather in the spirit of catastrophism, which evokes realistic, convincing and repulsive enough scenarios that aim to provoke immediate action. Future-oriented accounts on problems like climate change or “the limits to growth” step on such disastrous counter-images to advance preventive policy solutions. “Positive” and “desirable” are boiled down to “what needs to be done in order to avoid/mitigate the coming crash”. This in itself, diminishes the normative richness and appeal of the proposed preferable futures. In some cases, it could lead to a situation in which a preferable future, counterintuitively, is one demanding comprehensive surveillance and global governance as a risk mitigation response to the vulnerable world hypothesis (Bostrom, 2019). In other cases, the preferable may entail transformative action for wealth distribution, like the recent Earth for All report (The Club of Rome, 2022), but again, under the banner of survivalist strategies.

Realizing all that, we reach across to deal with the long-term prognostic horizon, but from another vantage point. In the current text we attempted to provide conceptual justification for advancing desired remote possibilities of the future that are not merely technical reaction to the prospects of the catastrophe but draw their normative charge directly from the unacceptability of the latter. If we argue the need to open room to consider the reasonableness and the plausibility of incredible futures accounts like “Warless world”, “Nukeless world”, or “Wasteless world”, it is not just as a means to piece together a world falling apart but mostly because war, nuclear weapons and unrecyclable waste are unacceptable anymore. Of course, as we already noted, we realize that the advocated in this text practical employment of counterfactual analysis to conceive desired remote possibilities of the future is not omnipotent in advancing alternative state of affairs. But what is important is to insist that it is useful in “thinking the unthinkable” not in the tradition of Herman Kahn's work, but in the direction of building the soundness, coherence and reliability of what the common prognostic reflexes repudiate as just another fantasy. At the very least, counterfactuals, by being counterbalances to baseline/default scenarios, can help in isolating the factors that hinder perceiving some desired remote possibilities of the future as plausible and feasible alternative states of the world.

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Notes

- 1- The notion of rational imagination is important for our argument as it underlines that imaginative thought and rational thought have much in common and that in the creation of counterfactual alternatives to reality imaginative thought is guided by the same principles that underlie rational thoughts (see Byrne, 2005).
- 2- Of course, this represents an opportunity and a danger alike. We are increasingly living in a world of post-truths in which even morality is perceived as fluid. Then, the acceptability of a plausible scenario can be questioned as the implicitly perceived reliability of plausible accounts can be a stepping stone for advancing not very desirable remote possibilities by political leaders (again, the war in Ukraine being the example).
- 3- They need to restore what Fred Polak (1973) calls “influence-optimism”.

- 4- It is worth noting that Weick (1995) who is famous for his elaborations on sense-making noted that the latter, as an explanatory process, is driven by plausibility rather than accuracy.

References

- Amara, R. (1991). Views on futures research methodology. *Futures*, 23(6), 645–649.
- Attali, J. (2011). *A Brief History of the Future: A Brave and Controversial Look at the Twenty First Century*. Arcade Publishing.
- Barber, M. (2006). Wildcards-Signals from a Future Near You. *Journal of Futures Studies*, 11(1), 75–94.
- Bell, W. (2003). *Foundations of Futures Studies: Values, Objectivity, and the Good Society*. Vol.2. Transaction Publishers.
- Bell, W. (2009). *Foundations of Futures Studies: History, Purposes and Knowledge*. Vol.1. Transaction Publishers.
- Bloch, E. (1959). *Das Prinzip Hoffnung*. Surhkamp Verlag.
- Bostrom, N. (2019). The Vulnerable World Hypothesis. *Global Policy*, 10(4), 455–476.
- Byrne, R. (2005). *The Rational Imagination: How People Create Alternatives to Reality*. MIT Press.
- Cellucci, C. (2014). Knowledge, Truth and Plausibility. *Axiomathes*, 24, 517–532.
- Cornish, E. (2003). The Wild Cards in our Future. *The Futurist*, 37, 18–22.
- Day, G. & Schoemaker, P. (2005). Scanning the Periphery. *Harvard Business Review*, 11, 135–148.
- De Jouvenel, B. (1967). *The Art of Conjecture*. Basic Books.
- Estrella, A. & Fuhrer, J. (2002). Dynamic Inconsistencies: Counterfactual Implications of a Class of Rational-Expectations Models. *American Economic Review*, 92(4), 1013–1028.
- Fogel, R. (1964). *Railroads and American Economic Growth: Essays in Econometric History*. Johns Hopkins University Press.
- Fogel, R. (1989). *Without Consent or Contract. The Rise and Fall of American Slavery*. W.W. Norton.
- Gabriel, J. (2014). A scientific enquiry into the future. *European Journal of Futures Research* 2, 31. <https://doi.org/10.1007/s40309-013-0031-4>
- Godet, M. (1994). *From Anticipation to Action: A Handbook of Strategic Prospective*. UNESCO Publishing.
- Griffiths, R. (2003). *Consistent Quantum Theory*. Cambridge University Press.
- Inayatullah, S. (2008). *Six pillars: futures thinking for transforming*. *Foresight*, 10(1), 4–21.
- Inayatullah, S. (2014). *Casual Layered Analysis Defined*. *The Futurist*, 48 (1), 26.
- Kahn, H. (1960). *On Thermonuclear War*. Princeton University Press.
- Kahn, H. (1962). *Thinking about the Unthinkable*. Horizon Press.
- Lewis, D. (1986). *On the Plurality of Worlds*. Blackwell.
- Lewis, D. (1973). *Counterfactuals*. Blackwell.
- Masini, E. (2002). A Vision of Futures Studies. *Futures*, 34, 249–259.
- Mendonça, S., Cardoso, G. & Caraça, J. (2012). The Strategic Strength of Weak Signal Analysis. *Futures*, 44, 218–228.
- Mendonça, S., Cunha, M., Kaivo-oja, J. & Ruff, F. (2004). Wild Cards, Weak Signals and Organizational Improvisation. *Futures*, 36, 201–218.
- Nikolova, B. (2017). The Wildcard Event – Discursive, Epistemic and Practical Aspects of Uncertainty Being “Tamed”. *Time & Society*, 26(1), 52–69.
- Pauli, G. (2010). *The Blue Economy: 10 Years, 100 Innovations, 100 Million Jobs*. Report to the Club of Rome. Paradigm Publications.
- Pauli, G. (2015). *The Blue Economy 2.0: 200 Projects Implemented; US\$ 4 Billion Invested; 3 Million Jobs Created*. Academic Foundation.
- Pauli, G. (2017). *The Blue Economy 3.0: The marriage of science, innovation and entrepreneurship creates a new business model that transforms society*. Xlibris.
- Petersen, J. (1997). *Out of the Blue, Wild Cards and Other Big Surprises*. Arlington Institute.

- Petersen, J. (1999). *Out of the Blue-How to Anticipate Big Future Surprises*. Madison Books.
- Polak, F. (1973). *The Image of the Future*. Elsevier Scientific Publishing Company.
- Ramírez, R. & Selin, C. (2014) Plausibility and probability in scenario planning. *Foresight*, 16(1), 54–74.
- Sanford, D. (1989). *If P, then Q: Conditionals and the Foundations of Reasoning*. Routledge.
- Schwartz, P. (2004). *Inevitable Surprises: Thinking Ahead in a Time of Turbulence*. Gotham Books.
- Selin, C. & Pereira, Â. (2013). Pursuing Plausibility. *International Journal of Foresight and Innovation Policy*, 9(2/3/4), 93–109.
- Shostak, A. (2003). Introduction. In Shostak, A. (ed.) *Viable Utopian Ideas: Shaping a Better World* (pp.3-9). M.E. Sharp.
- Slaughter, R. (1996/2012). *The Knowledge Base of Futures Studies as an Evolving Process*. http://richardslaughter.com.au/wp-content/uploads/2012/03/KBFS_as_Evolving_Process.pdf
- Taleb, N. (2007). *The Black Swan: The Impact of the Highly Improbable*. Random House
- The Club of Rome (2022). *Earth for All – A Survival Guide for Humanity*. <https://www.clubofrome.org/publication/earth4all-book/>.
- Todorova, M. (2015). Counterfactual Construction of the Future: Building a New Methodology for Forecasting. *World Futures Review*, 7(1), 30–38. <https://doi.org/10.1177/1946756715587004>.
- Tsoukas, H. & Shepherd, J. (2004) Introduction: Organizations and the Future, From Forecasting To Foresight. In Tsoukas, H. & Shepherd, J. (eds.) *Managing the Future: Strategic foresight in the Knowledge Economy* (pp.1-19). Blackwell Publishing.
- Van der Helm, R. (2006). Towards a clarification of probability, possibility and plausibility: how semantics could help futures practice to improve. *Foresight*, 8(3), 17–27.
- Van Rij, V. (2012). New Emerging Issues and Wild Cards as Future Shakers and Shapers. *Foresight and STI Governance* (Foresight-Russia till No. 3/2015), 6(1), 60–73.
- Weick, K. (1995). *Sensemaking in organizations*. Sage Publications.
- Wiek, A., Keeler, L., Schweizer, V. & Lang, D. (2013) Plausibility indications in future scenarios. *International Journal of Foresight and Innovation Policy*, 9 (2/3/4), 133–147.
- Wilkinson, A. (2009). Scenarios Practices: In Search of Theory. *Journal of Futures Studies*, 13(3), 107–114.