FROM TRUTH TO COUNTERFEIT[1]

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Abstract

The concept of truth is central to philosophy, science, art, and religion. Throughout history, the emergence of counterfeit speculations and the prevalence of superficial and banal content over fine art have been evident in much of the public media today. In this work, I argue that counterfeiting in science and art does not exclusively stem from popular networks. Instead, its roots can also be traced to specific scientific epistemologies. Philosophical concepts such as *constructive empiricism* and various *deflationary philosophies*, if oversimplified, can lead to a diminished pursuit of truth, which is one of humanity's primary objectives. Simultaneously, the trend toward banalization reduces fine art to mere entertainment. If similar trends are identified in the oversimplified versions of religions, it opens the door to ideologies.

KEYWORDS: truth and forgery, deflationism, kitsch as false art, religion and ideology

Introduction

The quest for truth encompasses all aspects of human activity. Alongside the search for truth, counterfeits emerge in science, philosophy, and fine art alike. These *post–truth* tendencies are manifested as fake (unauthentic), false (ornamental), or forgettable (manufactured, deceptive) elements. According to the Merriam–Webster Dictionary, counterfeit is defined as something made in imitation of another with the intent to deceive. The dichotomy between truth and counterfeit is particularly pronounced in contemporary so-

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ciety, especially in the rise of post–truth reasoning, where reality and falsehood hold equal value. Counterfeit represents a version of the *post–truth ideology* where authenticity is *deliberately* mixed with a deceptive narrative.

Numerous historical examples illustrate the phenomenon of forgery in science. For instance, during the Hellenistic period, when chemistry emerged as a proto–science, the primary goal of 'experimental' labor was to search for gold, symbolizing the *perfect state* of substance rather than merely a valuable material. Alexandrian proto–chemists, notably Zosimus of Panopolis (ca. 270 CE) (Vančik 2021), focused their efforts on the Opus Magnum, aiming to transmute other metals into gold, which they envisioned as *philosophical gold*. In practical metallurgy, various metals can be combined to create alloys that closely resemble gold. However, during the early stages of proto–chemistry, no reliable analytical methods existed to distinguish gold from gold–like materials. The pursuit of gold was not merely a philosophical endeavor; some craftsmen exploited proto–chemical techniques to create their own version of 'gold' for commercial purposes. Thus, while philosophers were "*aurifictors*" — the representation of philosophical truth — these artisans became "*aurifactors*", focused on profit rather than philosophical inquiry (Needham 1974; Newman 2011). This highlights two conclusions: (i) aurifictors are interested in embodying truth, whereas aurifactors seek fraudulent profit, and (ii) the core principle of counterfeiting is that the *counterfeit item should closely resemble the authentic one*.

Another ancient influence on counterfeiting can be traced to proto–scientific concepts in ancient Greek philosophy and the subsequent Hellenistic period. Empedocles defined four elements — earth, water, air, and fire — in two distinct ways: as basic *substances* and as *principles*. The notion of principles evolved in Alexandrian proto–chemistry into the concept of properties. Chemical experiments aimed to transmute substances (e.g., metals) so that one substance's property could be transferred to another. Thus, *properties belong to a category independent of substances, allowing for their reallocation*. This idea is supported by experiments on sublimation documented in ancient manuscripts related to proto–chemists such as Zosimos and Mary the Jewess (Vančik 2021). If our observation of objects prioritizes their respective properties over their substantial reality, the likelihood of counterfeit emerges. For instance, the Turing test in computer science demonstrates that a program can be deemed intelligent if, during a conversation, we cannot discern whether we are interacting with a machine or a human. This illustrates how focusing on observable traits (the computer's speech) rather than the essence of the object (the computer as a tool) can lead to counterfeiting (Turing 1950).

The counterfeit issue bears resemblance to, yet is not synonymous with, the problem of pseudoscience. Counterfeit creators are acutely aware of

their actions, producing fakes deliberately for the market; they are the aurifactors. In contrast, pseudoscientists genuinely believe their ideas belong to the realm of science (Kaufman and Kaufman 1998). There is extensive literature discussing the structures of pseudoscience and the distinctions between pseudoscience and authentic science (Popper 1962; Hansson 2025). However, this work does not aim for a deep analysis of that topic. Instead, it focuses on case studies and the roots of the social proliferation of counterfeits and post–truth ideologies, exploring whether analogous trends exist in fine art and religion. The intention of this work is to argue that the science–pseudoscience relationship is not the same as, for instance, the relationship between science and religion because the human comprehension of the Universe comprises the three aspects—science, art, *and* religion. Consequently, the appearance of counterfeit should be considered in parallel in all three features of humanity. The triangle pseudoscience–*kitsch*art–*ideolo*fanatism is opposed to the triangle science–art–religion.

Why is Counterfeit Possible?

Counterfeiting is a phenomenon that has existed since the early days of human history. Its origins can be traced back to the psychological framework of humans, emerging alongside the first forms of human society. The way individuals interact with their environment is not solely grounded in rational perception; rather, it is heavily influenced by personal intentions. Our conceptual understanding is shaped by deep psychological desires that demand satisfaction regarding our individual perceptions of the world.

This inclination to accept hypotheses without a thorough analysis stems from the different levels of complexity in the universe, alongside varying degrees of knowledge and understanding. Because many levels of cognition are superficial, the distinction between illusion and truth can become blurred. While more fundamental levels of complexity—such as atomic, molecular, or crystal structures—are stable and predictable over long periods, higher levels, like social structures or art, can be unstable and unpredictable. The disparity in knowledge and understanding reflects the focus of modern educational systems, which tend to prioritize practical skills over the development of cognitive abilities.

The shift from subjects to topics, which is at the heart of educational reform, likely originates from non–critical oversimplifications found in certain philosophical doctrines, such as *constructive empiricism* (van Fraassen 1980), where a theory is only deemed valid if it interprets observables through empirical models, or *deflationism* (Butler 2017), which shifts the focus from seeking universal principles to specific topics. In this view, the pursuit of objective truth—particularly the kind that is found in rigorous

sciences like physics or chemistry—becomes of secondary importance. Scientific truth should be considered an open set of observables with continual refinements, rather than merely a singular observable. If readers engage with these philosophical discourses superficially, without grasping their underlying ideas, the resulting influence on the educational system could lead to detrimental effects (Sher 2023; Horsten 2011; Wrigley 2019). As universal concepts lose significance, education increasingly focuses on concrete subjects and a set of topics, which ultimately marginalizes scientific generalizations that bear little relevance to the practical lives of modern citizens.

In summary, interpreting the world as just a collection of topics is superficial and overlooks the vast structure of the universe. The consequences of such educational principles include (i) a decline in deep intellectual engagement, (ii) the replacement of a coherent worldview with a random assortment of objects, (iii) a decrease in the demand for critical and introspective thinking, (iv) heightened dependence on media narratives, and (v) a reduction in the complexity of knowledge.

Such an educational landscape has given rise to new types of academic institutions, particularly at the graduate and postgraduate levels. This has resulted in an oversaturation of universities and colleges, many of which are *for–profit institutions* (Connell 2016; Hwang 2015). These institutions often diverge from the academic standards of unifying scientific inquiry and education, specializing instead in narrowly defined fields focused solely on developing practical skills. Graduates from these colleges often lack the ability to critically evaluate the information presented by widely disseminated media in today's interconnected world. Furthermore, this contemporary approach to 'enlightenment' is presented as the optimal pathway to a *Knowledge Society*.

The focus on topic–oriented education also coincides with shifts in scientific policies, noticeable in the development of so–called scientific norms. There are primarily two opposing approaches to these norms. On the one hand, the norms proposed by Robert K. Merton (Merton 1942) are grounded in traditional academic principles, including **C**ommunism (the communal ownership of discoveries), **U**niversalism (truth evaluated based on universal and impersonal criteria), **D**isinterestedness (selfless activity), and **O**rganized **S**kepticism (rigorous testing of scientific ideas). Collectively, these are known as the **CUDOS** norms, foundational to traditional academic institutions. Conversely, Ian I. Mitroff (Mitroff 1974) advocates for a set of norms representative of a *post–academic society*, including **P**roprietary (where science becomes a commodity of businesses), **L**ocal (emphasizing research that is locally oriented toward specific applications), **A**uthoritarian, **C**ommissioned, and **E**xpert–driven work, referred to as the **PLACE** norms. Ian Ziman (Ziman 2000) argues that *the academic community should transform into a*

post–academic society, making the PLACE norms foundational principles. This shift paves the way for a post–truth ideology, opening the door to counterfeiting.

In this environment, fraudulent activities can thrive, blurring the lines between genuine science and pseudoscience for individuals educated within such systems. The disappearance of this demarcation is particularly evident in social sciences, as demonstrated by the Sokal experiment (Sokal hoax) (Sokal and Brickmont 1998; Sokal and Brickmont 1998a), wherein the physicist Alan Sokal submitted a paper entitled "*Transgressing the Boundaries: Towards a Transformative Hermeneutics of Quantum Gravity*" to the journal *Social Text*. After the paper was accepted and published, Sokal revealed in another publication, *Lingua Franca*, that his submission was a joke. The acceptance of such a fabricated manuscript highlights the prevalent lack of rigorous critique in academic environments.

Counterfeiting manifests itself in various forms, presenting a hierarchical structure. The first level of counterfeit primarily pertains to ethical violations, representing fraud aimed at generating profit. A historical example is the 'aurifactors' of the Hellenistic period. Numerous instances of deliberate hoaxes have even been published in reputable scientific journals, including N–rays, polywater, and arsenic bacteria. For further information, examples can be found in Stefano Ossicini's book, "*L'universo è fatto di storie non solo di atomi*" (Ossicini 2012).

The second level of counterfeit consists of a range of pseudo–disciplines that are prevalent in popular educational channels on television. These ideas are often more readily accepted than verified scientific content, possibly due to their simplicity and entertainment value.

The most intriguing form of counterfeit is the third level, which is directly linked to the advancements in artificial intelligence. As computer programs and procedures become increasingly sophisticated, distinguishing between reality and simulation in visual representations becomes nearly impossible. Furthermore, viewers' physiological perception is compromised when they are exposed to videos with average shot lengths of less than a second. Prolonged consumption of such ultra–short content impairs individuals' ability to analyze the information presented, ultimately diminishing their capacity to focus on the subject matter. In summary, this third level of forgery *transforms our understanding of the universe into a counterfeit reality*.

Art, Fake Art, and Kitsch

The history of science is, in many ways, intertwined with the history of art. Scientific revolutions are often accompanied by shifts in artistic styles across fine art, music, and literature. For example, the revolutionary insights

into the structure of space presented by the theory of relativity and quantum mechanics coincided with similar 'phase transitions' in cubist art, and the departure from classical harmony in music following the works of Arnold Schönberg and Karlheinz Stockhausen. Both art and science share a common purpose: the quest for new perspectives on the world around us. However, their methods differ significantly. Science relies on rational analysis and concept construction, while artistic concepts arise from nuanced observations.

Upon reflecting on history, one can observe that progress in both domains is marked by a drive to enhance abstraction levels. In science, this evolution is seen in the transition from fixed notions of time and space to relativity, as well as in the shift from Newtonian causality to probabilistic interpretations of matter. In music, the journey takes us from the classical harmonies of Claudio Monteverdi to the dismantling of harmonic functions initiated by Schönberg. In literature, it progresses from the intricate narratives of William Shakespeare to the stream of consciousness in the works of William Faulkner. In the realm of abstract art, which often employs rules that may not be easily recognized by inexperienced viewers, the capacity for misrepresentation increases: everyone feels empowered to portray themselves as an artist. Due to the general lack of experience in abstract thinking, distinguishing between genuine artists and impostors has become challenging. Consider the difficulty in identifying which of the following bike saddle designs is an authentic piece by Pablo Picasso and which is a counterfeit.

What follows the era of abstraction? Will the trends shift from composers to performers, or from fine art to kitsch design? Has the pursuit of truth transitioned from academic circles to media that is reliant on visually flashy content and superficial information?

Conclusions

The human approach to the world consists of three components: science, art, and religion. These components represent rational constructions, new visions, and the sense of human existence within the universe. Although providing a definitive definition of truth is impossible, as Bruno de Finetti

elaborates in his book *'L'invenzione della verità'* (de Finetti 2006), the quest for facts and visions that bring us closer to an accepted understanding of truth is not only the primary activity of scholars but also essential for the survival of a civilized society.

Open questions arise concerning religion as a genuine pursuit of the relationship between humanity and God. Is there a growing trend towards establishing post–traditional religions? Are contemporary mainstream religious movements on the verge of replacing prophet–established systems? Does the simplification of church service rituals, particularly in the Catholic Church, indicate a superficial approach to faith? Have spontaneous popular movements within specific churches led to a form of counterfeit religion? And, most importantly, has fine art in music or church architecture been sidelined in favor of kitsch?

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Sažetak

OD ISTINE DO OBMANE

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Koncept istine pojavljuje se kao jedna od središnjih kategorija u filozofiji, znanosti, umjetnosti i religiji. Nastanak obmana u prošlosti i danas, isto kao i miješanje umjetničkih djela s površnim i banalnim sadržajima, ponajviše se može prepoznati kroz javne medije. U ovom članku, međutim, nastojim pokazati kako obmana u znanosti i umjetnosti ne izvire isključivo iz popularnih mreža, već se njezini korijeni mogu nazrijeti i unutar pojedinih znanstvenih epistemologija. Poglavito filozofski koncepti kao konstruktivistički empirizam, kao i niz deflacionističkih filozofija, ukoliko su one prepojednostavljene, mogu voditi prema umanjivanju potrage za istinom koja je u središtu ljudskog djelovanja. Istodobno, pomodne banalizacije razaraju umjetnost pretvarajući ju u sredstvo zabave. Ako se slična iskrivljenja istine mogu pronaći i u religijama, vrata ideologijama su širom otvorena.

Ključne riječi: istina i falsifikat, deflacionizam, kič kao lažna umjetnost, religija i ideologija

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