

Alexander Becker: Art and Science

Text: [Alexander Becker](#) | Section: [On ‚Art and Science‘](#)

Programmatic thoughts

(1) Art and science present themselves today – this ‘today’ reaches back several hundred years – as two distinct spheres which are clearly separated from one another. The expectations of society and audience, the institutions, the ways of production and presentation differ widely. Education is not only separated institutionally but also organized differently. These institutional foundations make the separation of art and science a sturdy affair.

Given such differences, the attempt to substantiate them through some kind of essentialist definition of art and science suggests itself. Doing so properly would mean to peruse the different theories of art and science that have been suggested during the history of thinking about both. Within the limitations of few programmatic remarks this is not feasible, yet maybe also not necessary, since some rough lines of demarcation can be drawn easily. The conceptual pair “knowledge” – “experience” provides a suitable framework, with the addition that art is dealing with an experience being valuable neither because it represents reality, nor because it is a precursor to any level of generality (e.g. scientific or moral laws). It is an experience which is concrete and particular, and not subordinated to any purpose. It might be objected that we experience art in order to compensate for the deformations of everyday life, and therefore actually subject it to a purpose. However, even such theories presuppose that art is experienced for art’s sake. Otherwise it could not work as a compensation since the deformations of everyday life result precisely from the omnipresence of purposes.

Further familiar differences between science and art can be added easily. For example, that art is sensual and specific, while science is conceptual and general; or that the criterion of science is truth, whereas art is free to dwell in fictional spheres; or that in science form has to strictly follow content, while art can unchain form and hand it to the free play of imagination. Isn't the development of various artistic styles an obvious manifestation of the autonomy of form in art? Last but not least, science is obliged to present its results in a way so that (ideally) everybody can comprehend and verify them, while in the case of art not only production is a matter of genius, but also the beholder may be confronted with an irremovable mysteriousness, ambiguity and incompleteness which is no fault but at the heart of why art attracts us.

So far a rough sketch of what an essential distinction between art and science could look like, and how today's manifest separation of art and science might be explained. A museum is a place which ought to make experience possible; laboratories or seminar rooms are places of criticism and transparency. Art may ask questions without being obliged to give an answer whereas a science unable to deliver answers fails to meet its very purpose.

Essential determinations sometimes have a bad press since they are said to trim their objects until they fit the definitions, thereby cutting off anything that won't pass the conceptual grid. Art is a topic which provokes such a kind of objection with particular ease. However, criticising an essentialist approach to art in this way misses the point of using concepts. Concepts are never meant to take the place of the things they are applied to. The purpose of concepts is to structure thought – as such they are inevitable for human thinking –, and they are to be measured pragmatically by their payoff for us. It is part of the appropriate handling of the conceptual apparatus to know that concepts never fully comprise phenomena, that they are surrounded by grey areas, yet that they are nevertheless useful.

(2) While the mere attempt to essentially determinate art and science need not give rise to criticism, the definition outlined above is almost entirely contestable. Truth might be the reference point for science, but often enough science is working with fictional means itself. Thought experiments, which are common within the humanities as well as the natural sciences, serve as an example. Further, representing the world as it is is not the only aim of science; science is productive not only of theories but also of things. It does so not only for secondary sake such as the technical implementation of scientific knowledge. Creating and intervening are integral parts of the epistemic process itself. Consequently, truth tends to lose its privilege as the sole standard of scientific theories. As to the matter of form, believing that form can be completely subjected to content is plainly wrong. Form

always has a life of its own; to mention just one very basic case in point: every scientific work has an end – it does not merely break off, but it *comes* to an end – although neither the object of the investigation nor the line of thoughts ever will be confined to the limits of a journal article or, for that matter, of a book.

Turning to art, the fact that fiction plays a bigger role than in science can hardly be disputed. Yet if art severed any connection to reality it would become irrelevant: it would be reduced to a mere pastime for eyes and ears. Art that concerns us has to be related to reality in some way; in doing so, it not only exposes itself to being judged by standards of correctness, it even lays claims to knowledge. Consequently, art is no longer confined to the realm of particularity and concreteness. For if it matters to us, we have to generalize whatever art tells us; otherwise we could not transfer it to our world, apply it to ourselves.

These are some of the objections against the standard way of distinguishing art and science as it was outlined above. Before proceeding, a methodological remark might be useful. For, didn't I justify a conceptual approach by arguing that concepts are nothing but tools that enable us to orientate in reality but are not expected to precisely match with reality? The objections just made seem to presuppose the latter. Yet, the point of these objections is a different one. Whoever talks about science has to acknowledge that science is more than just results which might be put into books and articles. The way how such results are obtained, and the way they are presented, are also part of science. If the concept of science is narrowed down to scientific theories by excluding most of the practical aspects (leaving perhaps only an idealized form of experiments), it becomes useless for the comparison of art and science since the comparison is not one between results, but between institutions and practices as well.



Picture: Alexander Becker

(3) If a strict conceptual distinction between art and science is hard to obtain, telling both apart becomes difficult. What should be done about it? Should one simply annul the distinction and side with those who consider art and science as distinct yet equivalent 'ways of worldmaking' (Nelson Goodman), or those who unmask the institutional separation as a mere construct and work towards overcoming it? It seems to me that such a deconstructive impetus is a bit too much fuelled by an idealistic spirit which implicitly assigns priority to theoretical thoughts, subordinating a reality that is thought of as theoretically construed anyway and therefore changeable anytime. An attitude that is somewhat more pragmatic would pay more respect towards a praxis that, although not being isolated from theory, has a certain autonomy as well as priority towards it. This practice implies that art and science *are* different. (I

am talking about a *certain autonomy* since neither the praxis nor the thoughts about it provide an absolute foundation.)

The following thoughts attempt to offer an escape from this dilemma. The basic idea is: art and science are implementations of *one* fundamental practice that articulates into opposite poles; these poles cannot collapse because they need each other as counterparts.

It might be appropriate to defend this thesis on a conceptual and theoretical level. However, this does not seem to me the best reaction to the indicated dilemma. A better way might be case studies which investigate how a historically determinate practice is actually divided into art and science, how the two poles are being articulated and how they interact with each other.

(4) So, let me finally present an example in point, which at the same time enjoys great prominence in debates concerning the relation between science and art: the notorious critique of art contained in the tenth book of Plato's *Republic*. It is the earliest known analysis of their relationship, and often taken as an outright rejection of any kind of art. The examination focuses on the epistemic value of art. Art is being classified as an imitation, and hence placed into a realm of practices which are legitimately subjected to demands of correctness, made to be measured against the world. Such a placement might seem unfair – considering the ensuing criticism –, yet it secures that art matters for human concerns.

Plato's first reproach is: art is an imitation of an imitation. It is limited to imitating what is externally perceptible; what is perceptible is already an imitation of an imperceptible model. This model is being

introduced as a Platonic idea, but it is not necessary to buy the whole of Platonic ontology in order to follow Plato's thought here. When an artist is painting a machine, she is not depicting what makes it the machine it is – that is, its inner mechanism and ways of working. Her imitation can only depict the exterior, and this not even in its entirety but only from a certain perspective.

The fact that Plato is basing his argument on the concept of imitation makes his critique of art look a little obsolete since imitation is no longer very popular as a category in art criticism. However, there are several facets of imitation which should be kept apart: Firstly, Plato understands it ontologically. A piece of art is – as far as it is related to another object – only a copy of this object and not the object itself. Secondly, he aims at capturing the genesis of artworks. This might appear to be a little naive, but 'imitation', in this respect, can be understood as a label for the artist taking the world as an example. Finally, imitation also plays a role in the experience of art: it accounts for the fact that the beholder's tendency to relate it to the world – regardless of how obvious this correlation might be. None of these facets seems to me to be really out of place, and so is neither Plato's starting point.

The first target of Plato's critique is painting. but he soon transfers it to tragedy. This move is a bit surprising: certainly tragedy is also an imitative art – after all, the actors on the stage imitate people's actions. And of course actors imitate the outside of these actions: movements, gestures, tones of voice, etc. But doesn't tragedy include the representation of the inside as well? For, what is the inside of action if not the thoughts that motivate and accompany it? Tragedy is perfectly able to represent these features as well since its actors talk on stage, and in doing so they reveal often enough innermost thoughts and feelings. Therefore, it is at first glance difficult to understand why Plato finds fault with tragedy as much as with painting. After all, isn't theater rightly regarded as one of the best places to learn about human matters? Yet, in Plato's eyes what actors say on stage is a kind of imitation as well.

Genuine thought consists in deliberation; genuine deliberation is based upon knowledge, or at least strives for it. If the actor's talk on stage would be of such a kind, there would be no problem; it would just be philosophy. Yet, if the actors were doing philosophy, they would stop being actors since philosophy, for Plato, cannot but be a personal affair. They would no longer represent or imitate somebody else's thoughts but consider their own affairs. Hence, as long as they imitate philosophy, they are not doing philosophy at all. Their speech is to true thought as the painting of a machine is to its inner working: it is the attempt to recreate the exterior without understanding the interior.

Prima facie, this critique of art seems to be a typical piece of controversy between art and science which follows the conceptual distinction outlined at the beginning. Knowledge is being attributed to science (i.e. philosophy); poetry is being accused of pretending knowledge. (Later on, Plato will add that poetry makes the audience's attention stick to the surface by eliciting emotional responses, thereby preventing the attention from advancing to the realm of knowledge.) Seen this way, we – the readers of Plato – would at best be witnesses to an attempt to push back art into a sphere of its own, a sphere, however, whose products not only lack relevance to human matters but are dangerous because they distract from the proper pursuit of these matters. If this were the final word on Plato's critique of art, he would be nothing more than factional in the controversy between art and science.

Yet, whoever reads Plato in this way must be stunned by the fact that the very same author, within the very same text, turns into a prolific poet of myths. Why is Plato doing himself what he is repudiating categorically? An answer to this question cannot be found as long as the quest for knowledge is taken to be the most basic issue, the ground on which the distinction between art and science rests. There must be a deeper reason why both are distinguished. It can be found, I think, where the knowledge that philosophy seeks is grounded in human concerns: namely, in the conduct of one's own life. For Plato, the pursuit of knowledge is not an end in itself. Eventually, what is sought is the knowledge of the Good, and this is a sort of practical knowledge: it consists in deliberately organising the whole of life. Tragedy, on the other hand, does not obtain its relevance from imitating human behaviour. When we

attend a performance of *Antigone* we are not interested in learning what Antigone did. It would be a unreasonable demand for knowledge, since Antigone belongs to a past anterior to which we do not have epistemic access. Even if we considered *Antigone* as an imitation of an actual event, it would be pointless since we cannot compare what we see on stage with reality. A tragedy matters to us because it offers guidance in human affairs, too: it shows how people behave who are subject to irreconcilable moral and religious demands; it provides examples which might help us to understand a life struck by misfortune beyond human grasp. This – the question of what organises a life, what gives it unity and what helps us understanding its twists – is the ground on which philosophy and poetry are meeting, and competing with each other.

Now, it is possible to see how philosophy and poetry can be conceived as opposite poles into which one common practice is articulated, and in which way they need each other as counterparts. The distinction of philosophy and poetry is based on the fact that the former establishes and claims criteria of empirical testability and rational justification. The point of such criteria is hard to dispute; our understanding of human autonomy is directly related to it. We do not want to live our lives according to predetermined rules but according to rules that we can accept reasonably. In cases in which we cannot act autonomously we at least want to accept – rationally comprehend – what happens.

However, it is this very aspiration which makes philosophy depend on poetry: in order to fulfill its demands, philosophy is forced to exceed its own limitations. As a discipline that is shaped by the critical examination of claims to knowledge, it must pay close attention to the limitations of our epistemic capacities.



Portrait of greek actor Euaion on a vase, ca. 430 b. C., Agrigento, Museo Archeologico regionale, photograph by Pitichinaccio, Source: [Wikipedia](https://en.wikipedia.org/wiki/Euaion)

Philosophy has to admit that knowledge, as a basis for live decisions, requires a level of certainty that is not yet reached and probably will never be reached. When it comes to questions concerning gods or the afterlife, it touches spheres human beings cannot know anything about. The philosophical idea of a life that matches up to the standards of reason asks for more than philosophy can deliver. This is the point where philosophy has to transmute into poetry: it needs fiction. That is why Plato employs myths. However, to prevent the blurring of its epistemic standards, philosophy needs poetry as something that is clearly distinguished from itself. Therefore, Plato sets mythical and argumentative speech clearly apart.

How do things look like from art's point of view? Art has no qualms about exceeding the limitations of knowledge. It speaks about gods and souls in the netherworld without hesitation. So why does art need philosophy? It needs philosophy in order to be able to do this within the framework of fiction. Art needs a counterpart that turns fiction into a realm of its own which is free from demands of epistemic correctness and open for the whims of imagination. This not only concerns the freedom of speculation but also the freedom of form: how could a successful dramaturgy ever develop, if dramatists were forced to adhere to the real course of time instead of compressing and stretching time at their own discretion? How could they ever present within a few hour's performance the course, and the unity, of a human life? Such formal liberties are dependent on an opposing pole which turns them into "mere" art.

This much as to a first attempt to illustrate the idea to think of art and science as distinct yet mutually

dependent poles into which a common practice articulates. Whether the idea will prove really useful remains to be seen when tested in further case studies.

Translation: Norah Lewerentz, Alexander Becker

Featured Image: Jan Saenredam: *Antrum Platonicum*, 1604, copper engraving, after Cornelis van Haarlem, Source: [British Museum](#)

Tags

1. Alexander Becker
2. Plato