

Art and Science: On the Theses of Alexander Becker

Text: [Peter Tepe](#) | Section: [On ‚Art and Science‘](#)

Outline: In the series Critical Commentaries on texts on “art and science” Peter Tepe discusses the ideas set out in Alexander Becker’s w/k essay Art and Science.

In 2019 I began writing my critical commentaries on “art and science” texts in the online journal Mythos-Magazin (www.mythos-magazin.de) – and fostered a detailed discussion of Paul Feyerabend’s *Wissenschaft als Kunst* (Science as Art). A summary was also published at the same time in w/k. In addition, from now on, every one or two months, I will start publishing shorter commentaries on texts on “art and science” in w/k. I will begin with the w/k feature *Art and Science* by the currently Marburg-based (previously Düsseldorf) philosopher Alexander Becker, who made his first contribution in the opening round in November 2016. A discussion with Becker and others is due to be featured in the comments section of the current feature.

In this series I am not contributing as the publisher of w/k but as the *advocate of a certain theory on the relationship between (visual) art and science* which vies with other positions. Parts of this – as I call it – “art and science” theory have already been aired in the following w/k articles, as well as in the Feyerabend commentary:

▷ [18 Theses on Art and Science](#)

▷ [On: Art inspires Science](#)

A survey of my activities in relation to philosophy, literary studies and art can be found in my personal listing in [Wikipedia](#).

Becker’s line of argument

In his essay Becker postulates the “fact of institutional separation”^[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.”

Then Becker further speaks “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”. Becker briefly describes a few well-known distinctions between art (in general) and science (in general) and shows in a cursory form that they are “almost entirely contestable”. Yet he refuses to reject the basic principle of “essential determinations”:

„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.”

From this, Becker concludes that „a strict conceptual distinction between art and science is hard to

obtain“, however not that it represents an “institutional separation” that needs to be cast aside. He adheres to the idea that “art and science *are* different” – in the sense of “a certain autonomy”.

“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.”

My commentary will for the most part address this latter, appealing idea. But first of all, the status of this approach needs to be explained. Becker argues for

“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”.

Yet he explores just one example, which relates to Plato and concerns the contiguity of philosophy and literature. So it remains unclear whether, when it comes to examining a case study, say, on the history of photography, or on further observations involving other constellations where scientific and artistic procedures converge, one can count in each instance on *different* forms of “fundamental practice” or not. This can be clarified in the discussion.

My interest focuses on the main point in Becker’s case study – with the aim of replacing Becker’s model with a different one, which nonetheless bears a certain affinity to his. I espouse the following alternative model: in anthropological terms, (visual) art and science are *grounded differently*. If, in Becker’s sense, one can speak of “opposite poles”, then it can also be said that “they need each other as counterparts”. The assumption of a “fundamental practice” derived respectively both from art and science – and possibly in differing constellations – is by contrast relinquished or considered relevant only to special cases.

The case study on Plato

Becker does not contain himself to strengthening his central argument with a case study but goes even further. He begins by reviewing “the notorious critique of art contained in the tenth book of Plato’s *Republic*”, for instance by citing the claim that “art is an imitation of an imitation”. Besides this critique of painting he also discusses that of tragic dramatists. The real reason for the rivalry between poetry and philosophy, according to Becker – and this brings him to his central argument – lies

“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.”

In this respect, Becker sees the relevance of tragedy in that 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. [...] 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.”

Whereas, on the one hand, (Plato’s) philosophy dissociates itself from literature, on the other it is also dependent upon it:

“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.”

In the same vein, poetry also needs philosophy as

“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.”

Before I launch into my critique of Becker’s central thesis in the light of my own theory of “art and science” currently under development, I will first summarise several elements of this theory – already rudimentarily outlined in the texts mentioned at the outset.

Elements of my ‘Art and Science’ Theory

- Since the key focus of interest in w/k lies on visual art my primary concern is with clarifying the relationship between art and science – whereby attention is always paid to the question of whether statements made about visual art are also applicable to other art forms and, ultimately, to art in general.
- Visual art comprises various movements, tendencies and styles. Take, for example, Naturalism, Impressionism, Expressionism, Dada, Futurism, Constructivism, Surrealism, Art Brut, Land Art, Concept Art. A frequently recurring misconception during the development of any theory of “art and science” is that supposedly universally valid statements are made about visual art *per se*, which on closer analysis are shown to apply only to just *some* movements, tendencies or styles – and in extremis even only to *a single* movement. To avoid this mistake my approach operates with the following *formal* definition: visual art is always the realisation of a particular *artistic programme*, in other words generic artistic aims which give rise to various *concepts for individual projects*, i.e. specific artistic aims. The generic programmes and specific concepts assume a *different* character relative to Naturalism, Impressionism, Expressionism and so on. Hence the *formal* language of artistic programmes and concepts allows for all manner of *thematic* content. One can proceed analogously in respect to the other artistic forms or genres such as literature, theatre, music, dance, etc.
- The above-mentioned misconception often results from the normative premise that any particular art movement – or a number of related movements – represents *legitimate* or *true* art. Instead,

my approach to this issue is not *normative* but *descriptive*. It simply makes clear that artistic phenomena of every kind represent the realisation of specific and general artistic objectives. On this level of argument no movement is privileged over another – which on a different level (which here is not the issue) is of course entirely legitimate.

- Given that in historical and sociocultural terms we see that artistic programmes and concepts strongly vary, it also follows that my theory presumes that art can be allocated *different tasks*. Art can be understood as something that offers orientation of a certain kind, but also as something unsettling, disturbing and disorienting, etc.
- In relation to science my theory takes a somewhat different course, although not without similarity. Talking about science *per se* suggests a homogeneity permeating all the disciplines subsumed under this term, which *de facto* does not exist. There are marked differences between the various subjects defined as science in the past and the present; these need to be taken into consideration in constructing a theory of “art and science”. So I would propose that we no longer inquire in a general form *directly* into the relationship between (visual) art and science, but instead begin by posing several more differentiated questions concerning:

- the relationship of (visual) art to modern empirical sciences;
- the relationship of (visual) art to logic and mathematics;
- the relationship of (visual) art to past and contemporary philosophy, in as far as these disciplines consider themselves science;
- the relationship of (visual) art to disciplines with the status of science, which only to a limited degree (or not even at all) follow the principles of empirical rational thought as consistently applied in empirical science (but nonetheless also rooted in everyday empirical knowledge). From my studies over many years, here I would also include the domain of literary analysis and interpretation.[\[2\]](#)

Further specific questions could be added according to need. Since modern empirical sciences continue to be *acknowledged as sciences* it makes sense to start with the first question. This is more or less how I proceeded with *18 Theses on Art and Science*.

Becker's central thesis

Let us now turn to Becker's case study. This is not about confronting Becker's interpretation of Plato with a different one. I will entirely leave aside deliberations of this kind. For the sake of simplicity I will presume his interpretation to be correct. Rather, my concern is solely to answer the question whether or not Becker's case study might have application for the theory of "art and science" currently under development.

For this discussion I will summarise the central points of Becker's digression on Plato by way of the

following questions:

1. According to Plato, what constitutes *fundamental practice*?
2. To what extent do art and science represent forms of this practice in conformity with Plato's philosophy?
3. To what extent do these poles need *each other as mutual counterparts*?

On 1: Becker's interpretation of Plato implies that "the conduct of one's own life" represents fundamental practice.

On 2: Here the philosophy fostered by Plato functions as science: "what is sought is the knowledge of the Good, and this is a sort of practical knowledge: it consists in deliberatively organising the whole of life."

Becker illustrates Plato's notion of art's potential with the example of a tragedy such as *Antigone*. Like (Plato's) philosophy, it has the capacity to offer orientation, but of a different kind.

On 3: Science (in this case Plato's philosophy) and art (ancient Greek tragedy) both contribute, each in a *different way*, to a successful "conduct of one's own life" and each *supplements* the other. A gives something that B cannot give, and vice versa. In the context of Platonist philosophy, it is understood that people need a comprehensive orientation in life: philosophy on one side, and poetry on the other, both contribute in different ways to acquiring this orientation in life.

"The distinction of philosophy and poetry is based on the fact that the former establishes and claims criteria of empirical testability and rational justification. [...] 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."

Points of Criticism

Let us proceed with a critical response in the light of my theory of "art and science". I arrive at the following points of criticism:

1. The results yielded by Becker's analysis, if viewed in the given context, are only of limited scope. *Plato's philosophy maintains* – assuming Becker's elaborated interpretation of Plato to be correct – that the "conduct of one's own life" constitutes fundamental practice, that by and large philosophy conveys "a practical knowledge", concerned with "organising the whole of life", and that a tragedy such as *Antigone* contributes in a different manner to a successful "conduct of one's own life".
 - Propositions of this kind are only of subordinate interest for the theory of "art and science": whatever is valid in terms of Plato's philosophy does not necessarily pertain for philosophy in

general. For instance, there are a number of branches of philosophy – such as epistemology and the theory of science, ontology, diverse variations of metaphysics, and so on – in which the “conduct of one’s own life” does not have the status of *fundamental practice*. The relative justification of Becker’s line of argument could be stated as follows: in relation to Plato’s philosophy – and other philosophies with (as I would say) predominant *ethical* components it holds that tragedy and philosophy are forms of the same practice and that these two poles can be considered mutual counterparts.

- What holds true for Plato’s philosophy – or in a more general sense, for the theory of any particular philosopher – can be objectively erroneous or at least problematic. In terms of the development of a theory of “art and science” it strikes me as hardly promising to choose a *classical philosophical position* as an example for science since the epistemic claims made for the theory of forms in philosophy and other disciplines are frequently contested.
2. Becker’s thesis cannot be transferred from ancient Greek tragedy to art in general, and to visual art in particular. There are, for instance, various forms of abstract or non-representational painting, as well as a number of other forms of visual art, that cannot be directly correlated to a reflected “conduct of one’s own life”, as clearly can be said for *Antigone*. What one can imagine, however, is a concept comparable to that of Plato, but with reduced weight. Accordingly, what pertains for any *particular* philosophy or theory is that there is a fundamental practice which needs to be determined in a more precise manner, of which this particular philosophy or theory and abstract painting represent complementary forms. Whether that is objectively true is of course an entirely different matter.

In contrast to Becker, my approach first of all addresses the question as to the relationship between (visual) art and modern empirical sciences. But then it has to be stated that this does not involve a complementary relationship between such sciences and the arts in a broader sense akin to Plato’s philosophy, that there is no fundamental practice in the sense of a form of knowledge, from which actions and life in general are supposed to be organised, that might connect empirical sciences and arts.

A Complementary Relationship of another kind

However, as suggested above, I wish to address Becker’s thesis in a different manner and claim that, indeed, there exists a *complementary relationship of a special kind* linking art in general (and visual art in particular) to empirical sciences. For both are rooted in mutually distinctive dimensions of the human way of life, but both are *required* – we need *A* as much as *B*. I now will explain this in closer detail.

Human beings, on the one hand, are creatures that depend on reliable empirical knowledge about life-relevant aspects of reality in order to survive and to improve the conditions of their lives. Empirical sciences should be classified as disciplines that take on board everyday empirical knowledge and seek to improve it. This of course also gives rise to other disciplines that are not directly linked to everyday empirical knowledge. People *need* everyday empirical knowledge, and empirical sciences pursue the expansion and consolidation of this knowledge. This does not exclude the possibility that some people find no access to these sciences or even utterly dismiss them.

On the other hand, as living creatures human beings are constantly allied to (variable) worldview parameters that are founded in ideological assumptions and value systems – whereby one needs to

differentiate between moral, political, aesthetic and other values. In my view, the main function of the arts in a broader sense lies in how the respective producers of art *articulate* or *give expression* to aesthetic and other values. Notwithstanding, in the various artistic genres and art movements this is manifested in a variety of ways – one size does not fit all. Nonetheless, in formal terms it can be said that all the movements, tendencies and styles in art in general, and in visual art in particular, are, each in its own way, articulations of a certain value system. Hence, my theory is that, in anthropological terms, visual art in all movements should always be attributed to varying aesthetic principles and other values, and *not* linked to the pursuit of dependable empirical knowledge.

But there is also *science-related* visual art – art that responds to scientific theories/methods/results of this or another kind. As we know, this branch of art is given particular exposure in w/k. My theory classifies science-related art in the following manner: with any particular artist the response to a certain

branch of science ensues within the *framework of a distinct artistic programme (to be more closely specified) that is founded on aesthetic principles and other value beliefs*. In the articulation of these principles and beliefs this response performs a function that is not dedicated to the expansion of empirical knowledge. Consequently, science-related art does not directly compete with empirical sciences, which with the aid of theoretical constructs pursue the precise description and, most importantly, explanation of investigated phenomena. Accordingly, science-related art also performs the general function of articulating (and visualising) certain value beliefs.

Visual art (and art in general), as well as everyday empirical knowledge (of which empirical sciences should be regarded as its extended arm), represent two *poles of the human way of being* that depend on one another as *counterparts*. This way of being requires both *A* and *B*. This is where my counter-thesis bears a certain structural similarity to Becker's position. Yet contrary to Becker, art and science are not to be understood as diametrically opposed forms of a *shared practice* – rather, they are anchored in dimensions of the *condition humaine* that need to be delimited from one another.

To be distinguished from this is the fact that *some individuals* are largely unable to relate to the arts or are not specifically engaged in enhancing everyday empirical knowledge (even though they constantly use aspects of already existing knowledge) and find no access to empirical sciences.

Agreement and Divergence

The above remarks allow us to formulate the further points of agreement with and divergence from the position held by Becker:

- According to Becker we encounter art and science “as two distinct spheres which are clearly separated from one another” – a view posited on the fact of an institutional division. I share this view. But it is also a fact that – especially over the last few decades – diverse *interfaced institutions* have emerged with scientific and artistic activities that are closely intertwined. One example of this is *hybrid plattform*. In addition, there are also crossover figures such as Herbert W. Franke or Karl Otto Götz who work both in scientific and artistic spheres, as well as individuals like the artist malatsion, whose artistic work involves science-related processes and/or cooperate

with scientists/technicians/companies (as in the case of Thomas Schönauer). All these phenomena need to be *theoretically penetrated*.

- As soon as one breaks down the generalised question “what is the relation of art (*per se*) to science (*per se*)?” into sets of more specific questions and starts by clarifying the relationship between (visual) art and empirical science, the traditional approach at once appears misguided. In terms of art, on one side, and science, on the other, it lumps together the very aspects that need to be differentiated. While, like Becker, I view concepts as essential tools for ordering thought which cannot be expected to account completely for phenomena, nonetheless, given that traditional essentialist determinations of art and science rely on *inadmissible processes of homogenisation*, they in fact represent an aberration. Theories built on the notion that “art”, on the one hand, and “science”, on the other, are somehow constantly invariable *entities*, are frequently allied to problematic metaphysical assumptions, an aspect which for reasons of space cannot be examined in greater depth here.
- The consequence of the proposed concept of differentiation is that traditional essentialist determinations need to be replaced by assertions about *basic patterns of a formal kind* which can be variously filled with different content. Thus, whatever their differences in content, empirical sciences follow a common basic pattern which includes the exact description of phenomena, their explanation within the framework of theoretical constructs and the strictest possible verification of these constructs against the designated phenomena.

If assertions concerning the nature of science *per se* are replaced by assertions that describe the structural particularity of a certain *type of science* it becomes clear that *other* types of science (such as logic and mathematics, forms of philosophy informed by scientific epistemic claims, such disciplines that follow laws other than those of empirical-rational thinking, and so on) can be attributed a *different* relationship to art in general and to visual art in particular. The science variant *B* might boast a closer relationship with art than science variant *A*.

All the same, Becker’s attempt to depict “art” and “science” as diametrically opposed manifestations of one and the same practice does have a qualified justification: *in relation to a specific philosophy or theory* there can be a correlation of the type he is describing, although its *objective* justification would need to be verified separately.

Picture above the text: *Theorie* (2020). Illustration: Till Bödeker.

[1] All quotations of Alexander Becker cited here have been reproduced unchanged from the text published on 29 October 2016 in the English section of w/k.

[2] See P. Tepe: *Kognitive Hermeneutik. Textinterpretation ist als Erfahrungswissenschaft möglich*. With a supplementary volume on CD (Würzburg, 1970). P. Tepe/J. Rauter/T. Semlow: *Interpretationskonflikte am Beispiel von E.T.A. Hoffmanns Der Sandmann. Kognitive Hermeneutik in der praktischen Anwendung*. With addenda on CD (Würzburg, 2009).

Translated by Rebecca Grundmann.

Tags

1. “art and science” texts

2. “art and science” theory
3. Alexander Becker
4. Peter Tepe
5. Plato