

6. In areas of knowledge such as the arts and the sciences, do we learn more from work that follows or that breaks with accepted conventions?

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Open a major journal of science or an art magazine on the cutting edge of design, and it is most likely to be filled with articles devoted to subjects and topics that break or challenge our accepted conventions. These refreshing works can provoke new thoughts and offer eye-opening discoveries. But for many observers an unconventional work might instead undermine their desire to know more, scaring them off the topic and causing what one might call a regression of knowledge. We value the so-called accepted conventions: in the realm of science, things like theorems, equations, and paradigms; and in the arts, the various traditions and common patterns found in artistic work. As students, these widely known and thoroughly studied topics can teach us the most about a particular subject and how best to approach it ourselves. However, within the strengths of these pieces of conventional wisdom lie their inherent weaknesses: the notoriety of these ideas can serve to stifle creativity and the desire for discovery, qualities that are just as important to learn as the factual components of these conventions. Art is especially polarized in its disparities between new developments and groundbreaking work. And it is highly visible and prevalent in our society. For these reasons, art will be the primary focus of this essay, though connections to the sciences will be addressed.

Accepted conventions are quite hard to distinguish in terms of art: what is “accepted” truly varies from person to person, as no art is universal and to some extent each person determines his or her own criterion for what is normal and acceptable. A piece of art or a musical composition that seems entirely bizarre to one person could be considered the norm for a particular group. For example, I doubt playing an album by the punk band The Stooges would elicit the same feelings of surprise and confusion from a group of teenagers as it would from a group of elderly church-going ladies. However, setting this disparity in normalcy aside, for the purposes of this essay we will use “accepted” in the sense that it means widely known by the general public. This allows us to avoid inefficient digressions about what is “normal” within the arts.

The study of any subject including the arts generally begins with the basics. For a music student this might mean learning scales or music theory as well as basic classic composition. An art student might begin with artistic skill work such as brushstrokes or sculpting techniques, and also some background

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information on classical sculpture or painting. From an initial position of relative ignorance, a student of the arts can “learn” a tremendous amount of material based on the foundations and framework of their chosen field simply through study of these accepted conventions.

To draw on a personal example, my uncle had me sit with him and study a large volume regarding the art of Florence before a trip there. I absorbed a great deal of knowledge regarding the process of making a fresco and the way painters of the various eras used perspective and lighting to emphasize their mainly religious subjects. I learned a lot about this artistic period, generally accepted as embodying many conventions of Western artistic expression. However, all this factual knowledge of this particular convention could not deter me from one sentiment regarding this type of art: I found it boring. All the logical deductions regarding technique and form I had learned while reading this book could not overshadow the fact that I was not emotionally stirred by the works. I made no great emotional discovery within myself upon observing Botticelli’s *The Birth of Venus*. Though I had learned what one might call the mechanical qualities of this artwork, the emotional depth and power was lost on me. Why? I found the style repetitive and somewhat mundane.

My experience is by no means universal, of course. It was and certainly is possible to acquire knowledge through emotion from this type of traditional art. Studying these established topics is meant to provide a solid base in the subject. Applying this to music, the majority of classical and traditional music that is “accepted” by the general population follows fairly routine time signatures and rhythms, while using (for the most part) relatively simple keys. For example, anyone with a knowledge of classical music knows that a waltz will be played in $\frac{3}{4}$ time, and that no one will use this classification for a piece using a different structure. Though even these more mechanical and simple theoretical qualities can provide this next level of learning to some observers, the vast majority of students primarily learn just the basic foundations and structure of their subject area and not much beyond that.

However, where accepted conventions succeed at teaching basic information, work that breaks from these established traditions can frequently serve to teach a student or an observer the true nature of the art: it can show the expanse and possibilities of an art form. When we have learned the basics of an art, we can truly expand our comprehension of a subject through the study and practice of work that breaks these traditions. Many in the world of dance, for example, believe that one must learn the basic traditions of ballet in order to

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expand into the modern, more unorthodox practice. A performer must know the conventions and values of the tradition in order to know what to break.

Breaking the mold and reworking common conventions has the exceptional ability to teach an observer the true nature of an art, as these acts can show not only the traditional values but also the extent to which this particular art can be expanded. Rock and roll, and its various modern manifestations, can be seen as both following and breaking this pattern: artists fitting under its broad umbrella can be found retreating back to previous musical norms, maintaining the current artistic tradition, or seeking to distance themselves completely from any “similar” artists. Though the swinging rhythms and light distortion characteristic of rock’s originators stayed with the genre through its heyday in the 60’s and 70’s, it then gave way to such radical forms as David Bowie’s art rock, and punk rock from the Clash. But nowadays, one can find modern bands like The Strokes and Wolfmother re-hashing the traditional rock structure and sound in an attempt to avoid the ambiguity and uncertainty that accompanies the experimental forms of music.

Here we are faced with one of the most striking contradictions found in the “answer” to this question: sometimes too much innovation can be just that, too much, forcing a reactionary retreat to past values and principles. But on the whole, work that serves to break from traditional conventions can normally provide more “truth” than traditional forms, though maybe at the expense of its ease of comprehension by an outside observer unfamiliar with the conventions being broken.

The sciences do not precisely follow the same division of learning possibilities as music. Nonetheless, the sciences – like the arts – rely on a necessary base of knowledge that one must obtain in order to move forward with the science, though it may not always be emotionally engaging or interesting. Science is quite similar to the arts in this way: the “revolutions” that break established scientific conditions can be tremendously eye opening and offer terrific insights into the experimental capabilities of the sciences. However they can easily fall far short of their potential for teaching if the student is uneducated on the basics of a field. Take quantum mechanics: this field of knowledge first developed in the 1920’s completely revamped our understanding of the physical world. Its originators used their study of atomic and sub-atomic particles to disprove the formulae of classical physics. One especially mind-boggling claim known as the Heisenberg Uncertainty Principle states that any measurements we take are fundamentally inaccurate, due to an atom’s constantly shifting electron

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cloud. While many educated students of physics have adopted this school of thought in order to describe the minute workings of the universe, it would be impossible to give this theory directly to students who have no prior knowledge of physics. They would be baffled by such terms as “quark” or “subatomic”. But, give the same students a seminar on classical physics, and they can understand the principles that are then broken in the quantum school of thought. Moreover, these revolutionary discoveries only apply to the universe’s smallest particles, meaning the classical model continues to explain everyday occurrences and observations.

This disparity between accepted and innovative ideas even holds true in the social science of history, in regards to historiography. Any revisionist writer who creates historiography (the history of history) must first know the general assumptions and principles held by mainstream thought, in order to disprove or re-evaluate them. On the whole, however, many paradigm shifts in scientific thought are less revolutionary because their background material is quite complicated. And unlike art, science suffers from a lack of visibility to the untrained observer.

Revolutions in science and art will be the cornerstones of progress and innovation in our society’s future, but these conclusions would be meaningless without the framework and structure of traditional values. To end with a riddle about endings: conventions and innovations are like the chicken and the egg. That is, a revolution brings new knowledge by breaking out of convention; but that convention is itself the result of an earlier revolution in search of truer knowledge. Fundamentally, however, egg and chicken are both, well, chickens. And we need both.

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