ARTIFACT 2007 | Volume I, Issue 1 | Pages 6–10

Behavioral Artifacts: What is an Artifact? Or Who Does it?

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Keywords: Art, Anthropology, Cognitive Science, Creativity, Fluxus, HCI, Language, Mediation, New media, Perfomance

The word "artifact" comes from two Latin words. The first, "arte", means "by skill", from "ars", skill. The second, "factum", is the past participle of "facere", to do or to make.

The word dates back to the early 1800s, meaning "something created by humans usually for a practical purpose; especially: an object remaining from a particular period" and "something characteristic of or resulting from a particular human institution, period, trend, or individual" (Merriam-Webster, 1990, p. 105). Most definitions focus on the quality of artifacts as things, speaking of objects and remains rather than process or production. Typical definitions are "anything made by human art and workmanship; an artificial product. In archeology, applied to the rude products of aboriginal workmanship as distinguished from natural remains", "a product of human art or workmanship", "any object made by human beings" (Oxford English Dictionary, 2006, n.p.; Shorter Oxford English Dictionary, 1993, p. 120; Wordsmyth, 2006, n.p.).

I am as interested in the artifacts of doing as in the artifacts of making. Many artifacts exist only in human behavior, individual and social. These are the focus of this essay.

While the philosopher Mario Bunge (1999, p. 23) defines an artifact as a "man-made object", he uses the word "object" in the wide sense of anything we can create, including "symbols, machines, industrial processes, social organizations, social movements".

In this sense, an artifact is anything that we can design in the very large sense of the word design, defined as "[devising] courses of action aimed at changing existing situations into preferred ones" (Simon, 1982, p. 129).

The interesting challenge we face in the new journal *Artifact* involves finding a vocabulary that allows us to focus on the wide range of artifacts, those made by doing that never take physical form as well as those that are made in physical form, including remains.

One reason for the emphasis on physical artifacts may simply be their durability. An act or a word vanishes. An object – in the common sense of the word – does not. Historian Arnold Toynbee (1934, p. 156) captures this nicely where he writes, "It is a mere accident . . . that the material tools which Man has made for himself should have a greater capacity to survive . . . than Man's psychic artifacts".

This historian's distinction emphasizes a paradox. Historians study what human beings do and what they have done. They do so through the remains and traces of action captured in physical artifacts.

The language that helps us to capture one range of meanings seems always to withhold or defer another. As we bring ideas into one focus, we lose the focus that would help us to capture another set of ideas.

The words we use for different kinds of artifacts are also shaped by our history in using them. When way we speak of interfaces, for example, we think of human-computer interaction and not shoes or cups. Despite this fact, shoes and cups are interfaces of a

kind – a different kind, but interfaces nevertheless. When we speak of products and process, we generally do not think of things digital but a software package is as much a product as a block of cheese, and we produce the system that allows us to manage lines of customers at a bank.

It is as though we lack a holistic vocabulary that allows us to speak of what we wish without excluding what we also wish to speak of. While this has always been the case, the advent of new digital media focuses our attention on the virtual and immaterial, emphasizing this challenge. Describing the subtleties we seek requires the right prepositions and verbs to give voice to the nouns we choose, compound noun-preposition-verb phrases that do not fit easily into the mental habits of an English language that took shape in Shakespeare and the King James Bible. This problem arises in different ways and shapes in all languages – whether it involves a German theologian speaking through the language of Luther's Bible, a Japanese engineer who lives in the language once shaped by Hakuin Zenji, or an Indian mathematician thinking through a language that crafted the Vedas.

The science fiction writer A. A. Attanasio (1989) collapsed the distinction between beings and their doings in a science fiction novel that posited human action as a physical force embedded in and leaving behind an energy trail, much as a television broadcast radiates signals outward from a source. In Attanasio's imagined world, everyone who has ever lived can be reconstructed resurrected from their traces, much as we could still capture and watch the original broadcast of *I Love Lucy* or *Wagon Train* if only we could get out ahead of the signal with a sufficiently sensitive television antenna.

In thinking about artifacts, I want to capture the concept and dimensions of behavioral artifacts. The behavioral dimension of physical artifacts is clear to most of us. We conceptualize our understanding of this dimension in such terms as "affordance" and "interface", and we realize it in the way that we organize our working habits and living patterns around the artifacts we use.

It is this sense of the idea that Winston Churchill evoked in his 1943 speech on whether and how to rebuild the House of Commons: "We shape our buildings, and afterwards our buildings shape us."

Nevertheless, there is another behavioral dimension in the designed world, hidden in plain sight. It unfolds before us. We walk through it, embedded in it as we shape it around us. It arrives with each moment of time and vanishes as time passes by. This is the enacted world that we experience and capture partially in memory. We can document behavior, describe it, plan it, and represent it, but we only realize it in the living web of action and interaction. We experience behavior as we enact it, and then it vanishes. After the fact, it becomes an account, a memory of some kind, or perhaps the story of a memory.

As we move through time, we lose the traces of this world. In some cases, the importance of these lost worlds is greater than we realize. Consider, for example, the role of improvisation in Mozart's work. Through improvisation, Mozart shaped a tangible experiential world that played out daily through the duration of his life, vanishing when he died in a way that must surely influence anyone who thinks deeply on Mozart's music. Theologian Karl Barth (2003, p. 40) evokes the sense of this world: "the number of Mozart's preserved works is enormous. But probably even greater is the number of all those works of which we are deprived and destined to remain so. We know that at all periods of his life he loved to improvise, i.e., to freely create and play for himself within public concerts or hours on end to only a small audience. What he did this way was not written down a whole Mozartean world that sounded once and then faded away forever." What we hear is Mozart's legacy, his *nachlass*, and his remains. The living Mozart shaped his music in daily practice. This was not the "practice" of practicing scales or the practice of realizing a written composition. Rather, it is practice as an expert physician practices medicine or a lawyer argues law, practice brought to life in behavior.

Amadeus by Peter Shaffer (2001, pp. 3036, 120121; see also Forman 2002, Scene 7) captures this experience in the scene where Mozart memorizes

Salieri's *March of Welcome* on one listening. In the motion picture version of *Amadeus*, Mozart sits at the piano to work with the music as a potter works with clay. He transforms the tune effortlessly as he thinks and talks, shifting it from a somewhat wooden march into the well-known passage it will become in *The Marriage of Figaro*.

This is a behavioral artifact. It comes and vanishes in experienced time. We will never experience this Mozart for ourselves except in imagined reconstructions.

Even in this age of excellent recordings, we must inevitably miss experiences. One cause is the difficulty of capturing the quality of live presence in even the best recording. Many reports on music, theater, and art describe this. The recent death of soprano Birgit Nilsson offers an example, where Anthony Tommasini (2006: n.p.) writes, "it is almost impossible to convey what it was like to hear her in person. Even her recordings, many of them landmarks in the discography, do not do full justice to her singing. . . . It was not just the sheer size of her voice that overwhelmed recording studio microphones. It was the almost physical presence of her shimmering sound that made it so distinctive." For many, the physical presence of Nilsson's voice was unique. The ability to project a powerful sound through diaphragm control rather than volume meant that she could sing her words clearly to every part of a theater, rising over the orchestra and chorus in a way that listeners perceived as charismatic in power and subtle in musical mastery.

Another reason, even more common, is the fact that many experienced moments are not recorded. Peter Shaffer (2001, pp. xxviii–xxix) laments the facts that the revised *Amadeus* of 1998 was not filmed at Lincoln Center, as the first Broadway production of *Amadeus* had been two decades earlier.

The idea of musicality embodies the tension between the behavioral artifacts of live performance and the objects that instruct, record, or document performance.

The concept of "musicality" refers to works designed as scores for any medium, works that can be realized by artists other than the creator (see Friedman 1991, 1998-b). In this sense, any listener can experience Mozart simply by listening to an orchestra play one of Mozart's scores. Perhaps another orchestra or Mozart himself might have given a better rendition, but it is still Mozart's work. Other kinds of works can be realized in the same way, including theater, rituals, performed art, and even physical works created to be realized from a score.

The issue of musicality has fascinating implications. The mind and intention of the creator are the key element in the work. The issue of the hand is only germane insofar as the skill of rendition affects the work: in some conceptual works, even this is not an issue. Musicality is linked to experimentalism and the scientific method. Experiments must operate in the same manner. Any scientist must be able to reproduce the work of any other scientist for an experiment to remain valid.

Nevertheless, the radical interpretation of musicality that emerged in the instruction work and intermedia ethos of the 1960s raises interesting problems. The generous opening to the world that scored work made possible engages the action and behavior of the performer who realizes the work while dislocating the work from the productive behavior of its creator. (For a deeper discussion of these issues, see Friedman 1991, 1998-b, 2002; see also Owen Smith's contribution to this issue of *Artifact*.)

Musicality suggests that the same work may be realized several times, and in each state it may be the same work, even though it is a different realization of the same work. At the same time, the particularity, the unique quality of each realization depends on human context. It emerges once, in a radical sense, never to exist again.

Consider, for example, conductors who have given us great interpretations of past work, say a complete Beethoven cycle or a series of Brahms concertos, then, a decade or two later, gave a dramatically different, yet equally rich interpretation of the same work.

Oddly, the quality of difference that arises over time is linked to a specific contemporary definition of the term "artifact". This definition involves the unplanned results of human agency as well as the planned ones. This even includes unplanned results in the form of spurious scientific results or

unintended effects. The *Oxford English Dictionary* (2006, n.p.) defines this kind of artifact as "a product or effect that is not present in the natural state – of an organism, etc. – but occurs during or as a result of investigation or is brought about by some extraneous agency". "In scientific investigation", according to Wordsmyth (2006, n.p.), this involves "a spurious result or effect caused by the introduction of unintended substances or structures".

One contemporary composer has come to embody the radical opposition between these two poles. La Monte Young, a composer involved with the early Fluxus community, created some of the simplest and most radical music scores of the twentieth century. Young's well-known score for *Composition #10 to Bob Morris* is simplicity itself. It is a one-sentence instruction to "draw a straight line and follow it" (Young, 1990, p. 198; see also Young, 1963).

On the one hand, one can imagine a hundred ways to realize this score. The most famous of these is the widely known rendition in which composer Nam June Paik dipped his head in a bucket of ink, using his hair as a brush to draw a line down a prepared piece of paper. On the other hand, Young prohibits the score from being reproduced without his consent or performed without his permission. Young has apparently come to believe that the artifactual quality of *doing* influences the quality of the work to the degree that there is no *making* outside the *doing* of the composer. This is certainly the case for the amazing series of lengthy piano performances Young realized in New York in the 1980s. Many of these were recorded. One, a 1987 performance of *The Well-Tuned Piano in The Magenta Lights*, lasted six hours and twenty-five minutes. Young has now created his own record company to publish this piece as a CD.

Some of Young's concerns involve control of the copyright to his work, and controversial claims for credit by other composers in Young's compositions. The larger issue, the artifactual issue, remains more significant to me. To hear a six-hour-long live performance by La Monte Young in a room prepared for the concert with lighting by Marian Zazeela is an experience no recording can document. At the same time, we have recordings of these contemporary concerts by the composer in a way that we do not have of Mozart's improvisational performances.

The philosophical contribution of doing-as-artifact is a release of the static artifact to a pluralistic life. Such artifacts are freely available for consideration and realization in many ways. They can exist or come into being as idea, as spoken word, as score or representation, and as realized project (Friedman, 2002, pp. 127–128). The quality of lived experience takes a different shape around behavioral artifacts than around physical artifacts, and this quality also highlights the deep new understanding of how it is that physical artifacts are also embedded in the behavior and language that bring them into use.

Space, place, and history establish the constraints that define behavioral artifacts. In one way, these constraints can be considered information. The well-known phenomenon of an incomprehensible bottleneck in a traffic flow is a perfect example. This often takes place at a site where an accident occurred or another obstacle recently took shape. Traffic slows down at the point of the accident or obstacle. Long after damaged vehicles are pushed aside and obstacles removed, traffic flow slows down at the point of the accident or obstacle, a behavioral constraint imposed by the flow of information that was once useful.

The behavioral artifact that traces the former course of information remains in the system long after its uses are gone, sometimes causing distorted traffic patterns for hours after the wreckage has been cleared. This invisible behavior becomes visible behavior when we find ourselves slowing down at some point in the road that seems no different from the points before or after, nothing – to us – but a momentary and apparently meaningless jam in the traffic.

Behavioral artifacts arise commonly in the unplanned paths that emerge on every college campus and every major city park. Some of these patterns existed for millennia where goats and sheep once forded a long-vanished stream. Others emerge when impatient students and faculty establish their own short cut between two much-traveled points on a campus, breaching the tidy green of a well-kept lawn. This behavior irritates gardeners and gives birth to the annual memoranda on the subject of using sidewalks that all members of a college cheerfully ignore (Friedman, 1998-b, p. 89).

We see the behavioral artifacts around us in the everyday life of individual behavior and the structured social relations that constituted the empirical foundation of Erving Goffman's micro-sociology (See, e.g., Goffman, 1959, 1971, 1974). The organizational memory that gives rise to group behavior and organizational process is another case. So, for that matter, are the behaviors that actors use to shape the reality of theatergoers, or, as theologian Ditte Mauritzon Friedman (2005, p.: 4) notes, the craft of a filmmaker in "creating and sustaining a symbolic universe for those who watch a film".

Shakespeare's grand vision of the theater rests upon this understanding, where words and action summon a reality that spectators embrace to eke out the performance with each mind.

It is useful to remember, as we celebrate the birth of a journal on the *Artifact*, that artifacts constitute the twin relationship between doing and making found in the Latin "facere".

As the editorial board joined in dialogue to reflect on what this journal could be and mean a tune ran through my mind. It is a revised version of the 1945 Disney classic, "Zip-A-Dee-Doo-Dah" from the film *Song of the South*.

I play the revised role of Uncle Remus, while a couple of bluebirds and a squirrel give me the eye and sing:

"It's the truth, it's natural:
Everything is Artifactual".

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Published online 2006-05-05
ISSN 1749-3463 print/ ISSN 1749-3471
DOI: 10.1080/17493460600610764