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Art, Artifact and History:

The Role of Objects at the Goodwill Computer Museum

The intertwined nature and definitions of art, artifact and history have long troubled Western scholars - yielding elaborate notions of idealized Platonic beauty, loosely defined concepts of antiquity and antiquities, and Aristotelian treatises venerating poetry over history to privilege the recording what should be over what is. Questions surrounding what constitutes art continue to plague philosophers, art historians and artists alike, while debates concerning where natural history ends and human history begins likewise persist. Yet many Western museums nonchalantly reproduce socially constructed stereotypes of these three concepts - placing certain objects in the art museum, some "Other" objects in natural history museums, while still others reside in various incarnations of history museums. These distinctions between art, artifact and history perpetuated by the museum as an institute of knowledge reproduction, while perhaps somewhat arbitrary, are often more likely motivated by the lingering politics of empire and colonial exceptionalism.

Nevertheless, the social distinctions between museum typologies endure, embedded in many Western orthodox discourses. Due to the framework in place, the classifications commence and each museum becomes typecast as belonging to a certain genus. While the placement of certain non-Western human made objects within the category of natural history over (human) history or art is fraught with sociopolitical ramifications and ethical pitfalls; what is less clear,

and perhaps less socially controversial, is how art and (human) history museums can be distinguished as separate categories, particularly in an era when objects of "art" are often mechanically reproduced, frequently conceptual, sometimes "readymade" and not always "unique". Within this nebulous, perhaps even imaginary line between art, artifact and history lies a certain type of museum which venerates the historical artifact, yet offers little in the way of historical context, overall narrative or situated explanation, all while endowing the object with artistic qualities and marks. The Goodwill Computer Museum in Austin, Texas thoroughly exemplifies this unidentifiable class of museum, thus creating an opportunity to explore the nature of three types of museums - the natural history museum, the history museum and the art museum - to discover where exactly the Goodwill Computer Museum resides in this museological taxonomic framework.

The objects at the Goodwill Computer Museum consist of almost entirely of computers ranging in age from ten to fifty years. Given the relatively recent age of the objects, it might be difficult to perceive them as historical, yet the breadth and rapidity of socio-historical transformations which occurred due to these ubiquitous objects certainly represents "practical activity in history" and a revolution in socio-historical practice (Marx 1967:23). Accordingly, it would be tempting to classify the Goodwill Computer Museum as an historical museum and refrain from further debate. However, removing "objects from their original environment and placing them in a museum changes their signification...In a museum those very same [objects] become educational; they may document.. history, or they can be presented as works of art" (Lenk 2006:320). Therefore it would be prudent to first investigate the features that constitute a historical museum and provide prototypical examples to discover how the nature of the museum

as an institution transforms the signification of those objects, and define how the Goodwill Computer Museum re-renders its objects within their own museological context.

As "almost nothing displayed in museums was made to be seen in them" (Vogel 1991:191), the manner in which objects are displayed at a museum can have a profound impact on how the object is perceived by its viewer. In contesting the nature of how best to display objects in a historical museum, MacDonald and Alsford advocate for a "traditional" museum format in which "the best artifacts are identified and a *story* built around them" (Moore 1997:37 emphasis added). MacDonald and Alsford criticize the latest convention within historical museums where the story is identified prior to the artifacts being added, while Moore argued that the object in the historical museum had lost its place of primacy and had been relegated to secondary status behind the narrative with the popularization of social historical movement (1997). Despite the internal historical museological debate over primacy of the object and the story, in both instances a narrative is constructed and a *story* is told with the objects regardless of whether or not they are the "best" objects the museum possesses.

At another computer museum, the Computer History Museum in Mountain View, California, displays feature not only computers as objects but also a "narrated movie that tells the story" of the computing industry as well as "listening stations [that] let attendees delve into deeper information about topics" (Ricadela 2009:1). The museum's mission is to "preserve and present for posterity the artifacts and stories of the information age" (Bell 2011:1), and the museum's president "particularly enjoys exhibits that highlight tales of engineering triumph" believing it is the "stories behind the artifacts [that] attract all those visitors" (Calamia 2011:35). Whether the Computer History Museum followed MacDonald and Alsford's "traditional" historical museum practice of allowing the "best" objects to dictate the story, or whether they let

the story dictate their selection of the recent 1200 object exhibition *R/Evolution* remains unclear, yet what appears certain from these descriptions is that the story of the objects has a primary place at the Computer Historical Museum. The *story* can thus be construed as a primary component in classifying a museum as a *history* museum.

Some of the object displays at the Goodwill Computer Museum allow the story a primary place as well. The computers in the Datapoint exhibit include extensive textual background information, with one object contextualized in a 1960's and 70's period display. The hardwood desk the object rests on comes complete with a requisite rotary telephone and ashtray common at the time the computer was sold. The museum thoroughly situates the Datapoint computer within an historical context and adds narrative text and information about the objects creating a story, thus rendering them historical artifacts. However, the majority of the objects at the Goodwill Computer Museum dangle in time, some with brief descriptions and dates and others with no context whatsoever. The Apple computer exhibit provides some brief labels but mainly feels as though one walked into an Apple Store at a fictional mall where they forgot to change the logo from rainbow to silver¹. Another exhibit of objects even contains photos of the objects as actors used in a local film with accompanying text about their role as fictional characters, rather than information about their original use or historical context. A television screen on one wall suggests that the museum may provide some historical narrative for the objects but it remains black, leaving the visitor to interpret the objects for him or herself.

The Goodwill Computer Museum brochure contains their mission statement and unlike accounts of the Computer History Museum, it does not contain mention of stories or history at

¹ Although there was no Apple Store when the rainbow logo was in use.

all. The brochure states that the museum "is dedicated to the preservation and restoration of vintage computer equipment", providing "interactive exhibits and programs that educate the community on the evolution and use of computer technology", promoting "environmental technology and the importance of recycling end-of-life electronics", and raising "awareness of Goodwill's mission" (Goodwill Computer Museum Brochure 2011). Although the brochure notes elsewhere that "everyday someone discovers the museum and is able to reconnect with memories of their first computer" and that there "are so many captivating *stories*" (Goodwill Computer Museum Brochure 2011 emphasis added), none of the stories are on display for the casual patron. The uninitiated can only guess what the stories are as they embody an oral history locked within the minds of the few with personal or museological knowledge and privilege, as the museum does not often have a docent available for interpretation. The patron must therefore navigate the meanings of the museum and construct its stories for him or herself.

Although the Goodwill Computer Museum contains historical objects and offers a narrative and historical context for some of the museums objects, the lack of displayed historical narrative, stories or overt context for the vast majority of the objects at the museum suggest it cannot reasonably be classified as an historical museum according to established museological conventions. If the Goodwill Computer Museum is not an historical museum then what type of museum might it be? The computers in the museum were once considered mainly utilitarian, used primarily to produce digital objects separate from the physical form of the computer. Thus it would seem counterintuitive to consider the physical computer anything other than a highly complex, mechanized tool. As tools have often been studied by anthropologists and archaeologists, as opposed to historians or art historians; and have therefore been categorized most often as artifacts, as opposed to history or art; it would be reasonable to classify the

computers as artifactual objects. As many archaeological and anthropological artifacts reside in natural history museums, perhaps it might be appropriate to consider displaying these complex mechanized tools along with Other tools from Other eras.

As a number of non-Western "indigenous" cultures lacked or had lost a formal system of writing or record keeping that Western scholars found satisfactory, Occidental thought rendered these cultures "without history" (Wolf 1982). Accordingly, artifacts from "primitive" non-Western cultures "without history" could not reside within Occidentally oriented art or (human) history museums. Considering the problematic nature of placing human artifacts in appropriate venues sensitive to Western notions of cultural superiority, Williams explains that in

the nineteenth century museum, unlike its predecessor the eighteenth century *cabinet de curiosite*, exhibits were expected to reflect some clear rationale: museums of natural history presented instructive exhibits; museums of art presented things of beauty. But the place of ethnographic displays in this scheme of things was not wholly clear. (1985:147)

One type of museum which the Other artifacts did reside in was the anthropological or ethnographic exhibit often held within the natural history museum, and Paris' Trocadero represented an early model of such an exhibit. The Trocadero was intended as a museum of anthropology demonstrating the evolution and progress of humanity (Williams 1985). As the "aim of science was...to collect ethnographic artifacts and data, and to display them in reconstituted, easily interpretable contexts" (Clifford 1981:558), the Trocadero contained "display cases filled with...labelled artifacts" (Clifford 1981:554) and generally typified ethnographic exhibit formats seen later at New York's American Museum of Natural History and the Smithsonian's National Museum of Natural History in the United States. Thus the artifacts

from cultural Others were frequently housed in a particular class of museum along with zoological, geological and biological specimens, relegated to "natural" history status.

The objects at the Goodwill Computer Museum can reasonably be classified as artifactual tools and part of the museum's mission is educate the community on the evolution of technologies, both central tenets of the ethnographic display. However, despite the presence of some objects possessing labels informing the viewer what the object is and why it was important from an evolutionary historical perspective, notably the Datapoint exhibit, other objects contain little description while still others have no labeling at all. The scientific methodology employed at the prototypical natural history and ethnographic museum generally required labeling and some cultural-historical context for each object, and the Goodwill Computer Museum does not adhere to this convention.

The Computer History Museum in Mountain View has artifactual tools as the Goodwill Computer Museum does, yet the Computer History Museum also contains "artifacts including electronics and engineering notes...clearly labeled beneath glass display cases" (Ricadela 2009:1), and invokes an evolutionary display complete with a timeline (Ward 2004). As the Goodwill Computer Museum incorporates neither the notes and clear labels nor any sense or descriptive elements of technological evolution despite its mission, the Computer History Museum maintains a more valid claim to ethnographic natural history museum status. Moreover, the ethnographic natural history museum as a Western cultural form, Eurocentric though it may be, concerns itself primarily with the "Other" "indigenous" "primitive" "man". As the objects at the Goodwill Computer Museum consist entirely of Western designed² mass manufactured

² Although now sometimes Asian designed and often Asian built, the majority of the Goodwill's collection is American designed and often American built.

objects, and the objects do not fit the ethnographic natural history display format, the museum cannot rightly be classified as an ethnographic natural history museum either.

Still, the Trocadero later became an "unscientific jumble of exotica, a place one went to encounter curiosities" and "isolated esthetic objects" (Clifford 1981:554), unwittingly transforming itself into another museological form. As the twentieth century began, Western intellectuals and artists in particular began to frequent non-Western ethnographic collections and found the artifacts possessing artistic merit according to revised Western sensibilities. The Trocadero collection of African artifacts was of particular inspiration to Picasso in his 1908 studies of *l'art negre* and later to the surrealists, both of whom incorporated many of the forms and aesthetics of African artifacts into their European art (Clifford 1981; Williams 1985). As the Trocadero's science became less rigorous and its labeling "capricious", the museum's status as scientific and ethnographic "was considered more and more of a scandal, for it had changed, in effect, into a museum of 'art'" (Clifford 1981:554). Williams found humor in the perceived failures of the Trocadero as an ethnography museum noting it was "especially ironic that the Trocadero's disarray, which caused pain and embarrassment to ethnographers, was a source of delight to surrealist artists" (1985:163).

The destabilization of traditional categories of high Eurocentric culture, such as the opposition between what constituted art and artifact, intensified, particularly following the atrocities and alienation produced by European governments during World War I. With the incorporation of Other cultural aesthetics into Western "high-art", Western scholars began questioning their classificatory practices and a debate began on what elevated art over mere artifact. The art/artifact dichotomy within the Western museum has long been seen as a struggle between the display of Western and non-Western cultural objects (Duncan 1995; Dutton 1993;

Faris 1988). The "dichotomy has provided a rationale for putting western and non-western societies on a hierarchical scale, with the western ones (plus a few far eastern courtly cultures) on top as producers of art and non-western ones below as producers of artifacts" (Duncan 1995:5). Other scholars suggest that the production of art in Western society, once removed from its traditional sacred religious context and into a secular framework, generates ready-made museum objects which relegate the more utilitarian or "ritual" art produced by non-Western cultures to artifact status in the service of Western colonial superiority (Phillips and Steiner 1999; Prince 1988).

Still some non-Western objects, if pleasing to authoritative Westerners involved in museum curation and knowledge production, become elevated to art status. "For the past century or so, the objects of cultural Others have been appropriated primarily into two of these categories: the artifact or ethnographic specimen and the work of art" (Phillips and Steiner 1999:3). These two categories have historically been separated not only conceptually by cultural origin, but also in museums by academic discipline. "As a category, artifacts are normally distinguished from works of art both conceptually and as objects of museum display. The art/artifact distinction marks the divide between the disciplines of anthropology on the one hand and art history and criticism on the other" (Duncan 1995). Accordingly, the Western museum as an institution of knowledge reproduction has been quite complacent in regurgitating disciplinary and Eurocentric cultural stereotypes and asserting Eurocentric colonial knowledge power by placing non-Western artifacts lacking artistry according to Western sensibilities within evolutionary human cultural constructions in the natural history museum, while allowing privileged objects their very own class of museum according to Western notions of artistic merit.

With a dichotomy based primarily around cultural origin, an entirely Western computer museum would seem to be removed from the art/artifact dichotomy. After all, the Trocadero despite unknowingly transforming itself from ethnographic to art museum, still held non-Western artifacts. And yet because the objects at the Goodwill Computer Museum can be construed as artifactual tools, they become embroiled in the debate. But can objects at the Goodwill Computer Museum be classified as art and should they? How the object is presented informs the viewer as to the nature of the object - whether it is art or an historical artifact. "In the modern [art] museum an artwork is no longer viewed in its context as in the medieval Christian Church but is seen as an isolated work" (Prince, 1988:82). Further, the "earlier technique of stacking artworks" in art museums has been "eliminated and single works of art" are now "displayed in a clear, neutral setting" (Prince 1988:82). The vast majority of the computers displayed at the Goodwill Computer Museum, are displayed with little context, merely floating in a plain white space with little or no description or authoritative interpretation, thus allowing the viewer to explore mainly the aesthetics of the object. But even if the Goodwill Computer Museum *displays* their objects as "art", does that display re-render the object or *make* the object art?

The advent of anti-art and the rise of dadaism and constructivism brought about what Rosenberg termed "a new machine aesthetic"(1972:164), and as computers are generally considered machines, they would seem to possess a mechanized aesthetic. Likewise, the design of the computer itself as an art form, beyond the familiar beige box, has been analyzed extensively by Atkinson (1998; 2000; 2005), who discusses the various manifestations of aesthetic form these utilitarian objects have had over the course of the last half century. Similarly, computers not only often make digital art such as videos and photos that are displayed

in museums, they also become subjects in some art exhibits themselves with photos of computer parts comprising entire art exhibits (June-Friesen 2007), and exhibits of computers as actors in films at the Goodwill Computer Museum. Moreover, CEO's of computer companies, particularly Steve Jobs, have been hailed as artists in the Smithsonian (Adams 2011), in newspapers (Cavna 2011), and from many users of their products.

The Macintosh display at the Goodwill Computer Museum is quite extensive and contains several rare limited computer editions including the signature "Woz" 20th anniversary edition, complete with the signature of Apple co-founder/artist Steve Wozniak on the case. The design of this and many of the other computers on display at the Goodwill Computer Museum go well beyond the familiar beige box making them more "unique" and thus perhaps "worthy" of artistic contemplation. Further, despite the enormously omnipresent beige box in personal computer design, which many might argue is not "art" in the traditional sense given its plain-ness and ubiquity, the Goodwill Computer Museum displays only one such model - which happens to be hand signed by Michael Dell, CEO of Dell Computer. Thus the beige box required the endowment of the artistic mark of its creator in order to be displayed.

Accordingly, the objects on display at the Goodwill Computer Museum, are presumably chosen for their rarity - and many, such as the Silicon Graphics, Sun and Cray servers are indeed quite rare - as well as their unusual and unique designs - such as the custom built relay computer. The objects also "receive a cultural recognition... through the authority of the institution", and "the visitor is inclined to consider them more valuable than other" more utilitarian objects, including the beige box (Lenk 2006:320). As unusual, rare and unique objects, the computers at the Goodwill exhibit the commodification more familiar to works of art than to an everyday recent artifact. The decision of the museum to withhold the display of a Wintel PC - the familiar

beige box which with its lower cost is arguably the more numerous, less sophisticated "Other" in artistic parlance - save the one signed by Michael Dell, reinforces the museum's status as an art museum as the art museum generally displays rare and unique objects furnished with the mark of their creators.

Yet rare and unique objects signed by their creators are also displayed at other types of museums, including the Computer History Museum in Mountain View. "Installed in a vintage hand-built plywood case, the 1975 Apple 1 enshrined at the Computer History Museum bears the 'Woz' autograph of Apple cofounder Steve Wozniak" (Ward 2004:15). And another one of these extremely rare computers was purchased at an auction in the U.K. for an Italian computer history museum (Sangani, 2011). Thus original signed pieces from the "artist" Woz also reside in history museums augmented "with explanatory plaques...photographs, videos and documents" that "make the history of computing come to life" (Sturdevant 2003:68). So the mere presence of rare objects signed by an artist at the Goodwill Computer Museum does not necessarily make the objects art or classify the museum as an art museum.

The definition of what constitutes "art", and therefore what can be considered an art museum, is highly suspect. Marcel Duchamp found a urinal, turned it on its side, signed it "R Mutt", called it *Fountain*, and submitted it for display in an art museum (Davies 2007). Surrealist artists visited flea markets in Paris "where one could rediscover the artifacts of culture, scrambled and rearranged" and "bring home some bizarre or unexpected object, a work of Art with nowhere to go- 'readymades' like Marcel Duchamps 's bottle rack" (Clifford 1981:542-543). Andy Warhol manufactured replicas of Brillo boxes in his "factory" and proclaimed them art (Davies 2007). In discussing the Brillo boxes as "art", Davies rightly asks "what makes one item an artwork and its counterpart not, when the counterpart is perceptually indiscernible from the

artwork to someone unaware of either's provenance?" (2007:11). Davies Eurocentrically argues that all art is functional in different ways, but only Western art of the last few centuries and the court culture art of China, India and the Middle East is intended solely for contemplation (2007). "Western fine art...is valued for its own sake alone. By contrast, the artworks of small-scale societies are often not intended primarily for contemplation for their own sakes, being highly functional." (Davies 2007:3).

Regardless of Davies' questionable formal knowledge of what "small-scale societies" intended in object creation, his distinction of objects between small-scale social function and Western contemplation ultimately deteriorates. While Warhol's duplication of the functional Brillo box was never a functional item itself, it replicated the function of the original while generating new significance within the context of the museum. Had Warhol thrown the boxes in the trash they would have had an entirely different, likely non-artistic, meaning. Similarly, Duchamp's urinal was once a functional item, likely removed from the trash, that took on new meaning within its new context in the art museum. Thus although both objects were or could be functional, their significances had changed due to their placement within the art museum, regardless of any original intent. And likewise, the non-Western artifacts displayed in an ethnographic, art or history museum also become objects of contemplation regardless of their creators intent, as the museum has removed them from their context and put them on display in one of the museum types, thus generating new significances. By merely placing any object in a museum, the object becomes an object of contemplation regardless of intent as intent is momentary and ever changing without considerable documentation. Thus intent's provenance is lost and must be reconstructed and reproduced by the museum, generating yet another Brillo box for contemplation.

Attempting further definition of art and delineating art from folk art, Glassie explains, "if a pleasure giving function predominates, the artifact is called art; if a practical function predominates, it is called craft" (1999:126). As "the artistic nature of folk artifact is generally subordinate to its utilitarian nature...most folk art exists within the immediate context of folk craft" (Glassie 1999:126). Again, defining and delineating pleasure and practicality, like separating contemplation and function, is a highly dubious exercise relegated to the same types of culturally biased classificatory systems that removed Other cultures from history and privileged one object as art while the another became artifact. Such types of knowledge production serve only to reinforce the colonizing power of those who define what objects bring them pleasure or practicality and sorting them according to their own worldview; rather than acknowledging that some art may be practical but not pleasurable, while some artifacts may be pleasurable but not practical, or that perhaps an object can be both pleasurable and practical, or neither depending on relative position of how the object is viewed by the viewer and all the experiences, biases and knowledge claims the viewer brings to the viewed. The object is therefore neither inherently pleasurable or practical, as these are value judgments placed upon them by whomever is assessing and recontextualizing the objects for display.

As both Dickie's and Glassie's definitions of art can be seen as culturally biased and philosophically problematic, perhaps employing a simpler less Eurocentric and value laden definition would yield a less biased form of knowledge construction. Pointing toward Duchamp's *Fountain* as a piece of "art", Dickie suggested that arthood "is not an intrinsic property of objects, but a status conferred upon them by the institutions of the art world." (Skidelsky 2007:259). Thus art is art because the museum says it is art and displays it as such in a self defined museological type. The assessment, definition and display of an object therefore

becomes a form of museological knowledge power, recreating past colonial injustices perpetuated by a Eurocentric worldview. And as the Goodwill Computer Museum makes no claim on the artistic merit of the museum or its objects, the museum therefore cannot be classified as an art museum.

Although the Goodwill Computer Museum contains elements and shares characteristics with history, ethnographic natural history, and art museums, it does not typify nor can it rightly be classified as any of the three. Given the problematic Eurocentric colonial nature of the Western museological classificatory system, adhering to museological classification isn't necessarily a desirable virtue. The Goodwill Computer Museum as a form can be described or defined in a number of other ways. The computer museum can reasonably be compared to another type of technology museum, the film museum with both containing objects - computers, cameras, sound recording equipment and lighting - that produce other objects - files and films. Other similarities can also be identified as Lenk explains:

An art museum collects paintings that were made to be kept. Film, as seen by its 'creator', the film industry, was long considered of interest only for the length of time it could be shown in cinemas and earn money. When the commercial career of a film was finished the prints went to the dump. (2006:319)

The computer as a commoditized disposable object that produces art becomes eerily similar to film production equipment as the Goodwill's display on the recycling of computer products and its "commitment...to education about recycling" reminds us (Galloway 2011:626).

Galloway describes the Goodwill as a "community technology museum" (2011:623) that is devising "new museum practices that recognize and support the active use of artifacts for

entertainment, education, preservation, and research" (2011:627). Galloway also notes that the Goodwill Computer Museum's

collections going forward will consist of "performance artifacts"; hardware and software; archival documentation of the artifacts in the form of original documents where available and recovered from retrocomputing websites; and a range of published materials, many of them now rare (including manuals, magazines, journals, books), to provide a context for the collections. (2011:630)

Unfortunately, these noble aspirations have not been realized for the casual visitor. The "interactive exhibits" extolled in the brochure and the "performance artifacts" mentioned by Galloway are non-existent for the many patrons as the computers cannot be touched and the original documents cannot be accessed for preservation reasons without assistance from an oft absent docent. One solution to the access issue at the Goodwill Computer Museum might be to create a virtual exhibit or digital repository of the rare documents and animated models of the computers available both publically online and/or at the museum. Such projects have been implemented at the Computer History Museum and are being developed at the Monash Museum of Computing History in Australia (Berry, Sheard and Quartly 2011).

Still, any comparison to the Computer History Museum is somewhat unfair as the Mountain View institution had already received \$54 million in funding by 2004 (Ward 2004). A more economically apt comparison to the Goodwill Computer Museum might be the DigiBarn in Santa Cruz, California where oral histories also abound and "computer buffs...relive past glories" (Wallich 2002:38). The DigiBarn's founder recently wrote an article in which he acknowledged that the museum was "*greatly* in need of a financial sponsorship" (Damer 2011:74 emphasis

added). As primarily a community museum, the Goodwill likely has an active need for economic resources as well, both to build and expand their physical and virtual exhibits, and perhaps hire a full time docent to relate oral histories and enhance their visitors' experience.

Ultimately the Goodwill Computer Museum might best be described as a type of specialized community museum with aspects of art, history, ethnography and technology woven together. It seems appropriate that this type of community computer museum may in fact represent an emerging genre of museum that blends aspects of other museum types, finally overcoming problematic museological classifications. Museum professionals often "think of exhibitions as conforming to one of two models: either a vehicle for the display of objects or a space for telling a story" and this dichotomy is often expressed oppositionally between art museums and cultural-history museums (Karp 1991:12-13). And yet there is no reasonable necessity to adhere to such oppositional conventions. Any museum regardless of form or proclaimed type can both display objects *and* tell a story. As art can most certainly considered a part of historical practice and sometimes even represent a revolution in historical discourse, it cannot be removed from history. Likewise, any object whether placed in historical context or not can be considered art if the viewer refuses to acknowledge the knowledge power of the institution claiming to display "art" or "history". The time of distinguishing art, artifact and history based around Eurocentric paradigms of Occident, Orient and Other has long since passed, particularly given the globalized nature of a society interconnected by the objects the Goodwill Computer Museum displays. As these objects dismantle traditional definitions of art, artifact and history, they also represent aspects of each. And perhaps, as long dominant discourses change through the communication these tools/objects/artifacts/art/technologies provide, new global

community based inclusive definitions can be generated and agreed upon and become the new traditional dominant discourses and generate more inclusive museological forms.

References

Adams, Henry

2011 A Tribute to a Great Artist: Steve Jobs. Smithsonian Magazine. October 6.
<http://www.smithsonianmag.com/arts-culture/A-Tribute-to-a-Great-Artist--Steve-Jobs.html#ixzz1ebfGgr8I>

Atkinson, Paul

2005 Man in a Briefcase: the social construction of the laptop computer and the emergence of a type form. *Journal of Design History*. Summer 18(2): 191-205.

Atkinson, Paul

2000 The (In)Difference Engine: Explaining the Disappearance of Diversity in the Design of the Personal Computer. *Journal of Design History*. 13(1): 59-72.

Atkinson, Paul

1998 Computer Memories: The History of the Computer Form. *History and Technology*. 15: 89-120.

Bell, Gordon

2011 Out of a Closet: The Early Years of the Computer [x]* Museum. Microsoft Research Silicon Valley Laboratory.
http://research.microsoft.com/pubs/147240/Bell_Origin_of_the_Computer_History_Museum_v2.pdf

Berry, Geoff, Judy Sheard and Marian Quartly

2011 A Virtual Museum of Computing History: an educational resource bringing the relationship between people and computers to life. Submitted to Australasian Computing. <http://crpit.com/confpapers/CRPITV114Berry.pdf>

Calamia, Joseph

2011 Bits of History: Artifacts from the first 2000 years of computing. *IEEE: Spectrum*. May: 34-40.

Cavna, Michael

2011 RIP, STEVE JOBS THE ARTIST: The Apple founder is the subject of these 5 moving portraits. *Washington Post*. October 6.
http://www.washingtonpost.com/blogs/comic-riffs/post/rip-steve-jobs-the-artful-apple-founder-is-the-subject-of-these-5-moving-portraits/2011/10/06/gIQAMGUYPL_blog.html

Clifford, James

1981 On Ethnographic Surrealism. *Comparative Studies in Society and History*. 23(4) Oct: 539-564..

Damer, Bruce

2011 The DigiBarn Computer Museum: A Personal Passion for Personal Computing. *Interactions*. May/June: 72-74.

Davies, Stephen

2007 *Philosophical Perspectives on Art*. New York: Oxford University Press.

Duncan, Carol

1995 *Civilizing Rituals: Inside Public Art Museums*. London: Taylor & Francis Routledge.

Dutton, Denis

1993 Tribal Art and Artifact. *The Journal of Aesthetics and Art Criticism*. 51(1): 13-21.

Faris, James

1988 ART/artifact: On the Museum and Anthropology. *Current Anthropology*. 29(5): 775-779.

Galloway, Patricia

2011 Retrocomputing, Archival Research, and Digital Heritage Preservation: A Computer Museum and iSchool Collaboration. *Library Friends*. 59(4): 623-636.

Glassie, Henry

1981 Folk Art in Material Cultural Studies in America. Thomas J. Schlereth ed. Pp. 124-142. Lanham, Maryland: Altamira Press.

Goodwill Computer Museum

2011 Brochure.

June-Friesen, Katy

2007 Reboot. *Smithsonian Magazine*. July. <http://www.smithsonianmag.com/arts-culture/reboot.html>

Karp, Ivan

1991 Culture and Representation in Exhibiting Cultures: The Poetics and Politics of Museum Display, Ivan Karp & Steven Lavine, eds. Washington, DC: Smithsonian Institution. 11-25.

Lenk, Sabine

2006 Collections on Display: Exhibiting Artifacts in a Film Museum, with Pride. *Film History*. 18: 319-326.

Marx, Karl

1967 Writings of the Young Marx on Philosophy and Society. Loyd David Easton and Kurt H. Guddat eds. Garden City, New York: Doubleday & Company, Inc.

Moore, Kevin

1997 Museums and Popular Culture. London: Leicester University Press.

Phillips, Ruth B. and Christopher B. Steiner

1999 Art, Authenticity, and the Baggage of Cultural Encounter *in Unpacking culture : art and commodity in colonial and postcolonial worlds* edited by Ruth B. Phillips and Christopher B. Steiner. University of California Press. Berkeley, CA. pp. 3-19.

Prince, Patric D.

1988 The Aesthetics of Exhibition: A Discussion of Recent Computer Art Shows. *Leonardo*. Supplemental Issue, Electronic Art. 1: 81-88.

Ricadela, Aaron

2009 Upgrading the Computer History Museum. *Bloomberg Businessweek*. July.

Rosenberg, Harold

1972 The De-definition of Art. Chicago: University of Chicago Press.

Sangani, Kris

2011 Antiques of the Future. *Engineering & Technology*. February: 36-37.

Skidelsky, Edward

2007 But is it Art? A new look at the institutional theory of art. *Philosophy*. 82(2):260-273

Sturdevant, Cameron

2003 Pings and Packets: Legacy Systems - Does your equipment belong here?. *eWeek*. June 30: 68.

Vogel, Susan

1991 Always True to the Object, in Our Fashion. *in* Exhibiting Cultures: The Poetics and Politics of Museum Display, Ivan Karp & Steven Lavine, eds. Washington, DC: Smithsonian Institution. 191-204.

Ward, Bob

2004 Report to Members: Silicon Valley Museum Celebrates History of Computing. Computer. October: 15-19.

Williams, Elizabeth A.

1985 Art and Artifact at the Trocadero: Ars Americana and the Primitivist Revolution *in* Objects and Others: Essays on Museums and Material Culture *from* History of Anthropology Volume 3. George W. Stocking Jr. ed. Madison, Wisconsin. University of Wisconsin Press.

Wolf, Eric R.

1982 Europe and the People Without History. Berkeley, California: University of California Press.