MALware Technical Report

Alternative Taxonomies

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Abstract

Research techniques proposed for alternative Media Archaeology engagement, using Borges' *Celestial Emporium of Benevolent Knowledge* as a starting point. Three possible categorical systems proposed for arranging the materials in the MAL, to provide new anarchival interactions with the artifacts. These non-traditional modes of categorization could provide potential groundwork for new research, avenues for deeper student engagement, or other unforeseen knowledge creation. The suggested models for organization are: Emotional, Sensory and Economic. These are alternatives to the current organization system in the catalog, which is based in function, and the present organizational strategy in the lab, which is broadly based both in function and in temporal location.

About the Author

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Introduction

Jorge Luis Borges' 1942 essay "The Analytical Language of John Wilkins" includes a fictional taxonomy for describing animals taken from an imaginary encyclopedia known as the *Celestial Emporium of Benevolent Knowledge*. It is presented as true, and Borges quotes the translator Franz Kuhn as the source, but it is generally accepted as false or satirical. Borges uses the taxonomy to demonstrate the arbitrariness and cultural specificity of any attempt to categorize the world. Referring to the *Celestial Emporium* in the preface to *The Order of Things*, Michel Foucault writes:

> This book first arose out of a passage in Borges, out of the laughter that shattered, as I read the passage, all the familiar landmarks of thought—*our* thought, the thought that bears the stamp of our age and our geography—breaking up all the ordered surfaces and all the planes with which we are accustomed to tame the wild profusion of existing things and continuing long afterwards to disturb and threaten with collapse our age-old definitions between the Same and the Other.

The mere possibility of creating something that might "threaten with collapse our age-old definitions between the Same and the Other" is the impetus for this project. In order to think differently about the relationship we have with technologies, an attempt must be made to change the order of thinking. This is a proposed structure for beginning to do so. One of the proposed taxonomies is an objective taxonomy, the other two are subjective and personal. They can work independently or in conjunction with other categorization systems, or multiple personal taxonomies might be compared to glean some understanding about the individuals or demographics represented. There might be heretofore unimaginable means for approaching the MAL contained within these or other taxonomies - this is merely a suggested means for accessing that knowledge.

The Celestial Emporium of Benevolent Knowledge

Borges provided us with an alternative to the current familiar scientific taxonomy of animals. The categories are as follows:

> Those that belong to the emperor
> Embalmed ones
> Those that are trained
> Suckling pigs
> Mermaids (or Sirens)
> Fabulous ones
> Stray dogs

Those that are included in this classification
Those that tremble as if they were mad
Innumerable ones
Those drawn with a very fine camel hair brush
Et cetera
Those that have just broken the flower vase
Those that, at a distance, resemble flies

These categories are certainly humorous but there is no denying that they account for every animal on the planet, perhaps more neatly than our familiar Linnean taxonomy. The cultural subjectivity that is present in any system of categorization means that each system is rooted in a particular place and time, and limits understanding of other places and times. This approach is a means to call attention to that limitation, which is likely what was so attractive to Foucault. By suggesting other systems of categorization, we are suggesting alternative places and times.

Present MAL Taxonomy

At present, the MAL catalog is organized roughly by function. The hierarchy sorts the collection into hardware, software, peripherals, printed material, audio & video, and electronic literature. Hardware indicates devices including game consoles, microcomputers, monitors, and laptops. Software indicates programs stored on physical memory including video game cartridges, floppy diskettes, cassettes, and etcetera. Peripherals, which could be a sub-category of hardware, includes I/O devices like mice, joysticks, and keyboards and also cables, printers, and adapters. Printed material includes books, manuals, and magazines. Audio & video includes both the devices for playing audio and video and the physical media such as cassettes and filmstrips; this category could be divided between hardware and software. Electronic literature includes art software and e-poetry diskettes and cartridges and could also be included under the software category.

The physical space is, following the catalog, also organized roughly by function. The front room contains hardware grouped into desktop computers and portable computers and then ordered roughly chronologically. Software is divided by device and stored to one side. Printed material is stored on shelves in an intermediary room. The back room contains typewriters (hardware), a listening station with our functioning audio devices (audio & video), and a gaming corner with the game consoles also ordered roughly chronologically. It would be difficult to conceive of ordering the physical spaces differently largely because of the way we have been trained to think about technologies. They are ordered by function because that is how we conceptualize them, as tools that are organized according to their utility. However, re-ordering the categorization might lead to an alternative physical organization as well, and an altered perception of the devices and other objects contained within the MAL collection.

Economic Taxonomy

An economic taxonomy might provide a means of analyzing the history of technology for successful trends in design, for changes in consumer preference, and for shifts in technological understanding. It might also group devices and printed material together unexpectedly, or draw out points of overlapping success from disparate companies. Used in conjunction with the present functional taxonomy, an economic taxonomy could offer insights into the relationship between dysfunctionality and failure.

The proposed economic taxonomy would start with two basic categories: 'Commercially successful' and 'Commercially unsuccessful'. From there, subcategories could include 'unexpectedly successful' (fig. 1) and 'so unsuccessful that it led to the downfall of a company' (fig. 2). Additional possible subcategories might be 'unsuccessful due to technological failure' or 'successful in a way the company never achieved again'. These organizing structures, while seemingly whimsical, are valid points of analysis because they do apply to many of the artifacts contained in the MAL collection and they serve both to sort out outliers and to bring together objects that might not otherwise be framed in the same context.

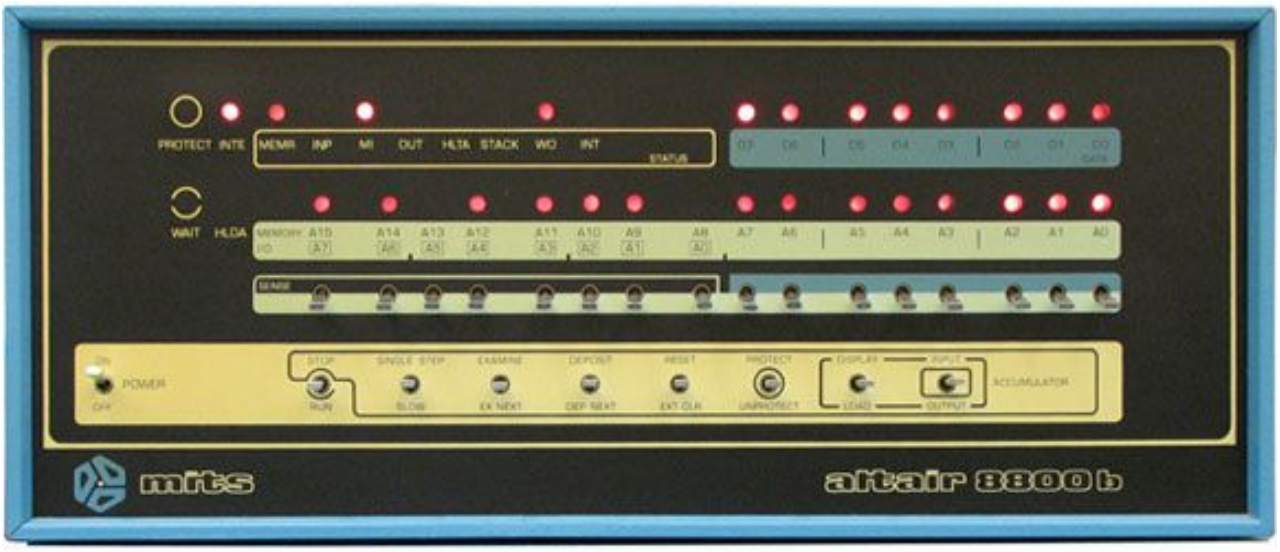

Figure 1: Altair's 8800 and follow up 8800b microcomputers were unexpected commercial successes.

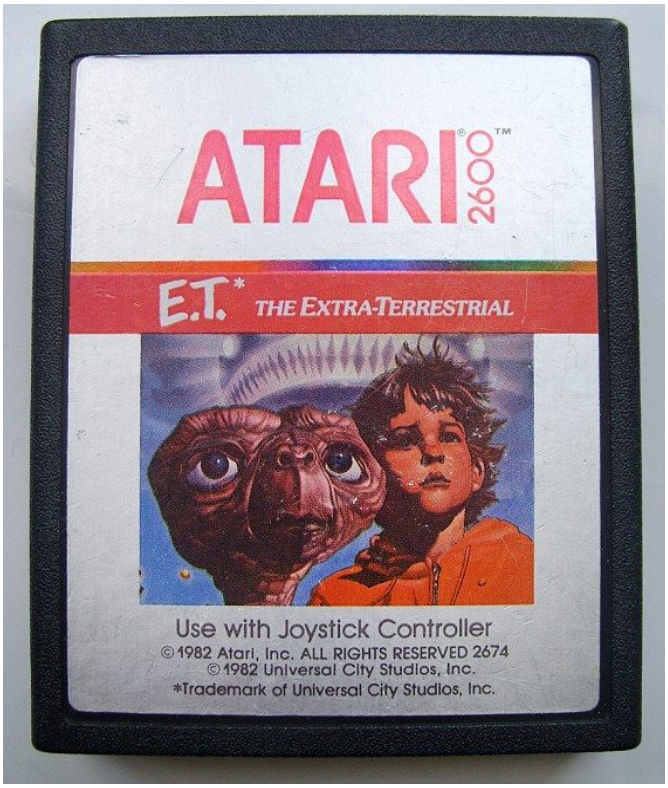

Figure 2: Atari's E.T. game was so unsuccessful that the company never fully recovered.

Sensory Taxonomy

A sensory taxonomy is a subjective taxonomy. Objects are sorted based on particular characteristics, according to the movements of the individual within the lab, and to their preferences and the quality of their interactions. The major categories would be 'Haptic', 'Visual', 'Olfactory', 'Auditory', and 'Extrasensory'. Potential subcategories for the Haptic category might include 'unexpectedly heavy', 'heat emitting', 'vibrating', 'difficult to (press, open, etc.)' (Fig. 3). For the Visual category, subcategories might include 'striking color' (Fig. 4), 'light emitting' or 'patinated'. The Auditory category might include the subcategory 'emits sound as a by-product'. Extrasensory objects might be subcategorized into 'emits radio waves' or 'transmits wireless signals'.

This level of subjectivity allows individuals in the lab to reframe their physical relationship to the technologies. Relating to technology now is entirely about seamless interaction, where the physicality of the tech is meant to be unobtrusive or imperceptible. Technology relates back to us, also, in as invisible a manner as possible. The profusion of Internet of Things and biometric monitoring devices would seem to encourage increased physical awareness of the digital world, however the opposite seems to be true. Modern tech skews towards the 'set it and forget it' mode, where devices only make their presence known through alerts and errors. Encouraging a

more sensually rich relationship serves to increase awareness of how and why tech works. By comparing the sensory taxonomies of multiple individuals, it would be possible to investigate demographic differences in preferences around technological relationships. It would also be possible to build community around particular commonalities.

Figure 3: The Timex ZX81; Haptic, Difficult to press

Figure 4: The Apple Newton; Visual, Striking color

Emotional Taxonomy

In the film *High Fidelity*, the following exchange occurs between two primary characters:

> Dick: I guess it looks as if you're reorganizing your records. What is this though? Chronological?
> Rob: No...
> Dick: Not alphabetical...
> Rob: Nope...
> Dick: What?
> Rob: Autobiographical.
> Dick: No fucking way.

In the film, this is meant to convey how far Rob, the main character, has gone down an obsessive thread thinking about lost love. The implication is that it would be entirely absurd to arrange your things autobiographically. I am proposing doing just that with this taxonomy, as it is the furthest I can get from the traditional, functional taxonomy presently used. An emotional taxonomy would be entirely subjective, and might have very little overlap from person to person. However, as a mode of interpersonal connection, it would encourage the strongest interpersonal bonds.

An emotional taxonomy might include categories like 'Inspires frustration', 'Sparks nostalgia', 'Prompts empathy', or 'Evokes wonder'. Subcategories for 'Inspires frustration' might include 'I remember using that thing' (fig. 5) or 'How does this even work?'. 'Sparks nostalgia' might also have the subcategory 'I remember using that thing' (fig. 6), though the tone is entirely different. 'Prompts empathy' might include 'I can imagine the person who used to use this' and 'Evokes wonder' could include 'How did they even make this work?' (fig. 7). These are only a very small number of possible categories and subcategories, as emotional relationships to technology are as limitless as emotion itself.

By reframing and offering a means for structured thinking about emotional relationships to technology, this taxonomy would provide an additional richness to the layers of human-tech interaction. This entirely subjective taxonomy offers nuance to other modes of understanding. While potentially useful for design and interaction research if collected on a broad scale, the goal of this mode of categorization is more strictly about removing yet another layer of invisibility. The dismissal of technologies as simply objects ignores the degree to which they are integrated in life, as well as the capacity we have for anthropomorphization. As tech attempts to appear more human, in AI and digital interaction, it is important to promote awareness of our emotional interface as well as our sensory or physical interface.

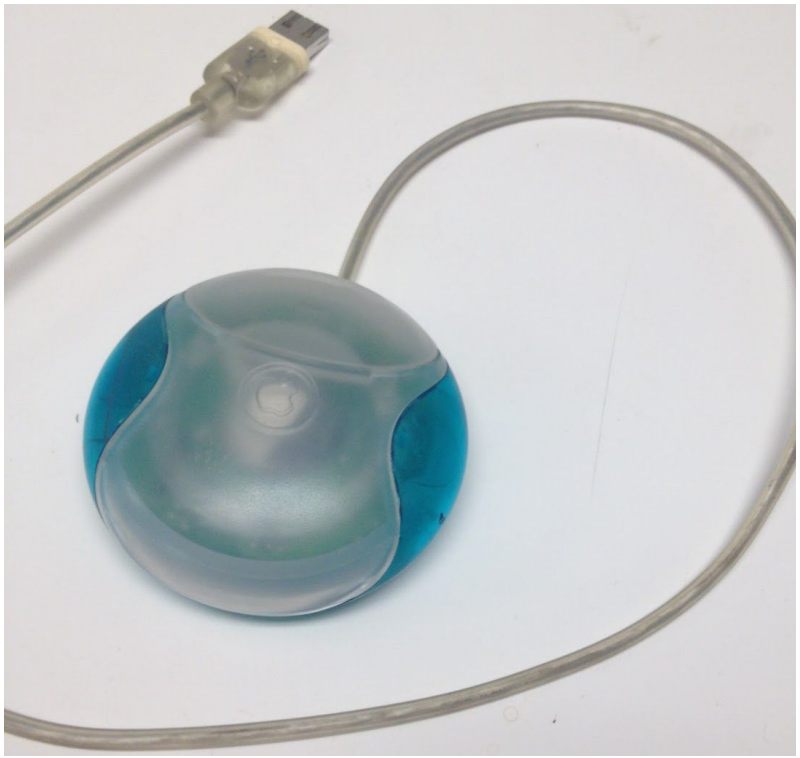

Figure 5: The Apple hockey puck mouse; Inspires frustration, I remember using that thing

Figure 6: Apple IIc; Sparks nostalgia, I remember using that thing

Figure 7: Data Cassette (Adventure); Evokes wonder, how did they even make this work?

Conclusion

Alternative engagement with the MAL is fully in keeping with the spirit of the lab's mission and vision. Providing methods for visitors or researchers to investigate the collections in modes that are non-traditional is a broad goal. To that end, the methods for recategorization suggested here will be detailed in worksheets and offered as curriculum addenda for any class that engages with the MAL, as well as provided to any interested visitor. These methods are an intervention that model alternative, qualitative research techniques and serve to invigorate the archive. By offering new paths for moving through the MAL collection, this process extends the potential value of the lab in unexpected directions.

References

Borges, Jorge Luis. "The Analytical Language of John Wilkins". Translated by Lilia Graciela Vázquez. Alamut: Bastion of Peace and Information.

Foucault, Michel (1970). *The Order of Things: An Archaeology of the Human Sciences*. Translated by C. Gordon. New York, NY: Random House.

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About the Media Archaeology Lab

Founded in 2009 and generously supported by the College of Media, Communication and Information as well as the Department of English at the University of Colorado at Boulder, the motto of the Media Archaeology Lab (MAL) is that “the past must be lived so that the present can be seen.” Nearly all digital media labs are conceived of as a place for experimental research using the most up-to-date, cutting-edge tools available. The MAL – which very well might be the largest of its kind in the world – is a place for cross-disciplinary experimental research and teaching using still functioning media from the past. The MAL is propelled equally by the need to both preserve and maintain access to historically important media of all kinds – from magic lanterns, projectors, typewriters to personal computers from the 1970s through the 1990s – as well as early works of digital literature/art which were created on the hardware/software housed in the lab.

The lab is defined as much by what it is not as by what it is. It is a unique humanities lab that is not interested in scientificity. Rather than being hierarchical and classificatory, it is porous, flat, and branching. Objects are organized in any way participants want; everything is functional and made to be turned on. Rather than being an entity you need to apply to be a part of or something you can only participate in as a researcher, librarian, PhD student, anyone may participate in the lab and have a say about what projects we take on, what kinds of work we do. Rather than setting out to adhere to specific outcomes and five year plans, we change from semester to semester and year to year depending on who's spending time in the lab.

The MAL is interested in experiments with temporality, with a disruptive relationship between past, present and future, and with lab infrastructure in general. It is a place for serious play and for playful seriousness. It is an anti-museum museum, in that all of its hundreds of devices, analog and digital, are meant to be turned on and actively played with, opened up, tinkered with, experimented with, created with, and moved around and juxtaposed next to any other device. The MAL acts as a kind of meta-lab for thinking through the infrastructure of labs and how they fundamentally shape and inform what is produced, from games to history, within the confines of the lab structure. The MAL’s holdings quietly show how the history of computing is anything but a neat progression of devices simply improving upon and building upon what came before. In other words, the MAL's collection itself is a disruption to a particular notion of temporality underlying another particular notion of "history". With these devices, we can understand the waxing and waning of technologies more in terms of a phylogenetic tree whereby they are altered over time, split into separate branches, hybridized, or are terminated.