

The Emotional Jukebox

Exploring nostalgia and tangible media in selecting and playing music

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Abstract: A project that proposes a novel form of jukebox interaction. This incorporates the findings of research projects that have attempted to link the selection of music through non-numerical interfaces and primary research that explores current scenarios of use in London pubs. The proposal is based on a system of tokens that can be issued and exchanged in a pub or club environment before being ‘played’ at a central, networked console. The project was exhibited at the Triennale di Milano for the SFC Consorzio Fonografici Milano in 2009.

Key words: *Jukebox, User Experience, Emotional Design, Tangible Media, Nostalgia.*

Since the introduction and increasing affordability of portable MP3 devices, consumers have become used to being able to recall thousands of hours of music with little fuss and no expense. Given this situation, it might seem strange that the jukebox is the thriving cultural phenomenon it is. Research amongst users suggests that this is more than a mere nostalgia trip and relates instead to the richness of the shared experience that arises from their use. These issues were explored in a project to explore the potential of alternative modes of interaction with music selection in shared spaces. Conventional jukebox interaction has kept up with technology through the incorporation of vast libraries of music. Alternatives, in the form of software applications such as *remote* for itunes, has allowed bars to open up their entertainment systems for everyone to access. While these options have increased choice, there is some evidence that this is at the expense of a meaningful interaction. In the absence of a DJ, and the need to exchange payment for a certain selection, bar owners have faced difficulty with the change in culture. In extreme cases, this has led to violent incidents between customers trying to gain access to the controls.[1]

It is inevitable that digital technology should have an impact on public entertainment systems such as jukeboxes. Early devices contained complex and fragile electro-mechanical systems that could only benefit from the increased sophistication of recorded music. Could the traditional jukebox be the worst example of interaction design ever known? A brief analysis incorporating common usability criteria [2] demonstrates their multiple flaws. An almost complete lack of feedback means that a user is left in the dark about such basic things as: whether payment has been made; whether a selection has been registered; how many selections remain; the order in which selections will be played. In recent years, as the discipline has grown, there have been several attempts to create a concise definition of what *good* interaction design is. Most of these include the need for clear models of feedback, mapping of functions, reversal of operations as well as more abstract properties, such as being ‘smart,’ ‘pleasurable,’ and ‘trustworthy.’ The jukebox manages to score zero or negative points on every one of these criteria and yet it also manages to survive and thrive in a variety of forms. The iconic image of the device is, of course derived from its earliest electromechanical incarnations where records were stacked in an array and

the user could watch them being selected and played through a window. More recently, first with the introduction of CD devices able to play thousands of songs, and then hard-disk devices able to play tens of thousands of songs, an appropriate form has yet to evolve. The next evolution will, no doubt, be connected to the internet (the so-called ‘Celestial Jukebox’), able to play anything ever recorded in any form. But the problem of creating a meaningful service out of this remains. What is important here is not the usability, but the User Experience. This is the component that incorporates a notion of joy, emotion, satisfaction, beauty,[3] and is, of course, the area in which Jukeboxes elicit a strong response.

A networked jukebox might have around 2M songs. It would be a daunting task locating any music on this scale, even assuming one knew what selection they wanted to make. ‘Browsing’ this number of choices would inevitably require text-based menus on a screen, and potentially take days to make a satisfying choice. Under the rules governing the optimization of menu systems[4] it is unsurprisingly to learn that big things and limited choices are generally favourable. And that’s where the traditional jukebox scores so well: big buttons, big discs, and less than a hundred options in total. The jukebox that is regularly cited as amongst London’s very best[5] sits in a pub called Bradley’s Spanish Bar, off Tottenham Court Road. This is not an MP3 behemoth, or even a 200 Compact Disc model. It’s a fairly unremarkable German-made NSM Prestige from the 1980’s that holds just 80 records. While it doesn’t fit the ‘classic’ archetypical image of the Jukebox, it is evidently very popular and more than earns its keep. In fact, the affection and loyalty it inspires is unsurpassed. In the course of our research, we interviewed regulars who told us: “This pub has atmosphere like no other, and this is probably based around the jukebox,” “I have the same song at home but it sounds better here. It’s strange, it’s like going back in time, in your own private club.[6]” This appeal is not lost on the owners and managers venues like this, who often go to great lengths to make sure that the jukebox is properly integrated into their customers’ experience.[7]



Figure 1. NSM Prestige, Bradley’s Spanish Bar, London. (image – Vincenzo DiMaria)

In reconciling the vast opportunities offered by technology and the correspondingly vast problems associated with it, is the popularity of the old-fashioned jukebox a pioneering example of post-optimal design? Although this is a recent-term,[8] it seems to go some way in explaining the jukebox’s enduring popularity – the post-optimal object being one that is happy to sacrifice conventional notions of ‘performance’ or ‘optimisation’ in favour of an experience that is somehow more meaningful or poetic. Our findings would certainly seem to contradict previous studies of the relationship between Usability and User Experience, which have stated “Usability is seen as prerequisite for UX [User Experience] and the related concept ‘joy of use.’ ”[9] The dominant approach amongst companies making jukeboxes today is to load the latest technology into a

housing that resembles something from the 1950s. This illustrates the difficulty with attempting to ‘reverse-engineer’ a poetic, or post-optimal interface. Of course it would be dumb to suggest that makers simply ignore all technological developments since the 1972 and continue to make clumsy temperamental electro-mechanical designs for a contemporary audience, but there is more to the appeal of these machines than the clichéd image of the arched neon and chrome housing. This type of machine allows for a big selection of music, but evidence shows that they make for a far less satisfying interaction with the user.[10]



Figure 2. “Pulse MP3” Selector, by Dan Flashman. (image – Dan Flashman)

Designers working with novel, tangible user interfaces have come up with various proposals for enhancing this activity when the menu system is too large to enable a satisfying choice experience to take place. Dan Flashman’s “Mp3 Pulse” for example, enables the user to bypass any time-consuming and potentially embarrassing manual choices by making selections based on their heart-rate. Each user places their hands in the surface of the machine and their pulse taken through transducers placed at the index fingers. This device is intended to tailor the mood of a song to the mood of an environment, but is ultimately just a way of removing options where the time taken to make a particular choice massively outweighs the significance of that choice. Another design that attempts to deal with the issue of browsing and navigation in a more intuitive way is by Magnus Pettersen. His “Euphony” analogue interface allows the user to scroll and select through a complex system of menus without a keyboard by manipulating the display itself. This idea allows for a more physical interaction with the device that could in turn lead to a more playful and meaningful experience.



Figure 3. “Euphony” gestural scrolling interface, by Magnus Pettersen. (image – Magnus Pettersen)

Regardless of changes in technology, it seems that the desire to share musical preferences in this way is as strong as ever,[11] but designers of such systems must understand that ‘usability’ in the conventional sense is not necessarily applicable. This form of entertainment is very different to the insidious, branded nature of services like “Audio Architecture” created by the Musak company.[12] It requires the involvement of the customer. The success of a jukebox is not in proportion to the number of songs it contains, and it’s not about accessing ‘heritage’ tracks from ‘heritage’ machines either. There is undeniably an element of nostalgia inherent in the whole concept of a jukebox, but there is also nothing standing in the way of someone designing a novel, meaningful and up-to-date device. Our research seemed to suggest that a successful device had quite different requirements to those being catered for with those currently being developed. Rather than use the technology simply to increase choice, it needed to somehow add meaning to the experience, and not necessarily adhere to the tenets of ‘good’ interaction design.



Figure 4. Hands-On-Jukebox prototype (image – Ben Hughes)

The ‘Hands-On’ concept is a response to the detached experience of browsing and selecting music on a jukebox with a large selection. The research highlighted the preference for physical records over CDs, the delight in watching the mechanical loading process, and the appeal of the idiosyncratic, handwritten playlist. The ‘Hands-On’ concept attempts to couple these with a simpler and more up-to-date digital music storage system. An early prototype had real records being handled by the user with rubber gloves, placing the records on a player. Subsequent versions took this idea further, but treated the records as markers or tokens rather than playable media themselves. The final, simplified, version incorporates this sense of involvement in the process but rather than records, users select cardboard ‘tokens,’ which they can then ‘play’ by placing them on a playing surface. These tokens are styled along the lines of their vinyl 45” counterparts but double up as drinks coasters, or beer-mats when not being played. The song and artist is first selected and written on the beermat either by the staff, or the customer, and then posted into the machine, from where it can be selected by future users. The accumulated collection may be edited/cleared out periodically by the bar staff, just like a vinyl jukebox. The user may select their own song, or rummage through the existing available tracks. This form of searching is intended to remove

anxiety about not seeing all of the selections at once. Users simply search through the piles of records until they see something they like.

The housing was constructed using Re-Board. The ability of this novel material to be printed, coated and die-cut in one process allowed for a very speedy build. The recyclability of the material and ease of construction means that the internal parts could be recycled into new housings with bespoke graphics for one-off events. The example shown has a collage of playlists, details and textures from the Jukeboxes photographed during our research phase.

This proposal was exhibited at the exhibition Musica Ex-Machina, Triennale di Milano, with the SFC Consorzio Fonografici Milano April 2009. A working prototype was exhibited on a bus that toured Italy as part of a mobile exhibition exploring the future of the Jukebox.



Figure 5. Hands-On-Jukebox touring exhibition. (image – Ben Hughes)

References

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4 Saffer, D., (2007) *Designing for Interaction, Creating Smart Applications and Clever Devices*. Berkley CA: New Riders, p.53. Fitt's Law (about the size of clickable elements) and Hick's Law, which is about how users make decisions have been used by software designers to analyse and optimise screen and menu operations.

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7 Manager of The Social, 5 Little Portland Street, London, interviewed on 11th March, 2009.

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8 Dunne, A (1999). *Hertzian Tales*. Cambridge, MA: The MIT Press.

9 Wechsung, I., Naumann, A., & Schleicher, R. *ibid*

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11 Misha, bartender and DJ of the The Reliance, 336 Old Street, London, interviewed on 12th March, 2009.

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12 <http://www.muzak.com/muzak.html>, accessed 6th March, 2009.