

Reading Response #2 to Artful Design - Chapter 2: “Designing Expressive Toys”

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From this week's reading, I am responding to Artful Design Principle 2.2 from Chapter 2, which states:

Principle 2.2: Design Inside-Out

Professor Wang describes inside out design as working outwards from the set of available technologies and the span of possibilities with constraints, while rejecting “blunt transfer” (or porting) from other domains. Ocarina as an example was designed with the phone itself in mind (size, multitouch, microphone), rather than a port of an ocarina to mobile.

Overall, I agree that porting designs without context to the technological medium is a dead end (e.g., a guitar on a phone severely underutilizes the set of available sensors, but exists: <https://apps.apple.com/us/app/guitar-elite-chord-play-center/id446637482> though I would almost equate the expressiveness of its functionality to Sonic Lighter or iBeer), but I believe Ocarina and similar tools, when designed in context of their available controller entry points, themselves port over otherwise inaccessible experiences and entry points to expressive musical worlds that would otherwise be gated behind a non-native skill barrier. I believe this to be an important relationship between amateur and expression. Nobody has to be taught to blow into a mouthpiece or cover holes with their fingers. The phone's microphone and touchscreen were put to work receiving gestures our bodies already know. What gets ported isn't just interface but familiarity, and I would argue that's a large part of why it works.

This connects to Principle 2.7: Design to Lower Inhibition. Professor Wang demonstrates how Auto-Tune lowers inhibition by putting distance between you and your voice (it's “you but not you”). I would argue that designing inside out in special cases both creates distance but also familiarity. Rather than learn a strange new instrument you're doing something you already know how to do but in a new context, enabled by the technology. Unlike purely generative models, toys like these these lower inhibition without taking away control, in fact enabling it since every note still comes from your gesture and varied inputs.

Modern devices make this an explicit design choice. A phone or game controller is a modular set of inputs (touch, motion sensors, microphone, camera), and the designer decides which existing relationship to translate. Wii Sports tennis mapped a swing millions of people already had in their bodies onto a motion-sensing remote (though it arguably oversimplified the swing: a flick

of the wrist from the couch worked as well as a full stroke, reducing the gesture to a “waggle” - an example of where the depth of the relationship can get lost in translation). Guitar Hero ports the stance and strum of a guitarist without the guitar. As a tennis player, I can imagine a digital computer vision based instrument where a forehand triggers a strike and racket-head speed and angle of contact opens a filter: someone who has never touched a synth would have the experience of playing it on day one through the lens of years of muscle memory.

To me, this suggests inside-out design can start from two separate but related “insides”: the span of what the technology can sense, and what its users already know how to do. Designing where the two overlap makes a technology's controls accessible from day one. The risk is apps like iBeer (<https://9to5mac.com/2022/01/25/developer-ibeer-app-store-interview-original-iphone/>), which port a familiar gesture, tilting a glass, but offer nothing to grow into: a floor with no ceiling. Which relationships, when ported, do we make familiarity a doorway rather than a limit?