Chapter 1.27
Technological Social-ism

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ABSTRACT

Culture is a byproduct of our brains. Moreover, we'll look at ways culture also employs ritual (from shamanistic practices to grocery shopping) to shape neural paths, and thus shape our brains. Music has a definite (well researched) role in this feedback loop. The ear learns how to discern music from noise in the very immediate context of the environment. This serves more than entertainment purposes however. At a glance, we often can discern visual noise from images, nonsense from words. The dynamics are hardly unique to audial compositions. There are many kinds of compositional rules that apply to all of the senses and well beyond. The brain develops these rule sets specific to the needs of the culture and in order to maintain it. These rules, rarely articulated, are stored in the form of icons, a somewhat abstracted, context-less abbreviation open to wide interpretation. It may seem somewhat amazing we can come up with compatible rules, by reading these icons from our unique personal perspectives. And often we don't, as we each have differing tastes and opinions. However, "drawing from the same well" defines abstract groupings, to which we choose to subscribe. We both subscribe to and influence which rule-sets we use to filter our perceptions and conclusions. But the way we (often unconsciously) choose is far more elusive and subtle.

INTRODUCTION

Language may have both a hard-wired component in our DNA, and a learned component (Chomsky, 1977). Neither is operable without the other. Or at least we don't get language without both. This is a debatable theory, yet very useful to us. If spoken languages could be thus constructed/understood, it seems sensible that non-verbal languages could also follow this organization. Fundamentally each are means of using symbols to represent ideas we want to transfer from our minds into another's (Calvin, 1996a).

Furthermore, it appears likely that where music operates neurologically on a (non-verbal) linguistic level, it too is organized in this dual fashion. Music also obeys both fundamental laws and is influenced by the immediate culture, while influencing it. Music serves cultural cohesion on a neuro-level (shown in many modern studies thanks to the fMRI (Levitin, 2006; Doidge 2007). In many cases, mu-

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sic, culture and the neural result are inextricable (Huron, 2008).

The way humans use musical instruments extends well beyond providing entertainment. We choose to employ a drum to speak to our own minds and the minds within others (more about this later), even if we are doing so with no knowledge of it, or intention in manipulating brain waves. But essentially, we mustn't forget that these instruments are tools at our disposal, they are also technology whether old or new. However we use the net, it is also a tool. Its ultimate product "cyberspace", shares many important features with music and cultural cohesion as well. Thus our big question becomes: if culture informs the web and visa versa, what neurological impact is it being used for?

In other words, asking a tribal member why a certain drumbeat is used in a ceremony gets you one answer. It is not at all the wrong answer (Narby, 2001). But asking an anthropologist or neurologist who studies the effects of "deep listening", gets a very different answer. The beat ultimately is used to hold the culture together hypnotically.

Let's consider the modern equivalent of a drum though. It is a tool, one that has neurological effects, which may be one reason we use it. Oddly though, we often do not employ computers as tools but as human substitutes. Instead, the tasks for which computers are commonly employed are strangely inappropriate. We pretend they function as specialized brains.

Human brains accomplish most thinking (perceptive and conceptual) by means of switching logically between inductive and deductive reasoning (Dewey 1910; Fodor, 2000; Hawkins, 2005). Computers, with no means of comprehending or creating anything remotely like context, accomplish tasks using only a limited version of deduction[1]. Some inductive reasoning can be accomplished with a computer by iterating through every single possibility (by making the question deductive). But in real life, this is absurd. Real problems have either infinite unknown possibilities or at least unpredictable ones. Computers simply can't solve things humans can. And we still have no clue as to how we do it.

John Dewey (usually required reading for educational studies) published a very good account of "How We Think" in 1910. It happens to stand as a very good description of how computers don't think. Boolean Logic (Hillis, 1998) and *modus ponens* have been common subjects in Philosophy, Logic, Psychology and Cog Sci for much longer than computers have been on the open market. But no one questions that there is more to human brains and thought than these formalizations. In other words, this is old news from rather common sources. So why have we resisted what should plainly be ingrained into our habits of thought, just to bang our heads against the wall?

On the flip-side, though most of us may want computers to accomplish human functions (as in security facial recognition or recognition of written words), we aren't all actually working on these things first hand. Instead, most of us are using these same machines primarily to store and send strings of text (email, the web, word processing, spread sheets, …). The processor is minimally involved in just delivering a copy from one terminal to another. This is hardly a harmful or bad use. But it certainly doesn't warrant the fancy hardware. Not even close.

The Bigger Picture

An oft posed question: are we guided by technology? is certainly a valid, common sense approach to the issue. However, the answers it produces are necessarily misleading. It is a question like 'When did you stop beating your wife?' There may well be an accurate way to answer, but no satisfying response. Why?

Every question belies a symptom of one particular perspective. From our traditional point of view, the question is rather logical. But in looking