**“A Human-Centered Technology” – Don Norman**

When we speak of technology what we are often referring to are communication platforms, such as computers and cellular phones. For **Don Norman (1993),** **anything that is created by human beings is a technological artifact**, whether physical (tangible objects, i.e. paper) or mental (information structures, i.e. language). Norman divides technological innovations into *good*and *bad,*those that “make us smart” by extending human capabilities and those that “make us stupid” by frustrating, captivating, enslaving. **His focus involves the understanding of both technologies that extend cognition and those that manipulate cognition.**

While innovation has a historical contribution in terms of providing appropriate and efficient tools for society that help enrich human knowledge and enhance mental capabilities (memory, thought, reflection), **it has however created modes of entertainment that increasingly promote a consuming rather than a productive people and is accountable for the apparent social divider between the *haves*and *havenots*of technology.**

Moreover, new technologies create new social practices, specializations and knowledge requirements. This in turn adds a new set of social dividers between those who *possess*the required skills and those who don’t.The societal implications of new technologies have become more and more complex with the advent of computational systems. **Norman’s aim is as follows: “If we learn the reasons for and the properties of these various technologies, then maybe we can control the impact.” His aim is to influence a human-centered approach to technology; a quest for technologies that demonstrate humane properties.**

**“Toward a Human-Centered View of Technology and People”**

As technology becomes increasingly immaterial, its function concerns more and more the fulfillment of abstract needs, such as time-management, decision-making, methodologies, etc. **Norman’s critique is that rather than aiding human cognition, technologies today add confusion.** He notes that “distractibility”, “illogical” behaviour, and other concurrent characterizations are responses to the rigidness of the way in which computers operate. Those characterizations are related to the constant need for technology to impose a certain type of behavioral and mental effort (i.e. to pay attention, to speak grammatically, etc.). In addition, the information overload creates a feeling of inadequacy in society; such as, the inadequacy of the mind the memorize a certain amount of information, the incapacity to cope with innovation, etc. **His premise is that “people *err,”*andcomputers don’t, instead they are faulty and the blame is made on the human.**

‘To say that people often act illogically is to say that their behavior doesn’t fit the artificial mathematics called “logic” and “decision theory.” ‘

Hence, this adds yet another social divide: *machine-centered behavior* and *human-centered behavior.*For Norman, **the problem lies in the way technology inadequacy to adapt to the human.** **Technology would benefit society if it understood more the way in which human cognition works. Norman also criticizes technology for creating an information saturation wherein humans are exposed to too much information that results in a so-called mental “burnout”.** To illustrate this side-effect, Norman distinguishes between what technology is able to measure (i.e. hours worked per week) and what it can’t (i.e. satisfaction, rupture, experience), which he respectively refers to as “hard sciences” and ‘ “soft” sciences.’ The “hard sciences” make simple and objective measurements, leaving out what it cannot measure; whereas the ‘ “soft” sciences’ concerns itself with the complexity of subjective measurements, thereby making a link between technology and the living system.

**“Two Kinds of Cognition”**

The author identifies two kinds of cognition:  *experiential*and *reflective.* ***Experiential*cognition refers to the way we acquire expert skills through the use of our bodily skills**; ***reflective*cognition refers to mental thought processes that inform the development of new concepts and appropriate structures that serve as guides for action. Those are complementary and essential in the sense that they include both inner (mental) and outward (physical) practices.**

**The point here is that technologies that excite the mind (such as, TV) cannot be a substitute for experience, and hence cannot provide adequate modes of cognitive enhancement. “Experiential thought” is only possible through an active participation and engagement of the world.**