

VPAS 7380  
Art, Nature, and Machine  
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*A Topology of Vision: Politics of the Multiple Monitor Setup*

**Introduction**

As COVID-19 brought about the rise of teleworking, most people began investing in a home office setup. A place consisted of a table and a laptop in the past, is now adorned with twenty-four inch monitors, monitor stands, and desk elevators to make sure long hours spent in front of the screen is as comfortable as it can get. One of the setups used is the trading monitor setup, with vertically or horizontally positioned monitors attached to a mount. Using a mixed framework of Marshall McLuhan's media theory and Langdon Winner's arguments about politics of technology, I will deconstruct the trading monitor setup as an extension of its user, decontextualize it by removing it from its initial environment of trading as it is increasingly embraced by non traders to perfect their workstation. Lastly, I will speculate on why the multiple monitor setup might have been seen exclusive to traders using the framework of situated knowledges by Donna Haraway.

**Trading monitor setup as a site of vision**

According to communication theorist and author Marshall McLuhan, media is the extension of man (McLuhan, 1964) by altering the ratios of senses through different effects including amplifying or amputating sense organs, depending on the type of engagement one has with the type of medium. His famous dictum "Medium is the message" indicates that medium and message do not have a container/contained relationship, but are intertwined and co-productive. In his exemplification, wheel is an extension of foot in rotation, house is an extension of body's heat-regulating system,

and electric circuitry is the extension of the central nervous system. Media play out as prosthesis in McLuhan's understanding, including their ability to change pace and scale in human perception and affordance. McLuhan's media theory is influential in understanding the power media exercise over us as it invites the reader to think beyond the apparent qualities of media and instead how they enter into relation with other subjects and objects to form assemblages of user, medium, and message.

From his perspective, the meaning of the message delivered via whichever medium cannot be separated from the medium itself, and therefore has to be taken into account in the analysis of the message. He invites us to consider medium, message, receiver and the environment enmeshed in a systematic framework. In order to understand the amalgamation of medium and user in this framework, one needs to look at how they relate to each other. Relation, in this setting, has enough ontological importance as the medium and user. To quote Alan Blackwell: "When one thing is described in terms of another, a third thing has been created: the relation between the two".

(Blackwell, 2006) Although this quote is interested in the power of metaphor, the weight put on relation between things as a being in its own agency helps us understand the importance of the way we relate medium to the user. The detailed treatment of media and the user through McLuhan's theory helps us uncover histories of media artifacts, position them within a context of human and machine relationships that may otherwise have been hidden from initial observations.

From the perspective of McLuhan, the trading monitor setup is a medium by extending the sense organs of the user by amplifying their sense of vision as it stretches the vision site by the incorporation of multiple screens. In the following paragraphs, I will expand on the definition of trading monitor setup, its recent uses by non traders to trace a shifting trend where the trading monitor setup is taken away from its initial environment and becomes a multiple monitor setup, free from associations related to trading.

## **Uses and features of the trading monitor setup**

Trading monitor setup is comprised of multiple monitors, monitor arms to hold them together, and specialized keyboards allowing traders to track trading data from one control system. The setups might include the horizontal or vertical positioning of monitors, as well as ultra wide monitors, depending on trader's choosing. An image search on Google shows that there is a variety of setup combinations, starting with a minimum of two monitors, including one ultra wide monitor and a single monitor to mimic the effect of a three-monitor setup, going up to nine or even more monitors.

Even though one monitor can do the job of tracking a minimum of four charts, most trading monitor setups seem to be comprised of at least three monitors. There is an underlying motive for efficiency and comfort here. If one wants to track more charts, they need more monitors. However, we cannot stop at the apparent choices of efficiency and comfort, as Langdon Winner stated in *Do Artifacts Have Politics?*: "To see the matter solely in terms of cost-cutting, efficiency, or the modernization of equipment is to miss a decisive element in the history". (Winner, 1980)

## **The power dynamic of the trading monitor setup**

The decisive element in the story of the trading monitor setup is the politics of it, and the power dynamic it creates between different users. These are closely linked to the affordances of the setup, as it amplifies the sense organ of the user by elongating the site of vision via multiple screens. In this way, the trading monitor setup creates a *topology of vision*, allowing for an increased gaze, and thus equipping the trader with an all-seeing eye to perform their task. The trading monitor setup is firstly an extension of the user for the efficiency it provides, and is also a physical extension of the single screen medium. In this sense, the setup plays out as a double extension in user's

environment. Even though the trading monitor setup is not an inherently political artifact like a handgun or the atom bomb as defined by Winner (1980), what becomes political is its exclusive use by traders and the association of these efficiency tools with a particular professional group.

Most of the ways the trading monitor setup creates a dominance over other equipments such as single-screen setups or laptops are linked to the physiological advantages afforded to the user. One of these ways is the extended site of vision afforded by the trading monitor setup. Another one is the increased peripheral vision, which turns the setup into a low-level immersive environment. There are other advantages afforded to the user such as not having to bend their neck or be doubled up in front of the monitor as most setups are elevated via the use of monitor arms and desk stands. By having increased focus and vision along with a better body position, the trading monitor setup user claims more dominance over their tasks, as they are better fitted to perform them. In the light of these affordances, what makes the trading monitor setup is more powerful is not its inherent structure, but how the user relates themselves to it.

Consequently, the power play of the setup comes from the exclusivity users associate it with trading. The setup is often associated with trading-related activities, such as the setup being the most ideal choice for a day trader. The exclusion of other users who might benefit from such setup invites scrutiny, as the setup is promoted as an affordance that not everyone can have, even though the decision made on who can have it does not seem to be made clearly. However, when we look at Winner and *Do Artifacts Have Politics?*, we understand the pairing between traders and the monitor setup better as quoted by Winner: “Particular intentions are embodied in physical form” (1980). It is apparent that the intentions of traders are embodied in the physical form of the trading monitor setup. These intentions reflect themselves in the abundance of vision created by the increased site of gaze via multiple monitors, all what a trader needs to surveil, track and control the constant data flow from trading charts. However, even if the initial intentions reflected the ones of traders, it is

apparent that the exclusivity of the monitor setup is no longer in place for traders only, as it is increasingly embraced by non traders.

### **Shifting powers: The rise of the perfected workstation**

In order to understand the shifting power dynamic of who holds authority and exclusivity over this particular monitor setup, we need to revisit Winner once more. In *Do Artifacts Have Politics?*, he brings up the political motives behind star builder of New York Robert Moses' low-hanging overpasses built in Long Island, New York from 1920s to 1970s. These motives were to prevent buses from driving through the overpasses to make sure that low-income groups and racial minorities,— two key demographic of bus users — did not have access to Jones Beach, a spot enjoyed by “automobile-owning whites of upper and comfortable middle classes”. The biased motives behind seemingly innocuous design choices thus become apparent through Winner's historical approach to politics of artifacts. This is, according to Winner, “to see the importance of technical arrangements that precede the *use* of the things in question” [italic by author] (Winner 1980).

I will decode Winner's arguments through philosopher, physicist and author Karen Barad's *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (2007). She writes: “Relata<sup>1</sup> do not precede relations” (2007:334). Interpreted by Levi Bryant, Barad's thesis is summed in these words: “The thesis that relations are external is the claim that entities can break with whatever relations they happen to entertain to other entities at a particular moment and enter into relations with other entities”. Through Bryant's explanation, Barad's thesis can be used to explain why there is a shift in power acquisition from traders towards non-traders with the monitor

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<sup>1</sup> Relata: Plural of relatum. A thing or term related: one of a group of related things. (Merriam-Webster)

setup. The type of relation the medium of extended monitor setup enters into with different users ends up changing the associations one has with the medium.

Winner argues that “...a given device might have been designed and built such a way that it produces a set of consequences logically and temporally prior to any of its professed uses” (1980). This is a helpful quote in putting into context how certain technologies encompass purposes beyond their immediate use. The consequences produced by the setup prior to its immediate use is that the affordance of vision cannot be exclusive to any group. Even though the trading monitor setup is considered as such, that does not mean it cannot be taken up by other professionals. Indeed, a version of the trading monitor setup is used by many professionals including teachers, architects, illustrators, bioengineers, lawyers, computer and data scientists and other professionals alike. This version has a minimum of two-monitors, which is not the common way the trading monitor setup presents itself, but that gives us more reason to believe that this is an appropriation of a trading monitor setup in a completely new way, where the new setup simply becomes “multiple monitor setup”, free from associations with trading.

The multiple monitor setup is the result of an ongoing effort to perfect the workstation, the home office, which demands more and more time from its user. The medium and user relationship is negotiated within the environment via tools that better equip the user to perform digital tasks, whether they are related to trading, or not.

### **Speculation of association: Why ‘trading’ monitor setup?**

One of the arguments of the essay is that certain technologies are associated with certain social groups for their inherent embodiments in physical form. As the trading monitor setup offers increased gaze and abundance of vision, we realize that these affordances are there for efficiency in

tracking and controlling the constant flux of trading data. There is an undertone of a problematic vision here as the trading monitor setup seems like it affords its user with an infinite, all-seeing eye. However, as stated by Donna Haraway, tools of infinite vision are a god-trick (Haraway, 1988). Meaning, they claim existence in a plane of reality where no vision is objective and is sourced from an unmarked body, gazing from nowhere. The intention to have an all-seeing eye for trading purposes politicizes the multiple monitor setup, causing deeper connections between the monitor setup and a specific professional group, in turn labelling the setup as “trading monitor setup” as if it only can be used for trading-related purposes.

Haraway promotes the reclaiming of tools of allegedly infinite vision for a situated, partial perspective. I claim that the reclaiming of trading monitor setup as multiple monitor setup by others is doing just that.

## **Conclusion**

Through the media theory of Marshall McLuhan and political history of technological artifacts of Langdon Winner, the multiple monitor setup becomes a site of interrogation as it was initially taken up by traders and was seen exclusive for trading-related activities. However, as argued in this essay, with the rise of COVID-19 and the customization of workstations at home or office, different interpretations of the alleged trading monitor setup is increasingly embraced by non-trader professionals as the setup offers tools of increased vision, efficiency, and comfort for a better work performance. I argued that the affordances of this monitor setup helped politicizing its name as trading monitor setup, since its use is not exclusive to traders. These affordances fueled a power play of trading monitor setup over single-screen PCs and laptops, highlighting the relation between the user and the medium further, as the politics of the setup is rooted in how the user relates themselves to it. The shifting trend of the setup user demographic helps understanding the depoliticization of this media artifact, while decontextualizing the site of infinite vision afforded to

traders. As Winner claimed, even though artifacts don't have to be inherently political, their embodied intentions by their makers can contribute to the politicization of them. I brought up Karen Barad's "Relata don't precede relations", to prove that the fate of the multiple monitor setup don't have to be in the hands of traders exclusively, as the setup enters into new relations with different user groups. McLuhan's understanding of media emphasizes a similar approach to relation between user and medium, which was explored throughout the essay as the monitor setup being an extension of the user.

## **References**

Blackwell, A.F., 2006. "The reification of metaphor as a design tool". *ACM Transactions on Computer-Human Interaction* 13 (4), 490-530.

Barad, Karen. 2007. "Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning". Durham: Duke University Press, p. 334.

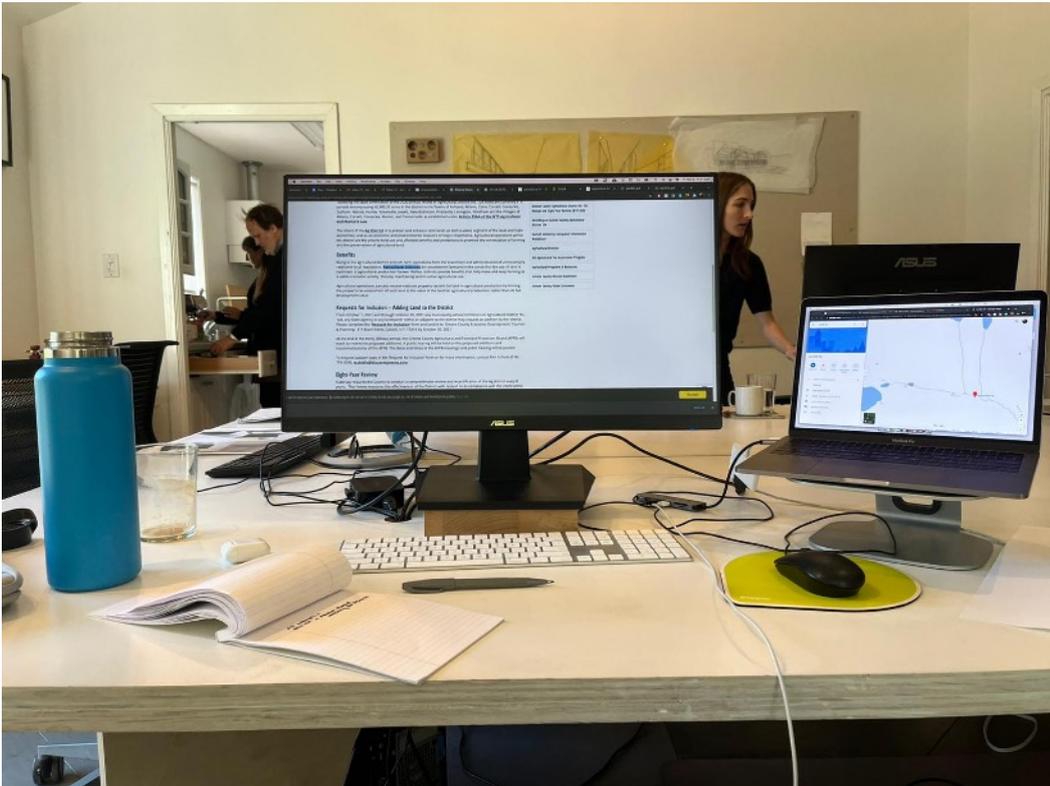
Haraway, Donna. 1988. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective". *Feminist Studies*, Vol. 14, No. 3, p. 575-599.

McLuhan, Marshall. 1964. "Understanding Media" ed. Lewis Lapham (1994). Cambridge, MA: MIT Press, p. 3-76.

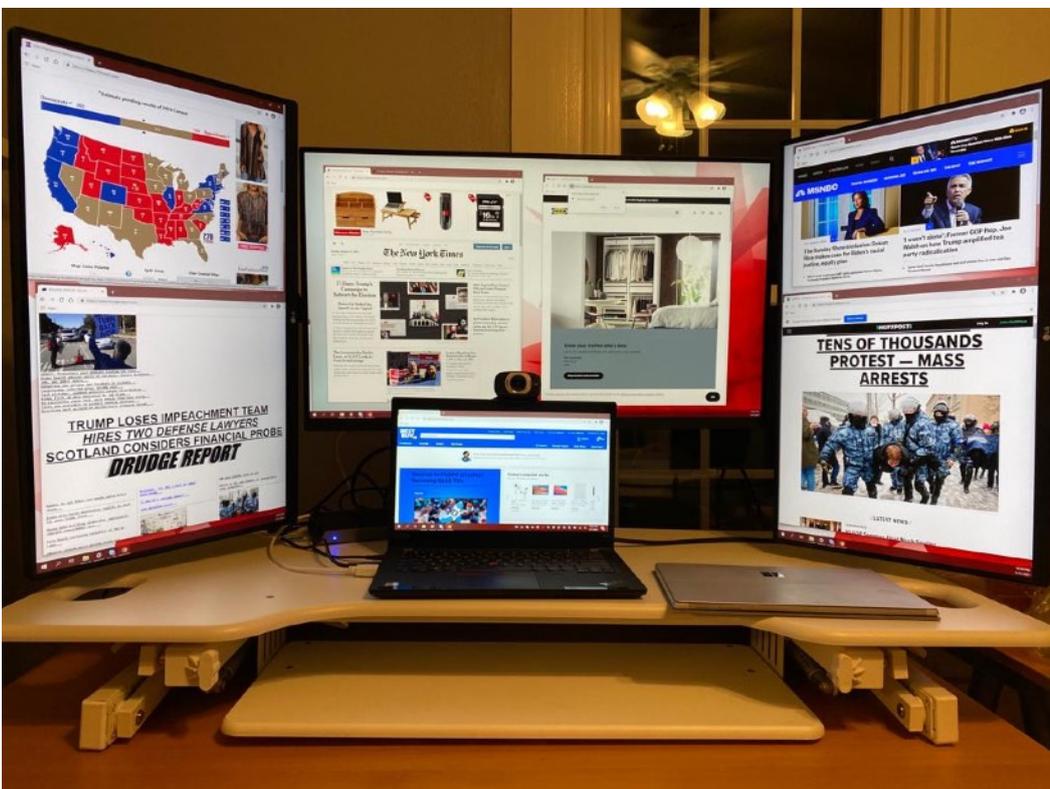
Winner, Langdon. 1980. "Do Artifacts Have Politics?" in *The Whale and the Reactor*, Chicago: Chicago University Press, p. 9-40.

## Attachments

Below are photos of multiple monitor setups from their users.



Setup of an architect



Setup of an attorney



Setup of a data scientist