# Occlusive Reality

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As Augmented Reality (AR) tentatively moves from obscurity to ubiquity, we find ourselves constantly enticed by the purported capabilities and glossy demonstration videos of this technology. While major corporate players seek to establish unique identities in this emerging information space, their design fictions focus on a product's ability to improve everyday activities. By using images of comfort, convenience, and efficiency, the companies seeking to monetize Augmented Reality tend to gloss over AR's potential to create distraction, disinformation, and delusion. As we begin to recognize the capacity for AR technology to obscure or eliminate elements of the real and the digital, we open up a new space for examination Occlusive Reality.

Occlusion, as used in the Augmented Reality paradigm, is the intentional blocking of information from the visual spectrum. Augmented Reality technologies have been lauded for their capacity to allow users to visualize geospatially contextualized information about their surroundings in real-time creating an experience that marries the digital and the real into an immediate, personalized, and seamless space. Alongside other perceptual engineering, occlusion is employed to create the illusion of embededness for digital artifacts; analyzing the user's visual scope and selectively eliminating both fragments of the real and digital worlds. In so doing, AR simulates via a rendering algorithm, a visual phenomenon we are accustomed to—inability to see through solid objects—thus creating the illusion of realistic placement for the digital artifact.

While this rendering illusion is critical to creating believable coexistence of digital and real information, I believe that the capacity for occlusion merits investigation and a discourse for political power inherent to AR technology. Augmented Reality's capability to block visual information based on preprogrammed parameters and personalized information represents a dangerous political potential and prompts a number of important questions. Who will decide which elements of reality are displayed, and which are occluded? Who will write the parameters and protocols for the new visual interface between the real and the digital? What variables will be considered in writing the algorithms that select digital artifacts to present to each individual?

If corporate proponents of this technology are successful in bringing Augmented Reality to the mass consumer market, the structures governing the operation of these technologies will find themselves in a unique position of power and control. Search engines and social web-applications use algorithms to cull the vastness of the Internet into personalized search results, feeds, and advertisements – in effect occluding parts of the digital world based on preferences, assumptions, and other information (Pariser 2012) . As major players emerge in

the Augmented Reality marketplace, we can safely assume that similar approaches will be used to shape user experiences and turn access to information into a profitable enterprise. While we will likely be assured by these corporations that unbiased algorithms and strict protocols are responsible for the display and occlusion of information in AR systems, the creation of these proprietary algorithms and overarching protocols will place the power of the "visible" in the hands of just a few.

As a thought experiment I asked people to imagine an occlusion algorithm that made visual evidence of negatively perceived trends disappear from a user's visual scope. Citing the upward trends of waste and homelessness as two such trends on the Hawaiian Islands, I created a series of sample still frame images to demonstrate this idea and presented these photos as proof of concept for a fictitious Augmented Reality product. Magically, homeless encampments were replaced by elements from the natural environment, and landfills and beached garbage vanished from sight. Fortunately, the experiment was met with mixed reviews.

A significant portion of the group was appalled by the underlying assumptions and designs of the proposed system. That humans could be removed from vision, and that grave problems could be hidden from perception, stirred many in the audience

to consider the darker potentialities for Augmented Reality. Success! The deliberate intention of the experiment was to inspire a discussion of the political ramifications of the technology's ability to render invisible, quite literally, chosen elements of an environment. The hidden power in such a system is so immense that it can no longer remain outside of the discussion of Augmented Reality going forward.

When Jacques Rancière (2006) first wrote about the distribution of the sensible, he was interested in those actors in society who could define the boundaries of legitimacy for the visible and the perceived within an aestheticopolitical regime. When he remarks "Politics revolves around what is seen and what can be said about it, around who has the ability to see and the talent to speak..." his interest is in those forms or processes predefined in a time and place, delimiting perceptions in an a priori manner. With a technology like Augmented Reality, the creation of algorithms and protocols would certainly fall within this conception as they will define the distribution of the sensible in a very real manner. In creating the guidelines that select which portions of the real world and which portions of the digital world come into a user's visual scope, the design of an AR system becomes a fundamentally political act. As such, it is important that both creators and users of such a system be made more fully aware of the politics they are enacting.

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## Note

1. Occlusive Reality is not simply a space in which digital artifacts replace the real, it is a politically charged arena in which the "invisible" struggle even harder for voice and presence in the world.

## References

Pariser, E.,. (2012). *The Filter Bubble: How the New Personalized Web Is Changing What We Read and How We Think Reprint.* London: Penguin Books.

Rancière, J., (2006). The politics of aesthetics: the distribution of the sensible Pbk. ed., London: Continuum.