Open Library of Humanities

Tennis | House: Medical Imaging as Videographic Criticism

Kevin L. Ferguson, English, Queens College, City University of New York, US, kevinlferguson9@gmail.com

"Tennis | House" extends my earlier work using medical imaging software to explore narrative film. As with digital humanities work, medical imaging "datafies" the body, reading the physical change of discrete organs, cells, molecules, and so on. Furthermore, medical imaging frequently does so by reading this evidence indirectly, as a proxy for other knowledge: in the absence of direct access to the body's secrets, medical science finds other indicative information to measure.

This work considers how this might also be true for videographic criticism, comparing recent medical research using fMRI to "read" the thoughts of vegetative patients with the concept of videographic criticism itself. As with coma patient research, which bypasses the articulation of speech, in videographic criticism audiovisual material is our proxy for thought. We think other thoughts through shared images.

Organized in five parts, my piece juxtaposes popular cinema focused on tennis and homes with discussions of medical imaging research. I argue that medical imaging is mostly videographic, given its indirect representation of an otherwise unknowable internal state that is mediated according to particular technical affordances and cultural assumptions. Likewise, videographic criticism requires us to think indirectly, by proxy, when we generate new knowledge by "graphing" with "video."

Research Statement

The field of videographic criticism once again finds itself in a growth spurt, evidenced by the renewed parsing of terms and impassioned calls for boundary explorations at conferences and events over the past few pandemic years. Whether reckoning with the "video essay" in the YouTube mold, exploring the affective turn of fanvidding, or reacting to perceived gatekeeping of the purely "scholarly" (whatever that might mean) academic essay, videographic criticism is restless.

For me, at the heart of these conversations is thinking about how remediation of audiovisual texts for critical purposes happens, and whether it happens the way we tend to think it happens: i.e., an argument is presented and perceived through audiovisual examples. I have previously worked with medical imaging software to explore narrative film, asking how medical tools might process humanistic texts and how using the "wrong" critical lens (one limited but also focused by its narrowly intended function) allows us to do new things. In that vein, thinking about how medical science might approach humanistic questions led me to cases of neuroscience that raise interesting humanistic metaphors, such as the idea of "translating" functional magnetic resonance imaging (fMRIs) into movies or "decoding" dreams. Referring to fMRI studies of perceived emotions and empathy, researcher Ross Buck promises in one clip from my video that "things that were previously hidden are now observable." Might this not also be a mantra for successful videographic criticism?

If so, how would this inform the methodology of videographic criticism? Specifically, how might medical imaging, which most frequently creates knowledge about the body through indirect means, serve as a videographic method? As with much digital humanities work, medical imaging "datafies" the body, reading the physical change of discrete organs, cells, molecules, and so on. And it does so most frequently by reading

this functional evidence indirectly, as a proxy for other knowledge: measuring the level of the enzyme alanine transaminase in the bloodstream can proxy for a measure of "liver damage," calculating the percentage of the blood protein hemoglobin that has glucose attached to it can proxy for a diabetic's average "blood sugar" level over the last three months, measuring the amount of oxygenated hemoglobin in the brain by briefly magnetically reorienting its hydrogen atoms can proxy for "brain activity."

"Tennis | House" extends my earlier work using medical imaging software to explore narrative film. This new work considers how my earlier work with medical imaging software might intrinsically be videographic without my additional performance. Here, I compare recent medical research using fMRI to "read" the thoughts of vegetative patients with the concept of videographic criticism itself. As with coma patient research, which bypasses the articulation of speech, in videographic criticism, audiovisual material is the best, if not only, proxy for thought. We can think other thoughts through shared images.

Organized in five parts, my piece juxtaposes popular cinema focused on tennis and homes with discussions of medical imaging research. I argue that medical imaging is mostly videographic, given its indirect representation of an otherwise unknowable internal state that is inherently mediated according to particular technical affordances and cultural assumptions. Likewise, videographic criticism requires us to think indirectly, by proxy, when we generate new knowledge by "graphing" with "video," remediating existing audiovisual texts to generate new knowledge.

The material I use here is of four registers: popular cinema with scenes of characters playing tennis (with one indoor variant exception), popular cinema with exterior shots of homes (from mostly horror films), educational and promotional scientific shorts, and scenes of spectatorship from narrative film where we watch characters watching. In its montage and eschewing of voiceover, my work draws from the subgenre of the supercut, which Allison De Fren recently described as a kind of "database thinking" that prioritizes an "algorithmic cataloguing of analogous relations" across audiovisual texts. My video certainly does this, matching scenes of characters being hit by tennis balls or trying to enter homes, but in its focus on the yes/no dichotomy it also serves as a training set to reduce "analogy" to "binary." Say "think of tennis" and a reader may imagine anything from the relationship hell of *The Squid and the Whale* to the ridiculous comedy of *7 Days in Hell*; but in any of these cases their premotor cortex is still going to light up the fMRI. Likewise, it strikes me that the idea of database thinking informs nascent AI developments such as DALL-E and ChatGPT; the supercut might after all simply be reconceived as a collection of training data for such programs. As with supercuts and the neuroscientists' quest to visualize dreamer's dreams, AI generators seem to promise a similar conjuring of media from out of a vast humanistic database.

The last sequence in my video, from Antonioni's *Blow-Up*, serves as a final provocation to that scary thought. The tennis ball that Thomas (David Hemmings) throws back to the mimes: might that not be the metaphor for videographic criticism at the present time? A meaningful object passed among a community that nonetheless lies solely within the mental imaginary? And if so, how might we decode the expression behind his final downturned eyes? Is he thinking tennis, or house?

Competing Interests

The author has no competing interests to declare.

Author Information

Kevin L. Ferguson is associate professor of English at Queens College, City University of New York, where he teaches undergraduate and graduate courses on digital humanities, adaptation studies, and college writing. He is also a faculty member in the M.A. programs in Digital Humanities / Data Analysis and Visualization at The Graduate Center, City University of New York. He is also co-editor of the award-winning *[in]Transition: Journal of Videographic Film and Moving Image Studies*.

References

"1 in 5 vegetative patients is conscious," Big Think, 2020, https://www.youtube.com/watch?v=Qx_OXBDOZtk

7 Days in Hell, Jake Szymanski, 2015

The Amityville Horror, Andrew Douglas, 2005

The Amityville Horror, Stuart Rosenberg, 1979

Blow-up, Michelangelo Antonioni, 1966

De Fren, Alison, "The Critical Supercut: A Scholarly Approach to a Fannish Practice," *The Cine-Files*, issue 15 (Fall 2020), http://www.thecine-files.com/the-critical-supercut-a-scholarly-approach-to-a-fannish-practice/.

Dogville, Lars von Trier, 2003

Edward Scissorhands, Tim Burton, 1990

El espíritu de la colmena, Victor Erice, 1973

Ferguson, Kevin, "Volumetric Cinema," *[in]Transition*, 2.1 (2015), http://mediacommons.org/intransition/2015/03/10/volumetric-cinema

"FMRI Project, 2019," Brenda Cruz-Wolf, 2019, https://vimeo.com/353244147

A Ghost Story, David Lowery, 2017

Gremlins, Joe Dante, 1984

Gummo, Harmony Korine, 1997

Halloween, John Carpenter, 1978

Hard, Fast and Beautiful!, Ida Lupino, 1951

"Human Brain Activity Elicited by Natural Movies with Sound," Jack Gallant, 2015, https://www.youtube.com/watch?v=OKpO_v76kVs

King Richard, Reinaldo Marcus Green, 2021

Lolita, Adrian Lyne, 1998

Monster House, Gil Kenan, 2006

"Nigella chocolate pears 1280x712 webNOT," TheDIEMProject, 2010, https://vimeo.com/13940499

Parasite, Bong Joon-ho, 2019

"Planet earth jungles monkeys 1280x704 web," TheDIEMProject, 2010, https://vimeo.com/13938254

Poltergeist, Tobe Hooper, 1982

Psycho, Alfred Hitchcock, 1960

"Reading minds," nature video, 2013, https://www.youtube.com/watch?v=z8iEogscUl8

Rosencrantz & Guildenstern Are Dead, Tom Stoppard, 1990

The Royal Tenenbaums, Wes Anderson, 2001

"Scottish parliament 1152x864 webNOT," TheDIEMProject, 2010, https://vimeo.com/13938314

Somers, James. "The Science of Mind Reading." *The New Yorker*, 6 Dec 2021

Strangers on a Train, Alfred Hitchcock, 1951

"A studyforrest extension, retinotopic mapping and localization of higher visual areas, "Sengupta et al., 2016, https://www.nature.com/articles/sdata201693

"Studying Emotion with fMRI," Uconn, 2016, https://www.youtube.com/watch?v=R-VdhXksbpQ

The Squid and the Whale, Noah Baumbach, 2005

Sullivan's Travels, Preston Sturges, 1941

Sunset Boulevard, Billy Wilder, 1950

Up, Pete Docter, 2009

"Using image processing to improve reconstruction of movies from brain activity," Jack Gallant, 2016, https://vimeo.com/169779284

"Vision Reconstruction," UC Berkeley, 2011, https://www.youtube.com/watch?v=6FsH7RK1S2E

The Wolf of Wall Street, Martin Scorsese, 2013