Camila Carreon

Ms. Comstock

Santa Fe Prep

12/20/24

Interim Report

The Iliad tells of the Trojan Horse, the infamous wooden gift-turned-weapon of the Greek and

Trojan Wars. What began as a symbol of a peace offering transformed into a bloody massacre

with the Trojans' final defeat. While likely apocryphal, Homer's epic reminds us of biological

dramas fundamental to human history: deception and belief manipulation. The Trojans believed

in the benevolence of the Greeks, only to be deceived and defeated. This is the aim of my

research, to highlight the modern-day Trojan Horses and illuminate when danger arises from

such deception and belief manipulation. The modern points of contention in this regard, I

identify as ideologies and conspiracies, though focus on conspiracies as the digital footprint of

ideologies isn't as well documented. Both, nevertheless belong to a social construction scholar

Yuval Noah Harari terms intersubjective realities, which "exist only in the human mind and are

given force through collective belief."

Furthermore, it seems from Harari's books and countless other articles and journals, that

belief systems seldom leave the literary or historiographical domain. As Philip E. Converse

highlights in *The Nature of Belief Systems in Mass Publics (1964)*, "*Belief systems have never*

surrendered easily to empirical study or quantification. Indeed, they have often served as

primary exhibits for the doctrine that what is important to study cannot be measured and that

what can be measured is not important to study.” My research objects to this point as since 1964, several technological advancements have been made to allow for belief systems to enter the scientific domain. Namely, my research hinges on two primary advancements: belief systems (conspiracies) can be tracked digitally and Natural Language Processing can be used to help quantify linguistic sentiment (sentiment analysis). Furthermore, I characterize the digital information networks I'm looking at (social media posts, transcripts of speeches, testimonies, and videos), as subject to the 3 V's (Lukić): Volume, Velocity, and Variety. Volume refers to the vast amount of data across these platforms, velocity is the rapid rate at which this information is disseminated and spread, and variety refers to the diversity of types of content (videos, text, audio) these networks offer—the three V's define my digital system as chaotic and subject to inherent disorder. Thus, to further analyze my system, I treat the traction and popularity of sentiments (conspiracies) as chaotic strange attractors. As Juan Campuzano explains, " In dynamical systems, a 'Strange Attractor' is a type of attractor (a region or shape to which points are 'pulled' as the result of a certain process) that arises in certain non-linear systems and is characterized by its fractal structure." Attractors are known colloquially as states that a system gravitates towards and cycles through. Mathematically, I'll study these states as points within a phase space, using different labeled sentiments as my parameters. I plan to visualize and explore these spaces through Python's matplotlib and sklearn, Python's machine-learning library. Furthermore, I expect sentiments to cluster and shift towards different states or attractors. Additionally, I am interested in looking at the bifurcation within the phase space to create new attractors, and considering what the bifurcations of attractors themselves means for the system as a whole. Thus far I have gathered data using web scraping techniques for this project: Social media (Reddit, Instagram, Youtube, Facebook, Twitter, Vkontakte, Snapchat, TikTok, Weibo,

and WeChat) posts and threads discussing misinformation on the Covid-19 vaccines and Pizzagate Scandal, as well as transcripted speeches from political officials, celebrities, podcasters, etc. and documents (press releases) on both aforementioned conspiracies. Finally, I have begun to prepare my data for sentiment analysis.

Works Cited

Campuzano, Juan Carlos Ponce. "Dynamic Mathematics." *Strange Attractors*, 1 July 2018, www.dynamicmath.xyz/strange-attractors/.

Lukić, Jelena. *THE IMPACT of INFORMATION and COMMUNICATION TECHNOLOGY on DECISION MAKING PROCESS in the BIG DATA ERA*. Vol. 11, no. 2, 2014, pp. 221–234, scindeks-clanci.ceon.rs/data/pdf/1820-3159/2014/1820-31591402221L.pdf. Accessed 24 Dec. 2024.

Philip E. Converse (2006) The nature of belief systems in mass publics (1964), Critical Review, 18:1-3, 1-74, DOI: 10.1080/08913810608443650

Yuval Noah Harari. *Nexus*. Random House, 10 Sept. 2024.

Zmigrod, Leor. "A Psychology of Ideology: Unpacking the Psychological Structure of Ideological Thinking." *Perspectives on psychological science : a journal of the*