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Digital Neural-Amplification: Paranoia and Digital Media

Peter Nelson

Introduction

In a previous essay, I have argued that our brains have evolved to be 'tilted' toward paranoid ideation (Nelson, 2021). This default mode resulted from natural selection but is not necessarily for an adaptive purpose (Raihani & Bell, 2019). The excessive prevalence of paranoid conspiracy 'theories' (fantasies) occurring throughout social media platforms raises the question as to whether this proposed paranoid 'tilt' of our perception is, in fact, being amplified by digital media. Originally intended to be an aid to interpersonal connecting, it appears that these platforms were designed without any clear understanding of how they would interact with the basic neural wiring of our alert-response-cognitive central nervous systems that evolution has bestowed on us.

Here I argue that the provision of social media to our human herd, whether or not we are consciously aware that we are always on alert for danger, has had the effect of directly over-activating the alert system thereby over-driving the innate paranoid 'tilt' of our perception and story-making. I also would argue that the speed and volume of feedback in these digital systems can generate a positive feedback loop thereby exacerbating paranoid ideation.

For social psychologists, the way people misconstrue what they perceive in the world around them, including the intentions of others, is called the 'fundamental attribution error' (Jones & Harris). Typically, this is most clearly observed in how people determine the social status of others by how they dress, the car they drive, etc. For example, an elderly man, wearing a thread-worn jacket and driving an old car will most likely be viewed as being not well off, whereas he could be just an eccentric member of the top 'one percent'.

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My observations as researcher and clinician have made me aware of how easily 'self-stories' take on a paranoid tone when the danger alert system is activated. Typically, this alert can occur when we perceive that someone's behavior is not 'appropriate' (expected) in a social encounter, for example. Phenomenologically an internal 'alarm' sounds and we respond with suspicion, rapidly creating a projected negative attribution (story) that casts the unexpected as potentially dangerous. These 'self-stories' (internal narratives) turn those that appear to be different into threatening 'others', as in the Lindy Chamberlain case in Australia when she did not show 'appropriate' emotion in public after her infant was taken by a dingo.[1]

The perception of danger and the generation of a story of threat is largely unconscious and reactive and is a response to any unclear perception that portends possible danger. This reaction only becomes pathological when the perceived threat is sufficiently amplified by additional emotionally charged input leading to a regressive positive feedback loop. As I have argued previously, this is most commonly seen in the outlying one percent of "over-reactors" (Nelson, 2021). I also would argue that social media is capable of causing this kind of paranoid looping as well, as seen in the example of a man's online life leading him to storm a basement-less pizza shop, armed and ready to liberate the children who were being held captive by pedophiles in an imagined basement.[2]

How Does Digital Amplification of Paranoid Storytelling Occur?

Before modern, electronic communication there was gossip—messaging in which 'hidden' truths were revealed and sources of threat and difficulty were uncovered and exposed. This activity, like mutual grooming amongst pre-human primates, is inherently rewarding, apparently causing small surges of dopamine in parts of the brain that register this neurotransmitter as a reward. As parasites are removed during grooming and malevolent forces or persons are revealed through gossip, a reduction in anxiety and a peak in excitation occurs in our emotional brains, as hidden threats are brought out in the open, relieving an individual's tension (Dunbar, 2004).

Gossip has been the primary method of opening 'self-stories' to social scrutiny probably from the time linguistic communication came into being. It only started to evolve into mass public news media when printing allowed for the wider distribution of stories to a literate audience. Gossip remained, of course, but now there was more than one way to learn whether or not it was a 'mouse' or a 'monster' lurking in the undergrowth. With the advent of mass

[1] https://womensagenda.com.au/latest/why-didnt-she-cry-how-lindy-chamberlain-became-the-poster-child-for-life-shattering-gender-bias/

[2] https://en.wikipedia.org/wiki/Pizzagate_conspiracy_theory

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broadcast media, the communication process increased in speed, and, once again, there was a person, more or less directly, telling us the 'truth' about what is rustling in the undergrowth.

Into this epistemic system emerged what we call social media. Previous social rules of conduct and their related standards of reliable and useful knowledge started to disintegrate into ever-increasing numbers of differing epistemic fragments—each claiming knowledge of the absolute truth regarding what is *really* rustling around out there. The speed at which this occurs and the sheer volume of wildly differing stories as possible activity in the undergrowth now has become overwhelming to a brain that evolved to handle a much-reduced rate and variety of input. 'Self-stories', as a result, have become ever more complex and filled with the vague, threatening, unknown forces that underpin an expanding range of paranoid stories.

The approximately seventy percent of the normal population that evolved to be slightly over-reactive to alarm stimuli is now being driven to a more intense reactivity and paranoid 'self-story'-making. The entire alerting, attending and reaction system is amplified so that it is now showing characteristics of perception and behavior that previously belonged primarily to the more extreme thirty percent of reactors. It appears as though the sector of the distribution curve that represents very high 'reactivity' may be growing, representing a larger section of the general population. Thus, as more of the population reacts with increasing intensity, the proportion of delusional paranoids may be growing in proportion.

The Facebook system, for example, intensifies the input into our paranoid 'self-story' production by increasing the rate of alerts and the perceptual complexity of the situation. This, in turn, drives the process into continuous looping for more input required to clarify and resolve the increasing cognitive dissonance caused by the variety, frequency, and ambiguity of input. A positive feedback loop is thus maintained as we are rewarded by incoming fragments offering partial resolution as well as being given 'likes' for our affirmative participation.

When applications like Facebook become the main source of mutual social grooming and gossip, the positive feedback loop established in those contexts tends to drive most participants into dependency on social media. The reward system thus creates and amplifies our 'self-stories' generating often bizarre, ungrounded, and paranoid ideation. One important factor underlying this looping that allows it to continue is the information received usually cannot be empirically verified or discounted. Another element fundamental to the continuation of this course is the absence of direct emotional knowing that we usually experience in face-to-face interactions. With a lack of honest emotional and non-verbal signaling to apply some negative feedback to the loop, the power of digital social media to amplify perceived danger signaling and cause them to loop out of control remains unchecked.

The Nobel laureate, Daniel Kahneman, writes about "fast and slow thinking" (Kahneman, 2011). In his approach to generating pragmatically useful knowledge and rational decision-

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making, he advocates an empirical method in which participants would be more likely to gather data and calculate ("slow thinking"). Kahneman describes "fast thinking" as being what most people would call their 'gut feeling'. I would call it an instantaneous projection of a 'self-story', which is not generated from empirical data gathering and logical construction. 'Self-stories' are sometimes modified by empirical data and rational thought, but for the most part, their foundations are built on limbic brain reactivity aimed at the recognition of danger and the need for self-preservation.

As I argued previously (Nelson, 2021), the 'tilt' of the brain's 'self-story' generation is toward looking for danger and projecting possible forms of it onto people, places, and things. Ambiguous or unexpected signals also can set off a cascade of responses in our brains that activate our deeply embedded alarm system. However, when danger is not clearly discernable, the prefrontal brain, driven by a limbic alert, creates a constructed 'picture' of possible sources that are causing the alarm as it attempts to strategize a solution.

Of course, associative memory and prior learning play a major role in the implementation of this process and it is difficult for a person to make a careful "slow-thinking" assessment of what the danger is. In the context of the 'storm' of input and feedback operative on social media platforms, a person's cognitive empirical-rational process can be quickly overwhelmed. The responses thus generated by digital amplification of our alert-response system go far beyond merely accentuating our innate paranoid 'tilt', in that they can work to create an effective cognitive-behavioral fast thinking 'stampede' toward a given conspiratorial belief and a perception of danger.

References

Dunbar, R. (2004). Gossip in evolutionary perspective. *Review of General Psychology, 8(2)*, 100-110. doi:10.1037/1089-2680.8.2.100

Jones, E. E., & Harris, V. A. (1967). The attribution of attitudes. *Journal of Experimental Social Psychology, 3(1),* 1-24.

Kahneman, Daniel (2011). *Thinking, Fast and Slow*. Farrar, Straus and Giroux. Kindle Edition.

Nelson, P. (2021). The evolutionary origins of paranoia: A speculation. *Academia Letters,* Article2621. https://doi.org/10.20935/AL2621

Raihani, N. J., & Bell, V. (2019). An evolutionary perspective on paranoia. *Nature Human Behaviour, 3(2),* 114-121.

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