

Emotional Contagion on Social Media Platforms: New Directions in Cognitive Science and Practice

**Abiola BAMIJOKO-
OKUNGBAYE¹**

¹ PhD, Zevo Health, Dublin, Ireland,
abiolaokungbaye@gmail.com

Abstract: Social media platforms, web 3.0 and metaverse have been hypothesised to be sources of mental disorders to develop, and emotional contagion has been described as a precursor of these disorders. This paper systematically explores the key features of emotional contagion as a psychophysiological and behavioural experience required for the conversion of these disorders to propose an innovative characterisation of mental disorders on digital platforms as socially construed and value-laden phenomena.

Keywords: *emotional contagion; social media; mental disorders; cognitive science; well-being; philosophy.*

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Introduction

Mental disorders that are considered to be linked with digital platforms are increasing, and social media platform users' activities are associated with disorders and mental distress. Further, research indicates a complicated interrelationship between problematic use of digital platforms and mental distress, resulting in behavioural addictions (Meshi & Ellithorpe, 2021). Those studies call for additional research to establish possible causality, which cannot be extracted from the existing data (Henzel & Håkansson, 2021). The global tally of these disorders is immense. If the pathogenesis of these disorders is not adequately understood, this can have a negative effect on research outcomes and destabilise recovery outcomes in practice. For this reason, this paper will examine mental disorders linked with engagement on social media platforms. The cause of these disorders on digital platforms has been attributed to emotional contagion spreading among participants. Some data provide experimental evidence supporting the transference of mental disorders, that disorders can spread from one user to another on digital platforms.

These findings indicate that the mental disorders of co-participants on digital platforms can influence others via massive-scale emotional contagion (Kramer et al., 2014). Another study demonstrates the evidence of emotional contagion, showing that people are more inclined to react to positive emotional contagion positively, and negative emotional contagion is more associated with fear and hopelessness (Sasaki et al., 2021).

According to this finding, negative emotions are faster to spread, and participants with higher activity being the most susceptible (Tang et al., 2021). I will attempt in this paper to place the perception of activities and the expression of the disorders on social media platforms outside of emotional contagion to gain a more sophisticated understanding of the expression of the disorders. The objective is to present these disorders hypothesised to originate on social media platforms as value-laden disorders, and emotional contagion is not needed for these disorders to be understood.

In order to improve the quality of care in practice and mental health research, this paper will investigate emotional contagion as the precursor of the disorder purported to develop on digital platforms. The notion of emotional contagion was introduced to address mental health practitioners' difficulties when dealing with clients' psycho-social experiences. According to this understanding, emotional contagion is predicated on three main propositions(a) People tend to get affected by mental disorders on digital

platforms because users mimic others (b) User's emotional experience is affected by such feedback.

(c) Leading participants on social media platforms to catch others' emotions. These are the features of emotional contagion. In addition, it refers to positive or negative emotional stimuli reflected in facial, vocal, and postural expressions, including neurophysiological (body and mind reaction) and autonomic nervous system (Ashkanasy et al., 2016; Hatfield et al., 1994; Zhang & Lu, 2013).

In this paper, I have two primary goals. The first is to improve the existing findings on emotional contagion on digital platforms by introducing an undiscussed aspect of emotion as embodied and embedded in our practical activities. It is also distinctively undetermined that requires the processing of conceptual repertoire constituting emotion as an embedded cognition beyond the disorder transference central to emotional contagion in mental disorders' development on digital platforms. This move calls into question the evidence associated with emotional contagion as a precursor of these mental disorders developed on digital platforms.

My second objective is to raise a case against emotional contagion as a precursor of these mental conditions on those platforms in a novel way by applying the contemporary ampliative understanding of mental conditions, symmetrically bringing participants' values to the fore during the intervention process (Bamijoko-Okungbaye et al., 2020). I argue that the primary consideration to support emotional contagion as a precursor of these mental disorders, namely as determined psychophysiological, and automated experience, is ill-founded.

For such disorders to develop after engaging with those platforms, the concept of emotional contagion is not necessary to understand the origin of those disorders on digital platforms since emotional contagion is viewed as relatively automatic, unintentional, uncontrollable feedback to others on those digital platforms. Consequently, appealing to emotional contagion to explain these disorders is not applicable, considering mental disorders are neither automatic nor automated experiences.

This paper has the following structure. I first describe the key features of emotional contagion in a general sense. Then, I show that its conceptualisation rests on disorder transference which raises concerns about the phenomenological implausibility of this transference in mental disorders. Because the process of emotional contagion does not capture the psychological modification of the mental states of participants on those platforms. My paper does not deny the existence of such disorders but raises

questions about the transference of such mental disorders into participants via emotional contagion on social media platforms. Finally, I close by anticipating and responding to the objection of the arguments put forward in this paper.

Emotional Contagion, Digital Platforms and Mental Disorders

Research indicates that emotional contagion is linked with disorders developed in the digital world (Wheaton et al., 2021). As the research suggests, mental disorders can develop using these digital platforms. Therefore, emotional contagion is generally recognised as the pathway through which these disorders permeate (Ferrara & Yang, 2015). In light of this finding, the claim is that mental disorder transference on these digital platforms is a serious issue to address. Given the particularly acute challenges of this claim in mental health practice and mental health research, it will be crucial to expound on emotional contagion as a channel of passage for these mental disorders on social media platforms.

The lines of argument central to emotional contagion are that the biosystems of participants are influenced systematically by the activation and feedback of dynamic simulated experiences. Participants do not need to be aware that they are actively shifting the emotional experience of others. The mechanism of this transference becomes automatic. Some researchers invoke that negative emotions on social media are infectious and shift from person to person; primarily, those experiencing mental disorders can transmit this experience to others, putting others in a state of turmoil. Some studies have used the evidence derived from mirror neurons considering physiology is involved in the process. The physiology involved is postulated to be crucial because it is considered an automatic response of our bodies and brains, not just our controlled imagination, which can also occur outside social media interactions (Hutchison, 2021; Kravetz, 2017).

This automatic transference of disorders is incompatible with the notion of disorders on digital platforms and outside of it, which are likely socially construed. For understanding, mirror neurons are considered to usher the mechanics that support emotional contagion. However, it is not certain that mirror neurons are up to the task when sharing the disorders' states with others. Their evidence does not indicate a two-step event because the perception of action is an understanding of the action. To determine these disorders that are believed to be generated on social media, I claim that these disorders are a matter of relatedness, as this is central to the meaningful interpretation of experience, and considering that emotional

contagion actions with mirror neurons are encapsulated, automatic and far different from interpersonal understanding. It is put forward that subjects' emotional experiences are influenced by the emotional faces they viewed, words they read, and things they mimicked.

The transmission accuracy of these disorders is open to debate. Bear in mind that the purpose of this paper is not to argue whether emotional contagion exists or not but rather to question its application as an explanation of mental disorders that stem from participants' interaction on social media platforms. As to practical utility, I note the research that neuroscientizes the emotions expressed by others on digital platforms to support experimental evidence of massive-scale contagion via social networks. In the research, neural analyses are used to understand the evaluation of the emotions shared by observers who read online consumer reviews (OCR). The outcome illustrates a different understanding of the arousal approach when processing the result of the combination of arousal (excitement/relaxation) and valence (pleasure/displeasure) on the observer through brain signals. The research supports the idea that the observed arousal can be contagious to the observer, shown in physiological and neural emotional arousal. According to the research, reading the OCRs allows the transference of emotions to readers, which leads to behavioural change. Besides, it is shown during the actions linked with reading the OCRs that readers can assimilate the customer's experience via emotional contagion, from the observed position to the observer's post. Further, information processing is automated on OCRs. Observers receive the details of different OCRs, which leads to multiple emotions being developed.

The apathy of impartial reviews is also transferred to the observer, causing arousal deactivation and displeasure (Herrando et al., 2022). However, I claim emotional contagion cannot be described as a precursor to the entire understanding of why the participants reacted the way they did. People can react based on experience and interaction using their possessed agency without appealing to an automated system as a precursor in order to achieve results. The readers could draw from past purchase experiences to decide on their new buys.

Nevertheless, one principle that goes amiss about the disorders that arise on social media platforms in well-being research and practice is the exclusion of the notion of mental disorders as socially construed and value-laden.

Digital Platform Disorders and Disorders as a Value-laden proposition

So far, I have described the features of emotional contagion as a precursor of mental disorders on digital platforms, which can make individuals, by their physiology, respond to those mental disorders, as proponents of such claims put forward. If the concept of mental disorders is multi-levelled and those struggling with mental conditions are detached from shared understanding, employing emotional contagion to transfer these disorders is somewhat misleading. In this paper, I do not deny the existence of emotional contagion.

However, I question its use as a precursor in describing mental disorders on digital platforms because the so-called disorders that arise on digital platforms are due to socially construed disturbances. Although I see a role for emotional contagion in our psychophysiological interactions but not modelling disorders developed on digital platforms. Historical understanding and cultural understanding are indispensable to this description of mental disorders and the development of emotions (Macpherson & Platchias, 2013). If emotions are embodied and embedded, appealing to emotional contagion in the form of an internalised phenomenon that emerges after interaction with digital platforms is generally mischaracterised. Therefore, explaining these disorders as a transference of emotional contagion is unnecessary for what is encoded in the abiotic, biotic and cultural environment. In neuroscience, studying emotional contagion by measuring the activation of neural structures, namely, brain waves activity and physiological responses, is essential. However, strictly applying this to mental disorders that stem from digital platforms would be complicated if one considers mental disorders as failure to enact one's own experiences with the shared world.

Proponents of emotional contagion as a channel to transfer these disorders cannot claim its veracity by ignoring these underlying issues facing their claim. The role occupied by intentionality and intersubjectivity in mental disorders cannot be excluded (Nemirovsky & Filc, 2020). Therefore, in viewing mental states observed after interaction with other participants on digital platforms, I will signal here that it is not an outer indicator of an internal hidden systematicity but the presence of emotion, meaning and experience. Therefore, if we develop the concept of disorders arising after using digital platforms, they should be described as aforementioned without the concept of emotional contagion.

The constitution of the theories of mind of those participants does not represent their experience in the world but is instead tied to interests and meaning grounded in social activities. For Emotional contagion to be a

precursor of these disorders on social media platforms and conduit for how these disorders travel, they cannot be automatic experiences predicated on mimicry, feedback and catching emotions. Because catching emotions cannot be reduced to the Cartesian system via a mechanistic process. Instead, I claim these experiences involve a bodily structure and affectivity found within the contemporary ampliative understanding of mental conditions highlighting the importance of values in the patient-practitioner relationship.

To cut to the quick, disorder on these digital platforms is linked to cultural and historical contexts in which value-laden descriptions are expressive. It involves the participants engaging in meaningful experiences that require external arrangement beyond mechanistic operations. In a way, participants respond to things that matter to them, manifesting in their emotional experiences.

Moreover, these disorders are to be explained as a disturbance of practical orientations of the world. Research shows that people who struggle with mental disorders own their agency. Achieving a balanced level of self-awareness through narration techniques in therapy can provide mental health growth for those struggling with mental conditions (Bamijoko-Okungbaye, 2020). If this is the case, one question comes to mind. How does emotional contagion transference distinguish between the agencies of those struggling with the disorder and those about to get the disorder? I claim that it does not, and the disorder experienced can be understood as employing the experiences of perceptivity and bodily receptivity. So describing those disturbances should be in the realm of body-reading, rather than appealing to emotional contagion, embedded in our practical, affective, and bodily relations. From this point, automated modelling to describe these experiences is incompatible with value-laden disorders, which are likely what those emotional disturbances are.

These disorders are interwoven and measured by our world experiences. Neither can we capture them via emotional contagion nor feedback mechanism. To further break this down to the basic, in the case of rudimentary attention development in children, the experience of others' attention and shared attention not only shows an awareness of attention but is the foundation upon which further appropriate development of attention awareness arises (Eilan et al., 2005; Eilan, 2022). Children experience others as intentional agents whose events and shared engagements are meaningful. During cooperative actions, they also begin to understand themselves as being experienced as intentional agents by others in the world interwoven in symbolic structure.

Symbolic interaction is already visible in their activities but becomes well-developed through language. Verbal expression becomes the vehicle of understanding which develop in the third and fourth year of their life. By participating in storytelling practices, children begin to experience others purposefully. They become sophisticated in expressing their ways around the social world and understanding the intentions behind certain moves people make (Gallagher & Hutto, 2008). The relational connectivity is also shown in the research that highlights the importance of mutual regulation of emotion that comes to operate through intersubjectivity, and the relational experience travels through language, in which language plays a vital role from the beginning (Mitchell, 2014). The role of shared events in regulating emotion is essential, which automatic features of emotional contagion cannot account for.

Even in the absence of language, mimetic expressions can also be used to regulate and establish shared norms where bodily and affective interactions include the reenactment of gestures and actions. Children show the shared resonance of intercorporeality and begin to refer to the shared context openly, using joint attention, gaze-following, pointing and observing how others interact within a collection of worlds. They learn the application and meaning that objects have for them and discern others' goals and intentions in uncompleted events. Moreover, our actions, in most cases, are aligned with multilayered intentions. Therefore, when we observe others, we do not need emotional contagion to understand them; instead, we depend on other sources of information, knowledge about human behaviour in context, specific knowledge about the specific individual in the shared context, and understanding of the context in order to disambiguate which among the pluralistic intentions are relevant in the shared context. We tend to make sense of others' intentions through our interaction with the world, and this is the foundation on which we make others' actions meaningful via a complex structure of skills and applied knowledge. During interpersonal interaction, people tend to negotiate their ways to achieve judgments about intentions and intentionality.

There is profound understanding in terms of our judgments about the understanding of others' intentions which are fundamentally linked with world knowledge. It is safe to say that a pattern of information correlated with intentions is attributable to the shared contexts on a purely structural level and statistical regularities. Even at the infant level, children can process action in terms of intention despite the actions' complexity. We generally differentiate our actions in terms of intersubjective understanding moderated by the intentions of others to support our observations and inferences. In

other words, these become the dispositions and practices that moderate our actions and judgment and this understanding can be extended to how we feel about specific actions.

We end up sharing with others meaningful activities and judgments. Even when we are inclined to challenge public norms guiding our actions, we often use these norms to gauge how far we are from ordinary ways of being. This distanciality keeps us in check to make comprehensible and acceptable decisions about others. I agree that recognising intentions is a complex endeavour and is knowledge-driven and rooted in structure discernment. One can say that skills are predicated on generative knowledge system, as complex as the generative knowledge essential to language. People in shared contexts recognise intentions within the flows of action, and this understanding of moderate action sequences is one-way intentional understanding that is generative.

Moreover, intentional understanding is functionally a knowledge system. As shown in this paper, we can calculate intentions in action at multiple levels of analysis (Baldwin & Baird, 2001). The dyadic interaction opens up towards objects in their environs, leading to a triadic structure (Hubley & Trevarthen, 1979). In the case of analysing the disorders that arise on these platforms, it is writ large that its expression is enshrined in values within the existing cognitive-affective metaphor. Therefore, I shall discuss the relationship between intersubjectivity and mental disorders to anticipate the arguments against the position taken in this paper. By so doing, we will see that emotional contagion as a means of shifting these disorders on social media and other digital platforms fails to explain the foundation of these disorders adequately. Hence, I will claim these disorders on digital platforms cannot be transferred via emotional contagion but present them as mental adhesion issues and intersubjectivity disturbances, which are socially construed, and value-laden.

Adhesion, Intersubjectivity and Mental Disorders

Emotional contagion as a tool in which these disorders on digital platforms are transferred cannot adequately capture a detailed account of these disorders because of emotional contagion's automatic and feedback features. On the other hand, the conceptual understanding of mental conditions beyond the classical tradition shows that the disorders that arise on those platforms are adhesion disturbances because those struggling are detached from shared societal values.

When their values are rebalanced, they begin enacting them within existing values, allowing values adhesion to eventuate. Mental disorder is not an automatic process; it involves all social cues adhering to the experiences of the social world moderating actions. When there is a disturbance of emotional adhesion due to hypothesised assumptions, the mental content and processing of the subject become detached from shared moderation governing actions.

The application of emotional contagion to account for those struggling with disorders that arise from interaction with digital platforms reinforces the urge to present an alternative attributable to adhesion disturbances. It is crucial to indicate that mental disorders on those platforms are multilayered, and their transference via emotional contagion is highly unlikely. In order to understand this assertion mentioned above, it is important to emphasise our lived body as a pre-reflective mode of participating in our shared world by adhering to existing values and alteration to this adhesion is allegorical for these disorders that arise on the platform. I must emphasise that the internalised and automatic features required for the feedback process in emotional contagion to complete its function will fail to explain the pathogenesis of disturbances, where meaning is central to the adhesion process in mental health practice. I will argue that emotional contagion is not needed to explain the mental health issues that arise with participants in shared settings.

I argue here that the adhesion of values necessary in a shared world is fractured with those struggling with disorders that arise on social media. In a whole world of a person struggling with disorders on social media platforms, a pre-established sense of living in a shared world is malleable. It can be reshaped and modified through the adhesion of shared balanced values. The people struggling with disorders can discern this because of their initial understanding of their ordinary world that is achieved through their interaction with the social and digital world. In the case of disorders on social media, it is valid to suggest that complexities between a pre-established sense of living in the world and interpersonal engagement interfacing with multifactorial modules of activities are disrupted. However, it can be explained without appealing to emotional contagion as the precursor of these disorders. Those struggling can redesign and reinvent the wholes they interact where intersubjective understanding is vital to the adhesion disturbances (Bamijoko-Okungbaye, 2019).

Research shows that adhesion disturbances can affect how those struggling with disorders view themselves. For example, this can be observed with people in a situation where they cannot differentiate between

the virtuality of the image in the mirror. Those struggling with certain disorders lose balance, blurring the embodied Self and virtual Self that appear in the mirror. This adhesion disturbance affects real encounters with others. So the phenomenon of transitivity is encircled in the representational medium of intersubjectivity (Fuchs, 2015).

The ability to recognise others' experiences amongst others' experiences as a separate experience moderated by experiences in the world, so to speak, bodily sense of Self, is crucial. For those struggling with adhesion disturbances, their bodily sense of Self is disrupted, leading to an incomplete circuit of thought development which can lead to thought-broadcasting, the experience that others know their thoughts. Those people struggling cannot differentiate between their mental life and others' thoughts. They are enclosed in a disembodied state of mind, possessing a delusional view of the shared world. In addition, delusions are generally considered in psychopharmacology as a brain disorder, a neuronal processing failure. The prevalent stance is seeking brain representation of delusion as a mapped state in the brain of those struggling, enactive synthesis shows it as a disturbance of intersubjectivity arising in social situations (Fuchs & Röhrich, 2017; Fuchs, 2020). So if these disturbances are value-laden, using emotional contagion to describe them is unnecessary. Because delusion seems to be a disorder where intersubjective trust and attunement to others could help restore a consensual understanding of the situation, which constitutes a shared, commonsensical reality. It can become disrupted due to the failure of moderation which makes delusion a relational phenomenon.

The intersubjective moderation of action is impaired in those struggling with disorders that arise on social media, that is, sharing others' experiences in shared sense-making. As a result, this intersubjective moderation of action is altered on which shared perspectives and the understanding of one's experience and others' experiences are needed. As in these cases on social media, the capacity to switch from one's experience when outside of the digital world is non-existent, leading to an altered way of enacting the world with others. As social media emerges as a place where tailored interventions can improve one's well-being (De Choudhury, 2019; Richardson, 2021). Social media and digital platforms can simultaneously be a bane of participants' lives where well-being intervention might be necessary for those struggling with intersubjective and adhesion disturbances.

Conclusion

As this paper shows, the transference of mental disorders on social media platforms via the process of emotional contagion raises valid phenomenological questions that the existing research in literature has not yet answered, considering the development we are witnessing with web.3.0 and metaverse. Answering these transference questions will involve applying the contemporary ampliative understanding of mental conditions to cover the existing gap in research.

Additionally, disorders that affect those on digital platforms can be described when analysed closely as adhesion disturbances resulting in detachment from shared societal settings with a modal structure of intentionality rooted in our presence in our social and digital world. As a result, the findings of this research should be a call to start looking for foundational causes of these disorders that arise on social media platforms outside of emotional contagion explanation. Finally, research is urgently needed to address the pathogenesis of such disorders affecting participants on digital platforms where purposeful recovery is central to intervention.

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