Mimetic Contagion and Social Bonds: an Approach from Biological Naturalism

Contagio mimético y vinculación social: una aproximación desde el naturalismo biológico

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Resumen

El contagio mimético sigue generando miedo en las sociedades democráticas actuales, lo que provoca un rechazo a la mimesis como productora de vínculos sociales. Sin embargo, desde la perspectiva del naturalismo biológico, la mimesis se toma como un fenómeno evolutivo propio de nuestra especie y de muchas otras, lo que permite mostrar un vínculo mucho más complejo entre ella y los afectos. A partir de tales coordenadas, este artículo defiende la necesidad de entrenar nuestras habilidades miméticas para, paradójicamente, resistir mejor a los efectos de contagio o arrastre mimético y ensanchar los horizontes de vinculación social.

Palabras clave: *Contagio mimético, naturalismo biológico, ficción, empatía.*

Abstract

Mimetic contagion continues to instill fear in contemporary democratic societies, resulting in a rejection of mimesis as a producer of social bonds. However, from the perspective of biological naturalism, mimesis is recognized as an evolutionary phenome-non intrinsic to our species and many others, facilitating a more nuanced understanding of its relationship with affect. This paper advocates for the necessity of training our mimetic skills to paradoxically enhance our ability to resist the effects of mimetic contagion and to expand the horizons of typical social bonds.

Keywords: *Mimetic contagion, biological naturalism, fiction, empathy.*

Introduction: Bonding by contagion

Mimetic contagion is one of the oldest forms of connection between speakers and followers, political leaders and spectators. The current rise of the far right (a problem compounded by the rise of inequality and the precariousness of economic and professional relationships, the substitution of physical contact with virtual forms of personal connection, and the ecological unsustainability of current human and non-human relationships) brings mimetic contagion —between a leader model and their followers— back to the forefront.

Mimetic contagion is characterized by the rapid and spontaneous transmission of emotions —such as rage or panic— through mimesis among individuals, unites the crowd to a leader, transforming a mass of individual bodies into a collective force with its own purpose and direction[1]. Mimetic contagion has been the subject of critique, particularly for its association with cycles of mass violence, which are difficult to interrupt (the works of Le Bon[2], Tarde[3], Canetti[4] and Girard[5] are the most representatives on this issue). Additionally, it has been criticized for its tendency to provoke a temporary suspension of seriousness and responsible self-control, the alignment of individual impulses with ritualized behaviors, and the general psychological weakening of individual autonomy (as Adorno[6] put it). In a politically apathetic society, mimetic contagion assumes a particularly significant role in mobilizing the violent passions of the masses —such as anger, rage, and panic— while simultaneously fostering hope for change through a leader who positions himself as a rule-breaker, openly defying taboos that continue to bind ordinary citizens.

These types of analyses tend to emphasize, with some exceptions like Tarde, the negative aspect of mimesis, fostering fear or aversion toward it. The central concern lies in how imitation can suppress individuality and promote blind conformity to social norms or collective emotions. By focusing on the risks of mimesis, such as the loss of autonomy or emotional contagion, these perspectives often overlook its positive aspects, like social learning or empathy. As a result, an unbalanced perception is created, where imitation is viewed almost exclusively as a threat rather than a potentially beneficial process.

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1 Gibbs, A., "Panic! Affect Contagion, Mimesis and Suggestion in the Social Field", *Cultural Studies Review* 14, n.o 2 (1970), https://doi.org/10.5130/csr.v14i2.2076.

2 Le Bon, G., *The Crowd: A Study of the Popular Mind*, London, T. Fisher Unwin, 1903 [1895].

3 Tarde, G., *Les lois de l'imitation: Étude sociologique*, Francia, Adamant, 2003.

4 Canetti, E., *Crowds and Power*, New York, Farrar, Straus and Giroux, 1984.

5 Girard, R., *To Double Business Bound*, Baltimore, Johns Hopkins University Press, 1988.

6 Adorno, T. W., "Freudian theory and the pattern of fascist propaganda", *The Frankfurt School Reader* (eds. Arato, A., and Gebhardt, E.), New York, Urizen Books, 1978, 118–137.

But, is it possible to conceive of alternative forms of mimetic bonding? Can mimesis have another relation to affection, beyond its traditional association with mobs, mass violence, and the libidinal identification with a charismatic leader? This paper argues that such an alternative is indeed possible, aligning with research in anthropology and philosophical anthropology that highlights the positive dimensions of mimesis. Notably, mimesis plays a crucial role in the social transmission of knowledge, as well as in processes of socialization and the creation of new cultural forms (as argued by Wulf & Gebauer[7], drawing on Tarde). Furthermore, it has been shown to operate not only in the adoption of inherited norms within colonial and postcolonial contexts, but also in their critical subversion and as a form of resistance[8]. Lastly, mimesis contributes to the reconfiguration of meaning in art[9] and narrative[10]. Across these examples, the mimetic phenomenon is crucially linked to a dimension of otherness and difference, rather than being confined solely to the dynamics of sameness and resemblance.

I will approach this issue, however, from a perspective different from that of the authors cited above. Specifically, I will adopt the framework of biological naturalism, to which I will dedicate the first section in order to explain its key elements. I will then apply this perspective to the problem of mimesis and emotional contagion (Section II) and advocate for the importance of training in mimetic activities for resisting emotional contagion (section III). Finally, in the last section, I will synthesize some conclusions.

1. Biological Naturalism

Biological Naturalism is a methodological framework for those seeking to understand the reasons, mechanisms, and timing behind the development of complex cultural and social capacities in humans, all while acknowledging their biological condition. Initially articulated by Searle[11], this concept is further developed and refined by Jean-Marie Schaeffer[12], who views it as a tool for countering human exceptionalism. By grounding human capabilities within an evolutionary context, Biological Naturalism encourages a comprehensive analysis of human behavior that integrates insights from biology, anthropology, and philosophy, promoting a more nuanced understanding of human nature.

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7 Gebauer, Gunter & Wulf, Christof, *Mimesis: Culture Art Society*, Berkeley, University of California Press, 1996.

8 Taussig, Michael, *Mimesis and Alterity: A Particular History of the Senses*, New York, Routledge, 1993.

9 Gadamer, H.-G., *Truth and Method*, London, Bloomsbury Academic, 2013.

10 Ricoeur, Paul, *Time and Narrative, Volume 1*, Chicago, University of Chicago Press, 1990.

11 Searle, John, *Intentionality: An Essay in the Philosophy of Mind*, Cambridge, Cambridge University Press, 1983.

12 Schaeffer, J.-M., *El fin de la excepción humana*, Barcelona, Marbot Ediciones, 2009.

This methodological position was first introduced by John Searle as a solution to the mind-body problem. Searle argued that the appropriate level for studying and understanding concepts such as "mind", "consciousness", or "mental states" is the biological level[13], positing that mental states are both caused by neurophysiological processes in the brain and, at the same time, are properties of the brain itself[14]. Although Searle aimed to critically reject dualism and offer an alternative, some have argued that his biological naturalism relies on a problematic causal theory[15], which ultimately results in a dualist conception of the mind. Others[16], however, have criticized his position as reductionist, asserting that it effectively eliminates mental states in favor of their neurophysiological foundations.

Searle introduced a central aspect of Biological Naturalism: the view that mental states represent a level of life's structuration, rather than something that enables humans to transcend their biological condition[17]. In other words, he asserts that the inescapable biological nature of humans should be the starting point for any investigation into human beings, with biology as the science that defines this status. However, Searle's reliance on biology is not sufficiently argued; he often appeals to "common sense" to support his claim that evolutionary theory should be foundational in the study of mental states[18]. This approach, however, avoids addressing the deeper issue: if Biological Naturalism is to be rigorously defended, it is because, even though evolutionary theory has been incorporated into Western thought, it continues to encounter resistance.

Why is evolutionary biology chosen as the framework for defining the ontological status of human beings? Schaeffer argues for the importance of biology, emphasizing its critical role in countering one of the major misconceptions in Western thought: human exceptionalism. He explains that evolutionary theory undermines the idea that humans occupy a distinct category of entities separate from other living beings. Instead, Homo sapiens share a contingent history and genealogy with all forms of life[19]. The current state of humanity is the result of a co-dependence

[13] Searle, John, "Biological Naturalism", *The Blackwell Companion to Consciousness*, John Wiley & Sons, Ltd, 2017, 327-36, https://doi.org/10.1002/9781119132363.ch23.

[14] Ibid., p. 331.

[15] Perez Chico, David, "¿Problema, qué problema? Naturalismo biológico y el problema mente-cuerpo", *Teorema: International Journal of Philosophy* 18, n.o 1, 1999, 125-38; Arias Domínguez, Asier, "El embrollo causal del naturalismo biológico", *Daimon. Revista Internacional de Filosofía*, n. 92, 2024, pp. 131-43, https://doi.org/10.6018/daimon.458871.

[16] Corcoran, K., "The Trouble With Searle's Biological Naturalism", *Erkenntnis* 55, 2001, 307-24, https://doi.org/10.1023/A:1013386105239.

[17] Searle, "Biological Naturalism", op. cit., p. 331.

[18] Ibid., p. 327.

[19] Schaeffer, J.-M., *El fin de la excepción humana,* op. cit., p. 156.

and co-evolution with other species, both extinct and extant. Consequently, evolutionary biology serves as a powerful tool against ontological dualism. By conceptualizing Homo sapiens as part of a genealogical group of entities, characteristics such as the mind, language, social life, and cultural transmission cannot be understood as breaks in phylogenesis. Rather, they emerge as products of biological evolution.

Is this methodological stance reductionist? Do mental states merely reduce to their neurophysiological bases, as posited by various forms of physicalism? Do cultural and social behaviors reduce to their genetic foundations, as suggested by sociobiology? The biological naturalism presented here circumvents such reductionism by emphasizing the previously mentioned genealogical aspect. Social, cultural, and mental phenomena are integral components of the biological constitution —the "biogram"— of Homo sapiens, arising from a genealogy or phylogenesis where incommensurabilities do not apply. Consequently, these phenomena do not exist in a realm of reality that transcends this biological constitution[20] and, therefore, cannot be reduced to it.

Biological naturalism, therefore, provides a methodological framework for those seeking to understand the universal structures, capabilities, and behaviors that characterize Homo sapiens across different cultures and historical periods. Examples include imitation, language, fiction, and storytelling. In other words, it is beneficial for scholars who aim to develop a multidisciplinary anthropology informed by the principles of evolutionary theory. This framework imposes two methodological constraints. First, every structure or behavior must be understood as a specific level of functional integration within biological life, with its sufficient causal explanation residing in the existence of more elementary levels. Second, every structure or behavior must be regarded as an evolutionary fact, which may or may not be an adaptation, yet serves one or more functions within the context of the organism and the species —an aspect that accounts for its universality.

2. Imitation and empathy: A shared evolutionary history

Imitation has frequently been regarded as a degrading aspect of human behavior, one that brings individuals closer to their animal condition due to its perceived loss of reasoning and self-control[21]. However, this perspective operates within an exceptionalist framework, implying a discontinuity between humans and other living beings. In this view, humans, considered to occupy a superior status, would be seen as descending toward non-human animals, losing the qualities that supposedly make them unique and elevate them above their "natural" condition.

[20] Ibid., p. 206.

[21] Tomasello, Michael, *The Cultural Origins of Human Cognition*, Harvard, Harvard University Press, 2009.

Consequently, even within scientific disciplines where human exceptionalism is presumed to have been surpassed, there remains a tendency to prioritize the study of complex behaviors that underscore certain unique aspects of our species, such as theory of mind, future planning, or imitation. This focus often distances researchers from investigating so-called "simpler" behaviors, which are not only present in the phylogeny of various non-human populations, including our own.

In contrast, from the perspective of biological naturalism outlined in the previous section, we propose to understand imitation as an evolutionary phenomenon. When examining its evolutionary history, evolutionary accounts should identify the capacities that underpin the trait, discovering the timing and sequence in which these capacities emerged in our lineage. This involves not only the use of phylogenetic bracketing but also a close examination of the material record[22]. The aim is to identify the basic elements shared by all phenomena labeled as "mimetic", ultimately arriving at a broad definition of "imitation".

This approach employs a bottom-up methodology, aligned with biological naturalism, in which the search focuses on the building blocks of complex cognitive capacities, tracing the processes underlying unique evolutionary outcomes. "An outcome-based science stresses differences, whereas a focus on process makes one wonder how deep these differences go and how outcomes are achieved. […] Unique outcomes do not always reflect unique processes"[23].

There are several behaviors that fall under the term "imitation": (1) Mimicry or mirror reproduction refers to the automatic and unconscious copying of another person's gestures, expressions, or movements. This basic form of imitation helps with social synchronization, like when people unknowingly mirror each other's posture during a conversation. (2) Observational replication involves deliberately copying an action after watching someone else do it. Unlike mimicry, this is a conscious act, seen in tasks like following instructions. (3) Observational learning goes beyond simple replication, as it involves internalizing behaviors and applying them in new contexts, essential for mastering complex skills.

[22] Griffiths, Paul, "The Historical Turn in the Study of Adaptation", *British Journal for the Philosophy of Science*, 47, 1996, pp. 511-32.

[23] De Waal, Frans and Ferrari, Francesco, "Towards a Bottom-up Perspective on Animal and Human Cognition", *Trends in Cognitive Sciences* 14, n. 5, 2010, p. 202, https://doi.org/10.1016/j.tics.2010.03.003.

In the phenomenon of mimetic contagion —defined as the tendency to adopt the affective states of others[24]— it is primarily mimicry that takes place[25]. Preston and de Waal[26] identify a neural mechanism at play: a perception-action mechanism grounded in the functioning of mirror neurons. These neurons fire not only when a specific action is performed but also when another agent is observed performing the same type of action[27]. What these studies suggest, then, is that the perception of someone engaging in an action (e.g., yawning) automatically and unconsciously activates the same neural representations as if it were the observer performing the action. Perception and action are not segregated into separate compartments, not even anatomically, and the organism's interaction with its environment does not rely solely on perception —this supports neurophenomenological and 4E theories of cognition.

Instead of attempting to exhaustively reduce mimicry and all forms of imitation to this neural mechanism —as a reductionist account would do— a biological naturalist introduces a historical perspective on how and why these cognitive capacities evolved and came to be. This mechanism is just an element and a clue to understand the evolutionary history of imitation and its social functions. Mimicry emerges as an evolutionary precursor to complex forms of imitation and, even more so, as an initial means of social proximity and bonding, where a basic understanding of the other's actions occurs[28], even if subconsciously. Those "others" are, however, people who are closely related to us, such as friends, family, and others within the same social group – that is, mimicry is socially and culturally determined.

Thanks to this bottom-up perspective, Preston and de Waal[29] take another step and propose an evolutionary relationship between imitation and empathy. Not only this neural mechanism is one of the underlying processes of mimicry, but also of one of the building blocks or most basic elements of empathy – emotional contagion. As with cases of yawning and other motor mimicry, the perception of an

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[24] Hatfield, E., Cacioppo, John and Rapson, Rochard, "Emotional contagion", *Current Directions in Psychological Science* 2, n. 3, 1993, pp. 96-99, https://doi.org/10.1111/1467-8721.ep10770953.

[25] Chartrand, Tania and Dalton, Amy, "Mimicry: Its ubiquity, importance, and functionality", *Oxford handbook of human action*, New York, Oxford University Press, 2009, pp. 458-83; Chartrand, Tania and van Baaren, Rick, "Human mimicry", *Advances in experimental social psychology*, vol. 41, San Diego, Elsevier Academic Press, 2009, pp. 219-74, https://doi.org/10.1016/S0065-2601(08)00405-X.

[26] De Waal & Preston, "Towards a Bottom-up Perspective on Animal and Human Cognition", op. cit., p. 204.

[27] Chater, Nick & Hurley, Susan (eds.), *Perspectives on Imitation, Volume 1: From Neuroscience to Social Science. Mechanisms of Imitation and Imitation in Animals*, The MIT Press, 2005, https://doi.org/10.7551/mitpress/5330.001.0001.

[28] Iacoboni, Marco, "Understanding Others: Imitation, Language, and Empathy", Chater, Nick & Hurley, Susan (eds.), op. cit., pp. 77-100.

[29] De Waal, Frans and Preston, Francesco, "Empathy: Its Ultimate and Proximate Bases", *The Behavioral and Brain Sciences*, 25, n. 1, 2002, https://doi.org/10.1017/s0140525x02000018.

emotion expressed in someone face or body activates the same neural connections as the ones activated if it were I who was having that emotion. This neural mechanism, then, is not only the basis for mimicry and all forms of imitation, but also for emotional contagion and empathy as a simulation capacity or a complex ability to immerse oneself in another person, to put oneself in their place ('to step into their shoes') and thus 'virtually' explore the mental situation they are in[30]. The origins of empathy and imitation are interrelated.

This common underlying process talks about how the evolutionary history of both complex capacities are intimately interconnected. It is not only that mimicry might be one of the evolutionary origins of other forms of imitation, while emotional contagion might be one of the origins of the complex phenomenon of empathy. It is also that, given that they share a neural perception–action foundation, the answer to how and why imitation evolved is interrelated to the answer to how and why emotional simulation evolved. Their sociobiological functions are connected: they are both essential for the regulation of social interactions, coordinated activity, and cooperation toward shared goals[31]. Ultimately, what these studies present is that all forms of imitation —including motor, automatic, and involuntary imitation— serve an attempt to understand and recognize the motivations, goals, and emotions of others. Such attempts are not exclusive to humans or even to hominids, but are found in multiple species whose phylogeny seems quite distant from ours.

3. Politics of Mimesis

The naturalistic approach, which conceptualizes mimesis as an evolutionary and complex phenomenon, underscores the necessity of rejecting the fear of mimesis. Mimesis reveals a far more intricate relationship with the emotional domain than is typically emphasized in discussions of mimetic contagion. Firstly, even motor imitation —whether automatic or involuntary— exhibits a level of cognitive complexity that is often underestimated. This form of imitation is not only socially and culturally conditioned, but it also involves a bodily mapping of the action being mimicked.

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[30] This approach to empathy as simulation differs from the more classical approach, according to which empathy is a phenomenon where we become capable of attributing intentional content to others through the gradual acquisition of a theory of mind in childhood, or a set of notions whose status is that of a psychological theory. Therefore, empathizing would be a process that involves inferences, assumptions of rationality, etc., about what it means to have (or be) a mind. Our attributions of intentionality would result from the application of this theory.

[31] De Waal, Frans, "Putting the Altruism Back into Altruism: The Evolution of Empathy", *Annual Review of Psychology* 59, 2008, pp. 279-300, https://doi.org/10.1146/annurev.psych.59.103006.093625.

Furthermore, the naturalistic perspective elucidates that mimetic contagion represents an evolutionary precursor to our capacity for recognizing and understanding the actions of others, along with their motivations, goals, and emotional states. In essence, when we yawn in response to seeing a friend yawn, this act of imitation functions as a mechanism for social proximity, coordination, and cooperation, thereby enriching the broader spectrum of mimetic behaviors.

Emotional contagion through mimesis undoubtedly poses significant challenges, as the emotions and behaviors of others can unconsciously influence our reactions and decisions. This human propensity to imitate observed behaviors can distort our perceptions and result in the adoption of attitudes that do not accurately reflect our true feelings or values. In contexts of conflict or collective panic, emotional contagion has the potential to amplify negative emotions, thereby intensifying chaos. Furthermore, it can undermine our capacity for critical judgment, leading us to make impulsive or erroneous decisions based more on external influences than on our own reflective processes. This phenomenon highlights the need for greater awareness of the impact of mimetic behaviors on our emotional landscape and decision-making processes.

However, this should not lead to a wholesale rejection of mimesis. On the contrary, the correlation between imitation and emotional simulation (or empathy) transforms imitation into a powerful tool against mimetic and emotional contagion. Various forms of imitation consistently serve as a means of training the "simulation muscle". True imitation is not only a fundamental pathway for acquiring technical skills, where the hierarchical structure of an action is simulated or modeled[32], but it also facilitates the simulation or modeling of the emotional state of the individual being imitated —so much so that one can come to genuinely experience those emotions themselves.

This perspective highlights the dual nature of imitation: while it can propagate emotional contagion, it also fosters a deeper understanding of others' experiences and enhances our empathetic capacities. Thus, engaging in imitation can serve as both a mechanism for learning and a means of emotional connection, ultimately enriching interpersonal relationships.

Probably, the most powerful way this occurs is through the capacity for fiction, where a "universe" or isomorphic model of reality is created, and a shared playful pretense is adopted concerning everything that happens within it[33]. Through fiction, humans generate spaces in which to explore situations, actions, and emotions

[32] Byrne R, and Russon, A., "Learning by Imitation: A Hierarchical Approach", *The Behavioral and Brain Sciences* 21, n. 5, 1998, https://doi.org/10.1017/s0140525x98001745.

[33] Schaeffer, J.-M., *Why Fiction?*, Nebraska, University of Nebraska Press, 2010, p. 215.

without the risk of suffering the direct consequences of enacting them in the social game.

Moreover, we explore the limits of our empathy and the factors that determine it —examining to whom we feel empathy and to whom we do not, as well as the reasons behind these feelings[34]. This serves as an exercise in emotional education that would, however, be impossible to carry out without a certain degree of automatic emotional contagion or commitment that drives us to engage in the simulation.

4. Conclusions

Through the methodology of biological naturalism and a bottom-up perspective, the critique of mimesis due to its necessary relationship with emotional contagion is called into question. Emotional contagion and mimicry emerge as evolutionary origins of empathy and imitation (including fiction), phenomena that have evolved concurrently not only in our species but in many others, fulfilling a fundamental role in social coordination and cooperation.

This correlation between mimetic and empathetic phenomena suggests that, in the face of situations involving contagion or social pull, the most effective way to prepare individuals to resist being swept away is not through the outright denial of mimesis but rather through its training. The development of capacities for imitating actions and emotions enhances the potential for resisting automatic identifications, thereby allowing for more complex forms of social bonding.

[34] Nussbaum, Martha, *Poetic Justice: The Literary Imagination and Public Life*, Beacon Press, 1995.

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