National Technical University of Athens
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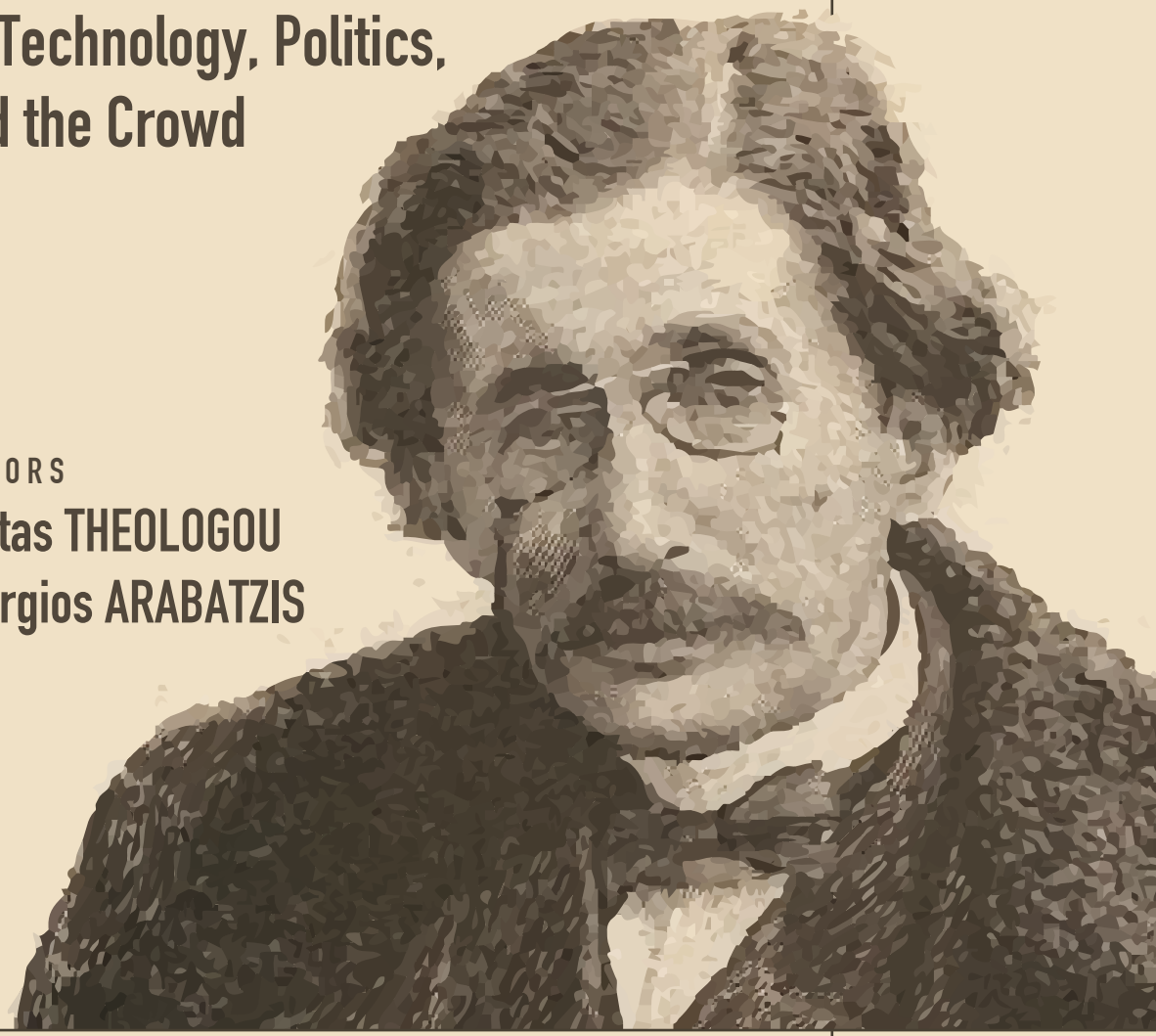
Gabriel Tarde

on Technology, Politics, and the Crowd



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GABRIEL TARDE ON TECHNOLOGY, POLITICS, AND THE CROWD

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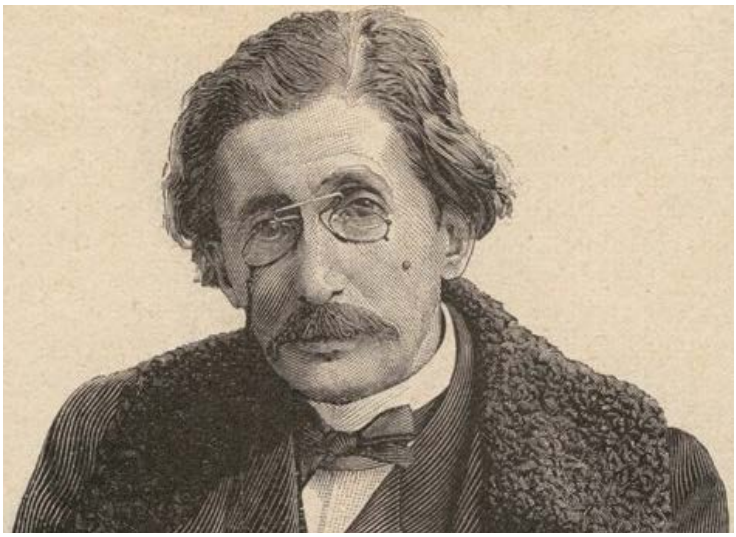
INTRODUCTION

GABRIEL TARDE: A REAPPRAISAL OF HIS CONTRIBUTIONS TO SOCIOLOGY

Kostas THEOLOGOU



French sociologist and social theorist Gabriel Tarde
Photo: Eugène Pirou/Bibliothèque interuniversitaire de santé), available at: https://editoraunesp.com.br/blog/classicos-do-catalogo-monadologia-e-sociologia-de-gabriel-tarde (accessed on June 10, 2025)

Gabriel Tarde (1843-1904) was a pivotal yet often underappreciated figure in nineteenth-century French sociology. Positioned alongside contemporaries such as Auguste Comte, Frédéric Le Play, and Émile Durkheim, Tarde distinguished himself through his empirical rigor and theoretical originality. While Comte emphasized positivism and Durkheim the primacy of social facts, Tarde foregrounded the significance of individual psychological processes and micro-level interactions as foundational to social life.[1, 2]

Tarde's marginalization within the French intellectual establishment was partly due to his provincial career, which kept him away from the academic and political centers of Paris. Moreover, his moderate religious views and political detachment rendered him an outlier in an age marked by ideological extremism.[3] Despite this, his criminological work gained considerable recognition, particularly for its critique of the biological determinism espoused by Cesare Lombroso and the Italian school of criminology.[4, 5]

His major theoretical contributions are encapsulated in three works: *Les lois de l'imitation* (1890), *La logique sociale* (1895), and *L'opposition universelle* (1897). These texts articulate a general theory of society grounded in three interrelated processes: invention, imitation, and opposition. Tarde proposed that social innovation originates in individual creativity (invention), proliferates through replication (imitation), and is modulated by resistance or conflict (opposition), offering a dynamic framework for understanding cultural transmission and social change.[6]

1 Clark, T. N. (Ed.). (1969). *Gabriel Tarde on communication and social influence*. Chicago: University of Chicago Press.
2 Katz, E. (2006). *Theorizing diffusion: Tarde and Sorokin revisited*. *The Annals of the American Academy of Political and Social Science*, 608(1), 144-155. https://doi.org/10.1177/0002716206292341
3 Deflem, M. (2005). *The reception of Michel Foucault in American sociology, 1977–2004*. *The British Journal of Sociology*, 56(4), 678–701. https://doi.org/10.1111/j.1468-4446.2005.00085
4 Tarde, G. (1886). *La criminalité comparée*. Félix Alcan.
5 Tarde, G. (1890). *Les lois de l'imitation*. Félix Alcan.
6 Rogers, E. M. (1962). *Diffusion of innovations*. Free Press.

Introduction and biographical background

Gabriel Tarde occupies a significant yet often overlooked position within the canon of classical sociology. Alongside figures such as Auguste Comte, Frédéric Le Play, and Émile Durkheim, Tarde contributed profoundly to the development of sociological theory in nineteenth-century France. However, unlike his more widely recognized contemporaries, Tarde has remained relatively marginalized in the sociological discourse. This marginalization can be attributed to several factors, including his geographical and institutional detachment from Parisian academic circles and his ideological nonalignment with dominant currents of the time.[7]

Born in Sarlat, a secluded town in southwestern France, Tarde was the only child of a noble family with deep regional roots dating back to the Middle Ages. His father, a judge, died during Tarde's early childhood, leaving him to be raised by a devoted and sensitive mother. Tarde's early education took place in a Jesuit institution, where he received a strict classical training. Reflecting on this experience, Tarde later argued that classical education plays an essential integrative role for elite groups, fostering a common cultural framework necessary for national cohesion.[8] Although he initially aspired to study mathematics and science at the prestigious École Polytechnique, an eye disease forced him to alter his plans. Tarde subsequently pursued legal studies, enrolling first at the University of Toulouse and later completing his final year in Paris. Upon obtaining his degree, he returned to Sarlat and embarked on a legal career as a magistrate. From 1869 to 1894, he served in various judicial capacities within the region. His decision to remain in the provinces –motivated by filial loyalty and personal preference– undoubtedly limited his visibility within the Parisian intellectual milieu but allowed him the time and financial security to develop his theoretical system.[9]

Tarde's intellectual influences were eclectic, encompassing the rationalism of Leibniz and Hegel, the probabilistic thought of Cournot, and the evolutionary sociology of Herbert Spencer. By 1875, he had formulated the foundational outlines of his social theory, although he delayed publication for nearly a decade.[10]

From Criminology to Sociological Theory

Tarde initially gained recognition not as a sociologist but as a criminologist. His early works, including *La criminalité comparée* (1886) and *La philosophie pénale* (1890), were widely praised and established him as a leading figure in French criminology.[11] During this period, he published numerous shorter essays on criminal behavior and penal theory, and in 1893 he became co-director of the *Archives d'Anthropologie Criminelle*, a prominent interdisciplinary journal in the field. His approach to criminology was shaped by his extensive practical experience as a magistrate, where he routinely dealt with recurring patterns of criminal behavior. This led him to develop a theoretical orientation in which the concept of imitation played a central role. For Tarde, the recurrence of similar crimes pointed to the significance of social influence over biological determinism –a viewpoint directly opposed to the theories of Cesare Lombroso and the Italian school, who emphasized physiological and racial predispositions to crime.[12, 13, 14]

Tarde's opposition to deterministic biology is evident in his argument that criminality, though

7 Clark, T. N. (Ed.). (1969). *Gabriel Tarde on communication and social influence*. Chicago: University of Chicago Press, p. 360.
8 Ibid., p. 361.
9 Ibid., pp. 362-363.
10 Ibid., p. 363.
11 Ibid., p. 364.
12 Tarde, G. (1886). *La criminalité comparée*. Félix Alcan.
13 Tarde, G. (1890). *Les lois de l'imitation*. Félix Alcan.
14 Clark, T. N. (Ed.). (1969). *Gabriel Tarde on communication and social influence*. Chicago: University of Chicago Press, pp. 365-366.

it may exhibit hereditary components, is primarily a social phenomenon governed by broader societal laws. As director of criminal statistics at the Ministry of Justice following his mother's death in 1894, Tarde examined national crime data and found that virtually all categories of crime had increased steadily since the early 19th century. He interpreted this trend not as evidence of moral decline, but rather as a demonstration of his theory of imitation, particularly its geometric progression.[15]

Despite his emphasis on social causation, Tarde rejected the Durkheimian notion that crime is a "normal" and even necessary feature of social life. He regarded such views as morally untenable, insisting that responsibility for criminal behavior must rest with the individual (Clark, 1968: 367).[16] His early endorsement of severe punitive measures, including capital punishment and transportation to penal colonies, gave way to a more nuanced position as he came to recognize the ineffectiveness of such sanctions in curbing criminal activity.

After 1890, Tarde increasingly turned from criminology to broader sociological and philosophical concerns. His theoretical magnum opus unfolded across three major works: *Les lois de l'imitation* (1890), *La logique sociale* (1895), and *L'opposition universelle* (1897). These texts laid the foundation for a general sociology that emphasized the psychological mechanisms underlying social processes –especially the dynamics of invention, imitation, and opposition.[17] Tarde's later academic roles reflected the growing importance of his sociological work. After 1896, he lectured at the École Libre des Sciences Politiques and the Collège Libre des Sciences Sociales. In 1900, he was appointed to the chair of modern philosophy at the Collège de France and was subsequently elected to the Académie des Sciences Morales et Politiques.[18] These appointments, however, came relatively late in life and did little to elevate his status above that of Durkheim, whose institutional influence far surpassed his own.

Tarde's General Theory: Invention, Imitation, and Opposition

At the heart of Gabriel Tarde's sociological thought lies a psychological theory of social interaction that centers on three interrelated processes: invention, imitation, and opposition. These concepts constitute the foundation of his general theory of society, most systematically articulated in his trilogy: *Les lois de l'imitation* (1890), *La logique sociale* (1895), and *L'opposition universelle* (1897). According to Tarde, society is not a sui generis entity as Durkheim maintained, but rather the cumulative result of individual interactions shaped by psychological forces.[19]

Tarde's point of departure is what he termed "intermental activity" –the dynamic interplay of beliefs and desires among individuals. In this framework, human personality evolves through the continual psychological negotiation between internal cognitive and affective materials. This psychologistic orientation marked a stark departure from the Durkheimian emphasis on collective representations and structural determinism.[20]

INVENTION

For Tarde, all social innovation originates from invention, which he defines as novel combinations of existing ideas generated within individual minds. Drawing inspiration from Darwinian adaptation, he regarded invention as a human counterpart to biological mutation: a creative mechanism through which individuals respond to environmental challenges.[21, 22] However,

15 Ibid., p. 367.
16 Ibid., p. 367.
17 Ibid., p. 368.
18 Ibid., p. 369.
19 Ibid., p. 369.
20 Ibid., p. 370.
21 Tarde, G. (1890). *Les lois de l'imitation*. Félix Alcan.
22 Clark, T. N. (Ed.). (1969). *Gabriel Tarde on communication and social influence*. Chicago: University of Chicago Press, p. 371.

he also posited limits to human creativity, arguing –based on Francis Galton's studies in *Hereditary Genius*– that a society 's collective capacity for innovation is constrained by the cognitive abilities of its members. In general, a more populous society, by increasing the number of interpersonal interactions, enhances the likelihood of inventive breakthroughs (Clark, 1968: 371).[23]

IMITATION

The process of imitation is central to Tarde's explanation of social continuity and change. Although countless inventions are produced, only a few attain wide acceptance. Tarde thus directed analytical attention to the mechanisms that govern the diffusion of innovations. He observed that imitations tend to follow a geometric progression, spreading from their point of origin outward in concentric circles, analogous to ripples on a pond.[24, 25] Importantly, this diffusion is subject to environmental "refraction", a metaphor borrowed from physics to describe how material, biological, and above all social contexts shape the trajectory of imitation. Tarde distinguished between logical and extralogical factors influencing imitation. Logical factors include consistency with existing cultural systems –for example, a new technology is more likely to be adopted if it aligns with prevailing technological capacities.[26]

Tarde identified three principal extralogical factors. First, imitation typically proceeds from affect to cognition to behavior. That is, people tend to adopt ideas or practices initially through emotional resonance, followed by intellectual acceptance, and finally behavioral conformity. Second, the prestige hierarchy determines imitation's directionality: innovations from socially superior actors are more likely to be imitated than those from inferiors. Third, receptivity to innovation varies cyclically; sometimes societies prefer traditional, proven elements, while at other times they gravitate toward novelty and the avant-garde. This fluctuation affects all societal domains –language, religion, economy, politics, and the arts (Clark, 1968: 373-374).[27]

OPPOSITION

In *L'opposition universelle* (1897), Tarde extended his theoretical system by incorporating the concept of opposition. He argued that conflict, whether physical, biological, psychological, or social, is a necessary counterbalance to imitation and invention. Physical conflict pertains to energy and motion; biological conflict relates to species evolution; and psychological conflict –the internal clash of contradictory ideas or desires– serves as a fertile ground for creativity.[28, 29]

Social opposition arises when competing innovations meet and interact. The intensity of such conflict varies across institutional realms. Tarde suggested that while moral disagreements tend to be diffuse and personal, economic conflicts are more structured, and political conflicts, particularly international ones, are the most intense and consequential. The greater the societal adjustment required by an innovation, the more intense the opposition it provokes.[30]

This triadic framework –encompassing invention, imitation, and opposition – enables a dynamic view of society as a field of psychological interactions, subject to patterns of diffusion and disruption. Tarde's theory thus provides an early precursor to modern studies of cultural transmission, social movements, and innovation systems.

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23 Ibid., p. 371.
24 Tarde, G. (1890). *Les lois de l'imitation*. Félix Alcan.
25 Clark, T. N. (Ed.). (1969). *Gabriel Tarde on communication and social influence*. Chicago: University of Chicago Press, p. 372.
26 Ibid., p. 373.
27 Ibid., pp. 373-374.
28 Tarde, G. (1897). *L'opposition universelle: Essai d'une théorie des contraires*. Félix Alcan.
29 Clark, T. N. (Ed.). (1969). *Gabriel Tarde on communication and social influence*. Chicago: University of Chicago Press, p. 375.
30 Ibid., pp. 376-377.

Empirical methodology and measurement in Tarde's work

Unlike many of his contemporaries who were primarily engaged in speculative system-building, Gabriel Tarde consistently sought empirical validation for his theoretical constructs. Although constrained by the limitations of data collection technologies of his time, he attempted to develop methods for the operationalization and measurement of the core processes in his social theory –namely, invention, imitation, and opposition.[31]

Tarde recognized the inherent difficulties in scientifically analyzing invention, which he viewed as a psychological and inherently individualized process. He believed that invention could only be studied indirectly –primarily through historical or archaeological analysis of the socio-cultural contexts in which new ideas emerged.[32] For instance, the discovery of tools or texts from ancient civilizations could, in his view, provide partial insight into the mental configurations that enabled early innovations. In contrast, the phenomena of imitation and opposition were more amenable to empirical study, particularly through statistical methods. Tarde's appointment as director of criminal statistics at the Ministry of Justice afforded him access to large datasets, which he used to trace patterns of social behavior. He favored time-series analysis over cross-sectional studies, arguing that temporal progression reveals more about the mechanisms of diffusion than static breakdowns by region, gender, or occupation. For Tarde, the spread of innovations through socially homogeneous environments should, in the absence of opposition, follow a geometric progression –a model that could be empirically tested. Deviations from this expected pattern signaled the presence of "refraction" or resistance from alternative innovations or systemic obstacles.[33]

Tarde was sharply critical of the deficiencies in governmental statistical reporting. He lamented the paucity of reliable quantitative indicators for key cultural variables such as moral values, religious participation, scientific output, and linguistic transformation. He maintained that these were far more important for social analysis than the conventional statistics available at the time, which focused on demography, commerce, and crime.[34]

One of Tarde's most prescient insights concerns the measurement of public opinion. Although writing decades before the advent of modern survey techniques, he anticipated many of their essential features. In *Les lois de l'imitation*, he remarked: "*Psychological statistics alone, recording the rise and fall of an individual's particular beliefs and desires, would give, if they were practically possible, the deeper meanings behind figures provided by ordinary statistics*".[35, 36] In the absence of such refined tools, he suggested using behavioral proxies –such as church attendance, charitable donations, book sales, newspaper circulation, and electoral patterns– as rough indicators of prevailing beliefs and desires. Tarde even envisioned the creation of a device that could quantitatively assess what he called the "psychic raw materials" of belief and desire. Such a device, he proposed, would aggregate individual attitudes into a measure of public opinion –a remarkable conceptual anticipation of modern attitude surveys and public opinion polling.[37]

Despite the limitations of the empirical resources available to him, Tarde's methodological orientation remains notable for its emphasis on psychological depth and historical dynamism. His ambition to unify theoretical abstraction with empirical specificity continues to resonate with contemporary scholars of social theory and methodology.

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31 Ibid., p. 378.
32 Ibid., p. 379.
33 Ibid., p. 379.
34 Ibid., p. 380.
35 Tarde, G. (1890). *Les lois de l'imitation*. Félix Alcan, p. 115.
36 Clark, T. N. (Ed.). (1969). *Gabriel Tarde on communication and social influence*. Chicago: University of Chicago Press, p. 380.
37 Ibid., p. 381.

Substantive contributions

MASS COMMUNICATION AND PERSONAL INFLUENCE

Gabriel Tarde was one of the earliest theorists to recognize the sociological importance of emerging modes of communication in the modern industrial society. His reflections on the telegraph, telephone, printed invitations, and most notably the mass-circulation newspaper positioned him as a foundational thinker in the sociology of mass media.[38] He understood that such technologies were not merely tools for transmitting information but transformative agents that reshaped patterns of social integration, cultural diffusion, and public consciousness.

Tarde argued that before the printing press, communication and social control were exercised largely within local, traditional groups such as families, villages, and occupational guilds. The development of the newspaper, however, enabled the formation of "publics" –aggregates of dispersed individuals who, exposed to the same messages, developed a shared self-consciousness. In this way, newspapers facilitated the emergence of secondary associations, including political parties, national professional organizations, and modern religious institutions.[39]

He perceived two primary effects of mass communication. First, newspapers functioned as integrative mechanisms that extended loyalties beyond parochial affiliations to national and international domains. Second, they acted as civilizing and rationalizing forces, fostering broader and more abstract forms of social coordination (Clark, 1968: 383).[40]

Tarde's view of communication as a two-level process was especially prescient. In *L'opinion et la foule* (1901), he famously remarked, "*If people did not talk, it would be futile to publish newspapers … they would exercise no durable or profound influence; they would be like a vibrating string without a sounding board*".[41, 42] This metaphor anticipates what communication theorists Katz and Lazarsfeld would later formalize as the "two-step flow of communication", wherein mass media exert influence through interpersonal channels and opinion leaders who mediate and adapt messages for specific audiences.[43]

Tarde's principle of imitation undergirds this model of personal influence. Innovations –whether ideas or behaviors– originating through mass media are disseminated via interpersonal networks, with diffusion typically proceeding from individuals of higher to lower social prestige. Thus, social hierarchies and informal leaders play a critical role in shaping how media messages are interpreted and acted upon.[44]

These insights remain highly relevant today in an age dominated by digital media, where similar dynamics of elite influence, networked diffusion, and affective reception persist. Tarde's work anticipates much of contemporary research in media sociology, opinion formation, and political communication.

POLITICAL SOCIOLOGY

Gabriel Tarde's reflections on political structures and processes, particularly in *Les transformations du pouvoir* (1899), constitute a significant yet underexplored contribution to the early development of political sociology. Tarde viewed political institutions not as autonomous entities, but as derivative expressions of broader societal patterns shaped by interaction,

38 Ibid., p. 382.
39 Ibid., pp. 382-383.
40 Ibid., p. 383.
41 Tarde, G. (1901). *L'opinion et la foule*. Félix Alcan, p. 83.
42 Clark, T. N. (Ed.). (1969). *Gabriel Tarde on communication and social influence*. Chicago: University of Chicago Press, p. 384.
43 Katz, E. & Lazarsfeld, P. F. (1955). *Personal influence: The part played by people in the flow of mass communications*. Free Press.
44 Clark, T. N. (Ed.). (1969). *Gabriel Tarde on communication and social influence*. Chicago: University of Chicago Press, p. 384.

imitation, and innovation. For him, power arose from collective norms formed through social interaction, rather than existing as a separate domain governed by its own sui generis logic, as was suggested by thinkers like Durkheim.[45]

Tarde asserted that political innovation, like technological or cultural change, originated with elite groups that held specialized knowledge and performed unique societal functions. Political change thus required not only the presence of original ideas but also the active dissemination of those ideas by influential actors. These elites –military, economic, religious, or aesthetic– served as conduits for introducing new political forms into broader society.[46] He further argued that the mechanisms governing political diffusion adhered to the same spatial and hierarchical patterns as other social innovations. Political ideas typically radiate from urban centers to rural peripheries, and from powerful or prestigious nations to those with lesser status. For instance, the liberal and democratic ideologies of the eighteenth-century diffused outward from France and England, influencing political movements across Europe and beyond.[47]

Crucially, Tarde recognized the role of mass communication and transportation in accelerating political change. Improved communication technologies and the expansion of mass publics –especially through newspapers– created new conditions for the formation of national political parties, the organization of public opinion, and the consolidation of political ideologies. These overlapping publics, he noted, facilitated the smoother transmission of innovations and reduced the resistance typically associated with political transformation.[48]

Nevertheless, Tarde remained attentive to the inevitability of conflict in the political realm. The introduction of new political ideas often leads to opposition and social struggle, particularly when these ideas threaten entrenched interests or require substantial institutional reconfigurations. While he maintained that conflict is a natural and necessary part of political evolution, Tarde believed that the expanding scope of shared communication would, over time, promote greater consensus and political integration (Clark, 1968: 386-387).[49] In many respects, Tarde's approach anticipates later developments in political sociology that emphasize the role of elite circulation, media influence, and cultural diffusion in shaping political life. His insistence on grounding political phenomena in general social processes marked an important departure from more rigid institutional or structural-functional analyses.

THE SOCIAL PSYCHOLOGY OF ECONOMICS

Gabriel Tarde's economic thought, principally articulated in his two-volume *Psychologie économique* (1902), represents an original attempt to construct a sociologically and psychologically informed account of economic behavior. In contrast to classical economists who treated market activity as rational and autonomous, Tarde situated economic phenomena within a broader matrix of social interaction, symbolic communication, and cultural values.[50] His analysis anticipated major themes in later economic sociology, including the social construction of markets, the cultural underpinnings of value, and the importance of trust and affect in exchange relations.

One of Tarde's central arguments was that economic processes such as price formation, investment decisions, and market coordination depend not merely on supply and demand, but on a set of collective understandings and shared cultural assumptions. For these social conventions to develop, he argued, individuals must possess sufficient leisure time, which allows for informal social interaction –the primary medium through which values are gen-

45 Ibid., p. 385.
46 Ibid., p. 385.
47 Ibid., p.p. 385-386.
48 Ibid., p. 386.
49 Ibid., pp. 386-387.
50 Ibid., p. 388.

erated and transmitted.[51] Tarde thus linked economic innovation to social stratification and leisure inequality. He contended that creative economic developments typically emerge from elite groups with greater leisure time and social capital, which afford them the opportunity to engage in reflective thought and experimentation. In this sense, economic progress is analogous to other forms of invention in Tarde's theory and is likewise diffused through imitation.[52] He warned that excessive equalization of leisure across society could potentially weaken a nation's creative and adaptive capacity, although he acknowledged exceptions to this rule – citing the case of the United States, where relatively broad access to education and mobility seemed to sustain a high level of innovation[53]

Another of Tarde's significant insights was his understanding of labor unions and collective bargaining as extensions of the expanding "publics" made possible by modern communication. While acknowledging that unions could increase short-term conflict between labor and capital, he foresaw their potential to integrate workers into broader networks of public discourse and institutional negotiation. This integrative function, he believed, would ultimately lead to greater social harmony, as diverse social actors became linked through shared communicative practices and values.[54] In sum, Tarde's economic sociology was grounded in a theory of interaction and diffusion. Markets, prices, and consumption patterns were not, for him, reducible to impersonal mechanisms or mathematical models; rather, they were dynamic outcomes of interpersonal imitation, elite influence, and fluctuating social desires. This view positioned him well ahead of his time, anticipating the behavioral and cultural turns in both economics and sociology.

CRIMINOLOGY AND PENOLOGY

Tarde's earliest academic reputation was built on his contributions to criminology and penology, which preceded the full articulation of his sociological theory. His foundational texts –*La criminalité comparée* (1886) and *La philosophie pénale* (1890)– as well as his extensive editorial and statistical work with the French Ministry of Justice, positioned him as one of the most influential criminologists of his time.[55]

Tarde's criminological work developed in deliberate opposition to the biologically reductionist theories popularized by Cesare Lombroso and the Italian school of criminal anthropology. While Tarde acknowledged in his early writings that heredity and racial factors could predispose individuals toward criminal behavior, he ultimately came to reject any deterministic framework that treated crime as a purely biological phenomenon.[56] Instead, he maintained that criminality was fundamentally a social phenomenon, explicable by the same mechanisms –particularly imitation– that governed all human behavior.

As director of criminal statistics at the Ministry of Justice, Tarde had access to longitudinal data showing a steady increase in virtually all categories of crime since the early 19th century. He interpreted this not as evidence of moral decay or social collapse, but as a demonstration of his theory that social behaviors, including criminal acts, spread through imitation in geometric progression. Unlike Durkheim, who argued that crime was a "normal" and even functional element of society, Tarde viewed this assertion as morally irresponsible. He held that criminal behavior, while socially patterned, could never be fully excused or normalized. Responsibility, he insisted, must remain with the individual perpetrator. This emphasis on individual agency distinguished Tarde's theory from more structuralist or deterministic approaches and underscored his broader psychological orientation. [57]

51 Ibid., p. 388.
52 Ibid., pp. 388-389.
53 Ibid., p. 389.
54 Ibid., p. 389.
55 Ibid., p. 390.
56 Ibid., pp. 390-391.
57 Ibid., p. 391.

Tarde's views on penal policy evolved significantly over time. Early in his career, he supported harsh penalties including capital punishment and transportation to penal colonies. However, as he examined the statistical evidence more closely, he concluded that there was virtually no correlation between the severity of punishments and actual crime rates. This led him to adopt a more reform-oriented stance, emphasizing preventive and rehabilitative approaches over retributive justice.[58]

Although Tarde's later writings focused primarily on sociological and philosophical questions, his criminological ideas have had lasting influence. He was among the first to formulate a sociologically grounded theory of criminal behavior that emphasized psychological mechanisms, cultural transmission, and social context. His emphasis on the spread of criminal behavior through social learning paved the way for later developments in criminology, including differential association theory and subcultural theories of deviance. Even decades after his death, criminologists such as Davidovitch (1963)[59] continued to cite Tarde's work as a foundational source of hypotheses and insights, particularly regarding the diffusion of delinquent behavior and the social construction of criminal norms. Tarde's work thus continues to resonate in contemporary criminological theory, especially in the context of efforts to understand crime as a socially embedded and culturally mediated phenomenon.

Assessment and legacy

Early critiques of Gabriel Tarde's work predominantly centered on ontological objections. Critics mainly challenged his foundational assumption that society constitutes merely an aggregate of individuals, in contrast to Émile Durkheim's conception of society as a *sui generis* reality. During Tarde's intellectual milieu, particularly in France, the dominant preoccupation among social scientists lay in ontological debates rather than the development of a systematic science of human behavior.

Contemporary scholarship tends to prioritize an examination of Tarde's empirical sociological contributions over his broader philosophical stance on social science. From this vantage point, a notable limitation in Tarde's oeuvre is his recurrent tendency to rationalize contradictory or problematic data through tenuous interpretations that favor his theoretical framework –a strategy arguably facilitated by his accessible literary style. Such an approach often shielded him from critically reassessing the adequacy of his conceptual formulations. Moreover, like many intellectuals of his era, Tarde uncritically embraced prevailing notions of evolutionism and race. His concept of "transformationism" represented a nuanced and moderated evolutionary theory; yet, in the latter part of his career, he acknowledged an overreliance on biological explanations in his earlier writings.

Methodologically, Tarde consistently privileged the historical approach over comparative analysis. This preference reflected his theoretical emphasis on dynamism and a relative disregard for collective social factors. A more robust engagement with comparative methodologies might have compelled greater recognition of certain systemic limitations within his framework. Tarde's enduring scholarly legacy can be discerned principally across three domains: criminology, social interaction theory, and diffusion processes. His criminological analyses have arguably attracted sustained scholarly attention, continuing to inspire hypotheses within contemporary criminological research.[60] At a time when disciplinary boundaries fostered mutual skepticism—psychologists adopting an anti-sociological stance, and sociologists an anti-psychological one –Tarde's insights into social interaction and its effects on individuals,

58 Ibid., pp. 391-392.

59 Davidovitch, A. (1961). Criminalité et répression en France depuis un siècle. *Revue Française de Sociologie*, *2*(1), 30. Similar findings also in Davidovitch, A., & Boudon, R. (1964). Les mécanismes sociaux des abandons des poursuites. *L'Année Sociologique*, *15*, iii.

60 Davidovitch, A. (1961). Criminalité et répression en France depuis un siècle. *Revue Française de Sociologie*, *2*(1), 30.

groups, and society provided foundational perspectives that contributed significantly to the emergent field of social psychology. For instance, E. A. Ross explicitly credited Tarde with many foundational ideas articulated in his *Social Psychology*.[61]

Furthermore, Tarde's perceptive analysis of the multifaceted diffusion of innovations across diverse social systems yielded principles that remain salient for current scholars investigating diffusion phenomena.[62] For specialists across the social sciences, engaging with Tarde's writings remains an intellectually enriching endeavor, demonstrating the intellectual agility that the French term *esprit d'athlète* aptly captures.

OVERVIEW OF CHAPTERS

In Chapter 01 of this book, Alain Alcouffe, Professor Emeritus at Université de Toulouse, discusses the 21st century rediscovery of Tarde's work mainly in sociology or other social studies, emphasizing the relevance of some of his ideas to current research in economic psychology and behavioral economics. In the second chapter, Georgios Arabatzis, Professor at the National, Kapodistrian University of Athens, examines the literary Byzantinism, arguing that moralism is completely separated from moral determinations and moral facts in a monadological universe. In Chapter 03, Frank, A. Coutelieris (Professor at University of Patras) and Antonis Kanavouras (Ministry of Education) present a mathematically proven approach to scientific field research, focusing on exploring the "mechanisms" of innovation. They propose the introduction of "new productive combinations", made possible by utilizing previous knowledge in a well-defined analytical-combinatorial way. In Chapter 04, Spyros Gangas of the Deree-The American College of Greece, is focusing on Tarde's homologies with Simmel. This proposed affinity is justified because Tarde's communicative cornucopia is not dissimilar to Simmel's proliferation of individuated spheres of life and secondly, because both Tarde and Simmel ground sociology on naturalistic templates. In the fifth chapter, Fani Giannousi, post doc researcher in the School of Political Sciences at the Aristotle University of Thessaloniki, discusses how Tarde poses the problem of the constitution of values and norms, departing from the government of affects and highlights how this foregrounding of affect is currently used as a way to reanimate social and political theory and a tool explore pressing political problems.

In Chapter 06, Professor Panayotis Michaelides and Professor Kostas Theologou (National Technical University of Athens) show that the certain elaborations of Tarde may be traced throughout Joseph Schumpeter 's works, since the French social philosopher and theoretician delivered a theory of Social Evolution based on Technological Change as its driving force, closely related to the profiteering function of the economy. In Chapter 07, Professor Kostas Theologou underlines the Laws of Imitation and invention as Tarde's most significant contribution to the linking between technology and society and claims that the core concepts of imitation, repetition, similitude of the masses are interwoven to foster wider social transformations, even promote new social Paradigms. In Chapter 08, Alexia Sofia Papazafeiropoulou, post-doc researcher at National Technical University of Athens, examines the commonalities of central arguments in Gabriel Tarde's work *Monadology and Sociology* with contemporary sociological analyses of Mobility. In the ninth chapter of the volume, Nikos Psarros, Prof. Dr. at Universität Leipzig, describes the philosophical significance of the monadological approach to ontology and presents some basic elements of the monadological tradition, which has its roots in the philosophies of Plato and Aristotle, and, building on the pillar of Spinozism and Leibniz's monadology, still exerts a great influence on modern philosophical discourse. In Chapter 10, Spyridon Stelios, Teaching and Research Associate at National Technical University of Athens, discusses the main *modus ponens* that underlines Tarde's *Monadology and*

61 Ross, E. A. (1908). *Social Psychology : An out-line and source book*. Macmillan.
62 Rogers, E. M. (1962). *Diffusion of innovations*. Free Press.

Sociology claim that if we observe any phenomenon, then we observe a society. Finally, in Chapter 11, Katerina Vassilikou, Director of Research at Research Centre for Greek Society of the Academy of Athens, argues that Tarde's work can be an inspiration for biographical analysis to understand recent migratory phenomena such as migrant networks, migrant-transnational family as well as the individual strategies of migrants.

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CHAPTER 01

GABRIEL DE TARDE BETWEEN POLITICAL ECONOMY AND SOCIOLOGY

Alain ALCOUFFE

ABSTRACT

During most of the 20th century Tarde was mostly in relationship with the development of criminology, or the birth of sociology and he very rarely related to economics. For example, Schumpeter is the only one to cite his name alongside with other French pioneers of sociology without devoting any developments to his works. The rare articles which were devoted to him used to add a complementary adjective, forgotten classic, or neglected, that indicates enough his place in the history of ideas. That is especially the case in economics where Thorstein Veblen devoted three articles to tear him immediately to pieces while it was only in 1926 that he received more attention from a rather obscure economist, Maurice Roche-Agussol. This state of the scholarship has dramatically changed in the last decades to the point that Laurent Mucchielli could speak disputedly of “tardomania” while Bruno Latour celebrates a precursor of the “actor network theory”. This new 21st century rediscovery of Tarde took place mainly in sociology or other social studies while there are only two articles devoted to Tarde’s theory of innovation in economic journals.

Keywords: sociology, economics, economic psychology, innovation, networks

INTRODUCTION

During most of the 20th century, when Tarde was mentioned, he was mostly in relationship with the development of criminology, or the birth of sociology and he very rarely related to economics. For example, if we consider three encompassing histories of economics, Gide & Rist[63] (various editions from 1913 to 1947), Schumpeter [64] 1954, or Blaug[65] (various editions from to), Schumpeter is the only one to cite his name alongside with other French pioneers of sociology without devoting any developments to his works. The rare articles which were devoted to him used to add a complementary adjective, forgotten classic, or neglected, that indicates enough his place in the history of ideas. That is especially the case in economics where Thorstein Veblen devoted three articles to tear him immediately to pieces[66] while it was only in 1926 that he received more attention from a rather obscure economist, Maurice Roche-Agussol[67]. This state of the scholarship has dramatically changed in the last decades to the point that Laurent Mucchielli could speak disputedly of “tardomania”[68] while Bruno Latour celebrates a precursor of the “actor network theory”[69]. This new 21st century rediscovery of Tarde took place mainly in sociology or other social studies while there are only two

63 Gide, C., & Rist, C. (1913). *Histoire des doctrines économiques: Depuis les physiocrates jusqu’à nos jours*. Paris : Librairie de la Société du Recueil Sirey.

64 Schumpeter, J. A. (1955). *History of economic analysis: Ed from manuscript by Elizabeth Boody Schumpeter*. London.

65 Blaug, M. (1968). Economic theory in retrospect. London: Heinemann Educational.

66 Thorstein Veblen, Review of Psychologie économique by Gabriel Tarde, Journal of Political Economy, December 1902: “On the whole, M. Tarde’s book is not a work with which economic science will have to count” (vol. 11, pp. 146–48).

67 M. Roche-Agussol, Tarde et l’économie psychologique, Revue d’histoire économique et sociale, Vol. 14, No. 1 (1926), pp. 68-114 and & p. 273-319.

68 Mucchielli Laurent (2000), “Tardomania? Réflexions sur les usages contemporains de Tarde”, Revue d’histoire des sciences humaines, vol. (3), p. 161-184.

69 Bruno Latour. Gabriel Tarde and the End of the Social. Joyce, Patrick. The social in question: new bearings in history and the social sciences, Routledge, pp.117-132, 2002.

articles devoted to Tarde's theory of innovation in economic journals.[70] That is paradoxical as currently a new branch of economics called behavioral economics placed itself at the intersection of psychology and economics exactly where Tarde pretended to be. This paper will try to overcome this paradox and highlight the complicated relationship between Tarde and economics. Section 1 presents some features of Tarde's education and training. Section 2 exposes the context of the relationship between Tarde and the economists of his time. Section 3 compares the economic ideas of Tarde and the economics of his time. Section 4 stresses the place of psychology in economics. Section 5 concludes that the 21st economics vindicate Tarde's intuitions.

I. GABRIEL DE TARDE: EDUCATION AND BACKGROUND

The infancy of a social scientist

Tarde was born in 1843 in Sarlat where his father was investigating judge. Sarlat was at this time a small town (around 6000 inhabitants) in a mostly rural region, Perigord (after the Revolution, the department of Dordogne). His father who had remarried when he was already 43 years old and she was 20, died when Tarde was only 8 and he was educated by his young mother who did not remarry. His infancy bears a strange similarity to Adam Smith 's one: Smith was also the son of a remarried father who died before his birth, and he maintained a closed connection to his mother during his entire life. But whereas Smith was sent far away of his birthplace to study, Tarde remained in Sarlat where he prepared the baccalaureate first in humanities (1860) and then in sciences in the local college run by the Jesuits. It seems that he has considered to become an engineer, but some ophthalmological illness prevented him to prepare the entrance at Ecole Polytechnique, instead he began to study law first in Toulouse where he obtained his baccalaureate in law on August 29th, 1863, and then in Paris where he moved with her mother (1865-6) and where he graduated in 1866. In between always because of his eyes, he had made a break which he devoted to study the ideas of his compatriot Maine de Biran (1766 –1824). Maine was born in Bergerac a town located at less than 50 miles from Sarlat, educated in in Périgueux, Lifeguard of Louis XVI, Inspired by Condillac and Locke. Maine de Biran had also many characteristics that could have inspired de Tarde. After some career in politics during the troubled years of the French Revolution. He withdraws from the political life to the estates he owns in Perigord. He published during his lifetime few of his works that were edited twenty years after his death by Victor Cousin. "Maine de Biran was suspicious of everything that might carry him beyond the firm ground of experience. The science he seeks to establish starts from a fact and must lead only to facts and to the laws which they obey, (Lévy Brühl[71], p. 328-9)". His health being delicate, he was watchful of the slightest changes in his physical condition and in his consciousness due to surrounding circumstances and was consequently predisposed to introspection (ibidem). Maine writes that "When one has little vitality, or but a faint conscious sense of vitality, one is more inclined to observe internal phenomena. This is why I became so early in life a psychologist" (quoted by Lévy Brühl, p.322). ''He heard the springs of the machine creaking, and he felt his thought straining or slackening with them" (*ibidem*, 393).

It is also quite possible that Tarde was initiated to political economy during his studies at the Faculty of Law in Toulouse and in Paris as the first lectures in this field were introduced pre-

70 Panayotis G. Michaelides, 2010. "Tarde's influence on Schumpeter : technology and social evolution," International Journal of Social Economics, vol. 37(5), pages 361-373, April. F. Djellal, F. Gallouj, The laws of imitation and invention : Gabriel Tarde and the evolutionary economics of innovation *Revue économiqu*e 2017/4 (Vol. 68), pages 643 à 671. Indeed, a sociologist, B. Valade has also published On Gabriel Tarde's Psychologie Économique, Chapter 4 in R. Leroux (2018). The Anthem companion to Gabriel Tarde, London, UK Anthem Press.

71 Lévy-Bruhl, L. (1994). *History of modern philosophy in France: By Lucien Lévy-Bruhl... With portraits of the leading French philosophers*. London: Kegan Paul, Trench, Trübner & Co., Ltd. Paternoster House, Charing Cross Road.

cisely at the beginning of the 1860s[72]. Anyway, contrarily to Smith who was pleased at the end of his life to pay a tribute to his professor, Francis Hutcheson, Tarde was largely an autodidact who has studied by himself "Maine de Biran, Cournot and Tocqueville" (Marcia[73], p.167). No mentor emerges from the studies of Tarde who obviously preferred the thinkers of the past to his contemporaries, while his library provides some clues on the authors that influenced him. The books he owned and annotated testify are testimonies of this vast knowledge, not only of the Classical authors but also a set of French, English, German or Italian authors pertaining to several fields, from philosophy to natural sciences, but also mysticism or poetry, a diversity that will conduct Lucien Levy-Brühl to class him in a catch-all category entitled eclecticism.[74] The variety of foreign authors present in the Tarde library does not mean that Tarde has mastered scientific languages other than French. He confesses in his last book that he does not read German and when he quotes Smith's Theory of Moral Sentiments it is in Baudrillart's translation. On the other hand, he has always shown his attachment to the language that was used in Sarlat, which he refers to as "a patois", but which he knows perfectly well that it is "the language of the troubadours". Thus, among the various orators at the ceremony marking the erection of a statue in his honor in Sarlat, there were interventions in Occitan and the animator of Le Bornat testified of his proximity to this organization focused on protecting and promoting Occitan language and culture. He was proud of his bilingualism, asserting that "The disadvantage of knowing only one language is that one is exposed to mistaken for universal characters the particularities that are specific to it".[75] It is very plausible that he has read the Italian authors of criminology.

Tarde as an investigating judge

If there is no clue to find in the training of Tarde, it is more fruitful to consider his career. After he has graduated in law, he returned in Sarlat where in 1867 he became secretary to the judge of Sarlat, then deputy judge in 1869. Thereafter, he was deputy attorney general in Ruffec (200 km from Sarlat) in 1873 before he was eventually appointed investing judge in Sarlat, a position he held till 1894 when he became head of the department of statistics in the Ministry of Justice.

The French judicial system includes specialist judges, known as *juges d'instruction* (investigating judges), who oversee investigations into the more serious and complex offences. The process is known as the information *judiciaire* (judicial investigation). Cases are referred to the *juge d'instruction* by the public prosecutor or by a victim who wishes to bring a civil claim for damages within criminal proceedings. His or her role is to gather all the information that may incriminate or exonerate a person accused of an offence. The *juge d'instruction* does not reach any decision about a person's guilt or innocence. As part of the investigation, the judge may interview any person, call upon the assistance of the police to require witnesses to attend for interview, issue warrants, take statements from persons bringing claims for damages and from suspects, appoint experts, carry out searches and seizures, order telephone tapping, etc. He may also delegate some of his powers to police officers with a view to carrying out certain acts for the purposes of the investigation.

At the close of the investigation, the judge may refer the accused to a tribunal or *cour d'as-*

72 See Alain Alcouffe, (1989) The Institutionalization of Political Economy in French Universities: 1819–1896, History of Political Economy, 1989, vol. 21, issue 2, 313-344. At the faculty of law of Toulouse, a course was given by Rodières since the 1850's. Batbie who was the first professor of economics in France (Faculty of Law of Paris) has been professor in Toulouse.

73 Marcia Cristina Consolim, Crítica Da Razão Acadêmica: Campo Das Ciências Sociais "Livres" e Psicologia Social Francesa no Fim do Século XIX, Tese de sociologia, Universidade de São Paulo, 2007.

74 Lévy-Bruhl, L. (1899). History of modern philosophy in France. Chicago: The Open Court Publishing Company.

75 G. Tarde, « L'Instituteur et la désertion des campagnes », Manuel général de l'Instruction primaire. Journal hebdomadaire des Instituteurs et des Institutrices, 66e année, no 24, 17 juin 1899, p. 261-264 quoted from H. Terral, « Gabriel Tarde : le patois dans la grotte », Lengas, 62 | 2008, retrieved August 08, 2019. URL : http://journals.openedition.org/lengas/2906.

sises for trial (if there is sufficient evidence) or discharge the matter (if there is insufficient evidence). In summary the investigating judge:

> *He has a dual role: investigator and court at the same time; he is first responsible for gathering evidence of the offence, with the assistance of the judicial police, and compiling the criminal file; then, this task is fulfilled, it decides on the charges identified, qualifies the facts retained, and, if necessary, refers the accused to the competent court* (Merle & Vitu *Traité de droit criminel, problèmes généraux de la législation criminelle, droit pénal général, procédure pénale*, Paris, Éditions Cujas, 1967, p. 794).

Contrarily to Maine de Biran who was living rather isolated in his chateau, the profession of Tarde led him to observe human behavior and think about motives and purposes. No doubt he had the qualities required for an investigative judge that are described as follow by Faustin Hélie:

> *It is certain that the functions of the investigating judge presuppose qualities that not all judges possess: knowledge of criminal laws, the science of the human heart, the sagacity of the mind, the independence of character, the activity of the body* (Hélie, F. (1866). *Traité de l'instruction criminelle, ou théorie du code d'instruction criminelle : T. 4*. Paris: Plon, p. 67).

The investigating judges have been part of the reform of the judiciary instigated by Cambacerès, ministry of law of Napoleon. The justice of the Ancien Regime has been discarded and replaced by a system of two juries, one which gathered evidence and appreciated it and a second jury which determined the penalties. With the Napoleonic system, the "investigating judge" investigates both for the prosecution and for the defence.

Son of an investigating judge, he occupied this function for a major part of his professional career as after his nomination in Sarlat in XXX, he remained there till the death of his mother in 1894 and his nomination as the head of the bureau of statistics in the Ministry of Justice.

No doubt that [h]is professional experiences in court apparently directed his interest towards criminology, affected his thinking about motives and about the level of analysis" (Kinnunen Jussi. 1996). Unfortunately for Tarde, methodological individualism which fits well with his interpsychology, was harshly rejected by most sociologists while neoclassical economists were delimiting a special area reducing psychological motives to a bare self-interest. The point was forcefully recalled by Stigler & Becker who assert that "an explanation of economic phenomena that reaches a difference in tastes between people or times is the terminus of the argument: the problem is abandoned at this point to whoever studies and explains tastes (psychologists? anthropologists? phrenologists? sociobiologists?)".[76]

II. TARDE BETWEEN SOCIOLOGY AND ECONOMICS

Tarde's first writings: Beliefs and desires

Tarde has begun publishing his writings in 1876 as a review of his favorite author and neighbor under the title [77] Maine de Biran and Evolutionism in Psychology. This publication where he paid an ambiguous tribute while opposing to some evolutionists as Spencer. But this publication

76 Stigler, George; Gary Becker (March 1977) "De gustibus non est disputandum". American Economic Review. 67 (2): 76).

77 Gabriel Tarde, Maine de Biran et l'évolutionnisme en psychologie. Avertissement d'Éric Alliez, préf. d'Anne Devarieux (Paris : Sanofi-Synthélabo, [1876] 000). In: *Revue d'histoire des sciences*, tome 57, n°1, 2004. pp. 228-230.

in the obscure *Bulletin de l'institut des provinces* as a previous manuscript stored in a drawer was a false start and remained largely unknown His first publications, with a decent readership followed a letter that Tarde had addressed anonymously to Theodule Ribot the redactor in chief of *Revue Philosophique*[78]. The first of his article in the Revue was published in the second issue of the Revue July 1880 and was entitled Croyance et Désir (Belief and Desire) and bears a subtitle Possibility of measures. Tarde presents there a theory of the quantification of moral values, which can be seen as an improvement of the (multifaceted) concept of economists' utility.

He asserts that:

> *Belief and desire are, in our opinion, as well* ***as space and time,*** *quantities which, serving as a link and support for qualities, make them participate in their quantitative character* (pp. 160-1).

This assertion of Tarde was akin to a line of analysis in economics which sees in the "utility " of goods the origin of their value. This theory of value was formulated originally by Condillac in 1776. Value itself is considered to be based upon utility, which is stripped of its popular meaning, and given a scientific connotation which it has never lost. It no longer implies an intrinsic, physical property of matter, but connotes a degree of correspondence between a commodity and a given human want. "Value is not an attribute of matter, but represents our sense of its usefulness, and this utility is relative to our need. It grows or diminishes according as our need expands or contracts."[79]

Condillac's book was published in 1776 the same year as Smith's wealth of nations which was the basis of the labor theory of value of the English classical school of economics. One century later, the marginalist revolution shook the labor theory of value to the benefit of a psychological theory of value:

> *But one is led to regard value as an absolute quality, which is inherent in things independently of the judgements we bring to bear, and this confused notion is the source of bad reasoning. We must therefore remember that, although things only have a value because they have qualities which make them fitted to our use, they would have no value for us if we did not judge that they do indeed have these qualities. Their value therefore lies principally in the judgement we have of their utility ; and they only have more or less value because we judge them more or less useful, or that, with the same utility, we judge them scarcer or more abundant. I have only rested so firmly on this point because it will provide the basis of this whole work*.

Tarde was also confident that some mental properties (in this case belief and desire) which would give the others by combination - could be quantified directly or by sociological means:

> "*If I am asked which of the two heterogeneous pleasures, that of theatre and that of playing by example, is the most pleasant in itself, I will not be able to answer. But I will not hesitate to say which one is the most wanted, either by this person or by this group of people. Let us therefore look for if there is or can be: 1) an individual meter; 2) a collective meter of belief and desire* " (Tarde, 1881, p.166).

Tarde's 1881 articles bear no explicit reference to the debates in economics. He quotes some philosophs, Descartes, Spinoza, Schopenhauer, Maine de Biran, Taine, or Renouvier but he also mentions three authors who are s included among the precursors of economics,

78 It is remarkable that Adam Smith 's first publication was also a letter addressed anonymously ot the editors of the Edinburgh Review (see, Jeffrey Lomonaco, Adam Smith's "Letter to the Authors of the Edinburgh Review"Journal of the History of Ideas Vol. 63, No. 4 (Oct., 2002), pp. 659-676).

79 Condillac, *Le Commerce et le Gouvernement*, p. 15. quoted in Gide and Rist, p. 48.

Hume, Bentham and Stuart Mill. Two other authors he quotes also approvingly could also be mentioned in a history of economics Bernouilli, and John Venn. However, in the 1870s, economics was moving away from classical theories of value based on labor or cost, and moving toward neoclassical theories, which were associated with a mathematization and formalization of economics, a process that gave greater focus to utilitarian foundations of value. In this context, the measurability of utility became a central topic".[80]

Tarde and the economists' debates on the measurement of "utility"

Indeed, if an alternative to the Classical theory of value was developed in the 1870s, the debate on the measurement of utility never entirely disappears on the agenda of economists. For example, John Stuart Mill who is presented in many histories of economics as a Classical economist argued against Auguste Comte that scientific analysis of sentiments was possible:

> *M. Comte, accordingly, claims the scientific cognizance of moral and intellectual phenomena exclusively for physiologists; and not only denies to Psychology, or Mental Philosophy properly so called, the character of a science, but places it, in the chimerical nature of its objects and pretensions, almost on a par with astrology* (p.499, Mill[81], 1843 vol. II).

Let us consider the approach followed by the French leading economist in the Marginaslist Revolution. Walras had first made this assumption in 1873, in his maiden analytical paper, 'Principe d'une theorie mathematique de l'echange,' which he read in August of that year before the Academie des sciences morales et politiques in Paris. The relevant passage reads:

> *The other element, however, namely the utility of each commodity to each trader, certainly stands in no direct or measurable relation to either space or time. It would appear, therefore, that we cannot proceed any further. But we can. The circumstance which obviously precludes numerical measurement does not by any means rule out pure and simple mathematical expressions. In physics as in mechanics, one operates mathematically with entities, such as mass, which are not directly measurable either. Let us follow the same procedure. We need only suppose that utility is measurable, and we are at once able to give an exact, mathematical account of the influence utility exerts, along with the quantity [initially] owned, on demand curves and hence* (we used Jaffé's translation in Jaffé; 1977, pp. 301-2).

The position of the problem by Walras is strikingly similar to that of Tarde and the question can be asked if Tarde has read the paper of Walras which has been published by *Journal des* économistes[82]. Anyway, Walras encountered the hostility of the French liberal school. His referee, Pierre-Émile Levasseur, the historian of the working classes in France, emphasizing the difficulty of measuring cardinal utilities, and thinking that rarity is not the only cause of value, concludes that these curves were" unfounded, false and dangerous" (see Levasseur, 1874).

Walras himself was convinced that comparison of utility derived from various goods was possible but not interpersonal comparisons. He was obsessed by this issue and asked his opinion to Henri Poincaré[83], who analyzes the issue as follows:

80 David Colander, Retrospectives: Edgeworth's Hedonimeter and the Quest to Measure Utility Journal of Economic Perspectives—Volume 21, Number 2—Spring 2007—Pages 215–225.

81 Mill, J. S. (1843). *A system of logic, ratiocinative and inductive: Being a connected view of the principles of evidence, and methods of scientific investigation*. London: J.W. Parker.

82 Léon Walras, Principe d'une théorie mathématique de l'échange, Journal des économistes, Tome 34, 1874 (p. 5-22).

83 Henri Poincaré was a polymath. While he was principally a mathematician, some of his work extended firmly into the world of physics. On the side he was a mining engineer and a philosopher.

> *Your definition of rareté impresses me as legitimate. And this is how I should justify it. Can satisfaction be measured? I can say that one satisfaction is greater than another, since I prefer one to the other, but I cannot say that the first satisfaction is two or three times greater than the other. That makes no sense by itself and only some arbitrary convention can give it meaning. Satisfaction is therefore a magnitude but not a measurable magnitude. Now, is a non-measurable magnitude ipso facto excluded from all mathematical speculation? By no means. Temperature, for example, was a non-measurable magnitude - at least until the advent of thermodynamics which gave meaning to the term absolute temperature* (Letter 1496, Poincaré to Walras, translation of Jaffé[84], 1977).

Poincaré was inclined to put forward ordinal utility and precluded interpersonal comparisons. Tarde had anticipated this criticism, using statistics to get measures.

Actually, Tarde's argument in his 1880 articles was not so much targeted to the possibility of measure as to criticize the measurement developed by the economists following Bentham and the utilitarian philosophy. Tarde developed several arguments. The first one was the idea that it is not possible to add pains and pleasures of different kinds, because they are incommensurable. Furthermore he doubted that utility is the obvious criterion that explains changes because "[T]here are always certain ideas existing antecedently on which the sense of convenience works, and of which it can do no more than form some new combinations. [85] Eventually he wonders if the rule of "the greatest happiness for the greatest number" is imprecise and Tarde asked several questions about it related to the possibility of happiness in front of pains: are we ready to sacrifice 10000 persons if the rest of the population will enjoy a greater happiness? Do we care of the impact of our decisions on the future generations?

The last argument raises a question which became hotly discussed in front of the worries about the climate change, but it was already crucial in the formulation of the function of utility of economic agents. This point would deserve developments which are out of the scope of this survey of Tarde's economics. But it is clear that Tarde was concerned by very sensitive issues for the economists, and it Is a pity that he did some contributions to concepts that are undisputable in modern economics as the opportunity costs.[86] For long, the invention of opportunity costs has been attributed to the Austrian school of economics and more precisely to Friedrich von Wieser (1914) but their importance is already stressed by Tarde in his 1888 article and illustrated by an example:

> *Here is a young Roman who owns both a beautiful slave and a beautiful horse, but the passion for horseback riding prevails over love. It can be said that his horse costs him dearly, since it costs him his mistress whom he completely abandons. Basically, does this case dilute essentially from the one where he owns the slave but not the horse, he would have seen it in a friend's house, would have wanted it and would have exchanged it for the slave?* (footnote Tarde, 1888, p. 537).

Tarde's paper was followed by one by Carl Menger, and the similarities between Tarde's conception of value and those of the Austrian school have probably struck some readers of the review as Tarde who did not read German mentions them in his book. Tarde discards any suspicion of plagiarism in a smart footnote:

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84 Jaffé William The Walras-Poincaré Correspondence on the Cardinal Measurability of Utility, The Canadian Journal of Economics / Revue canadienne d'Economique, Vol. 10, No.2 (May, 1977), pp. 300-307.

85 Maine, H. S. (1875). Ancient law: Its connection with the early history of society, and its relation to modern ideas. New York: H. Holt and Co.

86 Opportunity costs represent the benefits an individual, investor or business misses out on when choosing one alternative over another. Because by definition they are unseen, opportunity costs can be easily overlooked if one is not careful. Understanding the potential missed opportunities foregone by choosing one investment over another allows for better decision-making.

> *But I know too little about these economists to talk about their ideas any longer. The ones I have to expose are the development of germs laid down in substance, for the first time, in the Revue philosophique, in September and October 1881, i.e. in an earlier period, I believe in the appearance of the foreign schools I have just mentioned but it does not matter under the title of Psychology in Political Economy. If there are any coincidences between the theories stated there and those of Austrian or German schools* (Tarde, Psycho. Éco, p. 148).

If there is no reason to doubt that Tarde has discovered by himself the opportunity costs as they are a direct tenet of his theory of the value, that does not mean that he had few contacts with the leading economist of his time. For example, Tarde while preparing this book was in touch with Léon Walras, the great neoclassical French economist.

Walras-Tarde- a missed pas de deux

As it was already mentioned, it is quite possible that while Tarde was writing his 1881 articles, he had been aware of Walras' 1873 conference on the measure of utility despite he did not make any explicit reference to it either because he disagreed with Walras' approach or because the "bigwigs" of the social sciences had rashly criticized it. In the 1880s, Charles Gide, the apostle of economic cooperatives, approached Walras and Tarde while preparing a new academic journal (*Revue d'économie politiqu*e) against the *Journal des* Économistes which was entirely in the hands of the French liberal school. Gide had enlisted Tarde among the possible supporters of the REP in a letter of May 2nd, 1885. Eventually the first issue of the REP was released at the beginning of 1887 without Tarde but with Léon Walras among the "leading contributors". But in the next issue, G. Tarde has given two articles devoted to the value.

On the contrary, 18 years later, as he was already famous for his *Laws of Imitation,* Tarde sent a copy of one of his books to Walras who immediately replied to him[87]. Proposing an alliance, he wrote on May 16th, 1897:

> *I do not want to delay for a moment in replying to your kind letter.*
> *I will say without false modesty, since your indulgence invites me to say that, in my opinion, we can be very useful to each other. You are a philosopher who is very concerned about economic and social issues; I am an economist and a socialist who wants to link my solution to the ring of a solid philosophy. I will therefore read your book carefully before publishing The Sketch of a Doctrine by which my volume of Applied Political Economy Studies should end*.

The alliance could have been nurtured by the maneuvers of Charles Gide. At this time, the latter was. Eighteen months later, Tarde again has sent another book to Walras who replied immediately:

> *– Will you not be tempted to apply this synthesis of repetition, opposition, and adaptation of psychological and sociological phenomena to the reconciliation of progress and conservation, and to the discussion of the so attractive system of representation of interests or representation by professional category?* (letter 1357 Walras to Tarde 30 May, 1898).

The quid pro quoi was to continue one year later (letter 1403 Walras to Tarde 16 May 1899):

87 Jaffé deduces from the dates that Gabriel Tarde had probably sent to Walras his L'opposition universelle, essai d'une théorie des contraires, Paris, Alcan, 1897 just released.

> *A few days ago, I found your signature beside that of my excellent friend Mr. Gide at the bottom of a letter which I was extremely flattered to be asked to appear on the honorary committee of a congress of social science education. And yesterday I received your very nice volume on the Transformation of Powers. I hurry to thank you for everything*.

Eventually, a last exchange happens in May 1899. Tarde was probably working on his book Economic Psychology, where he compared his approach to those of the contemporary economists including Cournot and Walras. This time it was Tarde who has something to ask from Walras:

> *In recent times I have been diving back into political economy and I have deciphered your profound work. I will come back to this again and I will have the pleasure of talking to you, at a distance, in my office* (Letter 1404 Tarde to Walras 17 May 1899).

Tarde's comments on Walras are only evidence that Tarde did not succeed to draw Walras' attention on his works. The last letter that Walras sent to Tarde is still evidence of what Jaffé called "L.W.'s [extraordinary]capacity for self-delusion". Indeed, he proposed Tarde to join or support his political project:

> *I want a party to be formed [..] carrying out reforms, a serious government, an army not dependent on clericalism and caesareanism, [..], in short, a whole new society. I sincerely hope that this party will count you in its ranks. Needless to say, if you have a few economic aspects of this programme to discuss with me, I am at your disposal* (Letter 1405 Walras to Tarde, 18 May, 1899).

Despite these attempts, there is no evidence that Walras paid much attention to Tarde's ideas which were developed in his book *Psychologie Economique*.

III. THE ECONOMICS OF TARDE AND THE ECONOMISTS

Tarde's critique of post-Smith political economy

22 years later, Tarde gave in his book *Psychologie* économique an extended version of his ideas on economics that he has introduced in his 1880 articles in Revue Philosophique and his 1888 article in the REP. This book is presented as his lectures given at Collège de France where he has been elected on February 1st, 1900, at the chair of modern philosophy. In between, Tarde's academic career has taken off. His writings on criminal issues (Penal Philosophy, 1890), his exchanges with criminologists in various countries (Italy, Russia) had led him to the Ministry of Justice in Paris while his most celebrated publications *Laws of Imitation* published in 1890 had as subtitle *sociological study*. The repeated reference to sociology in the titles of his book (see Tarde 1892 Etudes pénales et sociales, Lyon-Paris, Storck et Masson, 460 pages, 1893 Les Transformations du droit. Etude sociologique, Paris, Alcan, 212 pages 1895 La Logique sociale, & *Essais et mélanges sociologiques*, Lyon, Storck indicate that he has joined the new field of sociology. Nevertheless, as a scholar who has chosen his field in complete independence, he did not bother with walls separating disciplines. He has written in the *Revue d'économie politique* the ascendant journal of economists a paper devoted to value and clearly, he was a prophet of interdisciplinary studies and he considered that his interpsychology could be helpful for economists. Tarde criticises the isolation where the economists maintain their discipline on the contrary he dreams of interdisciplinary research:

> *Political Economy, thus surrounded, would indeed lose its mysterious isolation as an erratic block deposited in the desert of sociology yet to be borne by metaphysicists*

> *or logicians, but it would benefit from appearing in its true place in social science, and from seeing its usual notions, divisions, theories, controlled by sister sciences, illuminated by its light, and illuminated by theirs* (Tarde, Psycho. Éco. p.68).

And he does not dissimulates that through his bought, [he] has sought to bring the Political Economy out of its majestic and disappointing isolation". It is a pity that for one century no economist went beyond the poorly formulated critics of "economic laws" and did not see they expressed a love tiff and not a charge against their discipline.

The book begins with general remarks on human society and the laws that govern it and ends abruptly with the study of demographic problems (without any synthesis conclusion summarizing all the observations collected). It remains silent on the concept of economic psychology, whose understanding it examines without specifying its extension. Nothing in either Chapter III of Book One ("Discussion of the Plan"), or Chapter IV entitled "Historical Overview" characterizes the area that the author intends to explore (Paul Albou (1981).At most, it suggests that this is a new form of economics or more exactly the kind of science that could have developed if economists have taken as their starting point the *Theory of Moral Sentiments* instead of the *Wealth of Nation*s.

It seems that Tarde has not come to terms with the scission between economists and sociologists, between economics and sociology. He had already expressed his position in a review devoted to a history of economics written by A. V. Espinas, a French sociologist. The book follows the same path as 1888 Ingram's *History of Political Economy* from the Ancient Times to the Historical School. Tarde's review is very critical of economists, blaming "the poverty of the little they have discovered or thought they have discovered compared to the immensity of their centuries-old efforts" (Tarde, 1892, p. 70) and in a few sharp sentences, Tarde destroys "the law of supply and demand, Malthus' theory of population, Ricardo's theory of rent, his Iron law of wages, Say's law":

> *I am surprised to find under Espinas's pen (p. 345) that it seems to result that, considered as a science, political economy seems to him to be distinct from sociology. However, is it anything other than a branch of applied sociology, as, in its theoretical aspect, it is only a branch of pure sociology? And isn't it especially from the point of view of practical applications that it is important not to separate this branch from the trunk, at the risk of sterilizing it or making it produce detestable fruits?* (ibidem, p.72).

Espinas, or Tarde's vision of economics as a branch of sociology as well as the distinction of several strand in economics (science versus art) are akin to those of Ingram who adopted the hierarchy of the Sciences according to Auguste Comte. Tarde came back to these issues at length in his 1892 book. The book surveys a whole set of economic topics but as Tarde emphasizes in his chapter 3 where he justifies his project which aims to rethink economics. A first step in this direction is scrapping the usual distribution of the topics into four usual ones (production, circulation, distribution, and consumption[88]) for a new one which mirrors Tarde's favorite conceptual tools: repetition, opposition and adaptation. Our purpose is not to analyze these new clothes of economics tailored by Tarde but rather to understand the arguments developed by Tarde against economics in a long "historical overview" (chapter 4, pp. 107-42). The main objection addressed by Tarde to the "heirs of Adam Smith " lies in their oblivion of the psychology or to use the vocabulary of Tarde the inter-psychology.

Actually, economics and psychology have common historical roots in philosophy and early discourses on man and society. It is enough to mention here, Bernard Mandeville's Fable of bees and Adam Smith 's *Theory of moral sentiments*. It is not to say that at the end of the 19th century, the contemporary economists had not forgotten the importance of psychology.

88 Tarde refers to Gide (Tarde, 1892, p.98).

On the contrary it is enough to mention either the title of Edgeworth's 1881 book entitled *Mathematical Psychics* or the psychological theory of value developed by the Austrian school. But the psychology put forward by the economists is very unidimensional as Edgeworth[89] put it: 'the first principle of Economics is that every agent is actuated only by self-interest' (Edgeworth 1881, p. 16).

Tarde's overview of economics discards the development of economics since the *Wealth of Nations* and on the contrary praises the *Theory of Moral Sentiments* where Smith stresses the importance of sympathy (i.e. the interpsychology). Tarde has read the *TMS* in the translation by Baudrillart published in 1860. In his introduction Baudrillart asserted that « It would be hard to believe that the Theory of Moral Sentiments is the same philosopher who wrote the immortal *Inquiry Into the Nature and Causes of the Wealth of Nations"* (Baudrillart-Smith, pp. V-VI).Tarde did not enter the sterile debate whether the two books of Smith are contradictory. For him (as for Smith himself), the most important of the two books was the TMS where one can find "a mine of useful observations"(Tarde 1892, p.132) and he is close to sustain that Smith's impartial spectator is an incipient formulation of his own inter-psychology. He quotes the famous metaphor of Smith along which "we endeavour to examine our own conduct as we imagine any other fair and impartial spectator would examine it [..] We suppose ourselves the spectators of our own behavior, and endeavor to imagine what effect it would, in this light, produce upon us."

Eventually Tarde wonders:

> *What is surprising, however, is the weak role that psychology plays in Smith's economic writings, and the complete absence of collective psychology. It was Smith, however, who first studied the sympathy, source, and foundation of inter-mental psychology. How it is that he never felt the need or opportunity to make use of the fine remarks he made on the mutual stimulation of sensitivities by each other, to explain men's economic relations?* (Tarde, 1892, p. 135).

It is not the place to consider Tarde's answers to this question (Tarde refers to a hypothetical deism of Smith), but it is clear that this chapter of *Psychologie* économique provides a critique of the neglect of interpsychology by the economists since 1759. Among the economists, Tarde dealt separately with Cournot whose mathematisation of social relationships he appreciated. Tarde was convinced that "the tendency to mathematize economic science and the tendency to psychologize it must be mutually supportive". He writes:

> *In the reformed and better-understood statistics, in the all-penetrated statistics of an interpsychological mind, I see the possible and even easy reconciliation of these two apparently divergent directions. Cournot saw that the only way to make good statistics, i. e., social arithmetic, is to have the statistician's counts brought to bear on external facts, but he did not see that these facts consist essentially of beliefs and desires, ideas and needs, acts of faith and acts of will, judgments and decisions.*

Clearly, the book proposes a new approach to save economics of its perils. The remaining parts of the book are a tentative to prove the fruitfulness of it. It is also an offer to economists to start a new relationship that was not taken into consideration during the following century.

89 Edgeworth has published earlier Methods of ethics (1877) but Edgeworth who had become the most outstanding reviewer of his time (Barbé, p. 233) never mentioned Tarde as far as we know. The ignorance is so much curious that "[Edgeworth] went on to make some interesting remarks on the results of 'impure' egoism, admitting an element of sympathy for each other" (see Amartya Sen, 1977).

Tarde's reception by economists

Unsurprisingly after the harsh critics of economics provided by Tarde, the reviews of his books in the French journals of economics were rather fresh. In the *Journal des* économistes which was the organ of the French liberal school, Rouxel who was specialised in the recensions of new books. In 1890, he concludes his reviews of the Laws of imitation as follows:

> *If the invention is an individual work, the more the State extends its powers, the less invention there is, in other words, the more stationary or even retrograde the society is. And vice versa. That was said before; the whole story bears witness to that. But the reasons and facts that M. Tarde's presence in support of this idea only makes it more obvious. Let us hope that it will move from speculation to social practice.*

Two years later, Rouxel comments on Economic Psychology is still harsher:

> *the interpsychology which forms the basis of M. Tarde's economic system couldn't give us much new. [..] that interpsychology was nothing more than psychology and that it could not give anything more, except to present truisms as old as the world as great and profound truths recently discovered".*

The *Revue d'économie politique* which has been launched thanks to Charles Gide's and Léon Walras' joint efforts and common hatred of the Liberal School, Professor Mahaim (Liège) gave a milder account:

> *it is not in the soul of the lone individual that M. Tarde will seek an explanation of the economic phenomena, but in the states of mind that result, in each of us, from the actions and reactions due to our life in society.*
>
> *The general impression left by this book is that of a majestic and harmonious forest. It has grandiose alleys, infinite perspectives beautifully laid back; it offers in more places the marvel of excessive trees; it often holds as much amazement as joy; it abounds with varied rare species; it has clearings, and also gaps. But it presents a numberless range of materials for new buildings* (p.34, L'économie politique de M. Tarde, Ernest Mahaim, Revue d'économie politique, Vol. 17, No. 1 (1903), pp. 1-34).

While Charles Gide (1907), "to complete [his] review· of the movement in economic studies", took into account "the movement in works on the cognate science of Sociology" mentions the title of Tarde's book, Charles Gide & Charles Rist in their celebrated History of Economic Doctrines mentioned Durkheim, the rival of Tarde in the French sociology but failed to mention Tarde, who is reviewed in the *Année Sociologique* by François Simiand : 1873 –1935 economist, sociologist, historian, member of the French historical school in in uninspiring terms:

> *– We see that in this book (Eco. Psycho), the ordering of the subject matter is very free and (unconsciously I think) very fanciful, that it obviously deviates from the usual patterns, but that he does not care with providing a coherent plan and presenting an objective, well-founded study. During the course of development, we will find a number of ingenious views and suggestive relationships that can be used to advantage. Factual or doctrinal information leaves much to be desired in more than one place, F. S.* (1901-2, pp. 459-61).

Pareto showed the same disinterest or neglect in his letters to Manfredo Pantaleoni. For him, "The Tarde is another Lombroso, among some truths he tells us stories to sleep with open eyes. Here is now in Italy the Ferrero that beats that way. My dear, they are all novels" (April 9th, 1897) and a few days later he wonders again:

> *"I have not read the opposition universelle of Tarde. Is it really worth the expense of buying that book?"* (May 3rd, 1897).

And two years later:

> *I am convinced that if you want to take sociology a step further, it takes you ten years of eclipse, since you wouldn't be happy to make one of the many books such as the one by Le Bon, Tarde, Durkheim, Giddings etc., and perhaps after ten years you would realize that everything is still immature* (Nov. 29th, 1899).

Adolphe Landry[90] in his textbook Manuel d'économique (1908) is the only author to consider positively the contribution of interpsychology to economics :

> *It is necessary to be grateful, on the other hand, to Tarde for having, in a very uneven but often suggestive work, drawn attention to the benefits that economic science would derive from a serious study of the "interpsychological" facts, of the various repercussions that the psychological life of individuals has on their fellow human beings*.

More specifically, Landry insists on the part played by knowledge in the economic life, and he argues:

> *It was Tarde who showed with the most ingenuity and most strikingly the so considerable role played in the production by mankind's knowledge. This knowledge, he argues, is "capital" for humanity, and it has been a mistake on the part of many economists to focus on material capital. Both capitals have their role to play in production, just as it is usually necessary, for a seed to grow, that it contains a germ and cotyledons.*

Outside France, Tarde's reception was also insignificant or negative. For example, Othmar Spann (1878 –1950), a conservative Austrian philosopher, sociologist and economist whose radical anti-liberal and anti-Socialist views, based on early 19th century Romantic ideas expressed by Adam Müller et al. whose two notable students were Oskar Morgenstern and Friedrich Hayek wrote:

> *The basic error of Tarde's thought is that imitation cannot be the constitutive principle of the social because, by its very nature, it is always imitation of something, of something which must have been found*. [..].
>
> *Despite all the originality, subtle observation and heuristic value, Tarde's thinking is still somewhat fantastic and erratic, and even undisciplined in terms of methodological knowledge theory.*

The only exception to this glacial reception is to be found on the other side of the Atlantic Ocean where he was greeted by Edward A. Ross in the QJE (1902)[91] or by Davis first in the *Political Science Quarterly* then in his thesis[92]. But Tarde found a still more supporter in [93] Roswell McCrea 1909 where he asserts:

> *There are many interesting special phases of the psychological discussion. For instance, the explanation of the origin and development of wants with different*

90 1874 –1956 Economist, demograph, deputy, senator, minister.

91 Ross, Edward A. Recent Tendencies in Sociology, QJE, 1902), pp. 537-563.

92 Davis' review of Psychologie economique Political Science Quarterly, 1902 & 1906. Gabriel Tarde, an Essay in Sociological Theory. New York (PhD, Columbia).

93 Roswell McCrea, Recent Textbooks in Economics QJE, 1909.

classes in the community is a suggestive statement of the notions of Tarde and Veblen. Of like special interest are the following: the interpretation of the psychological basis of risk-taking; the penetrating analysis of the cost elements that may be involved in work; the examination and emendation of the classical concept of the economic man; the parallel that is drawn between the often thoughtless discounting of the future in the preference for present over future satisfactions, and in the willingness of workers to accept unusually risky or unhealthful employment at no more than nominal wages.

Four years later, Roswell McCrea 1913[94]reviewing *The theory of economic development* of Schumpeter conclude about the "entrepreneur":

Individuals of this type are the active agents of economic evolution. Schumpeter thus offers a super-man interpretation of economic progress, in main outline quite analogous to the sociological system of Gabriel Tarde.

Despite this early parallel between some views of Tarde and Schumpeter that was reiterated in 1950 in the same journal by A. C. Taymans (1951), Schumpeter himself seems to have never taken into account Tarde's ideas[95]. Taymans notes that no direct link can be demonstrated between Tarde and Schumpeter, and he goes so far to wonder if Schumpeter could have "stolen" the idea from Tarde without saying so. That is impossible to answer. It could be a matter of two independent discoveries, as has been demonstrated in many cases. Seven decades later, despite a huge historiography devoted to Schumpeter, there is nothing suggesting that Schumpeter knew Tarde's theories. No biographies or presentation of the theories of innovation mention any direct link. This applies equally to works on Tarde (e.g. Clark 1969; Milet 1970) and works about Schumpeter (e.g. Harris, 1951; Schneider, 1970; Frisch, 1981; Heertje, 1981).

To conclude on Tarde seen from America, let us mention Thorstein Veblen who devoted three articles to Tarde that Hodgson has found highly dismissive in a footnote that summarizes Veblen's articles as follows:

Veblen (1900b, p. 363) criticized Tarde's 'elastic', 'ambiguous', and superficial formulations, noting that 'the volume may contribute materially to curtail the vogue of M. Tarde's sociological 'doctrines'. Veblen (1902, p. 147) was also critical of another of Tarde's works, describing its theoretical foundations as 'behind the times'. Like other writings by Tarde, its 'penchant for system making and symmetry gives it an air of completeness and definitiveness which is not borne out by substantial results' (Veblen, 1902, p. 147).

After this long survey of Tarde's reception, we can conclude that with a very few exceptions, economists were not sensitive to Tarde injunction to take seriously into account economic psychology and the main neoclassical authors at best ignore or rejected his critique of economics. The crisis of 1929 was to change the game.

IV. UNESCAPABLE ECONOMIC PSYCHOLOGY

The psychology of economics agents

If psychology had been reduced to the self-interest motive by neoclassical economics, the economic crisis of 1929 shook the pillars of the sufficiency of the economists who reintroduce

94 Schumpeter 's economic system QJE, 1913

95 A. C. Taymans, "Tarde and Schumpeter ; A Similar Vision," QJE, November, 1950, pp. 611-22.

psychological factors to explain the failure of “laissez faire”. To say the truth, several authors have managed to keep in mind psychology to explain or complete the theory of money and exchange rates especially in periods of turmoil. It was the case for example of Albert Aftalion, (1874-1956), best known for his discovery of the acceleration principle in his 1913 thesis, *Les crises périodiques de la surproduction*. He shows his discomfort with both the underconsumptionism of Rodbertus and Tugan- Baranovsky and the classical interpretation of Say’s Law. After the WWI he came to grip with Cassel’s theory of purchasing power parity and he developed his psychological theory of money. It is not to say that he searched to find the psychological elements that could explain some economic behavior but he argues that the maximization of utility as hypothesized in the microeconomic theory was unable to explain the demand for money and he proposed to introduce expectations whose formation was to be explain by psychology. But it was in the aftermath of the 1929 crash, that psychology and expectations made their return. Already in 1935, Bernard Lavergne in the journal *Etudes cooperatives*, published an article in which he sustained that “the spontaneous and often unpredictable fluctuations in human psychology cannot be exaggerated: these psychological fluctuations provide nothing less than a fundamental explanation of the economic cycle”. For him, the orthodox economists as well as the advocates of planning partake a similar erroneous creed in “the reality of the ’homo economicus, the human automate moved by his sole tightly defined personal interest, devoid of any fantasy and fever”.

But it is in *The General Theory of Employment, Interest and Money* of J. M. Keynes (1936) that a consistent explanation of crisis based on psychological factors was exposed. In the General Theory, one finds sixty-nine appearances of “psychology ” or “psychological” (among them 4 times mass psychology) and four appearances of “animal spirits”. It is also well-known that Keynes was interested in psychoanalysis and that he used psychological approaches when writing his Essays in biography (1933) where one finds one hundred eighteen appearances of mind, thirty-five of feelings and seventeen of sentiments. V. Barnett, despite his pioneering research in this field, admits that the link between Keynes’s economic theory and its indisputable interest for psychological topics is controversial. We don’t believe that the pervasive references to human psychology in Keynes’s macroeconomics is purely coincidental or could be misleading. On the contrary, Barnett 2015 provides evidence that Keynes had studied very seriously two handbooks of psychology (G.F. Stout and J. Sully). There are several arguments that sustain that Keynes relied on psychology to design his macroeconomic theory. The propensity to consume is a key element of the basic model of Keynes. Keynes explained the propensity by subjective and objective factors. The former include:

> *Those psychological characteristics of human nature and those social practices and institutions which, though not unalterable, are unlikely to undergo a material change over a short period of time.*

This brief definition reminds a paragraph of Stout that was paraphrased by Keynes:

> *One necessary and omnipresent condition of the formation of habit is the tendency of any mental process with its connected movements to repeat itself, simply because it has occurred before… When we say that the tendency grows stronger, we mean (1) that the process is capable of being set in motion by a slighter cue… (2) That it becomes less liable to disturbance from accompanying circumstances. (3) That it becomes stronger as a propensity—i.e., if its course is interrupted or arrested greater impatience is felt* (Stout 1896, 1:263 quoted by Barnett, 2015).

The inducement to invest is a second key element of the model of Keynes who deals with it in the Book IV of the GT. Alongside with the marginal efficiency of capital (chapter 11), Keynes explains it by the State of Long-term Expectation (chapter 12). There Keynes discards the usual motive invoked by economists to explain the behaviour of economic agents:

> *Even apart from the instability due to speculation, there is the instability due to the characteristic of human nature that a large proportion of our positive activities depend on spontaneous optimism rather than on a mathematical expectation, whether moral or hedonistic or economic. Most, probably, of our decisions to do something positive, the full consequences of which will be drawn out over many days to come, can only be taken as a result of animal spirits—of a spontaneous urge to action rather than inaction, and not as the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities.*

Keynes, one year later, in an article where he sustained that the "psychological law" of a propensity to consume less than 1 "was of the utmost importance in the development of [his] own thought. He made it clear that he completely rejected "the "homo oeconomicus" of Bentham's imagination which has become, according to Keynes, the cornerstone of the utilitarianism which constitutes the implicit philosophy of economists" (Dostaler, p. 72).

Despite the success of the Keynesian Revolution, the recourse to psychological factors to explain the business cycles was immediately criticized by some tenants of the economic orthodoxy. The famous book of G. Haberler is very representative of this current:

> *It is in a way misleading to speak of "psychological" explanations of the trade cycle or of particular and economic phases of it. Every economic fact has a psychological aspect. The subject-matter of economic science is human behavior - chiefly conscious and deliberate behavior - which can hardly be separated from its psychological basis. The psychology of human behavior is therefore a constituent part of the subject-matter of economics. When we assume that an entrepreneur will increase his output if demand rises or cost is reduced, or that workmen will respond to changes in money wages but not so readily to changes in real wages, or that consumers will buy more of a given commodity if the price falls and less if they think it will fall further, or that people will hoard money if the value of money rises-all these assumptions are assumptions about human behavior which presuppose a certain state of mind on the part of the human agents. Propositions about such actions may be considered as belonging to the sphere of applied psychology: but they also figure continually, whether implicit or expressed, in the economic theories of the cycle. What, then, distinguishes a "psychological " theory from an " economic" one?*

Ever since Jean Baptiste Say provided his law of markets, mainstream economists tried to evacuate the economic crises of their theories but "facts are stubborn things" and periodically the economists are reminded of these disturbances.

Tarde's theory of crises (business cycles)

As Zarnovitz puts it "In periods of substantial stability and satisfactory growth, the always attractive idea that the business cycle may have been conquered or rendered obsolete gains considerable publicity and acceptance" therefore after the World War II, mainstreams economics betrayed the Keynesian revolution and came back to a very limited psychological basis of economic behavior. However just before the beginning of the Thirty glorious years (Jean Fourastié), with rapid growth and very mild fluctuations by historical standards, Henri Guitton has supervised a PhD thesis on Tarde's theory of crises [96]. Thirty years later, he published a paper where he could write:[97]

96 Brun, J.M. 1946 L'interpsychologie de Tarde et les crises économiques –, PhD, Dijon Supervisor: Henri Guitton

97 Guitton, H. 1973 Gabriel Tarde et la pensée économique, Revue d'économie politique, Vol. 83, No. 2 (mars-avril), pp. 345-347.

> *It is no exaggeration to say that Gabriel Tarde is little known to economists. Of course, I am talking mainly about teachers. Because if we were to question the students, I wonder how many of those who, in four years of licensing, have heard of this author* (Guitton, 1970, p. 345).

Guitton concluded his 1970 tribute to Tarde insisting on the latter's explanation of economic fluctuations:

> *Where there is psychology, there is also rhythmic movement of the universe. How can we be surprised when there are crises and economic alternation? The PhD thesis that I had aroused, some 30 years ago, had shown the relevance of our author's theory: economic crises are the inevitable mark of disappointed expectations, the manifestation of the inescapable effects of deceived confidence* (ibidem, p. 347).

Guitton has not failed to mention Tarde's ideas in his textbook on business cycles which went through many editions from 1951 to 1970. Actually, Guitton's support includes only a mild approval and Guitton was eager to put his presentation of Tarde's ideas under the aegis of Pareto. For Pareto, there is fundamental distinction between logical and non-logical forms of action. While the former are related to the goals they pursue: the activity of the engineer or economist, the latter concern the rest of human actions, the study of which belongs to sociology. It must therefore logically study the non-logical actions: feelings, beliefs, instincts, what men rationalize but most often ignore themselves, and what Pareto calls residues. Pareto presents as follows the economic fluctuations:

> *The vibratory movements of the social aggregate may depend on purely objective circumstances, but their main cause seems to be the very nature of man. The manifestations of human activity hardly show a continuous march; they generally affect the shape of a wavy curve. Among other things, it should be noted that man rarely stops in the middle, he always exaggerates a little on one side or the other. He moves from hope to fear, from overconfidence to mistrust, Success exalts him, failure discourages him* (Pareto, 1897, Cours, t.2, p. 279).

He concludes this development by a disillusioned remark that "psychology is at the heart of all economic things". With the safeguard of Pareto's authority, Guitton acknowledges some values to Tarde's ideas about repetition, imitation to understand the waves of optimism and pessimism that can be relied to innovations.

> *• Psychologist G. Tarde has best demonstrated how this truth takes on an additional force as it moves from individual psychology to collective psychology. The ideas dear to this philosopher, of repetition and imitation, through which he has finely analyzed fashion and custom, explain the reasons for amplification (2), transmission and alternation of initial beliefs (3). "Collective residues ", even more so than" individual residues ", seem to form a background of an alternative nature. There is both a tendency in the human heart to amplify impressions, and a need for change that would explain two of the characteristics of the economic cycle [..]: a process of accumulation of effects in one direction, an abrupt reversal and a process of accumulation of effects in the opposite direction. It is the simple fact of having lasted that pushes and exaggerates and changes human movements. These fatal exaggerations lead to the resorptions that are crises: the author considers crises as the inevitable mark of disappointed expectations (4)*

Despite this praise, Guitton's mistrust appears here and there without the reader knows exactly what Tarde's ideas were. On the contrary, Taymans 1950 is far more positive. He

exposes very clearly Tarde's vision of innovation :[98]

> *An invention occurs. This means that "a variation has been grafted on repetitions,"^ that is to say on the phase of imitative repetitions or imitations, which constitute present society.' This invention brings on a "periodic repetition," a new cycle of individual repetitions. The waves of repetitions meet and clash; * this is the stage of "opposition ": "Equilibrium of forces and symmetry of forms," or "struggle of living organisms, conflicts of all beings."' Finally this opposition means either destruction or adaptation - third stage - which gives rise to new inventions, because it means "creative combined production" ("co-production créatrice")* (Taymans, p. 621).

Taymans goes on, summarizing Tarde's ideas in order to draw easily a parallel with Schumpeter 's vision of innovation and cycles:

> *A single innovation is carried out by a single innovator or entrepreneur. At this moment a new cycle sets in because other entrepreneurs are going to follow suit. "The appearance of one or a few entrepreneurs facilitates the appearance of others, and these the appearance of more, in ever increasing numbers.''' This is the "swarm-like" appearance of entrepreneurs, first phase, repetition. Then comes the depression, or "reaction of business life to the situation created by the boom,"' so that finally the third stage may take place, which leads business life towards "objective adjustments,"' the "search for a new equilibrium,"^ a "position without development... a process of absorption between two booms ending in a position approaching equilibrium". This last period corresponds exactly to what Tarde tersely calls "conservative production, elementary causation, without any creation".*

Taymans's article did not succeed to draw attention on Tarde nor on *Business cycles*, "the least successful book of Schumpeter ".[99] Indeed, when the article was published the mainstream economists were convinced that with the so called "fine tuning" policies it would be possible to get rid of cycles. Two decades, later during the 1970s a new generation of economists arose. In their critique, called the New Classical Economics, they saw that the few animal spirits that remained in Keynesian thought were too insignificant to have any importance in the economy.

V. GABRIEL TARDE AND THE 21ST CENTURY ECONOMICS

To date, economics has been only marginally concerned by the recent rediscovery of Tarde's theories which was mainly due to sociologists but there are many reasons to foresee that he could receive more attention in the next decades. It seems that his theories are able to highlight the new fields of analysis in economic theory and also to supplement some shortcomings in mainstream economics.

The theory of innovation and networks

In the last decades, several authors have stressed the importance of Tarde as a founding

98 A. C. Taymans, "Tarde and Schumpeter ; A Similar Vision," QJE, November, 1950, pp. 611-22.

99 McCraw, Thomas K., Schumpeter 's "Business Cycles" as Business History, The Business History Review, Vol. 80, No. 2 (Summer, 2006), pp. 231-261.

father of the field[100]. Sundbo's assessment is very detailed. He insists that "Tarde was the first to formulate a number of the later-used basic concepts such as invention and innovation, as well as a number of postulates - for example that innovations come in waves - which have become central to later innovation theories". But he addresses some critics to Tarde's methodology that explains probably why he was neglected during the 20th century by social scientists, fond of well-delineated fields and eager to mimic the hard sciences. Tarde's works did not include any empirical analyses in Tarde's, while the works themselves appear particularly verbose and have little in the way of specific hypothesis formation.

Tarde's theory of innovation is not limited to the relationship between invention and innovation on the one hand and the entrepreneur on the other hand, but he was also a pioneer in the innovation diffusion research. In his view social change requires penetration of inventions that diffuse through the process of imitation. People imitate beliefs and desires or motives transmitted from one individual to another. Analysis should take place on a micro-level with the method he called 'interpsychology' (Kinnunen, 1996).

Recently a new area is appeared in the economics of innovation : networks and networking. It is now an unescapable part of it and of the related of the economics of knowledge. These developments are well exposed in Lundvall and Borrás, 1997:[101]

> *"More and more of the innovation process takes place in networking as opposed to hierarchies and markets… only a small minority of firms and organisations innovate alone, and… most innovations involve a multitude of organisations"* (Lundvall and Borrás, 1997, p. 104).

It is the place to recall that Tarde was particularly concerned by the diffusion and that leads him to some thoughts about the physical nature of the earth. Davis reproaches him to devote ten pages to showing how human progress would have been different, if the earth had been flat instead of round (Davis[102], 1903, p.46). It is right that the hypothesis is surprising:

> *Since the earth is round, the path of civilization in any sense, by dint of going, always ends up going back on itself. All the rays of examples end up reflecting on it. If it were flat, the displacement of civilization would be its progressive and irreversible distance from its starting point, and there would be nothing to force imitation to return to its source*.

However, the development of the literature on social networks has provided evidence that their structure plays an important part in the diffusion of innovation and Tarde's position is vindicated:

> *The systemic and network related dimension of innovation phenomena is also frequently highlighted by the Tarde analysis, whether it is an essentially technical systemic or, more generally and more fundamentally, an organizational and institutional systemic based on these techniques, or, at another analytical level, the sociology of innovation networks.*

100 Sundbo, J. (2003). The theory of innovation : entrepreneurs, technology and strategy. Cheltenham [u.a.], Elgar.
Kinnunen Jussi. 1996. "Gabriel Tarde as a Founding Father of Innovation Diffusion Research". Acta Sociologica. 39 (4): 431-442.
Panayotis G. M. and K. Theologou, (2010), Tarde's influence on Schumpeter : technology and social evolution, *International Journal of Social Economics*, Vol. 37 No. 5, 2010, pp. 361-373.
Djellal, F. Gallouj F. (2014) The laws of imitation and invention : Gabriel Tarde and the evolutionary economics of innovation. *Revue économique*, Vol. 68, No. 4 (Juillet, 2017), pp. 643-671.

101 Lundvall Bengt-Åke & Susana Borrás The globalising learning economy: implications for innovation policy, Luxembourg: Office of the Official Publications of the EU, 1997.

102 Davis, Jr., Michael M., Gabriel Tarde: An Essay In Sociological Theory.

Behavioral economics

Comments surrounding the awarding of the Nobel prize to Richard Thaler in 2017, some have been led to think that he was a founding father of behavioral economics --the intersection of psychology and economics, economists have been working on themes that we might today categorize as 'behavioral economics ' for as long as economics has been. As we have seen, Adam Smith was certainly interested both in psychology and economics. But most economists during the 19th century that M. Baddely calls the "dark age" of behavioral economics focused on the role played by rational agents in market economies using unrealistic behavioral assumptions about humans' capacity for rationality[103]. By removing these assumptions, new behavioral economists try to get new insights on psychologically plausible features of human behavior affect—and should affect economics at the macroeconomic level as well as at the macroeconomic level. There are now so many applications of behavioral economics that it is beyond the scope of this article to survey them.

Ajdukovic, et alii (2018) have studied the relevance of some of Gabriel Tarde's ideas to current researchers in economic psychology, and behavioral economics. It is interesting to note both the similarity between some ideas of Tarde and now current research in the field, and the divergence between the direction he took and the course of research in the field. Tarde's critique of the homo economicus model includes two main tenets: its limitation to material concerns (the self-interest motive), and its unrestricted rationality. Regarding the rationality assumption, he makes an explicit distinction between "logical" and "extra-logical" reasons for imitation, the first of which consist in "the nature of the ideas themselves" suggesting rationality, while the latter adhere to "the nature of the people who give the examples, to the places or the times in which the influence occurs" (p. 123).

Despite several histories of the behavioral economics found neglected features of behavioral economics in major economists contemporaneous of Tarde (Marshall, Pareto, Edgeworth) we did not find any direct link to Tarde in the main handbooks of the fields. Therefore, for Ajdukovic, et alii (2018) who focused on the "Micro-Based Behavioral Economics" conclude that "these similarities seem to be closer to independent discovery than influence". Despite independent discovery is also plausible for Micro-Based Behavioral Economics, some transmission of Tarde's legacy is not to be excluded for Macro-Based Behavioral Economics. The return of the "animal spirits" in the aftermath of the 2008 crisis would deserve to be examined in this perspective. Let us consider the assertion of Akerlof and Shiller:

> *The idea that economic crises, like the current financial and housing crisis, are mainly caused by changing thought patterns goes against standard economic thinking. But the current crisis bears witness to the role of such changes in thinking. It was caused precisely by our changing confidence, temptations, envy, resentment, and illusions-and especially by changing stories about the nature of the economy* (Akerlof & Shiller, 2009, p.4).

This observation is very close to the following definition of the value of money given by Tarde:

> *Value, of which money is only the sign, is nothing, absolutely nothing, except a combination of all subjective things, beliefs and desires, ideas and wills, and the peaks and troughs of values in the stock market, unlike the oscillations of a barometer, could not even remotely be explained without considering their psychological causes: fits of hope or discouragement in the public, the propagation of a good or bad sensational story in the minds of speculators* (Tarde, Psycho. Eco, p. 108).

103 Michelle Baddeley, (2013) 2019.*Behavioural economics and finance*, New York: Routledge, 2019.

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CHAPTER 02

BYZANTINISM AND THE LAWS OF IMITATION

Georgios ARABATZIS

ABSTRACT

We can distinguish two sorts of Byzantinism. One is the political Byzantinism, the most widely known and discussed, signifying a constant inauthenticity in the political struggle and the constant plotting behind a verbiage conceived for this precise reason. There is also the literary Byzantinism, the other side of modernity, a contemporary of *fin-de-siecle* state of mind. The literary Byzantinism produces clearly an imagist literature, profoundly convinced that the language is capable to picture or imitate the world. There are two possible ways to assume the resemblance of the concept to the world, whatever meaning one may give to this last term (reality, state of affairs, everything that happens, etc.). These two ways are: the analogy and the imitation. The analogy is a structural part of the warrant epistemology of intellectualism. The behavior of the imitating individuals can be observed on the social level thanks to the social monadology.

Keywords: Byzantinism, analogy, imitation, monadology, space, having, being

INTRODUCTION

We can distinguish two sorts of Byzantinism :[104] one is the political Byzantinism, the most widely known and discussed, signifying a constant inauthenticity in the political struggle and the constant plotting behind a verbiage conceived for this precise reason. Political Byzantinism is a sign of decline, and it is not a surprise that it reoccurred in the vocabulary of the postmodernist phase that follows the great political narrations post-Enlightenment. There is also the literary Byzantinism, the other side of modernity, a contemporary of *fin-de-siecle* state of mind, what Mario Paz named the Aesthetics of *Vittoriale* and Julien Benda diagnosed in the works of Paul Valery or Andre Gide.[105] The literary Byzantinism is characterized by its ambiguous position in regard to ideas: it is idealist as much as it longs for abstraction and not so idealist as long as it to gives not away its aestheticism. The literary Byzantinism produces clearly an imagist literature, profoundly convinced that the language is capable to picture or imitate the world, not through sentences, as the first Wittgenstein believed, but through the power of the words alone, the *mots justes*.

There are two possible ways to assume the resemblance of the concept to the world, whatever meaning one may give to this last term (reality, state of affairs, everything that happens, etc.). These two ways are: the *analogy* and the *imitation*.

ANALOGY AND IMITATION

The analogy is a structural part of the warrant epistemology of intellectualism and its origins are Platonic. One central promotion of the idea is made in the theorem of the analogy of being, widely used by Thomas Aquinas. The analogy of being warrants the relation of the intellect to

104 G. Arabatzis, Byzantinisme et rationalié : Julien Benda et Constantin Tsatsos, *Peitho. Examina Antiqua*, 1/8, 2017, 423-445. See also, G. Arabatzis, *Αισθητικός Βυζαντινισμός*, Athens, Kardamitsa, 2018.

105 *Αισθητικός Βυζαντινισμός,* ibid.

the things through the relation of God to the world and vice versa. On the level of the social reality, *anomy* is such an example of analogy, a kind of structural homology between the social normativity and the signifying transgression. The notion of analogy faces the same theoretical difficulties as the Platonic relation of ideas to their participating exemplifications. The Platonic descending dialectics assumes a linear synthetic structuration that cannot be repeated with precision in the ascending dialectics. Besides participation, Plato used the idea of reflection to explain the relation of ideas to things. The analogical reflection remains a warranted epistemology, a relation of model to copy that is ascertained by a specialist's intellect destined to this task. The specialist's mind has a more or less obscure relation to the general intellect of the world.

The idea of imitation is found again in Plato where it concerns primarily the relation to the divine. Here, the whole world becomes an image. The imitation is a desire for identity, yet it becomes nothing more than a process of identification and thus, a state of constant difference. In this case, the problem is that of the individuation without which no imitation would be possible. The Hegelian dialectic of the desire for the desire of the Other is such an example of the individuation process; it is a dialectic that clarifies primarily the relation of the Master to the Servant and can be seen crystalized in the false ends of history that occur before the final, complete, and absolute totalization.[106] Jealousy or snobbism are emotions that characterize this false end of history and they can be seen in the long end of history[107] during the millennial timespan of the decline of Byzantium, which is the historical birthplace of Byzantinism.

Back to Plato, the problem of analogy and imitation is crystallized in the following passage from *Phaedrus* where Socrates states his credo:

> *If I disbelieved, as the wise men do, I should not be extraordinary; then I might give a rational explanation, that a blast of Boreas, the north wind, pushed her off the neighboring rocks as she was playing with Pharmacea, and that when she had died in this manner she was said to have been carried off by Boreas.*[1] *But I, Phaedrus, think such explanations are very pretty in general, but are the inventions of a very clever and laborious and not altogether enviable man, for no other reason than because after this he must explain the forms of the Centaurs, and then that of the Chimaera, and there presses in upon him a whole crowd of such creatures, Gorgons and Pegas, and multitudes of strange, inconceivable, portentous natures. If anyone disbelieves in these, and with a rustic sort of wisdom, undertakes to explain each in accordance with probability, he will need a great deal of leisure. But I have no leisure for them at all; and the reason, my friend, is this: I am not yet able, as the Delphic inscription has it, to know myself; so it seems to me ridiculous, when I do not yet know that, to investigate irrelevant things. And so I dismiss these matters and accepting the customary belief about them, as I was saying just now, I investigate not these things, but myself, to know whether I am a monster more complicated and more furious than Typhon or a gentler and simpler creature, to whom a divine and quiet lot is given by nature*. (229c - 230a, translated by Harold N. Fowler)

The "wise men" mentioned above is an ironic reference that marks the introduction of a modernist science of interpretation in Athens, based on analogy (the mythical sign – the *mytheme* – is analogical to its reason of being). Socrates advances rather the "know thyself" principle which demands for a somnambulist imitation since the monadic sufficiency is based on Phaedrus' conforming presence and, on the difference with Typhon who, born by Hera alone, without the insemination by a male, points to a discourse without a father. To this last

106 A contesting view about the final totalization is made by Catherine Malabou, *L'Avenir de Hegel: Plasticité, Temporalité, Dialectique,* Paris, Vrin, 1996.

107 The false end of history is an idea of Alexandre Kojève, *Introduction à la lecture de Hegel*, Paris, Gallimard, 1947.

Socrates would never concur, he who constantly looks for the father of logos. What is more imitating than a son to a father? This may be the ground for the metaphysical construction as to its monadic moments.[108]

MONADOLOGY AND SPACE

The behavior of the imitating individuals can be observed on the social level thanks to the social monadology. Within the unified image of the whole, the monads are populating every level of reality and thus, also the social reality. No laws of imitation and out-imitation can be conceived of without the theory of monadology or abstract individualism. The perception of the monads is real since no separate unconscious sensation can be thought of. Thus, the intellect, as the language for Wittgenstein, is objective to the highest degree. The objective reality of the intellect is individualized in opinions or beliefs, or else powers to will. The imitation process makes images out of our convictions. As it is already noted, Hegel gives a very good idea of the process of imitation of convictions or objective data of consciousness, through evolutions and ruptures up to the final, totalizing point. This cannot be a simple phenomenalism but a discourse on the objective spirit or phenomenology. Beliefs are monads that cannot be further analyzed and the monism of desire is thus shown to be real. The universal monadological texture assumes the ancient “all things are full of gods” principle of Thales.[109] There is however no teleology in a monadological universe, no metaphysics of the telos, no polytheism either since each monad is a totality, a cosmos. There is no space -time, only an interpenetration of spaces. Monadology cannot accept the idea of world-vision since each monad is a place; some monads are imitated, others are imitating, producing and abstracting space.[110] Thus, the continuity of the phenomenal world is ascertained and the continuity from monad to monad is assumed without any differentiating principle. The symmetry of the monadological extension outdoes the sublime of hierarchical differentiation.

Without the monadological principle, one must posit a collective intellect that creates consensus in the place of the *klinamen* that monads produce by clashing between them through the force of knowledge/power. One cannot conceive of final determinative conditions since the result is always more complex than its initial circumstances of appearance. If the space was not monadological then it would have been totally contemplative long ago. Only through the action of monads, space can persist. At the end we see more and new individualities to imitate and be imitated. The process is more important than any state of affairs. The principle of imitation means that for one to be identified one must differ since identity is not possible without a minimum of difference, which as we said before makes the imitation the constant process of individuation. Thus, the structural character of the monads since the difference is their distinct quality. Difference is the reason for the resulting multiplicity and the imitation cannot be other than an intermediary state from one difference to its replica, producing objective, cultural space. The society is an example of this process and the association of monadic differences makes common projects or factions. Unity and stability are the product of difference, simplicity and complexity follow one another and at their heart is the difference while the normativity can only be contextual.

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108 What follows is a series of disseminations on Gabriel Tarde, *Les lois de l’imitation*, préface Jean-Philippe Antoine, Paris, Les Empêcheurs de penser en ronde/Le Seuil, 2001 (1890/1895) et *Monadologie et sociologie*, préface Eric Alliez, postface Maurizio Lazzarato, Paris, Les Empêcheurs de penser en rond/Institut Synthélabo, 1999 (1893).

109 DK 11 A22(b) Arist. de Anima I. 5, 411 a 7: «Certain thinkers say that soul is intermingled in the whole universe, and it is perhaps for that reason that Thales came to the opinion that all things are full of gods».

110 See the genealogy of cultural space in Georg Simmel, The Metropolis and Mental Life, in Levine, Donald (ed.), *Georg Simmel on Individuality and Social Forms*, Chicago, Chicago University Press, 1971, 324-339.

HAVING AND BEING

At the core of the monadological ontology is a comprehension of the ontology of having that is situated prior to the ontology of being. To be is to identify or else to say, such or such has these qualities. The belief is an image of having since we are *having* beliefs. The philosophy of being comprises of the non-being and this is a fatal error as to monads. The quality of "more or less" is far proximal to the ontology of having and pictures better the mediation from monad to monad. The opposite of being is not the no-being but the "non-having". Science is focusing on the having or the properties and to have is a better form of explication than analogy. An encounter (like the ones Socrates was having in Athens) is also a form of possession ("I have or I had a meeting"). The intimate conversation or interior monologue is the reciprocal condition par excellence as Wittgenstein thinks also and any other possession is ulterior to this conversation. Culture and life are born out of it and this may be called the solipsism of language. Without the ontology of having, the whole is not understandable at all. This concludes on the intermediate character of monads instead of some quintessence of them. The ontology of having is also the reason for universal intentionality that can be noticed in every child as the will to will. The leading monads permit to overcome the frustration of not having and the steps to acquiring are replaced by piety and devotion. The ideas are the passage from belief-power to properties and, then, intentionality becomes the application of belief-power to ideas. Persuasion is the ultimate communication of monads and piety makes the transformations of intentionality. The Empire is an example of the possibility to apply massive force either over one point or over many points at once. This is a clear example of the passage from acquiring to persuasion that characterizes the Empire. At the end, the Apostolic path is more effective than the military one. The real Empire is uneven yet consistent. The murderous frenzy never reaches the heart of the pious soldier[111], it only happens in the case of Barbarism. Faith and love are the real factors of making and consciousness is the imperial gestalt delimited only by the fall of the Empire. The dispersion of divinity is the beginning of new independences.

The above summary presentation permits to understand the predominant individualism of Byzantinism. Social history based on the history of ideas and social conflict may only point to the anomy as the sign of an underlying consensus, a structural homology, or some distinctive analogy. Monadology or imitation explains better the intellectual fractionism, the converging beliefs, the general piety and the imperial hold on opinion. Even more, at some crucial points, on certain belief-junctions, one may perceive the auto-affirmation of individualism, beyond the antiquarianism, the cult of citation, the dominant opinions, the transcendentalist or the esoteric style. Monadology in this case defeats the idea of representationism as form of all-pervading intellect or intellectualism of the object or rational phenomenalism. In philosophy, the debate about mental representation concerns on one part the propositional attitudes (beliefs, desires, etc.) and the phenomenal properties that are related to the contents of thought and data-experience. Byzantinism as the limit of the rationalist credo in *fin-de-siecle* sensitivity coincides with the monadological view of the universe. Their contemporaneity must be underscored and further explained.

WORLDVIEW

One must mention the opposition of monadology to the idea of worldview. The concept of worldview comes mainly from the hermeneutical philosophy of Wilhelm Dilthey[112]. In sum, a worldview is the mode on the basis of which a precise cultural space -time represents the

111 G. Arabatzis, Crainte et eusébeia dans la pensée byzantine, *La peur chez les Grecs : Usages et représentations de l'Antiquité à l'ère chrétienne*, eds. M. Patera, S. Perentides, J. Wallesten, Rennes, Presses universitaires de Rennes, 2023, 77-86.

112 See Tom Rockmore, Dilthey and Historical Reason, *Revue International de Philosophie*, 226, 2003/4, 477-494.

world that surrounds it, meaning the human relations, feelings, the artistic productions but also the world of action. Action is thus always within a worldview. In that way, Dilthey introduced a cultural relativism that was subject only to understanding and not to causal explanation. Hegel though had himself produced a historicist account never concluded on a relativist point of view since in him the different worldviews are articulated inside an evolutionary picture that culminates in Absolute Spirit.

Dilthey's relativism had certain consequences that remind us strongly of the postmodern moment in philosophy. Thus, since worldviews exist, no one is ever in direct contact with reality, but only in contact with the worldviewed reality. Reality can never be understood without the mediation of a network of concepts. In fact, anyone that partakes to a worldview lacks the words to describe what is evident for another worldview. A second consequence is that the question of power becomes clearly prominent. The first and original power is that of translation that brings forth the question of the compatibility of worldviews. Is the relativism of worldviews a radical one or can it be surpassed? The incompatibility of worldviews shows that a translation always misses or, as the Italians say, "*traduttore tradittore*". Yet, the description itself of the variety of worldviews demonstrates that the relativism here is not a radical one or, in other terms, the description of a variety manifests the limit of absolute relativism. So, from questions of ontology, one passes to questions of common action: do we share the same worldview? Do we see the same worldview? These are questions that become crucial with globalization, migration or even, simple tourism and here appears the need for new epistemic fields of cultural observation. There is still a major problem: the communication can obscure or cover the difference of worldviews. The new media are the manifestation of the coexistence of relativism and communication, despite their informational noise and the ensuing bad faith.

Back to Byzantinism, the concept of worldview can be conceived of only as a form of monadological belief. In this sense, the worldview relativism is limited by the action of imitation and counter-imitation. Worldview is not an explaining principle but a monad like the other ones, just a monad with a greater attraction to imitative forces. Byzantinism itself can't be a worldview, only a worldview that is not in actuality, a second degree of belief, a monad that imitates and counter-imitates within the interpenetrated spaces of modernity.

PASSION

Byzantinism contains the idea of the singularization of passion. Instead of the classical philosophical war against the passions, Byzantinism proposes an analytic of passion which monadologizes. The units of passion are placed in silence, cannot lead to clear and distinct ideas, and constitute a form of internalization of having. The units of passion require a new hermeneutic understanding of phenomenalities. Silence is, at the same time, a cognitive impossibility and also an attitude of piety, in the face of what one might call the war of passions. The passions that are being opposed to are envy, jealousy, ambition, sensuality, bad faith. The sum of them is none other than what Plato would call a disharmonious state corresponding to psychological disharmony. The generalized hypocrisy requires a beautiful language, a benign language which constitutes the hieroglyphics of hypocrisy, while authoritarianism is well rooted in general behavior. Communication channels function not as a transfer and diffusion of information but as intuitions of the Other's mood. This latter categorizes the passions as signs. Thus, an ulterior ethics emerges which is still a cognitive ethics, seeking precision, subtleties, nuances, gradation, and constant comparison.

This minor ethics is foundationalist and is based on self-observation which provides the primary measure of comparison. The basic facts to be compared are envy and sensuality. Ethics parallels what we would call, in modern terms, a novel of apprenticeship (*Bildungsroman*). The general attitude is the moral equivalent of a progress towards the light but without any

lyricism or romanticism. Its tools are abstraction and logic, both of which are to be found in bad faith. Expression is identified with the moral defense of the Ego, the condemnation of the Other, the recognition of this last's intelligence and non-moral reciprocity; thus, any form of confession according to St. Augustine is avoided and is rather sought the balance of conduct. Moral truth, too, is ultimately monadic and oscillates between passions and disorder (referring often to popular Stoicism).

Although the passions are ultimate entities like monads, which do not admit of further analysis, the psychology of passions constitutes an object of knowledge. The process parallels any other cognitive efforts: observation - hypothesis - identification of the causes. However, the end of the knowledge of the passions is not a new science but a withdrawal into the beyond of passion, i.e. Hellenistic serenity (*ataraxia*). A prominent idea is the constant war against the collective illusions of a benevolent sociability. The understanding of passions is the taking of a decisive distance from them as the final criterion of the individual acquisition of the relevant knowledge. From Christian ethics we pass to moral individuality as the only possible movement of the will. The generalized passions that are the object of imitation (ontology of having) lead to an ethics of isolation (monadology). This is, perhaps, a particular distinction performed in Byzantinist terms within monadology.

IN CONCLUSION

There is a difference between ethical experience and ethical communication that leads to the problem of moralism. The latter can be associated with hypocrisy, bad faith, pharisaism or Machiavellianism. Can one be moral by betraying her/his own principles? Is not moral knowledge love, as it was considered at the foundation of the Second Rome? If we accept the hypothesis of the Renaissance imagination as a potential idea-in-progress since the classical Byzantine period (i.e., after the end of iconoclasm) what remains as to the autonomy of the divine mind? Is imagination nothing else than the projection of the mind into external, diviner spheres? Is the mind characterized by a continuous referentiality in which itself becomes continuous (excluding the presence of mental faculties) and is life the supreme good? Moralism posits a schism within the monad between the Being and the Ought-Being of our moral behavior. What is the description of that behavior and whether it should be changed are questions that point also to the distinction between categorical imperative and moral imperative. Nothing precludes moral behavior from being an illusion concealing the truth of the monad. In this case, ethics is a moral impressionism and the object of games and role-playing. A Stoic theatre may be, but this does not preclude its realism. Thus, moralism is completely separated from moral determinations and moral facts in a monadological universe.

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CHAPTER 03

PHILOSOPHICAL AND MATHEMATICAL INVESTIGATION OF SIMILAR PHENOMENA IN THE CONTEXT OF AN INCREASED COMPLEXITY

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ABSTRACT

This work presents a mathematically proven approach to scientific field research. It is an attempt that elaborates philosophical principles so as to mark scientific research and technological innovation. For that, this work is focusing on exploring the 'mechanisms' of innovation, within the causes, logics or laws of innovation, as well as in the nature of the actors involved and the role and functionality of an entrepreneurship activity. In order to achieve that, the current work proposes the introduction of 'new productive combinations', made possible by utilizing previous knowledge in a well-defined analytical-combinatorial way. Such derived innovations, may evidently, sweep away the old in favor of a newly defined approach, fill-in the research-based knowledge gaps and, eventually, provide a cognitive completion of knowledge. Although via a rather different approach, the dynamics of innovation and the notion of the entrepreneur researcher as the key actor, seem to have been already present in a Tarde's previous work. On the other hand, we are not standing behind Tarde's position that invention is the (new and original) result of an (originally) combined imitation of previously existing inventions. But then, we try to identify the procedure towards novelty or originality, via a non-static circular process where production functions constantly change in a Centrifugal mode. Research and Development is essentially the outcome following the introduction into such a 'circular flow' of a 'new combination' of existing knowledge and cognition. This work may technically be described as a "classification-transformation method" (CTM), which classifies experiences, qualities, properties and characteristics of the inputs, processes and outcomes, related with a phenomenon taking place in a specific system of the Euclidean & Newtonian world, and mathematically transforms them through levels that is said to represent the complexity in the description of the system.

Keywords: scientific research, knowledge, similarity, physical phenomena, matrix

INTRODUCTION

Science stands as a reasonable endeavor based on valid experimental evidence, criticism, and rational discussion, in order to reveal the knowledge of our physical world. It is, then, the experiments that provide such pieces of evidence that grounds this knowledge, through testing existing theories yet, also often calling for a new theory, either by indicating errors in the so far accepted theory, or by recognizing a new phenomenon that is in need of explanation.[113] Scientists may investigate a phenomenon so that it may be incorporated as evidence part of a theory. All theories have some free parameters that need to be completed via experimentation, where the phenomena are produced in an unchanging and repeatable manner.[114] In fact, the perception of a phenomenon has been emerged in the context of a hypothesis via the logical combination of empirical observations, and conclusive theoretical and practical interpretations.[115] Therefore, there is an infinite number of perceived phenomena, that all and each one, apparently signify an objective reality of higher or lower accuracy. The major tool

113 Reiss, J. and Sprenger, J. The Stanford Encyclopedia of Philosophy. *http://plato.stanford.edu/entries/scientific-objectivity/#EpiConVal.*

114 Hacking, I. *Representing and intervening. Introductory topics in the philosophy of natural science*. Cambridge University Press, UK, 1983.

115 Kuhn, T.S. *The Structure of Scientific Revolutions*. University of Chicago Press, Chicago, 1962.

for obtaining experience in the physical world is grounded on the reproduction of the physical phenomena in a controlled environment, i.e. within a lab or via an in-the-field experimentation procedure. In other words, gaining experience is actually based on similarities between phenomena or classes of phenomena, whose identification exists among the fundamental considerations of any scientist in charge of the experimentation procedure.[116] Indeed, the ability to correctly infer values of quantities for one physical system after knowing these same values of these quantities from a system that is physically similar to the first one, rests on the ability to properly establish that the two systems are similar. Towards supporting such an ability, the necessity of classifying the existing knowledge, has already been acknowledged.[117]

WHAT IS ACTUALLY SIMILARITY?

The similarity between particular systems is based upon the similarity in respect to a phenomenon of interest. At the same time observing events at a laboratory level, are considered informative about things and events that go beyond the specifics of the observed phenomenon. This is possible due to the assumption that there is a class of events or situations that are similar to the given event, and hence, any given event could be informative of all other events within that same class. Still, a question arises:[118] in the case that an observation has been made on a specific experimental setup, what does indeed determine the class of other events to which it is deemed similar? The answer refers to the assessment of various considerations regarding this same object or to the assessment among various objects of a common hypothesis.[119] Hence, the identification of similarity is quite difficult, since specific well posed criteria are necessary. What has been quite widely accepted was the necessity of the classification of the existing knowledge. However, a major difficulty has been the definition of all the specific similarity criteria, in order to assure that similarity indeed exists. Evidently, a researcher applying improper similarity criteria might obtain erroneous or meaningless results, yet still spending significant amounts of resources. Consequently, poor similarity criteria could lead to duplication of research (and, therefore, to waste of effort), due to lack of deep insights of the existing experience/knowledge on the phenomenon under consideration. Up today, knowledge classification attempts were -in most of the cases- rather empirical, without explicitly defining specific rules, and seemingly, following a time-dependent evolution of an inexplicable form.[120]

In an attempt to fulfill the requirement of selecting and applying solid similarity criteria, the work in hand suggests a solid mathematical treatment of identifying similarity and establishing robust similarity criteria through the application of fundamental Linear Algebra concepts (namely, vector spaces and mapping between them) on the relative philosophical aspects already arisen.

HYPOTHESIZING ON PHYSICAL PHENOMENA

The perception of a phenomenon may derive through a hypothesis context, formed via the logical combination of empirical observations and conclusive theoretical and practical interpretations. Thus, incidents occurring in the real world could be translated to phenomena, as

116 Kroes, P. (1989). Structural Analogies between Physical Systems, *British Journal of the Philosophy of Science*, 40, 145-154.

117 Sterrett, S.G. (2002). Physical Models and Fundamental Laws: Using One Piece of the World to Tell About Another, *Mind Society*, 3 51-66.

118 Glymour, C. (1970). On Some Patterns of Reduction, *Philosophy of Science*, 37, 340-353.

119 Sterrett, S.G. (2006). Models of Machines and Models of Phenomena, *Studies in the Philosophy of Science*, 20, 69-80.

120 Feyerabend, P. *Explanation, Reduction and Empiricism, Scientific Explanation, Space, and Time, (Minnesota Studies in the Philosophy of Science, Volume III)*. ed. H. Feigl, G. Maxwell, University of Minneapolis Press, 28-97. 1962.

far as these are recognized through the human senses and placed within the framework of theory and knowledge, available at the historical time frame.[121]

A theory may explain why some phenomena occur (or do not occur) by modeling the causes or conditions that control their occurrence (or non-occurrence) under the experimental prediction and regulation. Alternatively, a theory may explain a lawful regularity among empirical events, by providing a model of causes or conditions that, if fulfilled, necessitates the lawful regularity among these events. Theoretical questions as expressed by the researcher to sharp and accurate "technological" questions, may provide the way to reproduce nature within the lab, for to mirror theory to reality regarding the expression of the phenomena in question, or vice versa. It is up to the experimenter, to formulate certain "technological devices"/experiments, through which a decisive answer to these questions shall be elicited. Additional pending questions, may also follow a gradual implementation into the experimentation's unfolding, having an apparent impact on research subjectivity and its outcome.

Through the following results' explanation and interpretation process, the human engagement is inevitable for understanding, via providing the expressions of governing principles while, at the same time, humans make sense of themselves, their world, and the manner of being in it.[122] Summing up, the individual characteristics being examined and "adding" them up to make the whole, may not be considered as appropriate compared to total systems' behavior, understood as dialogic, emerging in the interaction between self and other participants.[123]

MATERIALS AND METHODS

Collecting the existing knowledge for a given system, includes both the objectivized pre-understanding, as well as the interpreter and inquirer. Potential users of scientific knowledge may possibly, be sharing a theoretical and practical pre-understanding with professional communities. This variability may be defining the multiple horizons of pre-understanding. Understanding may also occur as an iterated reciprocal movement between (the meaning of) a part and (the meaning of) the whole into which that part belongs. Assuming that any part only makes sense within a whole, yet the whole does not make sense except in terms of a coherent configuration of its parts.[124] Finally, understanding, contains the information-derived-knowledge. Therefore, it also depends on the engineering functionality of the inherent knowledge, which is transforming the existing knowledge, via appropriate justification means, into understanding, which according to Capurro[125], is one of the forms of the knowledge technology. According to Lancaster[126] and Salton and McGill[127], knowledge relevance criteria formulation includes the system's relevance and individual relevance or suitable applicability. Froehlich[128] also added the need for a more productive framework towards modelling systems and user criteria, including users of the collected information and mediation through the system.

In order to overcome issues raised up due to the complexity of the phenomena, the human factor engagement and the data collection, we, herein, propose an independent, engineer-

121 Kuhn, T.S. *The Structure of Scientific Revolutions*. University of Chicago Press, Chicago, 1962.
122 Popper, K.R, Eccles, J.C. *The self and its brain: an argument for interactionism*. Berlin: Springer; 1977. Prigogine I. La fin des certitudes Temps, chaos et les lois de la nature. Paris: Odile Jacob, 1996.
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ing-based method, which aims in offering the experimenter scientist a tool for designing and executing the reproduction of the phenomena in the lab, inside a clearly defined experimentation “device”.

For achieving the aforementioned goals, it is our suggestion to include the formation of a knowledge database step, along with a classification scheme, under a strict research field terminology. That will be actually an objectivized pre-understanding collection of the phenomena descriptors, following specifically coded classes of data, that can be dialectically experimentally explored and/or enriched by the scientific community.

THEORETICAL BACKGROUND

The description of a system needs to consider both the physical principles of the system along with a validation step for the physical description of the system. Such a consideration must discretize in-space and in-time the investigation in order to provide a holistic approach of the system, including the cohesive points of the phenomena occurred. Nevertheless, this description has to be transformed accordingly to human cognition, in order to obtain a description that is consistent with the way that intelligence translates the phenomena. Actually, a system description based on fundamental principles is the initial condition for deriving the picture of the system, recognizable by human mind. This step produces the necessary categories, i.e. the expression of the system behavior and the definition of the boundary conditions, both classified in terms of logic. Finally, at least one macroscopic quantity must be estimated, against which the engineering tool should be developed and assessed.

Any system of physical interest can be described through a typical “in-process-out” context. In accordance with principal “categorical descriptors”, a system is actually described through the expression:

(1) $$\text{matter} + \text{energy} \xrightarrow{\text{relationships}} \text{outcome}$$

That, results to a classification scheme that correlates these four categories (namely, matter, energy, relationships, outcome) with three, empirically defined, levels. From left to right, these levels follow a pattern of increased complexity, as clearly described in the following Table 1. From a mathematical point of view, the number of levels is the minimum number of points which might describe a non-linear curve on the Euclidean plane. At the same time, three is the least number of points that might be linearly independent, - which is a crucial subject in terms of linear algebra -, since these levels actually describe the degrees of freedom for each category, indicating therefore the impact of each systemic descriptor on the macroscopic outcome. Furthermore, it should be stressed out that the human cognition about the coherence of the system, does exist naturally within the cells of this matrix. To visualize the above concept, a 4X3 classification matrix has been constructed and depicted in the following Table 1.

CATEGORIES	LEVELS		
Matter	One	Many	All
Energy	Reality	Disallowance	Restrictions
Relationships	Inter-dependent	Reasons	Intra-dependent
Outcome	Potential	Existence	Necessity

Table 1. The classification matrix.

Each column of the above matrix within the levels of the categories, represents a specific situation within the system also indicating a specific level of complexity in the description of

the system. The general trend is the increase of the description complexity, when moving from left to right. The first Level column refers to only one object/variable as a major representative for describing the system. Following a conservation law and/or a relative mass/energy balance, only one mathematical equation seems adequate to describe what takes place in the system. A single factor might be as well selected to describe the macroscopic behavior of the system, on the basis of one specific relationship between the variables selected and the outcome quantity produced. In brief, the first Level column of the matrix refers to *one* variable involved in *one* algebraic, differential or integral equation that produced by applying *one* fundamental principle in the system, while *one* quantity is selected to macroscopically describe the system. This column produces a rather primitive ideal outcome, which can roughly represent the system.

The mid-second Level column is produced by the transition from the one-dimensional events to multi-dimensional ones, with finite dimension. This vector-space dimension might represent the number of variables selected to describe the system (matter) or the details on the phenomena occurred (energy/relationships) or both. In any case, a system of differential or algebraic equations is produced by applying the corresponding fundamental principles on the system -parameters and reactivity-, while a single *one* parameter is selected to macroscopically describe the system. Although a single macroscopic outcome is defined, the difference from the first column's outcome is significant, since this second quantity includes the inter-effects of more variables and parameters, being therefore more accurate in satisfying more efficiently the approach.

Finally, the third Level column, describes the system in infinite dimensions that signifies an infinite number of variables. Since it is not possible to define a system of equations with infinite size, they must be treated through asymptotic techniques. The selection of *one* macroscopic quantity which is not only adequately describing the system's behavior (despite the problems arisen due to infinite dimensions), but also considers all the parameters impact (although not necessarily known in full details). The above-described overall concept is summarized in Table 2.

SYSTEM DESCRIPTOR	LEVEL 1	LEVEL 2	LEVEL 3
Dimension	One	Finite	Infinite
Mathematical treatment	Equation	System of Equations	Asymptotic
Macroscopic quantity	One (produced by the solution of the equation)	One (produced by the solution of the system)	One (appropriately selected)

Table 2. The translation of Table 1 to the language of mathematics.

The "System descriptor" column of the above table, contains the principal components of the system, commonly describing the three "Levels" in Table 1. These descriptors are considered to be logically adequate all together, to express each, and all, of the Categories. The remaining columns in Table 2, incorporate the particular requirements, per Level, in acquiescence to the theoretical background, presented in Table 1. In brief, the first Level column represents a simple, one-dimensional description of the hypothesis, the second one corresponds to a next level transition in a multi-dimensional space, while the third Level column depicts the influence and the cohesions in an infinite, multi-dimensional vector, space. Regarding the macroscopic description of the phenomenon/-a occurring as part of the systemic behavior under certain

conditions, both columns of Level 1 and Level 2, denote the selection of one representative factor/quantity, but they clearly differ in the number of parameters whose influence has to be taken into account. So, the factor/quantity of the Level 1 column, represents inevitably the effect of just one parameter. For the factor/quantity of the Level 2 column, a finite number of parameters is assumed to affect the systemic outcome, while for the Level 3 column an infinite number of parameters as well as their impact are incorporated.

MATHEMATICAL TRANSFORMATIONS: SIMILARITY MAPPING

In support of the above, an example of engineering interest, could be the problem of instantaneous sorption of a substance “A” into a solid media. The “A” is assumed to be diluted in a Newtonian fluid flowing towards the solid surface under laminar flow conditions. When no reaction among the media is assumed, the available mass transport mechanisms are the convection (i.e. mass transport due to the motion of the medium) and diffusion (i.e. mass transport due to concentration gradients/differences), which have been mathematically described through the well-known convective diffusion equation[129]. Recognizing the time-dependent spatial distribution of the concentration of “A” as the desirable outcome, results into a typical vector $\underline{v}$, (which is one of the above-mentioned vectors):

(2) $$\underline{v}=\left\{A\ ,\ convective-diffusion\ ,\ \frac{dC_A}{dt}+\underline{U}_A\cdot\nabla C_A=D_A\nabla^2C_A\ \ with\ \ C_A(interface)=0\ ,\ C_A(\underline{r},t)\right\}$$

At this point, it is important to clarify that eve ry vector of *V* includes all the previously defined vectors, thus identifying the evolution of the knowledge about a specific phenomenon with the time. Therefore, a type of arrangement $\prec$ is defined through the time $\hat{t}$ when the perception $\underline{v}(\hat{t})$ has been formulated, as follows:

(3) $$\hat{t}_1<\hat{t}_2\Leftrightarrow\underline{v}_1(\hat{t}_1)\ \prec\ \underline{v}_2(\hat{t}_2)$$

To further understand the arrangement $\prec$, it has to be mentioned that $\underline{v}_2$ in the above eq. (3) contains all the knowledge existed in $\underline{v}_1$, since $\hat{t}_1<\hat{t}_2$. In this context, every new perception of a phenomenon contains all the current knowledge about this phenomenon, plus a new contribution. Obviously, there are several cases where a newly obtained knowledge actually contradicts and eventually cancels a part or all of an existing knowledge on a phenomenon. In such a case, the existing knowledge is just proven as false knowledge. The overall achievement of proving the existing knowledge as actually false, can be treated as a new affirmative knowledge, by itself. In that sense, the arrangement previously defined in eq. (3) is always valid, even for the case that a new knowledge negates any previous one.

Now, let’s define the internal operation $\oplus$ as follows:

(4) $$\forall\underline{v},\underline{w}\in V\ \exists\underline{u}\in V:\ \underline{u}=\underline{v}\oplus\underline{w}=\begin{cases}\underline{v} & \text{if}\ \ \underline{w}\prec\underline{v}\\ \underline{w} & \text{if}\ \ \underline{v}\prec\underline{w}\end{cases}$$

The above process actually identifies existent accumulated experience about a phenomenon under investigation, following any recent scientific contribution towards its knowledge. The specific relationship (operation) defined through eq. (4) is commutative and associative, while it includes an identity element as well as inverse elements. Detailed proofs are given in the Appendix section. Still, it is important to underline that the above-mentioned accumulation

129 Bird, R.B., Stewart, W.E., Lightfoot, E.N. *Transport phenomena*. Wiley, New York, 1960.

also includes fractions of knowledge that may, partially or totally, negate the existing knowledge. In terms of mathematics, this accumulation represents a series where each term is accompanied by its own particular sign.

By defining the amount of the accumulated knowledge included in the vector $\underline{v} \in V$, $\lambda = \|\underline{v}\| \in \mathbb{R}$, as the regular norm of the vector, is able to calculate the evolution ratio between every two elements of *V*. If λ_i and λ_j are the amounts of knowledge embedded in $\underline{v}_i \in V$ and $\underline{v}_j \in V$, respectively, then:

(5) $$\mu_{ij} = \frac{\lambda_i}{\lambda_j} = \frac{\|v_i\|}{\|\underline{v}_j\|} \in \mathbb{R}$$

Obviously, $\mu_{ij} > 1$ when $\underline{v}_j \prec \underline{v}_i$, while $\mu_{ij} < 1$ when $\underline{v}_i \prec \underline{v}_j$.
Now, let's define the external operation $\times$ as follows:

(6) $$\forall \underline{v}, \underline{w} \in V \ \exists \mu \in R: \ \underline{w} = \mu \times \underline{v} \Leftrightarrow \mu = \frac{\|\underline{w}\|}{\|\underline{v}\|}$$

The above operation actually quantifies the relative significance of the knowledge evolution through any two perceptions of a phenomenon under investigation. Operation $\times$ defined through eq. (6) presents compatibility with scalar "multiplication", satisfies the distributivity of + over $\times$ as well as distributivity of $\times$ over $\oplus$. Detail proofs are again given in the Appendix section.

The above definitions and properties guarantee that the structure $\{V, \oplus, \times\}$ is a vector space of a basis containing the four vectors $e_m = \{m,0,0,0\}$, $e_e = \{0,e,0,0\}$, $e_R = \{0,0,R,0\}$ and $e_0 = \{0,0,0,o\}$. Obviously, the dimension = 4. To prove that the above structure is indeed a vector space, it is necessary to show that (a) the elements e_m, e_e, e_R and e_o are linearly independent, and (b) that they might produce the whole vector space. Indeed, the categorical descriptors defined in eq. (1) are independent to each other, because there is no straightforward transformation to produce anyone of them as a linear combination of the others three. For the matter, the energy and the relationships, this is rather obvious. On the other hand, the liberty of selecting any appropriate macroscopic quantity to represent "outcome" actually assures that this descriptor is independent on the others three. Finally, it is rather obvious that any vector of *V* is a linear combination of e_m, e_e, e_R and e_o.

It is now straightforward to define a mapping m_p^{In} on this vector space, as follows:

(7a) $$\mathbb{R} x V \xrightarrow{m_p^{In}} M_{3x1}(V): m_p^{In}(\underline{v}) = \{\lambda_1 x \underline{v}, \quad \lambda_2 x \underline{v}, \quad \lambda_3 x \underline{v}\}$$

with

(7b) $$\lambda_1 \to 0 \ ,$$

(7c) $$\forall \lambda_2 \in \mathbb{R} \exists M > 0: \lambda_2 > M$$

(7d) $$\lambda_3 \to +\infty$$

The first element of the mapping, $\lambda_1 \times \underline{v}$, represents a nearly zero amount of knowledge, the second, $\lambda_2 \times \underline{v}$, represents any finite amount of knowledge and the third one, $\lambda_1 \times \underline{v}$, the almost total infinite amount of knowledge that can me accumulated for the physical phenomenon

under research. This classification is consistent with the philosophical wit of “one-many-all”, encountered in the modern philosophy.[130]

The above mapping [eq. (7)] produces a matrix with four lines, each one standing for each of the elements $\{m,e,R,o\}$, and three columns, the first for the vector $\lambda_1 \times \underline{v}$, the second for the $\lambda_2 \times \underline{v}$ and the third for the $\lambda_3 \times \underline{v}$. In terms of rationalism, each column of this matrix represents a specific perception of the phenomenon, as presented in detail elsewhere.[131]

As previously stated, the first column refers to a vector containing the minimum non-zero knowledge of the phenomenon, where only one variable, along with only one mathematical equation produced by one simple conservation law or a relative mass/energy balance, are considered adequate to describe the particular perception. In fact, the first column of the matrix produces a rather primitive ideal outcome, which can roughly represent the phenomenon. The second column refers to the maximum finite knowledge currently available, where a finite number of variables are selected to describe the phenomenon and, therefore, a system of equations is produced, while a single one parameter is again selected to macroscopically describe the phenomenon. Briefly speaking, the second vector is a more accurate and more efficient representation of the phenomenon under consideration. Finally, the third column describes the absolutely holistic perception of the phenomenon, taking into account an infinite number of variables that define a system of equations with infinite dimension. In other words, the third vector describes the overall currently available knowledge about a phenomenon, identifying all the parameters’ impact, although not necessarily known in full details.

It is important to note that:

(8) $$\lambda_1 x \underline{v} \prec \lambda_2 x \underline{v} \prec \lambda_3 x \underline{v}$$

i.e. the last column of the matrix includes all the knowledge embedded in the previous two columns. Although sounds valid at a glance, the direct use of only this third column is impossible without the use of the previous two, due to the high complexity of the description and the infinite quantities involved. In this context, the values of the mapping m_p^{In} produce the necessary classification of knowledge through eq. (7). Apparently, the above mapping builds an internal similarity between the columns of matrix, as far as they are produced through the same mapping expression.

The aforementioned theory has been developed in order produce a tool for the detection of internal and external similarities under specific similarity criteria. For the application of such a theory, the development of a detailed methodology is crucial. In order to achieve potential internal similarity, it is necessary to complete the 4X3 matrix, i.e. to define a mapping of the form given by eqs. (7). Obviously, there are more than one options (definitions) of such a mapping, therefore the matrix is not unique. What is important here is to carefully follow the decisive rules, presented in detail elsewhere.[132]. Moreover, the use of this matrix allows for the identification of lack of knowledge about the phenomenon under investigation: this lack exists if it is not able to fill all the cells of the matrix, i.e. whether is not able to define the three real numbers λ_1, λ_2 and λ_3 in eqs. (7).

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132 Coutelieris, F.A. and Kanavouras, A. (2016) Preservation engineering assets developed from an oxidation predictive model, *Open Chemistry*, 14, 357-362.

SIMILARITY DECISIVE RULES

Following the above demonstration, we consider equally important to define the rules regarding the matrix content completion. It goes without saying that consideration and application of these rules will eventually reassure a trustworthy and acceptable model development for engineering purposes. It should also be possible to define the transition functionality and efficiency, from the Level 1 to the Level 3 activities of Table 2, in practice and within the empirical experience available.

Therefore, the key rules for filling the matrix, are:

Rule 1: The transition from a description of a system to a model is able if, and only if, all the cells of Table 1 are appropriately filled according to a given hypothesis.

Rule 2: A system may allow for more than one transition pathways from description to model, as the content of the cells in Table 1 are not obligatory unique.

Rule 3: For cells in Table 1 that may contain more than one values, the selected macroscopic quantity has to be different, in accordance with the selected parameters. Although all the potential different quantities in a cell are totally equivalent among each other, it is always possible to interchangeably translate each one of them to another through a simple relating process.

Subsequently, the completion of the twelve cells in Table 1, transforms the systemic mathematical description into an engineering tool that is self-confidently obtained through a well-established methodology of the classified available knowledge.

Additionally, it also makes sense that through this engineering model's mathematical shelf assessment and development process, the whole system and its classified knowledge may be intellectually screened for riffles and open points. These are original knowledge or existing knowledge "gaps" in understanding, which restricts a proper and adequate compliance of theory to mathematics, through the empirical experience (field/lab observations). Simultaneously, the aforementioned process shall then, apparently, reveal the particular experimental approach needed in order to answer and complete the inconsistencies in knowledge regarding the phenomenon in question and allow for the most "economical" experimental technology, towards an overall efficient experimentation plan.

CONCLUSIONS

The aim of this work was to tackle the matters of hypothetically questioned events, as part of a world of increased complexity, in order to reveal the cohesiveness among the complexity levels, as well as the similarity identified via the interconnection of these levels and the potential transition among levels of increased complexity, i.e. the columns of a of within a well-defined classification matrix.

The phenomenological expressions of the systemic participants can be strongly associated with forceful fields of classification and their descriptors. Accordingly, the goal was to critically describe the evolution patterns of the existing phenomena via their expressions under certain conditions.

Our method assumes that all relations in a Euclidian and Newtonian world, are inherently existing, although not clearly revealed, therefore they remain misperceived, unexplored or unknown. This work supports the classification of the existing knowledge regarding a phenomenon,

in a strict mathematical way. In specific, it was proven that the set of all the perceptions of a phenomenon under investigation, sustained by closely defined operations, constitutes a vector space. For knowledge classification being essential for identifying similarities among perceptions of phenomena, a non-linear mapping over this vector space has been also defined. This mathematical treatment allows for a deep insight on a specific phenomenon, becoming therefore an engineering tool for locating lack of knowledge, avoiding repetition of results and managing waste of research effort, in general.

Conclusively, this work is a constructivist approach in that tries to avoid non-essentialist explanations of events, research repetition or missing of particular research challenges and potential innovations. The ultimate target is to explain a successful theory by understanding the combinations and interactions of elements under well-defined conditions that make it effective and efficient, rather than recording the “true” and “false” perceptions of the events.

Finally, we support that our approach describes and tries to explain the world by focusing on the cohesions among the principal system descriptors, rather than in their description itself.

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CHAPTER 04

TARDE AND SIMMEL ON 'ASSEMBLING THE SOCIAL': SOCIETY, LIFE, THINGS

Spyros GANGAS

ABSTRACT

If Tarde's sociology undergoes a justified revival, seen as a forerunner to ANT (Actor Network Theory), then it is worth pondering how Tarde's monadological sociology can gain in explanatory adequacy in conjunction with Simmel's sociology and micro-metaphysics of 'things'. This chapter will focus on Tarde's homologies with Simmel. Both Tarde and Simmel reject dualisms, and both aim to affirm the essential entanglement of society with nature and with the world of objects. It is worth noting that Simmel offered a unitary theory of sociation based on the triptych: sociation –life– things. This proposed affinity is justified, as I argue, first, because Tarde's communicative cornucopia is not dissimilar to Simmel's proliferation of individuated spheres of life (like Weber's incommensurable value-spheres). Yet what separates Tarde and Simmel from Weber is that both are at pains to affirm a relational social ontology; Tarde's monadology and Simmel's interactionism sketched a new research program that found its contemporary formulation in Latour. Second, both Tarde and Simmel ground sociology on naturalistic templates. Whilst Tarde treats natural configurations as social, Simmel's metaphysics of life elicits a systematic deferral of relationism to the ground of Being (i.e. Life). Last, Tarde's pansocial ontology with its contemporary resonance in Latour's sociology of 'hybridity' finds a formidable ally in Simmel's microsociology of things. In Simmel, the fundamental demarcation of things from human interaction is emphatically denied. Thus, Simmel's aesthetic-normative appreciation of the world of objects brings him close to Tarde's pansocial ontology, yet this accommodation of 'things' into sociology entails the possibility of them being seen as non-instrumental containers of 'life' and, thus, as microforms of the latent utopianism in Simmel's metaphysics of society.

Key words: life, Latour, modernity, Simmel, society, Tarde, things

INTRODUCTION: EPISTEMOLOGICAL HOMOLOGIES

Bruno Latour has championed a return to Gabriel Tarde's sociology. Arguing against the Durkheimian hegemonic notion of the 'social' as the collective force over and above individual agency, Latour discerns in Tarde a sociological archaeology of ANT ('actor-netwrok-theory'). For Latour: "Tarde can be said to have invented microhistory many decades before its discoverers, in the same way as he invented ANT long before we had an inkling of what network theory looked like…"[133]

It is not too risky to suggest that what fascinates Latour in Tarde's monadological sociology is the epistemological confirmation of 'hybridity' which has been Latour's clarion call-in science and society studies. Ever since the articulation of a 'stereophonic' view of a Janus-faced science, which contains two irreducible dimensions, namely a 'black box' scientific and technological fact, but also a dynamic opening of such facts to the complex micro-processes of their genesis, prior to their consolidation, Latour has challenged sociological hierarchical explanation and any ensuing normativity (as in Durkheim) and has articulated a novel defense of 'symmetrical explanation' in science studies.[134] In wishing to overcome seminal modernist

133 Latour, B. 'Gabriel Tarde and the End of the Social', in Joyce, P. (2002). *The Social in Question*, 122.
134 Latour, B. (1987). *Science in Action: How to follow scientists and engineers through society.*

dualisms (such as agency/structure, idealism/materialism, and, above all, nature/society), Latour's project took recourse to networked patterns which ascribe will to non-humans; this move brought him in direct conflict with the Strong Program, to which he and Michel Callon figured initially as its French wing. Part of the intemperate and escalated controversy with Bloor, for example, is Latour's insistence in rejecting any external point of reference in terms of authority-conferring credibility to knowledge and the accommodation he provides to things. This paper has no intention to describe or analyze this controversy; yet for the purposes of the ensuing discussion, Bloor's criticisms of Latour, which ascribe to him obscurity when things are invested with ''interests'[135] and metaphysics[136] are pertinent to the degree of Latour's call to recover Tarde as a precursor to a revised symmetry principle, like the one proposed by Latour's anthropological twist to Science and Society Studies.

If Tarde's sociology undergoes a justified revival, seen by Latour as a forerunner to ANT (Actor Network Theory), then it is worth pondering how Tarde's monadological sociology can gain in explanatory adequacy in conjunction with Simmel's sociology and micro-metaphysics of things. I will thus focus on Tarde's homologies with Simmel. Both Tarde and Simmel reject dualisms, and both aim to affirm the essential entanglement of society with nature and with the world of objects. It is worth noting that Simmel offered a unitary theory of sociation based on the triptych: sociation –life– things. This proposed affinity is justified, as I shall argue, first, because Tarde's communicative cornucopia is not dissimilar to Simmel's proliferation of individuated spheres of life (pretty much in line with Weber's incommensurable value-spheres).[137] Yet what separates Tarde and Simmel from Weber is that both are at pains to affirm a relational social ontology; Tarde's monadology and Simmel's interactionism sketched a new research program that could be seen as a forerunner of the 'symmetry' principle advocated by Latour and the scope it accommodates to things and objects. Second, both Tarde and Simmel ground sociology on naturalistic templates. Tarde's writings are replete with references to cells and other biological entities, while Simmel's late metaphysics elicits a systematic deferral of relationism to the ground of Being (i.e. Life). Last, Tarde's pansocial ontology with its contemporary resonance in Latour's sociology of 'actants' (the network of humans and non-humans within a system) finds a formidable ally in Simmel's microsociology of things. In Simmel, the fundamental demarcation of things from human interaction is emphatically denied. Thus, Simmel's aesthetic-normative appreciation of the world of objects brings him close to Tarde's pansocial ontology, yet this accommodation of 'things' into sociology entails the possibility of them being seen as non-instrumental containers of 'life' and, thus, as micro-forms of the latent utopianism in Simmel's metaphysics of society.

FROM LATOUR TO SIMMEL AND TARDE

Latour's pan-networked view of reality and the assemblages he brings our attention to can, for all its merits, regress to paradoxology. For Latour:

> *Between one network and another, as between one force and another, nothing is by itself commensurable or incommensurable. Thus, we never emerge from a network no matter how far it extends. It is for this reason that one can be Commandant at Auschwitz, an olive tree at Corfu, a plumber in Rochester, a seagull in the Isles of Scilly, a physicist at Stanford, gneiss in the Minas Gerais, a whale in Adelie Land, one of Koch's baccili at Damiette, and so on. Each network makes a whole world*

135 Bloor, D. (1999). 'Anti-Latour', *Studies in History and Philosophy of Science*, 30.1, 81-112 (97). For Latour's reply, see: Latour, B. (1999). 'Discussion: For David Bloor…and Beyond: A Reply to David Bloor's 'Anti-Latour', *Studies in History and Philosophy of Science*, 30.1, 113-129.

136 Bloor, D. (1999). 'Discussion: A Reply to Bruno Latour', *Studies in History and Philosophy of Science*, 30.1: 131-136 (134).

137 For example, see: Oakes, G. (1985). 'Theoretical Rationality and the Problem of Radical Value-Conflicts: Remarks on Simmel, Rickert, and Weber', *State, Culture and Society*, 1.2, 175-199.

> *for itself, a world whose inside is nothing but the internal secretions of those who elaborate it. Nothing can enter the galleries of such a network without being turned outside in. If we thought that termites were better philosophers than Leibniz, we could compare a network to a termite's nest –so long as we understood that there is no sun outside to darken its galleries by contrast. It will never be possible to see more clearly, it will never be possible to get further "outside" than a termite, and the most widely accepted equivalence might appear, under trial, no stronger than a wall of clay.*[138]

Indicative in this dense passage is Latour's explosion of the symmetry principle (i.e. quasi-objects as the starting-point for explaining Nature and Society) to a leveling process of validity in terms of the authority induced by networks. The rejection of the dualism between 'commensurability' and 'incommensurability' aims to generate a liminal space (a wedge, so to speak) beyond hierarchical normativity and radical relativism. Essentially, what the plateau of networks, closed in themselves as Tardean monads, amounts to is a radicalized variant of a hyper-differentiated systems theory (à la Niklas Luhmann[139]), where any claims to some external point of valid meta-observation (the "outside" in Latour's phraseology) of social (and natural) reality can only be claimed by reference to the code (or the "secretions" according to Latour) of each particular system (or network in Latour's theory). Any "outside" force or standpoint loses its allegedly privileged vantage point of observation from the moment it is being processed by the network in question, namely when it enters it. Thus, *pace* Latour, it turns "inside out". As I shall claim shortly, this Latourian move (and its prehistory in Tarde's monadology) derives essentially from a radical reformulation of the neo-Kantian problematic of perspectivism as a condition for the possibility of knowledge. Perspectives on reality draw on contingent relevancies and thus bear on interests. Although Latour would abscond any such rigorism, it is hard not to notice the fact that the networks invoked act as different yet undifferentiated codifications of reality.

The implication of this paradox is that when Latour opts for a quasi-object as the starting-point of explanation[140],as explanation's 'black box' so to speak, he is careful, on the one hand to retain the dual poles 'Nature' and 'Society' but in an act of abstraction towards the quasi-object, he renders the latter the mystified locus of hyper-differentiation (as long as it qualifies as a trope of hybridity). This move is rightly discerned by Bloor as a regress to the Kantian thing-in-itself, [141] although as I shall argue it is better captured as a neo-Kantian residue in Latour's epistemology. Such mystification of the unmarked territory from which binaries emerge (i.e. 'society' – 'nature', 'agency' – 'structure', 'subject' – 'object') can lead, albeit unintentionally, to the reactionary implications to which Bloor alerts Latour.

Given these reservations, it is the Wittgensteinian recourse to conventions and the interest-based validity, which Bloor musters against Latour:

> *Barnes has led the way by reminding us of numerous familiar examples of objects whose identity is given by the uses to which they are put. Tables and chairs and cups and saucers, as well as fertilisers, explosives, vaccines and dyes are all real*

138 Latour, B. (1988). *The Pasteurization of France*, 171.

139 See indicatively: Luhmann, N. (2012). *Theory of Society. Volume 1*. Here Luhmann points out that the very distinctions used for observation, derive essentially from "the world of modern society" as a "background indeterminacy ("unmarked space") that allows objects to appear and subjects to act." (85). It would seem that the very program of assemblages and the rejection of modernity are possible only within the modern world-project. This would be another sociological surrogate ('unmarked space') for Latour's actants and hybrid configurations or networks. Essentially, a Latourian revision of the 'symmetry principle' would fall, for Luhmann, under science's self-referential spiral of differentiation, namely as a "description of description of description –*ad infinitum*", since the 'quasi-objects', 'actants' and, generally, the 'symmetrical anthropology' proposed by Latour is premised on the (modern) logic of differentiation. For this idea, see Luhmann, N. (1989). *Ecological Communication*, 80.

140 Latour, B. (1993). *We Have Never Been Modern*, 95.

141 Bloor, 'Discussion', 134.

and external things, but things whose identity is defined by their role in the life of a group who create that identity through their practices.[142]

But more importantly, the problems that stem from the pan-networked reality evoked by Latour's politics of hybridity and quasi-objects has to do with the reactionary implications imputed to Latour's vision[143]. Thus, it is not all clear how the network to which the Auschwitz commandant belongs and regards certain ethnic categories as equal to the sub-human status of termites –and thus has the capacity to act and draw on his network, believing that, really, termites, for instance, are worthier than Jewish intellectuals– while the network of termites clearly lacks this capacity. Instead of enabling the human to humanize things, Latour's world of actants projects an unintentional homogenization of the 'human – non-human' network to Tarde.

Before we assess this legacy, it is Bourdieu as well a sociologist who finds such 'symmetries' hard to sustain: "[…] I could also have cited Michel Callon […] who, in his study of scallops, places on the same footing fishermen, scallops, seagulls and the wind, as elements in a 'system of actants'.[144] Among the champions of the de-centering efforts against human and the (normative) hierarchies, the invocation of Gabriel Tarde resurfaces with force and pathos. Now, when the renunciation of a binding force of Nature, Society or merely of conventions reaches its climax, it is being transformed into the rhizomatic standpoint on reality and knowledge. Thus, it is no accident that Deleuze and Guattari invoke Tarde:

Tarde countered that collective representations presuppose exactly what needs explaining, namely, "the similarity of millions of people." That is why Tarde was interested instead in the world of detail, or of the infinitesimal: the little imitations, oppositions, and inventions constituting an entire realm of subrepresentative matter. […] Imitation is the propagation of a flow; opposition is binarization, the making binary of flows; invention is a conjugation or connection of different flows. What, according to Tarde, is a flow? It is belief or desire (the two aspects of every assemblage); a flow is always of belief and of desire. […] For in the end, the difference is not between the social and the individual (or interindividual), but between the molar realm of representations, individual or collective, and the molecular realm of beliefs and desires in which the distinction between the social and the individual loses all meaning since flows are neither attributable to individuals nor overcodable by objective signifiers.[145]

Interestingly enough there is a Hegelian aura ('being'–'essence'–'notion') in the triptych: 'imitation–binarization–conjugation', which is not at all foreign to Tarde's own Hegelian intimations.[146] For one thing, dialectics is not being entirely unmoored from explanatory adequacy, but, as we shall see also with Simmel, it is divested of teleology and of mediations (a not insignificant concession of its force though). Before I return to this motif, the problematization of 'overcoding' by Deleuze and Guattari, which they attribute to Tarde, betrays the fact that some process of coding is at work in the 'molecular' field of beliefs and desires. The "rigid line" invoked implies "an overcoding that substitutes itself for the faltering codes" and its segmental matrix acts like acts of "reterritorializations on the overcoding or overcoded line".[147] Contrasted to this, a "mutant flow always implies something tending to elude or escape the codes; quanta are precisely signs or degrees of deterritorialization in the decoded flow."[148]

142 Bloor, 'Anti-Latour', 109.
143 Latour, 'Discussion', 126-127.
144 Bourdieu, P. (2004). *Science of Science and Reflexivity*, 30.
145 Deleuze, G. and F. Guattari. (1987/2012). *Capitalism and Schizophrenia: A Thousand Plateaus*, 255-256.
146 See Schérer, R. '*Homo, Ludens* des Stratégies Vitales', in Tarde, G (1999). *La Logique Sociale*, 17-56 (36-38); Tarde, G. (1999). *La Logique Sociale*, 166-167.
147 Deleuze and Guattari, *Capitalism*, 256.
148 Deleuze and Guattari, *Capitalism*, 256.

For all its claims to supersede hierarchical epistemologies of the social, the logic of flows does not seem to entail the capacity to dispense binary movements between the molecules and nodes of the network and its flows. Even as 'deterritorializations' and 'decodings', such forces are still tethered to the referent of the code, from which they escape and secrete their desiring streams to the network in question. Dialectically, such reformulations would imply that they reproduce something of the code's special conceptual and symbolic territory: as flows, they are marked by directionality away *from* the code's claims to territorialization.

If this is a part of the contemporary resurgence of Tardean sociology of hybridity, then it is worth reflecting on questions of originality and validity. While both of these questions cannot be pursued in the context of this book chapter in all their ramifications, one way to proceed is to explore any doors being opened towards other traditions of classical sociology or bridges constructed between such traditions with Tarde and with contemporary epistemologies, such as Latour's.[149] Thus, the pivotal point towards such bridge-building (my reference to doors and bridges is not merely rhetorical but substantive, as it will be shown next) is Latour's neglect of Simmel in his formulation of a sociological genealogy of network-theory and actants.

LATOUR'S 'PARLIAMENT OF THINGS' REVISITED: SIMMEL AND TARDE

Strangely enough the Tarde-Durkheim controversy has opened the door to Simmel. David Toews, for example, in reconsidering the notion of 'sociability' as a means of relaxing the tensions between Tarde and the by now patterned contrast to Durkheim, considers Simmel as a helpful participant in the dialogue.[150] Relaxing the tensions between Durkheim and Tarde, Toews opts for problematizing the 'unsociable' aspect of human interaction, beyond the mere conflation of it under unprincipled action or adaptation to societal constraints. Rather, for Toews, both Tarde and Durkheim address the problem of sociation (and association). While on Toews' reading Durkheim posits the sociable as the obligatory aspect of human interaction and its collective permutations, Tarde tilts the emphasis to the 'unsociable' aspect of social life (along also with attention to its antithesis, namely, the hyper-sociable person).[151] A formidable move on Toews' rereading of Tarde is to relax the opposition with Durkheim, highlighting in the latter's apotheosis of the social, elements of the unsociable as essential building-blocks of the Durkheimian edifice. For Toews then, the elements of 'unsociability' shared by Tarde and Durkheim reside in the continuum with which they calibrated sociology's relation to philosophy (thus, even by Durkheim's standards, facts can never be divested of value[152]); the latter is held to reject the rigid division of intellectual labor, to which bland sociologism subscribes to.

It is at this juncture that the Tarde-Durkheim 'dialogue' is enriched with Simmel. Toews' reference to Simmel prepares the ground for further homologies. He understands Simmel to render human sociability a Kantian *a priori,* without which human interaction would be rendered an impossible undertaking. Moreover, it is evident that Simmel's claims to 'sociability', being a 'form' of sociation, play up the Weberian methodology of ideal types. Sociability (or conflict for that matter) can never be 'pure'; if it were, this would imply lack of empirical content (thus, an explanatory vacancy in face of historical reality) or, inversely, a 'perfection' of empirical reality

149 See, indicatively, Haraway, D. 'A Cyborg Manifesto: Science, Technology and Socialist-Feminism in Late Twentieth Century' in Haraway, D. (2016). *Manifestly Haraway*, 5-90. On the proposal –except Latour's– to remember and implement Tarde in sociological explanation and methodology, see Sampson, T. (2012). *Virality: Contagion Theory in the Age of Networks*; Santana-Acuña, A. 'Social Monads, Not Social Facts: Gabriel Tarde's Tool for Sociological Analysis.' in Law, A. and E.R. Lybeck (eds.) (2016). *Sociological Amnesia: Cross-Currents in Disciplinary History*, 141-158.

150 Toews, D. 'Tarde and Durkheim and the Non-Sociological Ground of Sociology', in Candea, M (2015). *The Social After Gabriel Tarde: Debates and Assessments*, 129-139.

151 Toews, D. 'Tarde and Durkheim and the Non-Sociological Ground of Sociology', in Candea, M (2015). *The Social After Gabriel Tarde: Debates and Assessments*, 129-139.

152 Durkheim, É. (1974). *Sociology and Philosophy*, 80-97. See, Toews, 'Tarde', 133-137.

to the status of the pure type; an unjustifiable and haughty idealism. Toews' nuanced reading of Simmel projects an unjustified brand of idealism in his sociology of sociability at odds with Simmel's neo-Kantianism and the historicist heritage in it.[153] In order to accommodate Tarde, Toews downplays the heuristics of Simmel's epistemology and his *Lebensphilosophie*, which introduces, even more emphatically than Tarde, the domain of 'unsociability', 'difference', 'contingency' and 'movement' as a reservoir of vital forces in search for sociable forms, yet always energized to reach beyond sociality.[154] Both Simmel and Tarde reject dualistic categories in sociology –regardless of such rejection's claims to adequacy. For Simmel, the project of a relational sociology aims to curb the rigidity of schemata based on the juxtaposition between 'individual' and 'society'. Simmel saw in Tarde a promising field for rethinking the social through 'form' and 'content'. In what has become the seminal reference point of Simmel's sociology, Tarde's analysis of crowds through the lens of imitation entailed the distinction between 'form' and 'content'.[155] If 'imitation' is the form of countless 'contents' in the multitude of social life's vicissitudes, then it is one among the forms of sociation and one that refracts Simmel's epistemological principle of 'reciprocity' (*Wecheslwirkung*). But Toews is correct when he attributes to Simmel's theme of sociability the search for the *good form.*[156]

In his example of the 'internet', and contra Simmel, Toews is correct in seeing a networked and relatively disorganized and non-hierarchical setting of unsociability that explodes both the Durkheimian fascination with the social and Simmel's transcendentalism of the 'good form' of human sociation. Rather, it is the Tardean paradigm that serves better sociology's description, analysis and evaluation of social media, precisely because it contains the possibility of unsociability's ruse in instantiating 'the future of the social'.[157] Yet, Toews all too easily occludes that 'unprincipled' sociability[158] and pulverizing social structures[159] can be discerned to undermine unsociability's benign contingency and potential.

Finally, Toews' approbation of 'unsociability' tends though, for all its merits, to regress to the neo-Kantian problem of the *hiatius irrationalis*. Advanced by Emil Lask, the problem of the validity of perspectives in interpreting and conceptualizing reality, relied on the paradox that

153 "Simmel is hinting with his comment that sociability in its pure form has no "ulterior end", that it is futile to search for something such as the philosophical conditions of possibility of sociability. But he has not considered the aspect of those philosophical conditions as a practice. Moreover, Simmel would have to admit that empirically existing sociability never takes this pure form. What this means is that sociability is something that is never fully accomplished but is an empirical experience of striving for good social form. Simmel would like us to believe, in the Kantian manner, that the good social form is a teleological movement of a transcendental concept, an expression or coming into fullness of the pure form of the social, which is taken as an a priori category. But actors who are behaving in a sociable manner, if we accept Simmel's portrait of social reality, cannot do so without a principle or regulative ideal of good form to guide their self-interpretations, their self-recognition as actors who have no ulterior motives. Sociability in ignorance of such a principle would quickly be recuperated by interests and interested behavior and would fall off the track of purity." See Toews, 'Tarde', 136-137.

154 This standing Simmelian trope opens the door to other nuances of 'unsociability', elided by Toews. In fact, Simmel shares with Durkheim the 'unsociable' and ecstatic dimension of 'collective effervescence', which, somewhat paradoxically, necessitates 'unsociability' in order to strengthen and replenish the social. See, Simmel, G. (2010). *The View of Life: Four Metaphysical Essays with Journal Aphorisms*. Moreover, the Bataillean homage to Durkheim, or even the politics of paroxysm and transgression in Roger Caillois demonstrate additional provinces of 'unsociability', at work below the threshold of the social, but also above it. See, for example, Mukherjee, S.R. (ed). (2010). *Durkheim and Violence*.

155 See Borch, C. (2010). 'Between Destructiveness and Vitalism: Simmel's Sociology of Crowds.' *Conserveries Mémorielles*, n.8. Available at: https://journals.openedition.org/cm/744. Simmel's review of Tarde's *The Laws of Imitation* can be found in Simmel, G. 'Rezension: G.Tarde. Les Lois de l' Imitation. Etude Sociologique.' in K.C. Köhnke (1999), *Georg Simmel Gesamtausgabe, Band 1*, 248-250.

156 Toews, 'Tarde', 136. For an even more normative reading of Simmel's micro-dialectics (on the *good form*, too), see Gangas, S. (2004). 'Axiological and Normative Dimensions in Georg Simmel's Philosophy and Sociology: A Dialectical Interpretation', *History of the Human Sciences*, 17.4, 17-44.

157 Toews, 'Tarde', 138.

158 See, for example, Levmore, S. and M. Nussbaum (eds.). (2010). *The Offensive Internet: Speech, Privacy and Reputation*.

159 For example, see Fuchs, C. (2017). *Social Media: A Critical Introduction.*

cognitive apprehension presupposes conceptual abstraction from reality.[160] This abstraction creates a hiatus, precisely because we draw on a slice of reality (our intellectual categories) in order to grasp reality and comprehend it in its totality. But this is precisely the irrational aspect in this epistemological move. It posits the 'part' (abstracted reality in our perspectivist concept-formation) as a condition for attaining knowledge of reality (in its totality). For Lask though, this paradox is in fact the *a priori* for knowledge: A complete conceptual apparatus would cancel a meaningful perspective on reality. These problems, Hegelian and Durkheimian sociology sought to surmount but could never fully release itself from their relevance. It is my impression that Toews' re-reading of Durkheim (and Simmel) via Tarde's 'unsociability' accommodates a different version of the *hiatus irrationalis*: the 'unsociable' as a condition of possibility for the 'sociable'.

MEDIATED HYBRIDITY AND MICROSOCIOLOGY'S CONNECTION TO NORMATIVITY: SIMMEL BEYOND TARDE

Is this though the end of what classical sociology can provide to the justified Tardean renaissance? For this to be answered in the Simmel-Tarde affinity I am proposing, it is apposite to briefly revisit Latour. In two of his writings he resorts to 'doors' in order to forge the opening to the non-human and to reorient sociology's attention to the mundane, outside the black boxes of social structures and rational human agents.[161] In both texts, he never refers to Georg Simmel's seminal essay on the 'Bridge and the Door'.[162] In short, Latour's caveat on the door (and similar objects) is that it exercises significant constraints on human action. Thus, we cannot simply denude the authority these exert on us (after all, we all, for Latour, swear at a computer!) by erecting an explanatory and normative even barrier as part of a modernist classification matrix that primes the human. In principle, this is also the attraction Latour feels for Tarde. As he puts it: "Tarde's idea is simply that if there is something special to human society it is not be determined *by any strong opposition* to all other types of aggregates, and certainly not by some special sort of arbitrarily imposed symbolic order which will set it apart from 'mere matter'."[163]

Moreover, this hermeneutic turn is reinforced by Tarde's dictum that to "exist is to differ", where difference is "the truly substantial side of things" because it is "at once their ownmost possession and that which they hold most in common".[164] Such injunctions, which Latour gleans from Tarde's numerous writings lead him to the imperative call addressed to the sociology to avert the scientific gaze from the ladder that moves upwards towards abstractions from the particulars, but, rather to look down, to "be even more blind, even more narrow, even more down to earth, even more myopic" and to install to sociology an "oligoptica" perspective; one that resembles –this is what Latour imputes to Tarde– "the 'flat society' argument".[165] The conservative and obscurantist aura aside, this injunction reminds us of Baudrillard's invocation of Borges' short story on a cartographic project of drawing a map with such precision that it "ends up covering the territory exactly".[166] While Baudrillard has in mind the detachment of the signified from the signifier in the ever-expanding redoublings of simulacra, the implica-

160 For the relevance of Emil Lask and neo-Kantianism, see Beiser, F (2008). 'Emil Lask and Kantianism', *The Philosophical Forum*, 39.2, 283-295; Beiser, F. (2009). 'Normativity in Neo-Kantianism: Its Rise and Fall', *International Journal of Philosophical Studies*, 17.1, 9-27. Tarde's ontology is laden with the heritage of the hiatus, since his symmetry principle posits reality's "inexhaustible stream" with "parts growing smaller almost to a vanishing point". See Tarde, G. (1999). *On Social Laws: An Outline of Sociology*, 95-96.

161 Latour, B. (1988). 'Mixing Humans and Non-Humans Together: The Sociology of a Door-Closer', *Social Problems*, 35.3, 298-310; Latour, B. 'Where are the Missing Masses? The Sociology of a Few Mundane Artefacts', in Bijker, W. and J. Law (1992). *Shaping Technology/Building Society: Studies in Socio-Technical Change*, 225-258.

162 Simmel, G. 'Bridge and Door', in Frisby, D. and M. Featherstone (1997). *Simmel on Culture*, 170-174.

163 Latour, 'Tarde', 120.

164 Tarde, G. (2012). *Monadology and Sociology*, 40.

165 Latour, 'Tarde', 124.

166 Baudrillard, J. (1994). *Simulacra and Simulation*, 1.

tion here is that Latour's 'commandments' replace one source of authority for another. What does it mean to be 'blind' and enter the galleries of moles or termites? One plausible –and generous– reading, if Latour (and Tarde with him) are not going to drown in incoherence, is a heuristic use: Act as if you were blind and as if maps were unavailable or as precise as the territory they are drawn to represent! Recover, that is, the mundane perspective of humility and relate to non-human entities as if the fixity of our distinctions did not apply. If this reading is plausible, I shall leave aside the latent socialism (of humans and things) to which such an approach is unwittingly tethered, since by rejecting fixities, it aims to redeem non-humans from a merely subordinate to instrumental reason role. Instead, I shall explore if this path is a way forward to a relational epistemology based on reciprocity or if, *pace* Latour, it leads to the irrationalist straightjacket of having to discard hard-gained distance from the non-human, in order to immerse our perspective in it (like Shelling's Absolute which, as Hegel put it, resembles the 'night in which all cows are black'; so much for the metaphor of blindness).[167] Because Latour runs the risk of substituting one form for an all-encompassing matrix of knowledge with the myopic attachment to 'difference' (a sort of particularistic universality too; namely, the each monad as a universal), it needs to realign some of Tarde's claims to what could possibly balance this admittedly reactionary picture.

Such possibility, I think, is available in Tarde's invocation of 'reciprocity'. For Tarde,

> *[u]nilateral possession and reciprocal possession are, likewise, necessarily united. But the latter is superior to the former. It is reciprocal possession which explains the formation of those beautiful celestial mechanisms in which, by the power of mutual attraction, every point is a centre. Reciprocal possession explains the creation of those admirable living organisms whose parts are all united and solidary, and where everything is both an end and a means at once. By reciprocal possession, finally, in the free cities of antiquity and in modern states, mutuality of service and equality of right bring about the prodigious achievements of our sciences, industries, and arts*.[168]

In this remarkable excerpt, we discern a metaphysical position not alien to Simmel's accommodation of reciprocity to which I will turn shortly. (Even, 'opposition' –like Simmel's 'conflict'– "implies a relation between two forces, tendencies, or directions".[169])

Rather than limiting Latour's vistas of non-human actants to a Tardean genealogy only, Simmel's systematic consideration of things (bridges, doors, windows, handles, jewels, picture frames, ruins) as entities invested with aesthetic, ethical and metaphysical meaning enriches this discussion and, as I claim in this chapter, attaches to non-humans a redeeming force lacking, or at best occluded, in Latour (and Tarde). Admittedly, the Simmel-Latour rapprochement is rare.[170] A few remarks shall enable us to explore if fruitful bridges can be built.

Simmel's fascination with non-human entities from a sociological point of view reflects various interests: (1) for one thing it is an aesthetic decision, given Simmel's highly refined aesthetic antennae evident through his many writings on architecture, painting, sculpture, poetry and music; (2) secondly, it stems from his *Lebensphilosophie*. This metaphysical neo-romantic standpoint (in Simmel's case soaked with Jewish mysticism) sees Life as a Heraclitean flux that flows through countless forms (human, non-human; social and individual; local and cosmic) and is further is refracted through these countless shapes, which when attempting

167 Tarde is not absolved of such nuances of irrationalism. He even tells us that the descent from society to matter leads to "the cell, and finally the formless or protean protoplasm, with its sudden whims which no law may grasp. –Here again the alpha and the omega is diversity, in all its vividness." Tarde, *Monadology*, 44.

168 Tarde, *Monadology*, 56-57.

169 Tarde, *Laws*, 45.

170 To my knowledge, it appears on one occasion. See. Kemple, T. (2007). 'Introduction – Allosociality: Bridges and Doors to Simmel's Social Theory of the Limit', *Theory, Culture and Society*, 24.7-8, 1-19 (7).

to seize and immobilize life they become congealed in disenchanted and instrumentalized reifications of it.[171] The focus on non-human objects is part and parcel of this metaphysical principle. (3) The aesthetic and metaphysical dimensions are coupled to an ethical purpose that Simmel consistently pursues. Kantian, Hegelian, and even Marxian motifs lead him to the challenge of having to reconcile 'necessity' and 'freedom', the 'universal' with the 'particular', 'individualism' to 'socialism'. (4) Sociologically, non-human objects function as loci for interaction, which for Simmel is channeled through various social 'forms' (conflict, secrecy, exchange, gratitude) and social types (the poor, the stranger); objects and things are essential reference points in social space, which through Simmel's perceptive lens, acquire a significance (see the previous three 'interests') that extends far beyond, and deeper too, than instrumental value and rationality. (5) Non-human objects crystallize Simmel's convergence between epistemology, metaphysics, sociology and ethics, which is no other than the idea of relational reciprocity (*Wechselwirkung*).[172] Beyond the idea that meaning and communication are relational concepts, reciprocity (even as reciprocal causality) stretches from the most metaphysical notions (the reciprocity of 'life' and 'form') to the most detailed (the reciprocity in a human glance, in secrecy's drive towards revelation, in the door's reciprocal function of both limitation and transcendence of limits).

Indicative is Simmel's dialectic of the bridge and the door: "[…] the bridge indicates how humankind unifies the separateness of merely natural being, and the door how it separates the uniform, continuous unity of natural being".[173] If bridge and door are raised to a metaphysical significance, well beyond Latour's own version of the door, this consideration on Simmel's part denotes what these objects say about humans. Particularly for the door, it is both enclosure of space and openness toward freedom that are elevated to Kantian metaphors for necessity and freedom respectively. This kind of reciprocity is another trope to convey Simmel's relationism. His non-dualistic epistemology (an expression of which is interactionist sociology as well as its stretch to the world of objects) is plainly likened to the problem of justice. For Simmel, relationism (ambiguously referred as 'relativism') "strives to dissolve into a relation every absolute that presents itself and proceeds in the same way with the absolute that offers itself as the ground for this new relation".[174] As a heuristic act of dialectical deferral before a sublated synthesis emerges, Simmel's relationism is tantamount to a theory of 'moderation'. It is no accident that he visualizes relationism through the prism of law, where "the objective form of equity and justice" is being attained "through the exchange of claims and restrictions".[175]

Carried by the anti-Durkheimian turn in Tarde, Latour fails to discern such mediations in Tarde. Thus, he underplays strongly relational injunctions like:

> *We must, however, look to the social world to see monads laid bare, grasping each other in the intimacy of their transitory characters, each fully unfolded before the other, in the other, by the other. This is the relation par excellence, […] a kind of tightly knit network which extends indefinitely" and where "social elements hold each other or pull each other in a thousand ways, and from their competition the marvels of civilization are born.*[176]

Although non-humans are an essential part of this network, for Tarde –like Simmel's and

171 The sources of Simmel's *Lebensphilosophie* are numerous and contested. I tend to subscribe to a Hegelian and radical reading rather than one that subsumes the trope of 'Life' to reactionary intellectual trends and political standpoints. For my qualified defense of Simmel's *Lebensphilosophie*, see Gangas, S. (2019). 'Simmel, Marx and the Radical Concept of Life: A Hegelian Approach', *Dissonância: Critical Theory and Journal.* Advance Online Publication.

172 The most systematic exposition is: Papilloud, C. (2003). *La Réciprocité: Diagnostic et destins d'un possible dans l'œuvre de Georg Simmel*.

173 Simmel, 'Bridge', 174.

174 Simmel, G. (1990). *The Philosophy of Money*, 117.

175 Simmel, 'Philosophy', 114.

176 Tarde, 'Monadology', 56.

Durkheim's affirmative concepts of 'life'– "life is preferable to non-life".[177]

CONCLUDING REMARK

While it has been plainly suggested that Gabriel Tarde's logic of imitation offers a counterweight to hierarchical sociological reasoning, emblematically compressed in Durkheim's organicism and its explicit moral teleology, the Tardean turn proposed by Latour is not without its own limitations. Latour's reading of Tarde is nuanced but is at risk of obfuscating dimensions in Tarde's thought which point to a different direction than the one with which Tarde's own thought often intimates, namely a post-humanist approach with problematic political and normative bifurcations.[178] I have argued that these, mostly normative, limitations are better captured if we bracket a juxtaposition to Tarde via what constitutes the target of the latter's criticisms, namely Durkheim. Rather, I intimated to the possibility of countering Tarde from within the micro-frameworks he is so attracted to, by opting to examine Simmel's micro-sociology of hybridities, which brings him remarkably close to Tarde, but with a distinctive normative difference.

Thus, *pace* Simmel's relational sociology and its blend of idealism with *Lebensphilosophie*, the question posed would be to consider the possibility of a meta-network, which could sustain the breadth, firmness and vital streams of the nods and knots that constitute non-hierarchical and horizontal networks, as imagined by Latour: free of a fixed *terminus a quo* and *terminus ad quem*. If the debate on Tarde's relevance for a pan-social society, with ample openings to networks, rhizomas, 'unsociability' and flows, is, however, to have any purchase in the domain of human interests (its condition of possibility, so to speak), then sociological theory should consider it as an adjunct to other similar proposals that played up 'difference' (as in Simmel), but, in order to avoid the reactionary crevices of Tardean socio-politics of conflating the human to the non-human in various continua and, rather, to enrich the capabilities of human agents.[179]

Simmel's means to get round the Tardean dead-ends enable sociologists to consider the shift to pluralism and diversity as essentially modernist challenges (apparently a theme downplayed in Tarde[180] and certainly in Latour), but also as opportunities to rethink the Tardean claims of monads in a differentiated and highly complex (networks are apposite here) world. We can conclude, therefore, with a Simmel extract that incorporates the Tardean problematic but also moves beyond it, both pragmatically and in normative terms, as it reasserts even with *Lebensphilosophie*, the human. For Simmel:

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177 Tarde, 'Monadology', 65. This is also a sharp observation by Karsenti, who aligns Durkheim and Tarde around the metaphor of creativity in terms that bear affinity to vitalism and *Lebensphilosophie*. He points to the social fact's "insistance, its ever-repeated capacity to impose itself against facts of the same order. The sociologist's task thus becomes to apprehend, beneath the regularity of an imitative practice, the irregularity of constant modifications. Or, better, the regularity of that which is imitatively repeated must be read as a continuous process through which the social creates itself, that is to say, modifies even as it reproduces itself." See Karsenti, B. 'Imitation: Returning to the Tarde–Durkheim Debate', in Candea, M. (2015). *The Social After Gabriel Tarde: Debates and Assessments*, 99-113 (112-113). As these lines are written amidst the COVID-19 pandemic, it is worth connecting the motif of life (as a normative ideal) to Latour's posts on the pandemic. Again, Latour seems to want to have the cake and eat it too. On the one hand, humans are horizontally levelled alongside the internet, the virus, the state, the law, the hospitals or the climate, but, on the other hand, the alarming state of looming biopolitics against which he warns readers is premised on highly charged in normative terms allusions to the desirability of human life (for Latour's Macron's idealized and desired hypothetical announcement: "I protect you from life and death, because I maintain the conditions of habitability of all the living people on whom you depend.") in the context of a standing ecological crisis, with far-reaching and deeply intertwined risks for "all humans". See Latour, B. (2020). 'Is this a Dress Rehearsal?' *Critical Inquiry*, March 26, 2020 (Available online).

178 Even writers sympathetic to Tarde recognize this risk. See, for example, Lorenc, T. 'Afterword: Tarde's Pansocial Ontology', in Tarde, G. (2012). *Monadology and Sociology*, 71-95 (93-94).

179 For this normative direction in sociology, see: Gangas, S. (2020). *Sociological Theory and the Capability Approach.*

180 It is not that Tarde neglects modernity. As Clark intimates, he is often very close to Simmel on communicative overlaps and the increasing interdependence and individual freedom. See Clark. T. 'Introduction', in Clark, T (ed.). (1969). *Gabriel Tarde: On Communication and Social Influence*, 55.

> *That one part of a whole should become a self-contained whole itself, emerging out of it and claiming from it a right to its own existence, this in itself may be the fundamental tragedy of spirit. This condition came into its own in modernity and assumed the leading role in the processes of culturization. Underlying the plurality of relationships that interconnect individuals, groups and social formations, there is a pervading dualism confronting us: the individual entity strives towards wholeness, while its place within the larger whole only accords it the role of the part. We are aware of being centered both externally and internally because we, together with our actions, are mere constituents of larger wholes that place demands upon us as one-dimensional parts in the division of labour. Yet, we nevertheless want be rounded and self-determining beings, and establish ourselves as such*.[181]

Simmel is one step ahead because he –unlike Latour, for example– conceives the differentiation tendencies (hybrids, rhizomas, netwroks, monads) to reside, as their condition of possibility, in modernity, which he also subsumes under the tragedy of the spirit, namely the spirit's immanent self-differentiation, despite its restive claims to wholeness.[182] As I have argued, Simmel's sagacity on networks –evident in this extract– is normatively anchored both through the intimation of the reciprocal moderation of different claims and demands (this was, as can be recalled, the kernel of relationism) but, more importantly, it is premised on each 'individual' being worthy and capable to claim self-determination.

181 Simmel, G. (2007). 'The Philosophy of Landscape', *Theory, Culture and Society*, 24.7-8, 20-29 (22).

182 Ironically, we can claim that in certain respects Tarde sounds more conventionally Hegelian than Simmel, when the former, instead of tragedy's wounds to the Spirit march to Reason, affirms an "imitative diffusion" which accounts for "successive complications and harmonizations of the harmonies" through which "the grand collective works of the human mind are constituted, –a grammar, a theology, an encyclopaedia, a code of laws, a natural or artificial organization of labor, a scheme of aesthetics or a system of ethics.". See Tarde, *Laws*, 95.

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CHAPTER 05

AFFECTIVE IMITATION OR IMITATIVE AFFECT. GABRIEL TARDE'S MECHANISM OF BELIEF AND DESIRE

Fani GIANNOUSI

ABSTRACT

Recently the politics of ontology has taken an affective turn in the framing of the political subject, individual and collective. This turn is fuelled by a growing interest in the work of a series of forgotten thinkers, among them Gabriel Tarde. The recent revival of his approach to the study of human interaction centres on his concepts of belief and desire as the cornerstones of society. His inter-psychology based on monads that interact animated by the elemental forces of belief and desire represents a mapping of the emergence of societies. In his thought, the diverse currents of faith and passion are the materials that configure and transform institutions, groups and individuals. We discuss how Tarde poses the problem of the constitution of values and norms, departing from the government of affects; highlight how this foregrounding of affect is currently used as a way to reanimate social and political theory and a tool explore pressing political problems.

Keywords: Gabriel Tarde, belief, desire, society, affect theory.

INTRODUCTION

Questions about desire –its inner workings and its role in human behaviour– have a long history in Philosophy, particularly in the 18th century discussion of passions, that delineates a specific field of action, and the positive role attributed to certain passions in the cultivation of morality and civic virtue. A topic of philosophical inquiry it has, from the early 19th century onwards, moved from the sole purview of philosophy and theology to attract the more clinical attention of a range of empirical disciplines: Medicine, Neurology, Psychology and Sociology, and even Marketing and Economics.

Such inquiries, however, have never been disinterested. Since desire is central to the formation of human capacities, it has also constituted a nexus of problems in the sense that it has always been a point of entry into conduct that pins particular behaviours under the direction of either secular or religious authorities.

There is currently, an emergence of a semantics of value centred on passions and affects.[183] The most recent and explicit attempts to grapple with the nature of emotions and affects are in Sociology of Emotion and in the relatively new field of Affect Studies. Different theories attribute effects to different bodies or qualities of bodies; but these differences may broadly be categorized in three ways. Firstly, affects and emotions are located within an individual subject or body. Or, secondly, affects are collective or atmospheric forces that operate external to the body. Finally, affects are the effects of the interactions and encounters of individual bodies;[184] These three formulations are not necessarily mutually exclusive. Tarde's approach to affects may offer a bridge to the dilemma between them, since he views all bodies as social constructions made out of affective monads who crossover into passionate relations.

183 Barbalet, J. M. (2004). *Emotion, Social Theory, and Social Structure: Macrosociological Approach*. Cambridge, UK: Cambridge University Press, p 40

184 Ahmed, S. (2004b). Collective Feelings: Or, the Impressions Left by Others. *Theory, Culture & Society, 21*(2), 25-42. doi: 10.1177/0263276404042133.

Belief turns into a problem, a political and economic one, the moment it stops being a given. Tarde vividly describes the changing technological and social conditions (rise of new communication media, flows of population to urban metropolis, the subsequent cutoff from tradition) that turned the process of producing belief from passive to energetic. This involves a radical permutation in the relationship between man and belief. Since the destabilization of tradition, the new conditions bring up man against new dilemmas and questions.

There is a dark point in desire upon which we usually hesitate to shed light because desire seems ill fitted in every logic system and defies it. Desire bypasses the timeline of causality. We don't always understand its nature because occasionally desire cannot be interpreted by aims and reasons. This constitutes its hidden and subversive nature. It also explains our own 'desire' to tame it. Desire –as many have claimed– constitutes a potential for action rupture and change.

Tarde's conception of the body allows for the incorporation of myriad bodily forms, both human and non-human, that continuously affect and are affected by one another. Thus, the affective environment is constituted by a changing scene or flux of bodily presences that are exploring desires. Tarde had quite accurately captured the dynamics of desire, that is, he recognizes desire as a prime mover of the social.

GABRIEL TARDE'S INTER-INDIVIDUAL PSYCHOLOGY

Social theory, ever since the foundation of sociology as discipline has been interested in affect as a key concept, for instance Emile Durkheim's collective sentiment and ritual effervescence, Max Weber's charisma and Georg Simmel's fidelity and gratitude, Tarde's belief and desire system, to name a few.

Gabriel Tarde was a forefather classic of social thought, an outsider to the academic system, who became a famous professor of Collège de France and was then forgotten.[185] His work, a social theory he called inter-individual psychology (psychologie inter-individuel) was scorned as "psychologism,[186]" only to be rediscovered by Deuleze, who used it much more extensively than the few interspersed mentions and footnotes might suggest. Today however, his works are being republished, a growing number of papers cite him, and we see more theoretical and even empirical research drawing on his sociology. The recent revival of his distinctive approach to the study of human interaction focuses on his notions of belief and desire as the cornerstones of society.[187]

For Tarde, everything is a form of society, from rocks to stars, from the liver to the individual.[188] Unlike Durkheim he does not start by viewing society as a pre-existing domain, distinct from the elements that compose it. He states that it is a scientific prejudice to treat unity, structures, and hierarchies as the beginning and end of everything. In his views society was first and foremost the unstable and temporary outcome of social life. He believed in the multiple, heteroclite, and heterarchical nature of both the natural and social world, and stated that science has to somehow take into account this fact.[189] He and his contemporary Durkheim tried to produce a new scientific discourse sociology and attempted to establish its relative autonomy. But in Tarde's opinion, instead of starting by analysing the actual structure of

185 Cerulo, M. (2021). Gabriel Tarde In Cerulo, M., & Scribano, A. (Eds.), *The Emotions in the Classics of Sociology: A Study in Social Theory (1st ed.*), Routledge, p 40-41.

186 Alliez, E. (1999 re-edition). Présentation. Tarde et le problème de la constitution, in *Monodologie et sociologie*, 9-32.

187 Katz, E. (2018). REDISCOVERING GABRIEL TARDE. In R. Leroux (Ed.), *The Anthem Companion to Gabriel Tarde* (pp. 49–60). Anthem Press.

188 Tarde, G. *Monodologie et sociologie*, 58.

189 Tonkonoff, S. A new social physic: The sociology of Gabriel Tarde and its legacy, Journal: Current Sociology, 2013, ISSN: 1461-7064, p 270.

social objects, this science should start by reconstructing the diverse ways in which these structures are produced –a process he calls polygenesis.

His project was neither strictly a sociological, psychological, or economical one, but a complex manifold entanglement of forces which operated according to certain general principles. He also stated that instead of separating society from the individual, Sociology should draw on the distinction between three forms of inter-psychological or inter-mental relation: imitation, invention, and opposition.[190] This does not mean, however, that he sees the individual as the irreducible basis of social life. Rather, the individual is likewise an outcome – and also, in a certain sense, unstable and temporary. Isaac Joseph notes that "*His social theory is not the analysis of systems of social representations as Durkheim would have it, instead, it is the study of currents of beliefs (social logic) in languages, myths, religions, sciences and philosophy, and the study of currents of desire (social teleology) in laws, customs, institutions and industries*".[191]

In Tarde's work imitation is a type of social bond in which someone offers himself or herself, voluntarily or involuntarily, as a model, and someone else, consciously or unconsciously, copies him or her. It is a form of relationship in which someone influences, suggests, or orders and someone else is influenced, accepts, or obeys. In his words, it is "*the action at a distance of one mind upon another, an action which consists of the quasi-photographic reproduction of a cerebral image upon the sensitive plate of another brain. … By imitation I mean every impression of an inter-psychical photography, so to speak, willed or not willed, passive or* active".[192]

It is an asymmetrical, contingent, and reversible relationship. Each time, it can or cannot be reproduced as well as reversed –in which case, the model will become a copy. It is also a 'contagious' mode of interaction able to repeat itself, spreading from one individual to another, homogenizing the spaces in which it has been displayed, or rather producing a particular kind of spaces: spaces of similarities and regularities, of social reproduction. In consequence, the social bond would be produced as follows: a way of acting, feeling, or thinking of one individual that is transmitted to another; this individual will repeat the behaviour, serving as an example to a third person, who, in turn, will also be copied. This is what Tarde calls a flow of rays, a wave, or an imitative current. When currents of new examples arise and disseminate, they take the form of fashions, if they take roots and establish themselves, they become traditions.[193]

The concept of imitation allows him to explore the relation between man and creativity. Invention is a key concept in his system as it is the source of all innovation and progress. Tard emphasizes its social foundations. Every invention is the product of correlations in the minds of creative people, but it depends on knowledge, which works cumulatively in human history. Moreover, invention cannot exist without communication and social ties that facilitate its transmission.

Inventions are diffused into the social systems through imitation. These imitations are spreading - to use one of his favorite images –like the ripples on the surface of a pond, tending to the boundaries of the system until they come in contact with an obstacle. The obstacle, however, is likely to be the imitation of an earlier concept, and when the two collide, their opposition is likely to produce a new product –that is, a new invention– which in turn is mimicked until the moment where also encounters other obstacles and thus continues ad infinitum. Therefore, these three processes form an independent whole that continues to produce and interact in a variety of ways.

190 Tarde, G. (1895) *Les lois de l'imitation.*
191 Joseph, I. Postface. *Gabriel Tarde: le monde comme féerie, Monodologie et sociologie*, 25.
192 Tarde, Les *lois de l'imitation*, 14.
193 Tarde, *Les lois de l'imitation*, xxi.

A really innovative element of his work lies in the fact that he recognizes that society is entirely divisible into monads, and that, in turn, these atoms and molecules can also be decomposed. He understands the world as an entity made out of monads. The phrase "*Everything is a society*" (even the smallest cell is a "f*actory*") means that the world is not made of objects and subjects but rather, it is a grid of relations that combine according to hierarchies established by the institution of a myriad of other individuals (physical, organic or human monads). This universe within universe absorbs spheres of action that interpenetrate and is crisscrossed by flows or currents of belief and desire. He preserves the term monad to capture the simultaneous continuity and discontinuity of flows, for a monad is conceived as a mediation of individualities, as a series of singularities.[194] In his neomonadology[195] the monads are open and act upon each other. Since nothing restricts them, they become "*a sphere of action infinitely enlarged*".[196]

Monads get built in dynamic fields of passions, desires and beliefs. He chooses monads –"the daughters of Leibnitz", as he calls them, accrediting the influence Leibnitz exercised in his thought- because they can solve an important issue. Tarde wants to develop a social theory evading the classical individual-society dichotomy and monads permit him to elaborate a theory in terms of fluid physics. The metaphysics, for which they accused him, has a very material foundation.

His general definition of bodies states, that each body has to be taken as a complex body, consisting of various simpler ones, which in turn are also composed from more simple bodies, ad infinitum. This raises the question: what turns a collection of simple bodies into a complex body? Tarde defines a body by its possessive capability (avoir). This particular power is manifested in two ways belief and desire.

Thus, affects are not just 'produced' by bodies, they define and ceaselessly constitute and reconstitute the nature of a body. Bodies are defined by their capability to affect or to be affected, by their power to conjoin other bodies or to split up, to be influenced or to deflect. A composite body emerges as an individual body at the moment it becomes affectable by outside influences or has an impact on other things as an individual body (by its 'power of acting'). This in turn points to the continuous mutual determination of bodies and the effects of their encounters, for each encounter results in a change of the body's capabilities– a change of the powers of acting and perceiving. Affectio (often translated as the English 'affection') is the trace of one body's effect upon another; affectio is the index of (changing) affective capabilities.

The monads do not exist as atoms without any interaction between each other. In opposition to Leibniz, Tarde's monads are open for the external world. They penetrate each other by means of the affective powers of belief *(*croyance) and desire (désir)[197] . The monads are oriented towards the outside world and the psychological forces of belief and desire are central for their motivation. Belief (as assertion) and desire (as will) play within me and with regard to my emotions the same role as space and time play with regard to material elements his dialectics is neither idealistic nor metaphysical, let alone psychological. At the core is the original insight that action is a process based on affects, passions, and beliefs.

For Tarde, affects are rational in the sense that they induce and configure self-knowledge, social positioning, or differentiations in the objective world. The power of belief *(*force-croyance*)* has priority over the power of desire (force-désir*)*. Judgement as an act of belief determines the faculty of understanding and of differentiating. Monads penetrate each other in

194 Lazzarato, M. (2004) *Les* Révolutions du Capitalisme, 34.
195 Alliez, Monadologie *et Sociologie.*
196 Tarde, *Monadologie et Sociologie* 56.
197 Tarde, G. (2012) trans. Monadology and Sociology, 56.

their desire for imitation. Their radical inequality and lack of resemblance is, so to speak, the precondition for association. Essentially, imitation produces the balance needed to arrive at some degree of sociability, it "*tames*" differences. The monads' radical difference is the basis for their creative action. Tarde's argument is not based on an ontology of being, but on an ontology of "*having*". "*I desire, I believe, therefore I have*".[198] This radical existential pluralism grounds social and psychological phenomena on the forces of affect and passions as well as on the power relations that express these forces. Each human being desires to penetrate and to appropriate the beings of others.

There is a decisively spinozist resonance to this. Spinoza's philosophy of inter-corporeality shows us that affect is always social in nature. Each effect always trails behind a train of other effects, and is in turn followed by infinitely many more others. Every affect is simultaneously of at least two bodies. The concept of the affective is meant to capture this social and heteronomous quality of affect and affective bodies. However, Tarde, by his own admission has never read Spinoza. It does explain though the allure his work holds for Deleuze and those who work on the philosophy of difference.

In short, for Tarde individuals are not irreducible and compact elements. Rather, they are open monads almost entirely made up of beliefs and desires. These are the very particles (subatomic, some have argued) that form the internal world of individuals. But also –and this is key– they form the micro-physical matter of which social life is made. This life is nothing but the flowing, converging, clashing, and deferring of currents of convictions and passions that compose and decompose society and its subjects. So, in essence an individual is, mainly, a passage and a sedimentation zone of social flows that are repeated in him/ her in the form of judgments, memories, wills, and habits. Through social interaction, through the imitation of others, 'metaphysically' excessive and porous monads acquire a psychic unit of relative coherence and determination. Individuals imitate, but what is important is *what* is imitated. What is imitated are always ideas and wishes, faiths and passions: these are the elemental generative forces of the social field.

> "*Can we deny that desire and belief are forces? Do we not see that, through their reciprocal combinations, their passions and designs they are the perpetual winds and storms of history, the waterfalls that make the windmills of politics turn*?" [199]

Both the individual and society are primarily established by affective and evaluative bonds, but here the coincidence of convictions and passions in a large number of individuals does not refer to organic inheritance or to a natural law contract. Nor does it refer to the social fact as Durkheim understood it (coercive and external to individuals). What is imitated is always an idea or a wish, a judgement or a plan, in which a certain amount of *belief* and *desire* are expressed, which is the entire soul of the words of a language, the prayers of a religion, the administrations of a government, the paragraphs of a code of law, the duties of a moral system, the work of an industry, the products of an art.[200] The ultimate 'objects of imitation' are our beliefs and desires.

THE INNER MECHANISM OF BELIEF AND DESIRE

In his seminal work *Belief and desire, the possibility of measuring* (*La croyance et le désir*, *la possibilité de leur mesure)* Tarde explains that all psychological states are combinations of the following three unique elements: belief, desire and sensation. Although sensation is a

198 Tarde, Monadology and Sociology, 87.
199 Tarde, *Monadologie et Sociologie*, 50.
200 Cerulo Gabriel, *Tarde in The Emotions in the Classics of Sociology: A Study in Social Theory,* p 47.

quality, the other two are quantitative.[201] The difficulty lies in distinguishing between the first two elements and the feeling as they appear together.

> So, "*The proper task [of statistics] is to measure special beliefs, special desires, and to use the most direct procedures to study as closely as possible these quantities that are so different to get hold of; to count actions that are the most similar to each other".*[202]

Faith and desire are quantitative and therefore measurable, while sensation is qualitative and therefore it cannot be measured. This distinction is fundamental to his theory. Tarde makes some pretty discerning observations about quantification and measurement that are quite innovative to his era. How can one measure behaviors or ideas? He examines the quantification and measurement of social behaviors in various works. A seminal concept of his theory is that of the public, as it emerges in late19th century Europe and gradually acquires the features that will become emblematic in the 20th century.

After explaining the qualitative nature of the feeling, he deals with belief and desire and their quantitative nature. "*Belief and desire are real quantities whose variations, more or less negative or positive, are essentially –if not practically– measurable, either in their individual manifestation, or –more and more easily– in their social manifestations. Consequently, not only from one condition to another in the same person, but also from one person to another, they remain essentially identical to themselves and can legitimately be summed up...*"[203]

The argument he uses to establish their quantitative character is, that opposition in all its forms presupposes similarity, since it is a form of equation or balancing. The two driving forces of the social are faith and desire. The crossovers of streams of faith and desire form dynamic contrasts that are integrated into each other. For Tard, opposition is a very special kind of repetition as it includes two identical objects that are overturned because of their similarity. Conversely, opposites always form a duality.

Similarity automatically recalls the concept of reduplication. This term has a numerical connotation. Anything that can be counted is a quantity. "*So, if desire and faith contain uncontested contrasts, they turn out to be quantities. It is obvious that both contain positive and negative attitudes*".[204] Although individual belief and desire are difficult to measure, the measurement of collective belief and desire is less complex. For Tarde, the measurability of belief and desire "to different individuals in aggregates and massively" is based on a psychological mechanism –what some psychologists call 'ejet'".

Therefore, we can legitimately sum up the distinct individual amounts of belief and desire. The examples he chooses, are the amount of faith in financial credit in the public or private sector and the increase or decrease of religious faith based on contributions to church treasury. A century before the passion of opinions started to dominate political and social discourse; he discovers that statistics when handled skilfully provide strange and interesting measurements of general desire. In his theory, an idea is not a foiled or abandoned act; on the contrary, the act is but the pursuit of an idea, the acquisition of a fixed faith.

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201 "*All quantitative reality known to us may by its nature have positive or negative values, internal oppositions. But sensation, which is a reality, has no negative values. Hence it cannot be a quantity*", Tarde G. (1895a). *Essais et mélanges sociologiques*, 194. "*On the contrary, belief and desire are quantities. All opposition is a conflict, an attempted or realized counterbalancing, which supposes a similarity of the opposed terms, their numerical comparability, the possibility of putting them into an equation. Hence no true opposition can be found outside of quantitative realities. So if belief and desire contain undeniable oppositions, it is proven that they are quantities; and it is evident that both of them encompass positive and negative states*". Tarde,*Essais et mélanges sociologiques*, 196.

202 Tarde, G. (1903 trans.) *The Laws of Imitation*, 196.

203 Tarde, G. (1890). *La croyance et le désir, la possibilité de leur mesure*, 290.

204 Tarde, *La croyance et le désir, la possibilité de leur mesure*, 196.

When attempting to give definitions, he realises how slippery is the terrain that he is attempting to map, and he limits himself to short judgments on the nature of belief and desire. Tarde, as Hume before him, claims to be unable to define them more exactly and simply suffices to describe their function.

In his system belief and desire perform for the inner self the same role that time and space play for the material element. Belief and desire are existential categories where areas time and space are sensory categories. So, in a bold move Tarde replaces the Kantian pair of time and space with his own pair. He audaciously pronounces that belief and desire are the fundamental faculties of all human functions. Memory perception, imagination cannot exist without them. Belief and desire though their compositions and relations build the forms of human experience from the simplest to the more complex ones. After all, what else is perception but the result of a conjunction or a disjunction of sensation performed by belief? Belief acts directly upon sensory images, which she herself constructs. Then by dismantling these images from sensation belief creates memory. While desire united to sensation becomes pain or pleasure, since there is no sensation per se of the painful or the pleasurable.

Finally, by applying our ability to desire on the images produced by belief desire turns into love, hatred, sympathy or repulsion, in short it turns into passions. And yet still, passion presupposes the element of judgement that is a belief, because we desire to cross from the image, as it is born in sensation, to the image as a confirmed sensation. In other words, we desire to cross from the idea of reality to reality. In Tarde's own words *"… by the simple concepts of pain or pleasure and perception we objectify ourselves incorporating them to what is ours, to what we is, the ability to believe and desire"*. [205]

The consequences of the above premise are extremely interesting. According to Tarde, we know ourselves directly and from within not as thinking subjects or cognitive points. Our endoscopic knowledge of the self is constructed in two ways. First through sensation we are cognizant body. The direct knowledge of the body and the self is the only knowledge we can have about beings. Secondly, we are members of a society, speakers of a language, participants of a culture. So, the only way we can know is though relations, the relation of body and spirit, of individual and society, of man and object.

But in Tarde's relational universe the concepts of body and spirit, of individual and society do not pre-exist, instead they are an ongoing project, formed though relations established. Monads understand themselves via the relations they build with other monads. We know the thing in itself because we construct it and we live it. Our knowledge is passionate or to put differently we learn though our passions. It's not just a clear negation of the Kantian theory of knowledge; it is also a total and empowering affirmation of man's ability and potential.

He questions the forms of subjectivity and what the individual and the collective subject are. His answer leads to a denial of the classical dichotomy between micro and macro between the individual and the collective. In his anti- Cartesian doctrine of habeo-avoir that is the desire to possess,[206] the monads form relations based on their passion. This fundamental desire decomposes the cogito in forces of desire and belief and compels monads to surrender and become part of a relational ensemble or in deleuzian terms of an assemblage.
His answer to what society is and how do we govern it, is radically different. It implies that society is a political project where monads clash and strive to possess one another. For

205 Tarde, *La croyance et le désir, la possibilité de leur mesure*, 193-195.

206 "*So far, all our philosophy has been founded on the verb to be, whose definition seemed to have been the Rosetta's stone to be discovered. One may say that, if only philosophy had been founded on the verb to have, many sterile discussions, many slowdowns of the mind, would have been avoided. From this principle 'I am', it is impossible to deduce any other existence that mine, in spite of all the subtleties of the world. But affirm first this postulate: 'I have' as the basic fact, and then the had as well as the having are given at the same time as inseparable*". Tarde, *Monadologie et Sociologie*, 86.

example, in *The transformations of power* (*Les transformations du Pouvoir)* and in *Economic Psychology* (*La Psychologie* économique*)* he uses his inter-psychological theory to examine other aspects of human activity, respectively politics and political economy. He applies these principles in his study of the political phenomenon which he views as a series of transformations of power in bodies, organisations, institutions that are passionate and contingent.

His political economy is, as Maurizio Lazzarato observed, an economic anthropology.[207] In his criticism he claims that political economy tries to rationalize and explain economy whereas economy is illogical since it is the product of crossovers, clashes and cultivations of passions. Thus, his analysis of stock markets as nothing more than a factory of passionate beliefs.[208]

ECONOMIC PSYCHOLOGY: READING POLITICAL ECONOMY THROUGH THE LENS OF BELIEF AND DESIRE

Tarde applies his bold conception of belief and desire as the cornerstones on society to the examination of various phenomena in his work and proclaims belief and desire as the driving force of the social in every facet of human activity. A striking example is his reading of Political Economy.

We cannot understand human society without the concept of production. Throughout the 19th and 20th century it was monotonously repeated that production is linked to the economy and there can be no Economy without Economics. Since Economy needs its science, the science of Political Economy is born.

Gabriel Tarde's Political Economy is not a Political Economy in the classical sense of the term.[209] He speaks of Economic Psychology and analyses its principles and function in his *Economic Psychology* that contains a series of courses delivered at the College de France between 1900 and 1901. Tarde was probably the first to use the expression "*Economic Psychology*", stressing the need to analyse economic behaviour from the point of view of Psychology and social theory. As early as 1881, in his book *Essays on social psychology* (Écrits de psychologie sociale) he devotes a chapter to Psychology in Political Economy (La psychologie en économie politique). In it he criticized Adam Smith for not incorporating in his concept of economy the human psychology insights that were evident in his texts on moral feelings –in particular the Theory of Moral Sentiments.

The question he poses is quite simple. What exactly is this perception of the Political Economy that emerged in the 18th century and whose importance has not ceased to increase in the coming centuries? The question has remained pertinent as currently voices are rising to question the "abolishment" of politics and its total surrender to Economics. For Tarde, it's ideas that guide the world, in particular, the ideas that economists produce from the very material of their science. Thus, he puts forward the term Economic Psychology as a curious intersection where science and politics crossover.[210] What he describes, in his critic, is a phenomenon where ideas, opinions and arguments overturn the existing theory and sidetrack and discard monads and their relations. In Marxist terms, it's an inversion where the superstructure (language, ideology, etc. formed by faith and desires) defines the base, which just comprises the monads in a relational universe. It's not a classical Political Economy theory but rather, as Maurizio Lazzarato put it, Economic Psychology; a crossover between *homo politicus* and *homo economicus* via Psychology.

207 Lazzarato, M. Postface. Gabriel Tarde : un vitalisme politique,. *Monodologie et sociologie*, 103-150.

208 Borch C. & Arnoldi, J. (2007) *Market Crowds, between Imitation and Control*, Theory, Culture and Society, 24, 7-8, 169.

209 Valade, B. (2018). ON GABRIEL TARDE'S PSYCHOLOGIE ÉCONOMIQUE. In R. Leroux (Ed.), *The Anthem Companion to Gabriel Tarde*, Anthem Press, p. 72.

210 Barry, A & Thrift, N. (2007*) Gabriel Tarde: imitation, invention and economy, Economy and Society, 36:4, 509-525*

He approaches the problem of defining social quantities (values) as a process, departing not from the logic of capital accumulation but from the power of invention. To understand his Economic Anthropology, we must first accept a complete reversal of our conventions. Nothing in Economy is objective, everything is subjective, or rather inter-subjective, and "*... that is precisely why we can treat the economy as quantifiable and scientific*" [211]. In order to quantify the Economics, we must fully reverse it into inter-subjectivity, since the fundamental concepts of value and knowledge as products of belief and desire that highlights point.

> "*Hence there are these two great social quantities, which may be termed truth and value, in the broadest sense of these words, or in more concrete terms, knowledge (les lumières) and wealth. The dualities of belief and desire are reflected, although transfigured, in this fundamental duality, from which flow all the different magnitudes, whether or not they are measured by statisticians*".[212]

Back in his time the field of Economics was a battlefield. It is a time of *"... passions of unprecedented intensity, aspirations, marvellous conquests, with a kind of new religion, socialism, and a proselytizing zeal unknown from the time of the early Church. That is to say, the interests, the passionate interests, which we must coordinate with each other, but also with the equally passionate interests of the militarized capitalist allies, who are no less coloured by the hope of victory, by the arrogance of life, by the thirst for power*".[213] A description that remains chilling pertinent today.

According to Tarde the error of Political Economy lies in the fact that it tries to rationalize and explain the economy with scientific laws and constructing an economic logic, while the Economy is non-rational as it is produced by the intersection, the conflict and the development of passions. "*Capturing the homo economicus (sic), economists did a double abstraction [...] Never in any time of history have a producer and a consumer, a seller and a buyer been before each other without first having joined each other without some kind of totally emotional relation [...] and secondly without the company of an invisible sequence of colleagues, friends, believers with common faith, whose views were considered when debating the price or salary and was eventually imposed at the expense of their strictly individual interests*".[214]

He denies the central role of labour. He is equally interest in the fluctuations of the price of bread and those of the prestige of elected politicians that will be counted with instruments which he calls "*Doxometers*" (gloriometres). He does not use typical examples of production, like for instance the industrial production. Instead of a clothes factory, it is the book industry that interests him and the dissemination of both the ideas contained in the pages and the books themselves. He passes quite easily from Darwin to Marx and from Adam Smith to Cournot, never using the usual distinctions of political economy. He is equally interested in luxury, fashions, consumption, quality, pleasures, as well as in the military industry and colonialism. He continuously looks for his examples in the art market, in the diffusion of philosophical ideas, in ethics, in law, as factors in the production of wealth. He establishes science, invention, inventors, the very concept of laziness as the foundation of economic activity.[215]

His starting point is the definition of value. But we can already observe the first diversion for the canon, since value has par excellence a psychological dimension depending on belief and desire. It can be quantified if it has a certain degree of intensity. The concept of value extends to all evaluations of beliefs and desires: "*Every abstract quantity is divided into three major categories that are the original and fundamental concepts of collective life: truth- value,*

211 Latour, B.& Lepinay, V. (2008) *L'économie science des intérêts passionnés*, 17.
212 Tarde, G. (1897) *L'opposition universelle: essai d'une théorie des contraires*, 204.
213 Latour & Lepinay, *L'économie science des intérêts passionnés*,17.
214 Tarde, G. (1902) *La Psychologie Économique*, 111-116.
215 Latour & Lepinay, *L' économie science des intérêts passionnés*, 10-11.

utility-value, and beauty-beauty".[216] Maurizio Lazzarato observes that economic psychology is a theory of creation and institution of values, while political economy and Marxism are theories of value measurement.[217]

For Tarde the basis of cooperation in modern societies resides neither in labour nor in capital, nor in usability, but rather in the activity of the spirit, soul, or memory, from which voluntary action (desire), intellectual action (loyalty) and affective action (sentiments) begin. He raises the human power of creation, that is, the moment people form a affective relation and produce together, as the foundation of economic psychology. He questions the conditions that allow production; the production of innovation, not as energy but as the emergence of new social, economic and aesthetic relations.

Economic Psychology presupposes the autonomous cooperation and the interdependence of people who co-produce by compiling their differences. Tarde examines the conditions of production of this new state that he locates in "co-operation between the minds". Minds interact with each other through desires and beliefs. The "*production of knowledge*" is identified as the actual production of modern societies, which results in an economy of circulation, of flows of desire and belief. Consequently, the science of political economy is not a theory of production but a theory of reproduction.[218]

His explanation of the institution of values is not through labour and production –as it is in the classical economic theory and Marx–, but through the mediation of imagination and imitation, by creating the potential and fulfilling it. Inventions, from the smallest to the largest, are events which in themselves are of no value, but which create a new potentiality and are a prerequisite for any value. An invention is a product of co-operation, a union between streams of belief and desire, a rearrangement of pre-existing flows in new ways. Invention is also a constitutive force, because, through this recomposition, monads can express their full potential and forces meet. Out of this intersection a new force, a new synthesis will come out; thus, activating forces that were simply potential.[219]

Invention derives by the "*co-operation natural or accidental*" of a large number of conscious nesses in transience. Therefore, it is not, according to Tarde, the product of an individual consciousness but that of a multi-consciousness. Invention as an event, as a combination, an interaction, production process of a hybrid, involves an extra dimension than the individual or collective action. For though inventing is always a co-operation, it is at the same time an action that temporarily disrupts, both in the individual and in society, what is already structured, habitual, individual. Invention is a process of creating a difference, which makes the individual and his individuality conditional each time. Every invention is a break with norms, rules, habits that define the individual and society.

Tarde continually highlights the fact that inventing is not only a difference, but also a repetition, a diffusion, a power capable of mobilizing desires and beliefs, defining the new conditions of synthesis and mediation of psychological forces. Therefore, the affirmation of an invention is also a matter of public opinion, an appropriation between brains. In his theory, there is no separation but synergy between science and public opinion, between science and power, between science and Economics. The true value of an object consists of "*the perfect harmonization of the collective judgements surrounding the object*".

This is a theme that permeates all his work. The constitution of the public –as an "agathon" (common good) but also as a dynamic community of interaction and spiritual exchange– which

216 Tarde, *La Psychologie Economique*, 63.
217 Lazzarato, M. (2001). La Psychologie Économique contre l'Économie politique, *Multitudes*, 194.
218 Lazzarato, La Psychologie Économique contre l'Économie politique,1.
219 Lazzarato, M. *Les Révolutions du Capitalisme*, 43.

the Marxist theory and the political economy completely ignore. Value is a property that we attach to things. But this property is not an individual preference; it is a collective judgment, a common idea and a collective desire shared by many individuals, shared within a public. Value and measure are social phenomena. Lazzarato writes that Economic Psychology is "*the first theory of the production of values which incorporates mass media as a fundamental mechanism*".[220] This social judgement: an inter-subjective valorisation of beauty, truth, etc. is necessary elements for a society to function, perhaps even the definition of what one might call a society.

CONCLUSION

Tarde's fundamental position is, that collective values, norms, and logics of action have their source and origin in small, de-centralized units. These values, norms and logics derive from the passionate, imitative relations between otherwise disconnected individual beings. In short, the material world of facts is underpinned by the emotional dimension of people's relations with one another.

In his work we find valuable tools for conceiving the social realm as inevitably open and dynamic. This is due to the fact that what matters to Tarde are not the finished social structures but their generative networks. He asserts that all social structure hides within it a constellation of beliefs and desires, which are open to other equally open social structures. In his Sociology, the diverse currents of faith and passion are the materials that configure –as well as exceed and transform– institutions, groups and individuals.

In the 21st century we consume more than just goods. In fact, we consume varying forms of lifestyle. Even with the limitations applied by factors such as geographical areas or class or gender, this is a universal trend. Through the streams of image, information, knowledge and services in which we have permanent access, we consume tons of subjectivity whilst simultaneously producing just as much. We come to the realization that our world is made out of "*decisions mediated*" though a system of signs. Beneath concepts such as cultural capitalism, intangible economy, Society of the Spectacle, age of bio-politics, economy of attention, lay attempts to describe this new relation between Capital and Subjectivity.

We are faced today what we call capitalism of affection; based on an apolitical consumerism, as Guy Debord so succinctly summed it up. This debate has its origins in the problem of manipulation in the form of mass emotional contamination. Vocabulary that directly refers to Tarde and the ethical epidemics of his time. There is a distinctive link between the flows of desire and belief and the emotional life of a crowd and currently the philosophy of emotion researches the transmission and the production of such collective emotions.

In her seminal work *The Cultural Politics of Emotion*, Ahmed[221] argues that emotions play a crucial role in the "*surfacing*" of individual and collective bodies through the way in which emotions circulate between bodies and signs. Emotions are not simply "*within*" or "*without*" but create the very effect of the surfaces or boundaries of bodies and worlds. Emotions create narratives; an emotion works to animate the ordinary subject, to bring that fantasy to life. Within the narrative, the specific emotion cannot be found in one figure but works to create the very outline of different figures or objects of the emotion, a creation that crucially aligns the figures together and constitutes them as a "*common*" threat. Importantly, then, the emotion does not reside in a given subject or object. Emotions are economic; they circulate between signifiers in relationships of difference and displacement. In such affective economies, emotions do things, and they align individuals with communities –or bodily space with

220 Lazzarato, M. *La Psychologie Économique contre l'Économie politique*, Multitudes, No 7 Dec 2001, 5.
221 Ahmed, S. (2004a) The Cultural Politics of Emotions. Edinburg, UK: Edinburgh University Press.

social space– through the very intensity of their attachments. In any "*affective economy*", the power of emotions accumulates through circulation of texts.

Her account of an emotion (e.g. hate) as an affective economy shows that emotions do not positively inhabit anybody or anything, meaning that "*the subject*" is simply one nodal point in the economy, rather than its origin and destination. This is important as it suggests that the sideways and backward movement of emotions is not contained within the contours of a subject. Ahmed's argument is not that there is a psychic economy that then becomes social and collective: rather, the individual subject comes into being through its very alignment with the collective. It is the very failure of affect to be located in a subject or object that allows it to generate the surfaces of collective bodies. Emotions are not "*in*" either the individual or the social but produce the very surfaces and boundaries that allow individual and collective identities to be delineated as if they are objects. Emotions are not simply something "*we*" or "*I*" have. Rather, it is through emotions, or how we respond to objects and others, that surfaces or boundaries are made; the "*I*" and the "*we*" are shaped by and even take the shape of contact with others.[222] Her approach bears very interesting similarities with Tarde's work.

Tarde's work vividly demonstrates why modernity is understood in and through the role of belief and desire. Emotions are taken as a social phenomenon. The key is not only the differentiation between individual and collective emotions but the fact that society as a collective is driven by emotions. His work highlights that the government of the fundamental effects, belief and desire, serves as the hidden instrument of power that shapes the very fabric of our being. This foregrounding of affect is currently used as a way to reanimate social and political theory. For example, the multiform manipulations of the spinozist multitude from Deleuze to Negri. There is a difficult question to tackle: How can we today come up with a form of collective subject? If we are not accepting the lethargic emersion into political apathy that plagues western democracy and the post-democratic condition that transforms the social and political field, then we need to come up with an alternative. If we do not wish for the spectre of those who feel unseen and unheard haunt the 21st century, we have to look for answers to the emerging problems of affect capitalism. Tarde's work could serve as an answer to the pressing problem of grasping the real passions and energies that run through the modern-day crowds and harness them into social and political action.

222 Ahmed, *The Cultural Politics of Emotions.*

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CHAPTER 06

JOSEPH SCHUMPETER AND GABRIEL TARDE ON TECHNOLOGICAL CHANGE AND SOCIAL EVOLUTION

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ABSTRACT

In this paper, we show that the certain elaborations of the French sociologist Gariel Tarde may be traced throughout Schumpeter's works. More specifically, we show that Joseph Schumpeter's views were influenced by the French social philosopher and theoretician Gabriel Tarde who delivered a theory of Social Evolution based on Technological Change as its driving force, closely related to the profiteering function of the economy. Also, we demonstrate that Tarde's approach has striking similarities with the Schumpeterian vision of Economic Development, Change and Social Evolution. But there are similarities in their respective methodological approaches as well. For instance, the most striking similarity is that despite the importance he gave to the social stratum, Tarde, just like Schumpeter's early approach, never fully admitted the determination of the individual's will by the social forces. In other words, they both attempted to explain social evolution by means of individual initiative. At this point it should be mentioned that Tarde's theory has been delivered and published about a decade before the publication of the first edition of Schumpeter's influential *Theory of Economic Development.* In this context, much of this similarity in visions could be attributed to Schumpeter having carefully read Tarde and, probably, to certain common intellectual sources of influence. Part of the explanation why this similarity in visions has been inadequately acknowledged, so far, lies in the ignorance of the approaches on which Schumpeter built his treatises. In this framework, after examining the affinities of Schumpeter's work with Gabriel Tarde, it is evident that certain Schumpeterian elaborations appear to be less unique.

Keywords*:* Schumpeter, Tarde, evolution, invention, technology, individualism
JEL classifications: B15, B25, B31, B52

I. INTRODUCTION

Joseph Alois Schumpeter is regarded as one of the most influential economists of all time who had a major impact on the development of *Economics* in the twentieth century. For instance, Haberler (1950: 1) argued that Joseph Schumpeter "*was one of the greatest economists of all time*". In fact, it is nowadays becoming increasingly evident that Joseph Schumpeter is among the most prominent theoreticians who will probably shape the thinking on economics for the next decades.

However, important aspects of his works remain unexplored. In this context, Schumpeter's affinities with other great theoreticians have been inadequately acknowledged, so far. Although there is no "*systematic study of influence in the economics profession*" (Leeson, 1997: 637, emphasis in the original) there is one serious reason why studying the potential influences on Schumpeter is of great interest. Given that he was a major economist who wrote extensively on economic and social evolution, the study of his affinities with other great social philoso-

phers and theoreticians is an important key for understanding his writings.

Affinities can be shown in many ways. One of the most common is when an author shows traces of the thinking or consistently uses the contributions of authors in his work (Senn, 2003: 142). In this sense, what were the affinities of Gabriel Tarde's and Joseph Schumpeter's ideas on technological change and social evolution?

Obviously, understanding the origins of these important ideas and re-evaluating the influences that might have shaped them could be very useful for promoting dialogue between *Economics* and *Sociology* and clarifying several issues. More precisely, this paper makes an attempt to interpret certain parts of Joseph Schumpeter's voluminous *oeuvre* in association with the writings of the French social theoretician Gabriel Tarde. This article is part of a larger project investigating Joseph Alois Schumpeter and his affinities with other great theoreticians and/or schools of thought (see, for instance, Michaelides & Milios, 2004; 2005a; 2005b, Michaelides et *al.,* 2007a; 2007b; 2007c; 2008; 2009a; 2009b; 2009c).

Following Shionoya (2005: ix), we would like to affirm the following thesis, which has been the point of departure of our investigation: "*Even if the core of a certain idea were identified in the continuous and discontinuous process of the filiation and ramification of thought, it is still possible to trace its predecessors, successors, and sympathizers in different directions*". Of course, it is the case that tracing these paths for many of the economic and social theories is usually quite difficult.

The paper is structured as follows: section two (II) offers a very brief biographical presentation of the two theoreticians' life and work; section three (III) explores the role of technological change and development in their respective writings; section four (IV) presents their respective views on the concepts of determinism and individualism; finally, section five (V) concludes the paper.

II. BRIEF BIOGRAPHICAL NOTES: JOSEPH SCHUMPETER & GABRIEL TARDE

Joseph Alois Schumpeter (1883-1950) was born in the Austrian part of Moravia (then the Hapsburg Empire) and died in Taconic, Connecticut. He was educated at the Theresianum, a deeply aristocratic school where "Schumpeter never felt that he quite belonged" (McCraw, 2007: 18). In 1901 Schumpeter enrolled in the faculty of Law at the University of Vienna and continued his studies in Berlin and London. In 1906, he took the degree *Doctor utriusque iuris.* In 1909 Schumpeter became an Assistant Professor at the University of Czernowitz (Kirsch, 1979: 143). Between 1911 and 1919 he taught Political Economy as a Full Professor in Graz, while in 1913 and in 1914 he was an Exchange Professor at Columbia University. In 1918, Schumpeter became member of the *German Socialisation Commission (Sozialisierungskommission),* and in 1919 he was appointed Minister of Finance in the government formed by the Social Democrats (Haberler, 1950: 346). In 1921 he became president of *Biederman Bank* in Vienna, and in 1924 after the great inflation in Germany he accepted a professorship at the University of Bonn in Germany in 1925.[223] From 1932 until his death in 1950 at the peak of his fame he taught at Harvard University, and he served as president of the American Economic Association.[224]

223 In the summer of 1926, Schumpeter lost his beloved mother, his (second) wedded wife, and his (newborn) son. Based on Schumpeter's diaries, it is often argued that his meticulous output was due to "isolation and self-doubt" that was enhanced by the death of his wife and son that made him use academic work "as a means of harnessing his personal grief' McCraw (2007: 345, 160).

224 It is worth noting here that although he was world famous by that time, Schumpeter was also penniless. As McCraw (2007: 4) stressed, Schumpeter had to make paid speeches in order to be able to buy his transatlantic ticket.

Schumpeter's writings cover a broad range of topics such as the dynamics of economic and social evolution (e.g. *Theory of Economic Development,* 1912, and *Business Cycles,* 1939), the integration of economic, sociological and political perspectives with regard to capitalism (e.g. *Capitalism, Socialism and Democracy,* 1942) and, last but not least, the history of economic ideas (e.g. *Economic Doctrine and Method,* 1914, and *History of Economic Analysis,* 1954). On the other hand, Gabriel Tarde (1843-1904) was born in Sarlat, Dordogne (France) where he engaged in legal studies and became *Juge d' instruction*. He was a student of human nature who was particularly interested in the explanation of motives. Very early in his career he realized not only that motives may be resolved in terms of belief and desire, but also that, under certain circumstances, they could even be "measured", in an approach where everything is "calculable" and never unexpected.[225] In this context, Tarde's *La croyance et le desir, possibility de leur mesure* (1880) in *Revue Philosophique* is regarded as a significant contribution in the literature.

Imitation as a motive force of change attracted Tarde's attention from the very beginning of his scientific endeavor. Meanwhile, he proceeded to the study of the evolutionary theory as held, for instance, by Darwin and Spencer, including the evolution of institutions (Giddings, 1903: iv). He noticed the overwhelming presence of imitation in most spheres of the human action. To a sharp philosophical mind like Tarde's, it was pretty obvious that there was some sort of a broader socio-psycho- economic immanent regularity (i.e. "law" of imitation), worth investigating. This is why Tarde is regarded as a theorist of imitation emphasizing *invention* as the driver of *imitation*, borrowing, thus, from Leibniz and Cournot a mechanical explanation of reality.

Tarde published several articles in *Revue Philosophique* between 1882 and 1884, such as *Les Lois de limitation, Les Traits communs de la nature et de lhistoire, L'Archeologie et la statistique* and *Qu'est-ce quun societe?.*[226] Gabriel Tarde's philosophical system is exposed in a series of lectures at the *College Libre des Sciences Sociales* in 1897. These lectures (structured in three parts i.e. *The Repetition of Phenomena, The Opposition of Phenomena* and the *Adaptation of Phenomena)* were published under the title *Les Lois Sociales* (1898). In what follows, our attempt intends only to provide an overview of Tarde's influence on Schumpeter, from the theoretical and methodological perspective. As a result, in this paper, the connections between Schumpeter and Tarde are sometimes primarily substantive (as in the section on Technological Change, etc.) and sometimes primarily methodological in nature (as in the section on Individualism, etc.).

III. TECHNOLOGICAL CHANGE AND DEVELOPMENT

Gabriel Tarde was a visionary social philosopher. In a lecture given to the *Society of Sociology* in Paris (June 11, 1902) he made a serious attempt to explain social evolution. According to Tarde successful initiatives signify the drivers of social evolution. The direction of the evolutionary path depends on small insignificant (on their own) random forces, which are combined with new forces creating, thus, a new sort of periodical reproduction of the system. In his own words: "*In all these instances it is seen that great, constant forces are given a direction by small, accidental, new forces, which, by being grafted on the first ones, set into motion a new kind of a periodic reproduction. Upon repetitions is grafted a variation, origin of new variations*" (Tarde, 1902: 1).

225 This discovery had been made before the seminal contributions by Bentham, Cournot, Menger, Walras and Jevons.

226 Other articles setting forth the same underlying principles and formulating ideas shaped by the Tarde's professional experience were later integrated in his 1891 books *La criminalite comparee* and *La philosophie penale* (Giddings 1903).

Furthermore, *evolution and change* are made possible through *invention* based on *repetition.* Repetition consists of elements such as the climate, the sun, the race, as well as by tradition, custom, ideas, and acquired attitudes. In fact, climate and race are characterized by *periodical* movements (tide-winds and successive hereditary generations of the same race, respectively, etc), whereas, tradition, custom and ideas, are characterized by *imitative* repetitions, transmissions of examples. According to Tarde (1902: 1): "*social transformations are explained by the individual initiatives which are imitated, I do not say that invention, successful initiative, is the only acting force, nor do I say that it is actually the strongest force, but I say that it is the directing, determining, and explaining force*".

This argument reminds us strongly of Schumpeter whose work is "*a comment, from constantly varying viewpoints, on a single affirmation: every aspect of social life is continually being transformed under capitalism*" (de Vecchi 1995, 3). For Schumpeter development is mostly the result of innovation, i.e. "*the outstanding fact in the economic history of capitalist society*" (Schumpeter, 1939: 61). For him, innovation is the leading force in what he calls "*evolution*". Evolution is however discontinuous because of a discontinuity in the introduction of major innovations into the economic system. However, Schumpeter's concept of innovation was different than what is generally assumed because he stressed that innovation *per se* is not a force in economic development. Rather, the real force in economic development is the *consequences* of these innovations (Schumpeter, 1928).

These consequences make innovations a force in the economic system and innovations which do not produce these consequences cannot be a force in the economic evolution of a social formation. According to Schumpeter, development depends primarily upon productivity increases based on innovation. More precisely, for Schumpeter this concept covered the following cases: "*1. The introduction of a new good [...] or a new quality of a good. 2. The introduction of a new method of production [...]. 3. The opening of a new market [...]. 4. The conquest of a new source of supply [...]. 5. The carrying out of the new organisation of any industry*" (Schumpeter 1912, 66). In this spirit the great Austrian thinker Joseph Schumpeter used the term 'technological progress' to characterize the changes (Scherer, 1992: 1417), which account for the greater part of economic development.

Of course, the hero of his story was the entrepreneur who initiated change. In other words, in the Schumpeterian evolution begins when an exceptional entrepreneur introduces an innovation. Actually, innovations produce *qualitative* changes in the system: *"[The] historic and irreversible changes in the way of doing things we call "innovation*", and we define: "*innovations are changes in production functions which cannot be decomposed into infinitesimal steps*" (Schumpeter, 1935: 4). In fact, Schumpeter defined economic development as "*such changes in economic life as are not forced upon it from without but arise by its own initiative, from within*" (Schumpeter, 1912: 63). According to Schumpeter, economic development is accompanied by growth, i.e. sustained increases in national income; however, quantitative growth does not constitute development *per se*. He wrote: *"[W]hat we are about to consider is that kind of change arising from [...] the system which so displaces its equilibrium point that the new one cannot be reached from the old one by infinitesimal steps. Add successively as many coaches as you please, you will never get a railway thereby*" (Schumpeter, 1912: 64, emphasis added).

Tarde suggested that by placing ourselves in a society already organized and alive, having its own language, a political and economic regime in embryonic form, as well as customs and habits we are in a position to examine the origins of modern society; we are about to examine why and how its language or the government, religion, morality, art and other beliefs could be modified in a given moment. "*The only means that could clarify the problem of origins, in all aspects, is to place ourselves, from the beginning, in medias res and to seize the action of forces that later could serve to explain the formation of things, the*

transformation of which they primarily explain" (Tarde, 1902: 2).

In Tarde's analysis, we may detect a fundamental element of Schumpeter's idea on the conflict between routine and innovation, characterising the circular flow. In a similar to Tarde's vein, Schumpeter started all his analyses with a treatise which, excluding any innovative activities, led to a stationary state. The stationary state is, described by Walrasian equilibrium taking account of the interdependences of economic variables but applicable only to a stationary process, i.e. one which adapted itself to forces acting on it. However, just like Tarde implied too, the examination of a static system is not worthless because in the short run, when most of the dynamic factors can be considered as being fixed, it is not devoid of explanatory power.

In Schumpeter's (1939: 40-41) words:

> *We may thus visualize an economic process which merely reproduces itself at constant rates; a given population, not changing in either numbers or age distribution [...] the tastes (wants) of households are given and do not change. The ways of production and usages of commerce are optimal from the standpoint of the firm's interest and with respect to existing horizons and possibilities hence do not change either unless some datum changes or some chance event intrudes upon this world.*
>
> *No other than ordinary routine work has to be done in this stationary society, either by workmen or managers. Beyond this there is, in fact, no managerial function - nothing that calls for the special type of activity which we associate with the entrepreneur [...] Such a process would turn out, year after year, the same kinds, qualities and quantities of consumers' and producers' goods; every firm would employ the same kind and quantities of productive goods and services; finally, all these goods would be bought and sold at the same prices year after year.* (Schumpeter, 1939: 40-41)

The author stated that the mechanistic repetition of acts –which reminds us of Tarde's mechanistic approach based on Cournot and Leibnitz– was based on the accumulated experience of man (Schumpeter, 1934: 84-85): The entrepreneurs took the same decisions. The income was paid to consumer goods already produced. Any supply was counterbalanced by its own demand at the level of prices which covered the unit cost. Money could be absent without deforming the economic phenomena. Apparently, the economic stratum could only alter under pressure. Schumpeter described this equilibrium as "*stationary flow*" (Schumpeter, 1912: ch. 1) characterized by the absence of any change. He made clear that this "*stationary flow*" is only a theoretical abstraction and serves as a reference point (Schumpeter, 1928). Yet, while Schumpeter was a great admirer of Walras's scientific method and technique, he believed that this vision of the economy was incomplete in that there should be a source of movement within the economic system, i.e. innovation.

Tarde proceeded further in search of the laws of invention and individual innovation. He distinguished between theoretical and practical inventions:

— *Theoretical inventions:* Mythological conceptions, Philosophical systems, Hypotheses, Scientific discoveries.

— *Practical inventions:* Verbal innovations (neologisms), ritual innovations, industrial innovations, military innovations, political innovations, judiciary innovations, artistic and literary innovations.

Theoretical innovations make their appearance, logically and chronologically, before the practical ones. Another interesting distinction was that there are inventions that cannot pos-

sibly be substituted, while others that can be substituted. Analytically, only the theoretical (e.g. scientific) discoveries cannot be substituted; the practical (e.g. industrial) inventions are often replaced (Tarde, 1902: 4).

Tarde emphasized the fact that inventions come from a new combination of already existing resources and concepts, i.e. from imitation. "*Every machine consists of old tools, old methods, combined in a different way"* (Tarde 1902, 5, emphasis added). In this context, Tarde believed that even the most genius poet or artist does nothing more than combine in a different way the processes already known, ancient rhythms and rimes, and provides his personal stamp in expressing his sentiments or ideas that are as old as the world itself: "*The most genial among the poets and artists combines in a different way previously known art, methods, combined in a different way*" (Tarde, 1902: 8, emphasis added).

Tarde concluded that the great poets (like Hugo and de Lamartine) had been inventors and creators because, although they originally imitated, they knew how to turn the innumerable examples they had in hands into a nice new output based on existing realities (Tarde, 1902: 8).[227]

In any case, invention consists of a work of logic and teleology: it is judgment, reasoning, deduction and adaptation. Of course, "*At the source of a new invention there is something else than just combined imitations of prior inventions. There is the main originality of this combination*" (Tarde, 1902: 6). Without this "*there would be no change in the channels of the flow (from the same to the same) no change in the production function (from equations to equations)*" (Taymans, 1950: 618). The innovating forces are also *new* to the extent that they are grafted upon the old ones (Tarde, 1902: 1).

Joseph Schumpeter distinguished the process of development from growth due to the gradual increase in population and capital and –in a strikingly similar to Tarde spirit– wrote:

> *The slow and continuous increase in time of the national supply of productive means and of savings is obviously an important factor in explaining the course of economic history through centuries, but it is completely overshadowed by the fact that development consists primarily in employing existing resources in a different way, in doing new things with them, irrespective of whether those resources increase or not* (Schumpeter, 1942: 65, emphasis added).

He wrote: "*Carrying out a new plan and acting according to a customary one are things as different as making a road and walking along it*" (Schumpeter, 1912: 85). In this spirit, as is well know he labelled the carrying out of new combinations "*enterprise*" and the individuals who carried them out "*entrepreneurs*", whereas "*entrepreneurs*" cannot simply do this when they are confronted by new tasks because while in the accustomed channels their own ability and experience suffice, when confronted with innovations, they need guidance (Schumpeter, 1912: 79-80). In another formulation, while they are obliged to swim with the stream in the circular flow, they have to make an effort to swim against the stream if they wish to change its channel (Prendergast, 2006: 255). Thus, "*It follows that novelty needs to be forced upon*

227 The difference between the scientific and the artistic, aesthetic invention is that in the first case the state of mind of the inventor plays a secondary part and the objective element keeps the dominant part, whereas it's inversed for the second case. Nevertheless, in both cases the indispensable condition is the encounter of the 'imitative rays' *(rayons imitatifs* according to Tarde's expression) within the minds, impressed in a certain manner by the external environment, the nature. Thanks to this direct and brilliant contact with the nature, two known ideas, that until then seemed having nothing to share, appear as attached with each other by a liaison of a consequence principle or by a liaison of means to an end or different means to a common end. Newton, e.g., conceived the fall of a body and the Lune's gravity around Earth as two identical phenomena, consequences of the same principle, i.e. the universal attraction. By seeing the magnetic needle's deviation H. C. Oerstedt and A.-M. Ampere conceived magnetism and electricity like two variables of a common force, and this discovery that identified two forces until then considered as stranger to one-an-other was enough to produce later the invention of the electric telegraph when it was combined within other brilliant minds with the already ancient need of long distance mental communication and it seemed to them as the best way of achieving this goal.

the majority of economic agents, as progress in general is basically a result of force and confrontation" (Ebner, 2006: 504).

Schumpeter defined production as the combinations or materials and forces that are within our reach (Schumpeter, 1942: 65). However, in the general case, the producer *is not an inventor.* Following Scott's formulation: "*Schumpeter emphasized the role of the entrepreneur in development. By definition, he is the man who sees that the new combination is made. He is to be distinguished from the capitalist (who bears the risk) and from the inventor (who has the ideas), although it is possible for one man to be all three*" (Scott, 1989: 104).

Apparently, based on the aforementioned Schumpeterian analysis it could be argued that nobody (not even Schumpeter himself) would probably mind too much the use of "*invention*", instead of "*innovation*" as referring to the ultimate cause of evolution given that this is exactly what Tarde meant by the term "*invention*". After all, the term "*innovation*" first appeared in Schumpeter's *oeuvre* in 1927 (Taymans, 1950).

IV. DETERMINISM, INDIVIDUALISM, AND DEVELOPMENT

According to Tarde's analysis the evolutionary path depends on small insignificant (on their own) *random* forces, which are combined with new forces creating, thus, a new sort of periodical reproduction of the system. In his own words: "*In all these instances it is seen that great, constant forces are given a direction by small, accidental, new forces, which, by being grafted on the first ones, set into motion a new kind of a periodic reproduction. Upon repetitions is grafted a variation, origin of new variations*" (Tarde, 1902: 1, emphasis added).[228]

We need to clearly see that all social phenomena have as their elementary causes inter-corporal and inter-mental actions, embraced by sociology in their complex totality of these two sorts of actions, but also that inter-mental actions explain the inter-corporal ones and allow for the formulation of general sociological laws.

The directing forces are, therefore, *accidental;* they are not "*measurable*" (calculable) and they are not automatically produced by a number of circumstances. The innovator/inventor does not behave under a given pattern of methods. His adaptive behavior that consists of a reaction to a given set of conditions proceeds by a causal connection determined and described by theory (Taymans, 1950: 619).

Does Trade exaggerate when emphasizing on the "*accidental*"? If each invention taken separately is accidental, if we always have the right to say that it could emerge too soon or too late and in a different part of the world, it is not less true to claim that the ensemble of their sequence is regulated by *general* laws, the ones relative to the probability of the inventions. These laws had been a constant pursuit and intent for Tarde. He had conceived a complete philosophy of phenomenal existence and he rapidly converted it into literary embodiment.[229, 230]

228 Given a group of brains in mental contact, when one of them conceives an idea or a new action, and when this idea or action seems to be of superior quality, it will certainly communicate itself to three, four, ten persons around; and each of them, in turn, will spread it around him, and so on until the limits of the group are reached. This will at least be the tendency, although often stopped by obstacles or contradictory tendencies (Tarde, 1902b: vol. 1, 23-24). In a footnote to this passage Tarde raised the question of the determination of the limits of the groups; he referred to the multiplicity of *esprits de corps* –religious, political, professional, domestic, national– which rather limit the spread of both ideas and action (Hughes, 1961: 556).

229 The first edition of his famous *Les lois de l' imitation* appeared in 1890 and a second in 1895.

230 In relation to total inventions Tarde refers to Breal's *Semantics,* a French-Jewish philologist, born in Bavaria who is often considered as the founder of modern semantics. Who invents the new meaning instantly forgets the antecedent meanings, except one single of the fact that the association of ideas always come in twosomes (couples) (Tarde 1902, 6).

Every invention profoundly is a judgement, the reunion of two terms by copulation. And this consists of the elementary and necessary step the spirit must take. There isn't but a single line, a unique series of inventions carried out by a logical deduction: there are, beginning from each invention, millions of following possible inventions, but not all of these being materialized; just few of them (Tarde, 1902: 10).

If we wish to understand the linear series of the real inventions, we should also take into account the set of all possible inventions. "*Real is nothing but a case of possible; and it is not only in Mathematics that the calculation of the imaginary quantities is necessary for the calculation of real quantities. All discoveries carry the infinity of other discoveries within their folds, but not all of them come out of it*" (Tarde, 1902: 10). It is important to consider all possibilities that led to an abortion, so that we avoid committing the vulgar error of believing in single-linear formulas of social evolution.[231]

Furthermore, *evolution and change* are made possible through *individual invention* based on *repetition:* "*social transformations are explained by the individual initiatives which are imitated, I do not say that invention, successful initiative, is the only acting force, nor do I say that it is actually the strongest force, but I say that it is the directing, determining, and explaining force*" (Tarde, 1902: 1).

The individual creator owes to society and social collaboration even his brightest individual creation. *Societal* is, according to Tarde, nothing more than the accumulated *individual* (Tarde, 1902: 6). Thanks to the imitative diffusion the superior or singular individual is not working but for the collectivity where it belongs. The main part of the individual tends to collectivize, to socialize (Tarde, 1902: 11). Will there ever be an increasingly declining need for the necessity of superior individuals? Tarde's reply is negative since the easier inventions are the ones to emerge first, providing an explanation of why there are inventions (innovations) that appeared simultaneously in the past, independently the one from the other in various parts of the world (Tarde, 1902: 11).[232]

These discoveries, according to Tarde, are made by individuals and these discoveries are interconnected and philosophically interwoven, with other individuals. In fact, what makes the world go round, according to Tarde, in not *great men,* but rather *great thoughts.* For instance, some of the most significant discoveries in mathematics and science such as the concept of "*zero*", are anonymous, originating in very obscure individual personalities (Tarde, 1902: 3). But this might be considered as a very superficial perspective of reality.

In *The Laws of Imitation,* he endeavored to point out in all possible clarity the *purely social* aspect of most human phenomena, as distinct from their vital and physical characteristics. Tarde claimed that the laws of a pure sociology apply to every society, past, present or future just as the laws of general physiology apply to all species, living, extinct or imaginary (Tarde, 1903: ix-x). Tarde was accused of *Psychologism* because he built several of his analyses on the psychology of the individual. Most economists and sociologists

231 "For an invention M to bloom" we should keep in mind that the elementary inventions A, B, C ..., and so on, should have been previously effectuated since they consist of the combinatory accessories and parts contributing to the invention of M. Therefore, the imitative propagation of A, B, C should have been rapid and spread on a vast territory and in a dense population; furthermore, it should have the chances that their rays interfere within the willing mind. On the other hand, with a given certain field of expansion of these elementary inventions, the more the race is fertile in individual varieties, in individual profound and outstanding inequalities, thanks to crossbreeding, intermarriages, the more there will be chances that the brain *singularity* required by the fruitful combination of the imitative rays A, B, C.and so on, is materialised and in turn materialises this combination" (Tarde 1902, 2). Clearly thus, the change is due to the innovator, i.e. the inventor.

232 As societies facilitate the imitative expansion of ancient inventions, the difficulty of new inventions becomes harder, due to the same reason that, in the same way of quarrying a single mine, the extraction of new fossil becomes harder to attain (Tarde 1902, 12).

were unwilling to accept his attempts to construct a social science on what went on in the (individual) human mind.[233]

On this subject, Schumpeter shares several common insights with Tarde. As is well known, in the second edition of *Theory of Economic Development* where Schumpeter omitted the seventh chapter and rewrote the second, several writers, such as Shionoya 1997, 167-71, argued that the changes detected signify a shift of emphasis (or a *paradigm shift)* with regard to entrepreneurial leadership in the Schumpeterian *oeuvre.*

More precisely, in the first edition, the entrepreneurial leader was described as dynamic man, and the concepts of innovation and credit were introduced as the form of economic development and its means, respectively (Prendergast, 2006: 259). In other words, in his early writings Schumpeter advocated "methodological individualism" (Shionoya, 1990: 202), which gave priority to an *atomistic* view of society over a *holistic* one. For Schumpeter (1908: 91) who originally coined the term, *methodological individualism* "*just means that one starts from the individual in order to describe certain economic relationships*". Of course, according to Hodgson (2007), methodological individualism is neither a universal principle of social science nor an obligatory rule for all social scientists According to the same author, Schumpeter (1954: 888) invented the term "*sociological individualism*" to describe "*the doctrine that the self-governing individual constitutes the ultimate unit of the social sciences*". Regardless of the fact that there is no broad consensus on the sense and usage of "*methodological individualism*", the term "*sociological individualism*" coincides with what many theoreticians, nowadays, describe as "*methodological individualism*" (Hodgson, 2007).

In the second edition of *Theory of Economic Development,* the importance of the entrepreneurial leader was reduced. In fact, Schumpeter in his mature works changed considerably his conception of innovative activity and leadership (see, among others, Swedberg, 1991: 172-3; Prendergast, 2006: 261). A major manifestation of this shift is the fact that in his *Economic Theory and Entrepreneurial History,* Schumpeter (1949: 51) was sincere enough to admit that "*the entrepreneurial function need not be embodied in a physical person and in particular in a single physical person*".

According to Schumpeter, individualist initiative was necessary for social evolution and economic development. In fact, in 1910, Schumpeter had already stressed emphatically, contrary to established theoreticians, that the "*herd of consumers*" needed to be "mastered and guided" by the "leading personalities" of the production sphere (Schumpeter, 1910: 51). In this context, *"[L]eadership [...] does not consist simply in finding or creating the new thing but in so impressing the social group with it as to draw it on in its wake*" (Schumpeter, 1912: 88). Here, we stress the fact that for Schumpeter, economic development involved a process of creative destruction in which a special kind of action was necessary to initiate change. In Schumpeter's own words entrepreneurship is "*essentially a phenomenon that comes under the wider aspect of leadership*" (Clemence, 1951: 254-5).

As is well known, according to Schumpeter, the entrepreneur was motivated by : (a) "*the*

233 In this context, Tarde's *La Psychologie economique* was not well received by most economists, whereas sociologists had mixed feelings about it. For instance, the *Revue Phi- losophique* published two critical reviews, one by an economist and the other by a sociologist. The Belgian economist Mahaim (1903) criticised *La psychologie economique* in Charles Gide's *Revue d'economie politique.* In particular, he eulogized Tarde's elaboration of the concept of need *(besoin)* as the desire of something believed to be part of our well-being. However, he raised serious objections to Tarde's definition of capital even though he admired the theoretical construction behind it. In this spirit, Mahaim, argued that Tarde greatly exaggerates the role of individual psychology and knowledge in relation to material things and his critique of the economic theories of capital, based on the relevant concepts, were not to the point. This was so, because *knowledge* was implicitly incorporated in economic theory in labor as a factor of production (Mahaim, 1903: 24-25). Anglo- Saxon economists who read the French text rejected Tarde's criticism of the economic man and concluded that there was no need to revise economic theory on the basis of his thinking (Davis, 1902; Hamilton, 1903; Veblen, 1902).

dream and the will to found a private kingdom, usually, though not necessarily, also a dynasty" (Schumpeter, 1934: 93); (b) "*the will to conquer: the impulse to fight, to prove oneself superior to others, to succeed for the sake, not of the fruits of success, but of success itself*" (Schumpeter, 1934: 93); (c) the joy of creating, of getting things done, or simply of exercising one's energy and ingenuity (Schumpeter, 1934: 93). In other words, entrepreneurial profits are viewed as means to achieve further ends and, thus, "*entrepreneurship is driven by motivations that are alien to the rationalist foundations of capitalist civilization*" (Ebner, 2006: 504). Moreover, according to the same author (Ebner, 2006: 504), for Schumpeter the motives of ordinary economic agents in the circular flow "*were not based on rational choice and egoistic hedonism, but on habits that were meant to satisfy given wants that are also shaped by the social environment*".

In his mature work *Capitalism, Socialism and Democracy* Schumpeter took a very different view. In fact, he argued that capitalism would be "*killed*" by a hostile atmosphere to its own social order and –surprisingly enough– *not* by economic failure. In fact, Schumpeter claimed that the bureaucratization of the big enterprise, with the transformation of entrepreneurial activity into a routine process conducted by managers and technical employees, would lead to the final decline of the big enterprise and thus of the capitalist economic order.

For Schumpeter the entrepreneurs constantly renewed the capitalist class, as the more successful among them systematically showed the propensity of becoming capitalist-owners themselves (Schumpeter, 1912: 78-9). Only the bureaucratization of the big enterprise, through the subordination of the entrepreneurs to managers, could lead trustified capitalism to socialism: "*The perfectly bureaucratized giant industrial unit [...] ousts the entrepreneur and expropriates the bourgeoisie as a class which in the process stands to lose not only its income but what is infinitely more important, its function*" (Schumpeter, 1942: 134). "*Thus, the same process that undermines the position of the bourgeoisie by decreasing the importance of the functions of entrepreneurs and capitalists, by breaking up protective strata and institutions, by creating an atmosphere of hostility, also decomposes the motor forces of capitalism from within*" (Schumpeter, 1942: 161-62).

Schumpeter defined socialism as "*an institutional arrangement that vests the management of the productive forces with some public authority*" (Schumpeter, 1942: 113), and claimed that "*the modern corporation [...] socializes the [...] mind*" (Schumpeter, 1942: 156). Furthermore, he argued that the "*bureaucratization of economic life*" (Schumpeter, 1942: 206) allows the transition to a socialist but "*bureaucratic apparatus*" by establishing new modes of managerial responsibility and selection that "*could only be reproduced in a socialist society*" (Schumpeter, 1942: 206-7).

In simple words, a basic argument of *Capitalism, Socialism and Democracy* is that the entrepreneur becomes less and less important, and consequently the process of economic development comes to halt and capitalism gives way to socialism. Schumpeter gave two reasons for the gradual disappearance of the entrepreneur:

> *For, on the one hand, it is much easier now than it has been in the past to do things that lie outside the familiar routine - innovation itself is being reduced to routine. Technological progress is increasingly becoming the business of teams of trained specialists who turn out what is required and make it work unpredictable ways. The romance of earlier commercial venture is rapidly wearing away, because so many more things can be strictly calculated that had of old to be visualized in a flash of genius. On the other hand, personality and will power must count for less in environments which have become accustomed to economic change –best instanced by an incessant stream of new consumer's and producer's goods– and which, instead of resisting, accept it a matter of course* (Schumpeter, 1942: 132).

Besides a less individualistic approach to the concept of entrepreneurial leadership (Schumpeter, 1951: 153), Schumpeter's late writings seem to admit the limits that social reality imposes on the leader's activity, a thing which shows that, for Schumpeter, the choices open to individuals are indeed limited and, it is in this spirit, that his mature writings revealed this awareness that society moves of its own momentum and that leaders are largely constrained by the existing social stratum (Prendergast, 2006: 261).

However, Schumpeter still stressed the importance of individual entrepreneurs, albeit in a different institutional setting: e.g. a production engineer in the R&D department of a large firm could be regarded as an "*entrepreneur*" in Schumpeter's sense of the word. Thus, despite envisaging the demise of the entrepreneurs and their partial replacement by a new mode of economic organization, he never abandoned his initial model of the entrepreneur as the agent of change (te Velde 2001: 24).

V. DISCUSSION AND CONCLUSION

To sum up, it is surprising that extremely limited attention has been paid to Gabriel Tarde as an intellectual source for Joseph Alois Schumpeter, given the presence of central elements of the flamboyant economist's vision in the works of the French sociologist. This paper argued that Schumpeter formulated some of his principal theses in accordance with the conceptual framework of Gabriel Tarde, given that the parallels are undeniable, and the matching of certain concepts impressive.

Analytically, strong parallels were found with respect to forces driving the evolution of the system and the role of technology. Also, we compared Tarde's and Schumpeter's visions emphasizing the role of the 'entrepreneur', and the 'stationary state'. Finally, Schumpeter's 'entrepreneur' was viewed in the context of the Tardean approach of 'individualism' stressing the inevitability of 'socialism'.

Furthermore, Tarde focused, among other things, on the fundamental role of Psychology, looking for the consequences at the societal level, of psychological phenomena observed at the individual level, thus bridging the gap between macro- and micro-level problems. In an attempt that reminds us of the *German Historical School,* Tarde built a system that he saw as applicable to all social sciences, but he was realist enough to see that this was practically impossible. His ideas were germinal and suggestive but needed more cultivation. His dealing with *Economics* was practically an extension of his ideas on societal structure to political economy.[234]

Tarde thought that *Economics* did not furnish solutions to many of the current problems of population growth, employment or migration. The main reason for the inadequacy of economic theory was its basis on Psychology with a strong preference for simple *hedonic calculus.* For instance, in his *Psychologie economique* (1902b, 119-121) Tarde claimed that leisure and the consumption of goods go hand in hand; and not merely that goods are consumed in time of leisure but also that in leisure there often occurs a "*conversation of brains*" (minds) out of which new wants and desires emerge (Hughes, 1961: 557).

Economic theory at the end of the 19th century was discovering subjective utility which Tarde advocated. By some economists he was recognized as one of the early promoters of the concept. However, they hardly ever appreciated the fact that Tarde attempted to explain subjective utility by means of a motivational conflict theory, involving beliefs and desires (Roche-Agussol, 1926).

234 In the 19th c., social scientists felt that the new capitalist society brought problems that had to be dealt with in new ways and that this was the responsibility of the social scientists, i.e. of political economists and sociologists.

What has survived nowadays of Tarde's ideas is probably related to the imitative use of invention. Tarde's influence on modern research on the diffusion of innovation is recognized by many authors in the field (Rogers, 1962; Kinnunen, 1996; Katz, 1999, Warneryd, 2008). Katz (1999) complained that the diffusion of innovation research no longer had any theory that, like the one developed by Tarde, could bridge the theoretical disciplines involved.

Despite Schumpeter's early romantic dream of developing what he called "*exact economics*" (McCraw, 2007: 5), it is true that the basic differences between Schumpeter and Tarde, on the one hand, and other great economists and sociologists, on the other hand, go much deeper than plain and simple mathematical theorems and other technicalities. They saw a different economic and social reality. Both men argued that a modern socio-economic system is always in (dis)equilibrium in the sense that it is forever changing and is rather open than closed in nature and constantly interacting with societal and even physiological factors. Of course, such an approach to reality is mostly ignored, in large part because it is too difficult to formalize, i.e. to fit into the maximization *paradigm* that dominates *Economics* as a science (McCraw, 2007: 500).

Meanwhile, most classical economics and social philosophers considered innovations to be an "*exogenous factor*", which have profound influence on the economy as a whole but are not part of *Economics* as a science. However, Schumpeter and Tarde argued that *innovation and invention, respectively,* is the very essence of the socio-economic system which led to their perception as *the* subject of economics and social evolution.

To conclude, we may say that, based on the available material and given the profound similarities in their respective theses, the fact that Tarde was Schumpeter's senior by forty years and the fact that he died (after having published all of his important works) just three year after Schumpeter had enrolled in the faculty of Law at the University of Vienna, are clear evidence that Tarde influenced the great Austrian theoretician. After all, Schumpeter's reading of Tarde coincided –chronologically– with a period when Schumpeter was formulating his own theoretical system (Haberler, 1950; Smithies, 1951; Faltello & Jovanovic, 1997).

Here, one must face two important issues:

(a) Why were Tarde's ideas not influential in *Economics?* According to Veblen's (1902) intriguing explanation: The author's familiarity with economics is patently scanty and has a perfunctory air. The work is unnecessarily bulky, diffuse, and discursive, while the penchant for system making and symmetry gives it an air of completeness and definitiveness which is not borne out by substantial results. The concept of individual psychology is in much the same case as his economics: it is somewhat behind the times; its outlook over its field is narrow and is subject to essentially mechanical limitations; With respect to economic psychology, reading Tarde leads to the doubtful conclusion that individual human motivation is an adequate explanatory tool for the study of *Economics.*

(b) Why is the Tardean contribution to the formation of Schumpeter's ideas neglected? In our view, it is because the German (non-Marxist) tradition in economics was practically represented by Schumpeter, i.e. Vienna's *enfant terrible,* a fact that made him appear exceptionally unique. Schumpeter played a role in this process, by not emphasizing the significant contribution of other theoreticians or schools of thoughts*, e.g. German Economics* (Reinert, 2002). In other words, Schumpeter's originality in the Anglo-American world was, at least partly, the product of ignorance of the approaches on which he built his essays.

According to Toye (2006: 830): "*There are different kinds of debt that a young economist*

incurs in the course of his education and apprenticeship. Some are personal, accumulated through receiving mentoring, friendship, and academic patronage, and some are intellectual, accumulated through inspiration, intellectual guidance and assimilation of the other's ideas". In this context, there is no doubt that Schumpeter owed intellectual debt to Gabriel Tarde.

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CHAPTER 07

INNOVATIVE TECHNOLOGIES AND SOCIAL TRANSFORMATIONS: DISCUSSING REPETITION, IMITATION, AND SIMILITUDE AFTER G. DE TARDE

Kostas THEOLOGOU

ABSTRACT

French sociologist and criminologist[235] Gabriel de Tarde's ideas, even in the 21st century, from time to time, emerge to contribute to novel readings of the social phenomena. Social scientist and economists might have paid insufficient attention to his ideas, largely devoted to the laws of imitation and invention. The purpose in this paper is to underline the laws of imitation and invention as his most significant contribution to the linking between technology and society and to claim that the core concepts of imitation, repetition, similitude of the masses are interwoven to foster wider social transformations, even promote new social Paradigms. Though de Tarde's theory is related to economic theories, like Joseph Schumpeter's, in this paper it is claimed that de Tarde's laws of imitation and his concepts of invention and social evolution may influence contemporary society and might explain the technological novelties in the field of bioethics and cyber-identities.

Keywords: *Tarde, invention, imitation, repetition, masses, similitude, transformation, cyber-identity*

INTRODUCTION

Gabriel Tarde (1843-1904) was a French lawyer and a sociologist, a philosopher in his time, whose name often emerges in the contemporary discourse; he is somehow considered either as a minor contributor in modern sociology[236, 237] while others think of him very highly, like an enormous star who was inevitably eclipsed by a solar phenomenon named Émile Durkheim (1858-1917); in any case he is not an indifferent case in scholar debates. One could claim that trying to prove him minor could easily produce the opposite effect. Two of his major studies, *Les lois de l'imitation* (1890/1993)[238] as well as *La logique sociale* (1895/1999)[239], contain several ideas, either implicit or explicit found in the core of almost all evolutionist theories of technological change and innovation. *Les Lois de l'imitation* is Tarde's most significant work; his laws of imitation are universals concerning not only social sciences but physical sciences as well (the natural living world and the physical environment). Imitation is thus a fundamental component of the social relationship, which also comprises two others, i.e.: *opposition* and *adaptation*. Society is defined by the law of imitation and not by the economic law of exchange of services, nor division of labour. Society is made up of individuals (monads) who resemble each other because they either imitate (adopt) or counter imitate (oppose to) each other.

235 For a documented reference to Tarde as a criminologist see : André Davidovitch, 1963, « Remarques sur la criminologie de G. Tarde », texts from two lectures on 19 and 26 of April at the seminar of *Histoire de la sociologie empirique en France*, dir. by Paul Lazarsfeld in: Jean-Christophe Marcel- Laurent Muchielli « André davidovitch (1912-1986) et le deuxième âge de la sociologie criminelle française », *L'Année sociologique*, vol. 56, no 1, 2006, pp.83-117. Paris: PUF. Available from: https://www.researchgate.net/publication/240988455_Andre_davidovitch_1912-1986_et_le_deuxieme_age_de_la_sociologie_criminelle_francaise [accessed Jun 10 2025].

236 Muchielli, L. (2000). *Le scandale des tournantes: Dérives médiatiques, contre-enquête sociologique*. La Découverte.

237 Muchielli, L. (2004). *Le Tournant punitif. Essai sur la montée des populismes pénaux en Europe*. La Découverte.

238 Tarde, G. (1993). *Les lois de l'imitation* (Original work published 1890). Kimé.

239 Tarde, G. (1999). *La logique sociale* (Original work published 1895). Les empêcheurs de penser en rond.

The *argument* according to Tarde's concepts in this paper is as follows:

P_1 : *the invention is a* motor *of social evolution (1902b)*
P_2 : *technology facilitates repetition* and *repetition facilitates imitation*
P_3 : *imitation forms similitude to the masses*

———————————————————————————————————————

C ∴ *similitude of masses fosters social transformations*

Therefore, the subchapters of our paper are structured after the 3 premises [P_1, P_2, P_3] of the argument and the conclusion [C] claims the title of the paper itself.

1. THE INVENTION IS A MOTOR OF SOCIAL EVOLUTION AND IMITATION IS A UNIVERSAL …TRUTH

Gabriel de Tarde was also a visionary social philosopher. In a lecture given to the *Society of Sociology* in Paris (June 11, 1902), he made a feisty effort to explain social evolution and he claimed that successful initiatives signify the drivers (*moteur*) of social evolution. The direction of the evolutionary path depends on small insignificant random forces, which are combined with *new forces* creating, thus, a new sort of *periodical reproduction* of the system. In his own words:

« *Dans tous ces exemples, on voit que la direction des grandes forces constantes (c'est-à-dire périodiques dans leur action) appartient à des petites forces accidentelles, nouvelles, qui, en se greffant sur les premières, déterminent une nouvelle sorte de reproduction périodique. Autrement dit, sur des répétitions se greffe une variation, point de départ de répétitions nouvelles* **».**[240, 241]

Evolution and change is made possible through individual *invention* based on *repetition*. Repetition consists of elements such as the climate, the sun, the race, as well as by tradition, custom, ideas, and acquired attitudes. In fact, climate and race are characterized by *periodical* movements (tide-winds and successive hereditary generations of the same race, respectively, etc.) Tarde emphasized the fact that inventions come from a new combination of already existing resources and concepts, i.e. from imitation.

« *Toute machine nouvelle se compose d'outils anciens, de procédés anciens, autrement agencés* **».**[242 243]

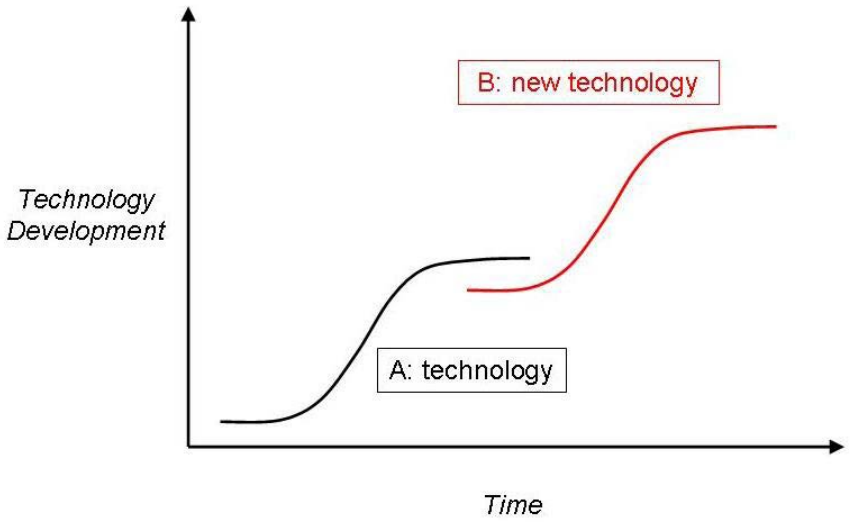
Tarde's purpose in writing *The Laws of Imitation* –one of most important books– was to establish a genuine and rather general science of society (*Sociologie*) and state its laws unbound of contingencies of space and time.[244] Specifically, Tarde argues that social development is determined by "individual renovative initiatives", which could be described as inventions, discoveries or innovations and thus he declares his *contrast* to Durkheim's accounts. These inventions, discoveries and innovations are diffused and spread by imitation and eventually *appropriated* by people in the mode of technology or knowledge transfer and appropriation. Since **«** *Tout n'est socialement qu'inventions et imitations* **»,**[245, 246] consequently the fundamental

240 Tarde, G. (1902a). *Psychologie économique*. Félix Alcan: Paris.
241 In all these instances it is seen that great, constant forces are given a direction by small, accidental, new forces, which, by being grafted on the first ones, set into motion a new kind of a periodic reproduction. Upon repetitions is grafted a variation, origin of new variations.
242 Tarde, G. (1902b). L'invention, moteur de l'évolution sociale. *Revue internationale de sociologie*, *X* (7), 562-574.
243 Every machine consists of old tools, old methods, combined in a *different way.*
244 Tarde, G. (1993). *Les lois de l'imitation* (Original work published 1890). Kimé, p. XXII.
245 Tarde, G. (1993). *Les lois de l'imitation* (Original work published 1890). Kimé, p. 3.
246 Socially, everything is just inventions and imitations.

principles of social progress and development are found within the invention-imitation bi-pole. The identification of a *universal phenomenon of repetition* is a crucial constituent for Tarde's approach. His goal in the book mentioned above is both to shed light on that phenomenon by disclosing its societal manifestations and to investigate its logical laws and influences.[247]

It is, specifically, universal *repetition* that explains similarity, whether social, biological or physical. According to Tarde, *repetition* and *similarity* (resemblance) are universal[248] phenomena that determine the existence of all sciences, social sciences included. Similarities in the social world consist of the consequences of various expressions of imitation, whether determined by religion, education, fashion, obedience, conformism, sympathy, or custom, whether deliberate, instinctive, or imposed etc. « *Toute similitude sociale a l'imitation pour cause* **»**.[249, 250] Thus, the belief of existing patterns or *resemblances* and *repetitions* attracted human attention and scholarship to observations and measurements of phenomena. On the other hand, a relationship must be repeatable, so that one establishes a cause-and-effect link between those events, the cause and the effect. In the social sciences, *the synonym of repetition is imitation*. To better perceive repetition's particularities and forms in social phenomena measures think of floating vote fluctuations, tech and gadgets freaks, social attitudes like divorces, women equality in specific socio-economic circumstances, religion followers, etc. These collective phenomena allow us to proceed to various counting and measurements and thus produce statistical data and virtually establish a concrete social science. *Imitation as a repetition mechanism functioning in the social sphere has certain characteristics*.

Firstly, it is subject to *a law of geometric progression:* inventions exhibit a general tendency toward a regular, unending, geometric progression. In this sense, Tarde would seem to be a precursor of *innovation diffusion theory*, and *in particular of the S curve*, in both economics and other disciplines (Rogers, 1995; Kinnunen, 1996; Marsden, 2000).[251, 252, 253]



Double S-curve indicating diffusion of innovation (new technology)

247 Djellal, F. & Gallouj, F. (2005). Les lois de l'imitation et de l'invention : Gabriel Tarde et l'économie évolutionniste de l'innovation. 11ème Colloque international de l'ACGEPE, pp. 2-3.

248 A "universal" in Philosophy is a claim of truth which holds all over the world, for instance the temperature of boiling water which is 100oC and in such significance we use it in this context.

249 Tarde, G. (1993). *Les lois de l'imitation* (Original work published 1890). Kimé, p. 40.

250 Each instance of social similarity has its origins in imitation.

251 Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). Free Press.

252 Kinnunen, J. (1996). Gabriel Tarde as a founding father of innovation diffusion research. *Acta Sociologica*, *39*(4), 431-442. https://doi.org/10.1177/000169939603900403

253 Marsden, P. V. (2000). Social influence and social network analysis. In K. S. Cook & J. Hagan (Eds.), *Annual Review of Sociology*, *26*, 121–136. https://doi.org/10.1146/annurev.soc.26.1.121.

Tarde discussed three extra-logical factors affecting the *diffusion of innovations*.

i. imitation proceeds from the internal to the external and affect precedes *cognition*, which precedes *behaviour*. Ideas may be transmitted before the words used to express them, doctrines before rites, ends before means.

ii. the *prestige hierarchy structures the paths of imitation*: innovations introduced by social superiors are more likely to be imitated than those introduced by social inferiors.

iii. in the same social system, receptivity to different kinds of innovations fluctuates: at times, what is old, traditional, and proved is the most likely to be accepted; at other times, it is the exotic and avant-garde that is most in favor.

These shifts in perspective apply to all institutional areas of a society —*language, religion, government, the economy, morality, and the arts*. Tarde's third extralogical principle parallels his principle cited above concerning the level of rational development: both predict that *cultural innovations are most likely to be adopted when they resemble other institutionalized elements within the culture*.[254]

Secondly, this repetition is never automatic or mechanical, indicating that an innovation is modified and *socially reconstructed* in the course of the imitation process. To put it simply, imitation- and generally *repetition*- does not foster convergence and monotony in the world, but out of necessity imitation produces differentiation and variation. *Les répétitions sont donc pour les variations*.[255, 256] The "objects" of imitation like the words of a particular language or the myths of a religion, are very concretely being modified in the process of imitation, as a new fruit of changes of context, being passed from one culture to another, from one tribe or race or nation to another, from one firm to another, etc. This process resonates the *technology transfer* and its *appropriation*, aptly discussed by historians of technology and civilization (e.g. Pacey, 1974, 1983, 1990).[257]

Thirdly, imitation can be vague or concrete, conscious or unconscious, deliberate or spontaneous.[258] Finally, separate imitation processes may come into contact with each other and either strengthen or compete with each other.

Tarde's consideration on the universal nature of repetition led him to elaborate a new definition of society. At first, he rejected the economist's definition of society as an *interaction* by distinct and separate groups of individuals performing services for each other, based on the exchange of services or utility and on the division of labour. Tarde introduced a definition based on the principle of *resemblance* and *imitation*, by which a society is constituted by individuals resembling each other either because they imitate each other or, because they counter-imitate each other. *L'être social, en tant que social, est imitateur par essence*.[259]

Social science, any discipline or branch of science that deals with human behaviour in its social and cultural aspects. The social sciences include cultural (or social) anthropology, sociology, social psychology, political science, and economics. Also frequently included are social and economic geography and those areas of education that deal with the social

254 "Tarde, Gabriel", International Encyclopedia of the Social Sciences, available at: http://www.encyclopedia.com/social- *Encyclopedia.com,* (accessed on September 26, 2017).

255 Tarde, G. (1993). *Les lois de l'imitation* (Original work published 1890). Kimé, p. 7.

256 Thus, repetitions are favourable to variations.

257 Pacey, A. (1974). *The Maze of Ingenuity: Ideas and Idealism in the Development of Technology, London, Allen Lane*, (1975, 2nd ed.,), New York, NY: Holmes & Meier, Cambridge, MA: MIT Press.
Pacey, A. (1983). *The culture of technology*. MIT Press.
Pacey, A. (1990). *Technology in world civilization: A thousand-year history*. MIT Press.

258 Tarde, G. (1993). *Les lois de l'imitation* (Original work published 1890). Kimé, p. 192.

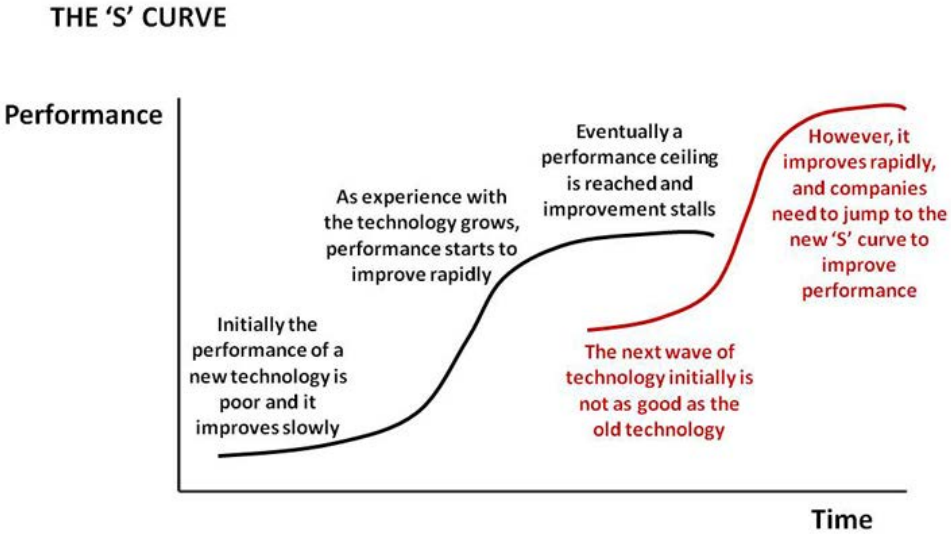
259 Social beings, by virtue of their own *sociability*, are imitators by nature.

contexts of learning and the relation of the school to the social order. History is regarded by many as a social science, and certain areas of historical study are almost indistinguishable from work done in the social sciences. Most historians, however, consider history as one of the humanities.

2. TECHNOLOGY FACILITATES REPETITION AND REPETITION ENHANCES IMITATION

The logical causes of imitation are those that lead an individual to choose (to imitate) an innovation, on the grounds that he considers it to be '*the most useful* or most well-founded', that is the one that accords most closely with his own goals or principles (which, it should be noted, are themselves established and internalized through imitation). The extra-logical causes are analogous to a subjective assessment of the innovation on the basis of its individual, temporal or spatial origins (reputation, etc.). There are two mechanisms that can be used to describe them. The first is that imitation operates from inside individuals towards the outside. Paradoxically, therefore, internal models (i.e. personal goals or ideas) are imitated before external models (i.e. means or expressions). The second is that imitation operates on the top- down principle (from the superior to the inferior). In other words, the innovations associated with entities (individuals, groups, places, even dates, etc.) assumed to be superior are more likely to be imitated than those associated with inferior entities.

The 'S' Curve model explains how innovations start slow, accelerate, then hit a ceiling requiring companies to jump to a new technology



Source: strategicthinker.wordpress.com/s-curve/ (accessed 21.9.2017)

Of course, this distinction between logical and extra-logical factors is ideal-typical, since the logical causes of imitation seldom manifest themselves in a pure form. In other words, extralogical factors, such as the prestige or poor reputation of the purveyor of the innovation, his geographical or historical origin, also play a role. Thus, it is quite often the case that the worst options for imitation from a logical point of view are, for extra-logical reasons, given preference over better choices.

Another important question concerns the content or substance of the basic social acts of invention and imitation. Tarde's answer is that they can ultimately be reduced, on the one hand, to beliefs and, on the other, to desires (i.e. needs). Thus belief and desire are the two basic social and psychological factors that form the substance of invention and imitation. Societies are organized around converging or competing beliefs. Similarly, they function on the basis of converging or competing desires (i.e. needs). In other words, social progress, whatever it may be (like individual progress, incidentally), is driven by two mechanisms: 1) the

substitution of one discovery or invention (that is of a need or a belief) by another, a process that Tarde denotes by the term logical combat or duel ; 2) accumulation, that is the addition of one invention or discovery (that is of a need or belief) to another. This process of mutual reinforcement is described by Tarde as a logical union or pairing (or even combination).

The desire for combat or union and the outcome of that combat or union depend on the forces of imitation. The logical duel (yes/no, choice between two religions, two theories or two commodities) is initially an individual matter. It is when it has ceased to be individual, that is when an individual has made a choice (that is, when he imitates), that it becomes social. As long as an individual hesitates, he is not imitating. However, 'it is only in so far as he imitates that he is part of society'. The logical duel can have three different outcomes: 1) the natural and irresistible propagation of one of the alternatives; 2) violent substitution; 3) the emergence of a third alternative (innovation) to displace the others. As far as the logical pairing is concerned, Tarde proposes a distinction between those inventions or discoveries that can accumulate indefinitely (e.g., the words of a language, the myths of a primitive religion or the listing of scientific facts) and those which, beyond a certain threshold, have to be replaced (grammar, the dogmas of a religion, scientific theories, etc.). The multiplication of "logical pairings" contributes to the development of coherent corpora or systems.

3. IMITATION FORMS A SIMILITUDE TO THE MASSES

Gabriel Tarde's insight into imitation as a social mechanism reveals a foundational process through which collective life is structured. While imitation begins as an individual psychological act, its systematic repetition across individuals produces patterns of resemblance –what Tarde called *similitude*. This similitude, in turn, is not merely descriptive but constitutive of the masses. In other words, social collectivity, or what we term "the masses", is shaped by the aggregation of shared beliefs, habits, gestures, and technologies disseminated through imitation.

For Tarde, every act of imitation carries the potential to induce a wider repetition, producing social cohesion. He claimed, « *Toute similitude sociale a l'imitation pour cause* »,[260] emphasizing that social likeness arises not from structural preconditions (as Durkheim would argue), but from the contagious transmission of innovations, behaviors, and desires. Thus, societies are not primarily integrated by institutions, but by the shared rhythms of imitation that structure common behavior.

In this light, the masses are not an abstraction, but a statistical and phenomenological outcome of overlapping imitative acts. As innovations spread in geometrical progressions –sometimes visualized through diffusion curves or S-curves–[261] the resulting social fabric is marked by homogeneity. These convergences are observable in fashion, political behavior, consumer habits, and even technological appropriation. The spread of the smartphone, the replication of digital gestures (e.g., scrolling, swiping), or the global synchronization of social media trends, all bear witness to the mass-producing effect of imitation. Yet this imitation is never a mere replication. Tarde's concept is dynamic: the act of imitating involves transformation. An invention changes as it is adopted, localized, or appropriated within differing social contexts.[262] Therefore, the similitude of the masses is not an erasure of difference, but a dynamic formation of collective identity through the interplay of similarity and variation. As such, imitation produces a *living similitude* –one that evolves, reconfigures, and responds to new social and technological stimuli. This dynamic can be viewed in contrast with mechanical uniformity. Tarde warned against interpretings imilitude as stagnation. On the contrary, *« les*

260 Tarde, G. (1993). *Les lois de l'imitation* (Original work published 1890). Kimé, p. 40.
261 Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). Free Press.
262 Tarde, G. (1993). *Les lois de l'imitation* (Original work published 1890). Kimé, p. 7.

répétitions sont donc pour les variations »[263] –repetition gives rise to novelty. The mass is thus not a dead weight but a fertile ground for further differentiation. This resonates with Tarde's belief that every act of imitation opens the possibility for inventive deviation.

In mass societies –amplified by the media and now by digital platforms– imitation becomes infrastructural. Newspapers, as Tarde noted, shaped public opinion and formed "publics".[264] Today, digital platforms operate in a similar fashion, functioning as echo chambers and vectors of accelerated imitation. Virality, meme culture, and algorithmic feeds reproduce and amplify similitude across populations. What is new is not the phenomenon, but its scale and speed. The simultaneity of imitation across the globe transforms similitude from a local to a planetary phenomenon. Moreover, Tarde's theory presciently accounts for the tension between individual agency and mass conformity. Since imitation proceeds "from the internal to the external", and since affect often precedes cognition,[265, 266] people may adopt behaviors that resonate emotionally before they fully rationalize them. The masses, therefore, are not passive receptacles, but emotionally and cognitively engaged in the processes that produce their own likeness. This framework finds echoes in contemporary theories of social contagion and network effects, where affective resonance plays a key role in spreading trends and ideologies.

Finally, it must be emphasized that similitude of the masses is both an epistemic condition for social science and a normative challenge. On one hand, the statistical regularity that imitation produces allows for measurement, prediction, and generalization. As Tarde noted, only when social acts are repeated do they become intelligible to science. On the other hand, this very regularity risks producing monocultures or systems of domination via conformity. Thus, similitude is ambivalent: it stabilizes societies but may also limit the scope for critical variation.

In sum, imitation forms similitude by diffusing shared forms of life across populations. This similitude is not static uniformity but a dynamic convergence that defines the masses as social subjects. Through this lens, Tarde's theory provides a conceptual toolkit to understand how society is woven not only by institutions and structures, but by mimetic rhythms of life –repeated, shared, and transformed across the social body.

CONCLUSION: SIMILITUDE OF MASSES FOSTERS SOCIAL TRANSFORMATIONS

At the heart of Gabriel Tarde's social theory lies a simple but powerful thesis**:** « *Toute similitude sociale a l'imitation pour cause »*.[267] This assertion –that all social similarity arises from imitation– provides a critical foundation for understanding how social transformations occur. In Tarde's view, **similitude is not merely the outcome of passive replication, but the very medium through which societal change becomes possible**. Through imitation, repetition, and innovation, the masses acquire a shared repertoire of behaviors, desires, and beliefs that make large-scale transformation both intelligible and actionable. The similitude of the masses –defined here as the convergence of social behaviors through mimetic mechanisms– does not imply homogeneity in a reductive sense. On the contrary, Tarde emphasized that repetition produces variation : *« Les répétitions sont donc pour les variations »*.[268] Social resemblance, therefore, is not static; it is a **dynamic field of continual differentiation**, in which shared forms are adapted, reframed, and recontextualized across individuals and communities. It is precisely this dialectic between similarity and transformation that renders the masses not inert

263 Ibid., p. 7.
264 Tarde, G. (1901). *L'opinion et la foule*. Félix Alcan, p. 83.
265 Tarde, G. (1993). *Les lois de l'imitation* (Original work published 1890). Kimé.
266 Djellal, F. & Gallouj, F. (2005). Les lois de l'imitation et de l'invention : Gabriel Tarde et l'économie évolutionniste de l'innovation. 11ème Colloque international de l'ACGEPE.
267 Tarde, G. (1993). *Les lois de l'imitation* (Original work published 1890). Kimé, p. 40.
268 Ibid., p. 7.

or mechanical, but **generative agents of historical change**. Tarde's sociology thus displaces structural-functional models –like those of Durkheim– that attribute social transformation to macro-institutional shifts. Instead, he locates social evolution in the **micro-processes of imitation and invention**, which operate at the level of intersubjective interaction. When masses imitate a particular gesture, idea, or technology, they co-produce a *similitude* that renders society governable, observable, and malleable. This mimetic alignment allows for the **emergence of new institutions, practices, and paradigms**, not because imitation erases difference, but because it synchronizes collective attention and affect around new forms.

Technology plays a pivotal role in this process. It does not merely transmit imitation but intensifies and automates it. Digital media, algorithmic personalization, and global communication platforms have accelerated the *temporal and spatial reach of imitation**,*** enabling the formation of mass similitude at a planetary scale.[269] From viral trends to global consumer habits, the synchronized rhythms of digital imitation generate new collective formations that exceed traditional sociological categories. These formations, grounded in *similitude*, become the *infrastructure of social change* –whether in the form of political movements, economic disruptions, or ethical realignments.[270] Importantly, similitude provides not only a descriptive category but also an **epistemological tool** for social science. Tarde argued that only when behaviors are repeated –only when they take on the form of statistical regularity– do they become amenable to sociological analysis.[271] In this way, the similitude of the masses allows researchers to identify patterns, model change, and theorize innovation. At the same time, this regularity is the *precondition for transformation*: it is only when behaviors converge that they may be contested, reformulated, or reoriented toward new ends.

Thus, *similitude is a paradoxical force*: it stabilizes society through shared norms and routines, yet simultaneously incubates novelty through cumulative variation. The repetition of an idea across a population does not guarantee its uniform adoption but ensures its social inscription. In this context, similitude is both the mark of existing order and the mechanism of its transcendence. In conclusion, Tarde's mimetic theory reveals that the *similitude of the masses is not a symptom of conformity, but a condition of possibility for social transformation**.*** Through the diffusion of innovation, the propagation of affect, and the recursive structure of imitation, similitude becomes the collective substrate upon which societies evolve. By recovering Tarde's insight into the creative and generative power of mimetic convergence, we gain a vital framework for interpreting contemporary transformations in an age where imitation is digital, instantaneous, and global.

Gabriel Tarde's theoretical contributions, long overshadowed by the structural-functional dominance of Émile Durkheim, are increasingly reclaiming scholarly attention for their prescient insights into the mechanisms of social change. In this paper I tried to reconstruct and mobilize Tarde's key concepts –invention, repetition, and imitation– as tools for analyzing the link between technological innovation and social transformation. Drawing upon Tarde's *Les lois de l'imitation* (1890/1993) and his later writings on invention and social evolution,[272] the argument presented here holds that the similitude of the masses, shaped and reproduced through imitative processes, constitutes both the material and symbolic foundation for large-scale social transformations.

My final remark is to underline that *invention*, for Tarde, *represents the primary engine –or moteur– of societal evolution*. It is not merely a technical or creative act but an epistemic rupture, a novel recombination of existing elements within a cultural or technological repertoire.[273]

269 Djellal, F. & Gallouj, F. (2005). Les lois de l'imitation et de l'invention : Gabriel Tarde et l'économie évolutionniste de l'innovation. 11ème Colloque international de l'ACGEPE, pp. 2-3.

270 Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). Free Press.

271 Tarde, G. (1993). *Les lois de l'imitation* (Original work published 1890). Kimé, p. 115.

272 Tarde, G. (1902b). L'invention, moteur de l'évolution sociale*. Revue internationale de sociologie*, *X* (7), 562-574.

273 Ibid., p. 563.

However, inventions do not alter the social world autonomously; their diffusion, and thus their transformative power, depends on the law of imitation. Imitation is for Tarde the principal conduit through which inventions become embedded in the collective life of societies. This process is cumulative and generative: each act of imitation may lead to further variations, creating feedback loops of innovation.[274] In this way, repetition does not negate novelty –it is the very condition of its emergence and proliferation.

274 Tarde, G. (1993). *Les lois de l'imitation* (Original work published 1890). Kimé, p. 7.

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CHAPTER 08

TARDE ON THE ROAD: MONADOLOGY AND SOCIOLOGY AND THE CONTEMPORARY ANALYSES OF MOBILITY

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ABSTRACT

The chapter discusses the commonalities of central arguments in Gabriel Tarde's work *Monadology and Sociology* with contemporary sociological analyses of Mobility. These theories mainly include the academic literature that has developed from the late 1980s onwards by sociologists such as John Urry and Scott Lash, as well as geographers such as Tim Cresswell and Nigel Thrift. Their analyses propose a view that uses Mobility flows as a central tool for the understanding of how geographical and social space is reconstructed in the contemporary world. They argue that these flows consist of mobility networks of people, capital, products, or information. Given that such approaches have developed during the last decades of the 20th century, it is interesting that they share similar views with a work of the late 19th century.

Keywords: Monadology and Sociology, mobility paradigm, social space, networks

INTRODUCTION

The chapter discusses the commonalities of central arguments in Gabriel Tarde's work *Monadology and Sociology* with contemporary sociological analyses of Mobility. These theories mainly include the academic literature that has developed from the late 1980s onwards by sociologists such as John Urry and Scott Lash, as well as geographers such as Tim Cresswell and Nigel Thrift.[275] Their analyses propose a view that uses Mobility flows as a central tool for the understanding of how geographical and social space is reconstructed in the contemporary world. They argue that these flows consist of mobility networks of people, capital, products, or information. Given that such approaches have developed during the last decades of the 20th century, it is interesting that they share similar views with a work of the late 19th century.

Tarde's influence on the subsequent sociologists had been considered marginal for many years compared to Durkheim, who prevailed as the "founder" of modern Sociology, especially as far as Structuralism is concerned.[276] Nevertheless, during the last decades, Tarde is considered to have many commonalities with recent theories and especially with poststructuralism views. Such similarities prove the insightful thinking of Tarde›s work, in which latter theorists find a language familiar with their approaches. Therefore, Tarde has been characterized as the "father" of specific postmodernism analyses, such as Deleuze›s and Foucault's thinking. At the same time, Bruno Latour explicitly recognizes Tarde as the "grandfather" of his Actor Network Theory.[277]

275 See Tarde, G. (2012), *Monadology and Sociology*. See also Cresswell, T. (1996), *In Place/Out of Place*. Cresswell T. (2006), *On the Move. Mobility in the Modern Western World*. Cresswell T. et al., 'Introduction: Geographies of Mobilities: Practices, Spaces, Subjects in Cresswell T. et al. (2011), *Geographies of Mobilities: Practices, Spaces, Subjects*, 1-18. Lash S. et al. (1994), *Economies of Signs and Space*. Thrift N., (2004) "Movement-space. The changing domain of thinking resulting from the development of new kinds of spatial awareness", in *Economy and Society*, 33, 582-604. Thrift N. "Driving in the City" in Featherstone M. et al. (2005), *Automobities*, 41-60. Urry J. (1990), *The Tourist Gaze*. Urry J. (1995), *Consuming Places*. Urry, J. (2000) *Sociology Beyond Societies. Mobilities for the Twenty-first Century*. Urry, J. (2007), *Mobilities*.

276 Tonkonoff S. (2017), *From Tarde to Deleuze and Foucault*, 1-20. Candea M., "Revisiting Tarde's House" in Candea M. (2010), *The Social after Gabriel Tarde. Debates and Assessments*, 1-23.

277 Tonkonoff, *From Tarde to Deleuze*, 67-110. Latour B., "Gabriel Tarde and the End of the Social," in Joyce P. (2002) *The Social in Question. New Bearings in History and the Social Sciences*, 117-132.

Still, this essay does not attempt to construct a linear genealogy on intellectual history, arguing that contemporary thinkers have been directly influenced by Tarde, consciously or unconsciously. The immediate attribution of the Mobility paradigm to a 19th-century scholar and its description as the outcome of a former ancestral theory would be a precarious reductionism. Apart from the fact that such an approach would introduce an a priori teleological point of view, it would also be –by all means– in opposition with both Tarde's theory and the Mobility paradigm Contrary to this, the central argument of this essay is that the common ideas between Monadology and Sociology, and those of contemporary sociologists and geographers, can enhance our understanding of the concept of circulation per se, which is crucial in both cases examined. The concept of circulation or Mobility encompasses the circulation of ideas, which –at the same time– do not form a distinct realm from other versions of interaction, either material or societal, as we will further discuss below.

The first part of the chapter briefly depicts the central arguments of the mobility paradigm. The second part underlines some of Tarde's most important ideas in his work *Monadology and Sociology*, which are relevant to the Mobility paradigm. Finally, the last part draws conclusions contributing to the general discussion about the commonalities between Tarde's sociology and contemporary sociological analysis.

THE "MOBILIZATION" OF SOCIOLOGICAL ANALYSES

As already mentioned, Bruno Latour is the most renowned contemporary scholar who illustrates how the work of Tarde is relevant to his Actor Network Theory, as well as to poststructuralism in general.[278] Tarde's ideas challenge many central concepts of Structuralism, which prevailed in the 20th-century social theories for decades. The Mobility paradigm discussed in this chapter can be viewed as a "branch" of poststructuralism. Within its context, many sociological notions are being renegotiated or even questioned. We will further describe the Mobility paradigm to show the similarity of its argumentation with the approach introduced in *Monadology and Sociology*. We will briefly present the ideas of some of the most representative scholars of the relevant literature: John Urry, Scott Lash, Tim Cresswell, and Nigel Thrift.[279]

The majority of the Mobility studies use as a starting point the empirical observation that the rapid development of transportation and communication technology in the contemporary world, especially in the postwar era, not only has it intensified the flows of people, capital, goods, and information, but it has also reconstructed space and time, both as physical and notional categories.[280] Such a reconstruction causes critical changes on the foundation of the mainstream sociological theory, since space and time, as the main framework for social interaction, have also been fundamental for the construction of other intellectual categories, such as class, gender, ethnicity, or cultural group. Moreover, some of the most dominant tools of sociological theories, like, for example, the social structures, have been primarily based on the use of the abovementioned categories. Thus, according to the Mobility paradigm, the most commonly used sociological categories and tools are anachronistic, or even inadequate, for understanding contemporary societies. As argued, mobility networks are the most determining factor in shaping the contemporary globalized environment and social and political organizations. These networks influence various societal and cultural interactions, such as education, consumer standards, or sociocultural resistance. Regarding this, the Mobility paradigm proposes that contemporary societies should be examined not as static constructions

278 Latour, "Gabriel Tarde," 117-132.

279 Cresswell, *In place*. Cresswell, *On the Move.* Cresswell, "Introduction", 1-18. Lash, *Economies*. Thrift, "Movement-space", 582-604. Thrift. "Driving in the City", 41-60. Urry, *The Tourist Gaze*. Urry. *Consuming Places*. Urry, *Sociology*. Urry, *Mobilities*.

280 Urry, *Sociology*, 1-20. Cresswell, *On the Move*, 1-24.

of hierarchical structures but as a dynamic field of flow of people, information, and objects.[281] Thus, mobility networks are a central methodological tool for understanding postmodernity.

At this point, moving to a more thorough explanation of how the Mobility paradigm redefines notional categories of many modern sociological analyses is helpful. As far as space is concerned, this has been a fundamental geographical parameter used to understand historical and societal phenomena. Modern space has been reconstructed through infrastructure that accommodates the physical mobilities of people, objects, and capital.[282] This process contributes to its redefinition as political, social, and economic territory. The organization of space perceived as a measurable physical quantity has been critical for the foundation of modern hegemonies and the definition of national states. As Foucault notes, the political signification of space takes place through observation and discipline mechanisms, materialized through infrastructure, statistical measurements, and legislation.[283] Within these territories, the movement of people is controlled and regulated through borders or passports. Hence, Mobility in modern national space has a political significance.

The above-described process has further developed in postmodernity due to the virtual and digital mobilities of capital and information or through virtual and imaginary travels that reconstruct national territories.[284] Consequently; postmodern space organization no longer takes place according to exclusively objective criteria, such as physical distance or political power. It also occurs according to individual mobilities, which redefine certain places as tourist sites, urban, trade or financial centers, or refugee destinations.[285] This process is exemplary in the tourism industry, in particular. Films, museums, photo and art exhibitions, tourist leaflets, and most importantly, the internet promote landscapes or sites as national landmarks. This process contributes to the iconoclastic perception of space and its definition as a symbolic consumption product. In any case, space organization relates to the subjective movement experience within specific places. John Urry has introduced the terms *sensescapes* and *sensuous geographies* to describe this process.[286]

Apart from space, the Mobility paradigm renegotiates the concept of linear time as a countable physical quantity. Different mobility networks create multiple time and space synapses. Hence, Mobility scholars argue that we should view time in its sociological sense, according to Einstein's description, as an internal characteristic of the systems we examine and, simultaneously, as a quantity that interacts with space. From that aspect, one could discriminate different simultaneous levels of time flows in different or even within the same geographical context.[287] An eloquent example concerns the different speeds of societal and economic developments in rural and urban areas. These developments relate to the flows of people, goods, and information through which different regions are networked. The analytical tool of multiple scales questions using a homogeneous timeline for different phenomena and the hierarchical structure among different scales. Thus, macroscale phenomena, such as wars, are not necessarily more complex than microscale ones, neither are they conceived as broader systems consisting of smaller ones. At the same time, the linear causality among them is revisited. Within the globalized environment, we should examine the rapid changes as a dynamic field of flows that create a fluid relation among the consisting systems' elements.[288] A third category renegotiated within the Mobility paradigm is taxonomies, such as class or ethnicity. Such taxonomies are usually the foundation of modern identities. Mobility theorists

281 Urry, *Mobilities*, 15-20. Cresswell, *On the Move*, 1-24.

282 Cresswell, *On the Move.* Cresswell, "Introduction", 1-18. Thrift, "Movement-space.", 582-604. Urry, *Consuming Places*, 1-30. Urry, *Mobilities*, 38, Urry, *Sociology*, 131-160.

283 Foucault M. (1995), *Discipline and Punish. The Birth of the Prison*, 143-148.

284 Deleuze G. (1992), "Postscripts on the Society of Control", *The MIT Press* 59, 3-7. S. Lash, *Economies*, 1-30.

285 Urry, *Mobilities*, 261.

286 Urry, *Mobilities*, 17-43. Urry, *The Tourist Gaze,* 3-7. Urry, *Sociology*, 131-160

287 Urry, *Sociology Beyond*, 105-130. Urry, *Consuming Places*, 1-30.

288 Urry, *Mobilities,* 21-31. See also Gladwell M., *Tipping Points. How Little Things Can Make a Big Difference,* 2000.

argue that using such tools introduces a static perception of societies, presupposing they are structurally comprised exclusively by socioeconomic terms. At the same time, it focuses on the direct interaction of humans without considering the role of different modes of their networking, like, for example, virtual communications.[289] What is more, space is considered of significant importance for the construction of identities. For example, ethnicities are co-constructed with national territories, whereas socioeconomic classes are seen as the outcome of organized national capitalism. However, as argued above, modern space categories tend to be constantly scattered and reorganized through the mobility networks developed within them. At the same time, national economies are reconstructed through mobility networks and detached from localities. Hence, postmodern identities are constructed regarding globalized and peripheral mobility orbits that transcend national borders. According to Bauman, Mobility is crucial for social stratification reconstruction.[290] New identities are formed within postmodern collectivities, such as ecology and human rights activist networks, the 99% movement, the LGBTQ movement, or even terrorist networks. These collectivities work alternatively or competitively to national and traditional forms of belonging. At the same time, the existing identities are also redefined.

One of the most representative examples that illustrate the interaction of participation in networks with the social actors' identities and their position in the social spectrum concerns citizenship. The ability of citizens to be mobile through their access to transportation and communication infrastructure is considered one of the fundamental rights that postwar governments are supposed to provide them with. This right is critical for the accessibility to goods and services, such as health or education; thus, it serves as a means of social exclusions' abolishment.[291] Therefore, international organizations, such as the World Bank, the International Monetary Fund, the European Commission or the United Nations, consider Mobility as a determining factor of the income per capita and the future development of states. Moreover, postmodern identities in the contemporary world are co-constructed with the mobility status of people within specific spaces (such as citizens, immigrants, refugees, or tourists). Another example concerns the economically privileged 1% of this planet. Their power originates from their ability to predict, lead, or provoke rapid capital flows.

What we can conclude from the above argumentation is that mobility networks are crucial for the construction of social, geopolitical, and economic relations and interactions and, consequently, for the construction of postmodern hierarchies related to the geographical and social distribution of welfare through the Mobility of economic and symbolic capital.[292]

TARDE RELOADED

After briefly describing the Mobility paradigm, we can examine some central theses of *Monadology and Sociology*. The similarities between the two theoretical approaches show how a work of the 19th century is up to date with contemporary analyses.

A first key idea that can be noted in Tarde's work, as Latour has also pointed out, is that he challenges one quite common belief of his contemporary mainstream sociology by showing that the division between nature and human society is an obstacle for the understanding of societal phenomena. There is no grounded evidence for the dichotomy between the natural, which is usually related to the matter, and the social, which is related to spirit or intellect.[293] In Tarde's words, this dichotomy: "*creates an abyss which separates movement and con-*

289 Urry, *Mobilities*, 15-20. Urry, Sociology, 161-187.
290 Bauman Z. (1998), *Globalization. The Human Consequences*, 2.
291 Urry, *Sociology*, 161-187.
292 Urry, *Mobilities*, 1-9. Kauffmann V. (2004) et al. "Motility: Mobility as Capital", *International Journal of Urban and Regional Research*, 28, 745-756. Thrift, 'Movement-space', 582-604.
293 Latour, "Gabriel Tarde", 117-132.

sciousness, object and subject, the mechanical and the logical".[294] According to his approach, there is a theoretical gap between matter and spirit. We should not forget at this point Tarde's argument, according to which even a cell or a solar system is a form of society.[295] That is quite challenging if we consider the fact that most sociological analyses presuppose that human societies are distinct, if not superior realms from the natural and the material world. Consequently, such a dichotomy is a conception of the modern era; that is why Latour calls it the "modern constitution".[296]

The second important point of Tarde's work is that the actors are monads, and, at the same time, complex societies are not distinct subjects from the laws that rule their actions and outcomes. That means that the actors themselves are similar in quality to their environment. Such a claim challenges the very foundations of modern Sociology since the concept of social actors as agents of societal phenomena is central in most analyses. Even Marxist materialism, which examines actors as parts of production relations, introduces a dualism between matter and spirit, since it argues that the former determines the latter.[297] Tarde, on the other hand, sustains an approach quite different from most Structuralism theories, drawing examples from positive sciences, and particularly the cellular theory. In parallel with Chemistry, where –according to many of his contemporary scientists– no principles rule the matter other than the matter characteristics themselves, Tarde argues that societal changes do not occur driven by external forces. According to Tarde's words: "*[T]his convenient point of view, which consists in mistakenly seeing the creation of a new being in a phenomenon generated by the encounter of real beings (albeit a genuinely new and unforeseen phenomenon), can be upheld only provisionally*".[298]

In opposition to this mistaken belief –as he characterizes it– Tarde sustains the idea that the causality of the phenomena is internal. Hence, movement is considered an innate element of the moving subjects. This idea explains societal changes, including the circulation of ideas. In his own words: "*Let us imagine that all the citizens of a State, without exception, are fully in favor of a program of political reorganization springing from the brain of one among their number, and more particularly from one point within this brain; the complete overhaul of the State according to this plan, rather than being progressive and fragmentary, will then be abrupt and total, however radical the project. The slowness of social modifications is explained only by the fact that the other plans for reform or ideals of the State all other members of a nation knowingly or unknowingly entertain run contrary to this plan.*"[299] Hence, movement and continuous displacement do not result from external causes; they are different phases of a living organism.

Such a view innovatively exegeses societal changes for several reasons. First, as noted above, it abolishes the binary perception of human and non-human factors. Moreover, it treats the movement as an internal and organic part of societies (even if we should avoid this term since Tarde's work questions societies as entities). Finally, it eliminates the distinction between macro-level and micro-level analytical objects.

Suppose we accept that the actors are not distinct subjects from the laws that rule their behavior. In that case, the individuals are not more superficial than the societal structures or phenomena resulting from their actions. According to his words:

> *If we look at the social world, the only one known to us from the inside, we see agents, men, much more differentiated and more sharply characterized as individ-*

294 Tarde, *Monadology*, 5.
295 Tarde, *Monadology*, 28.
296 Latour (1993), *We Have Never Been Modern*, 13-15.
297 Latour, "Gabriel Tarde", 117-132.
298 Tarde, *Monadology*, 8.
299 Tarde, *Monadology*, 12

uals, and richer in continual variations than are the mechanisms of government or the systems of laws or beliefs, or even dictionaries or grammars, and their competition maintains this differentiation. A historical fact is simpler and clearer than the states of mind of any of its actors. Moreover, as the population of social groups grows and the brains of their members are enriched with new ideas and new sentiments, the functioning of their administrations, their codes of law and conduct, their catechisms, and the very structure of their languages become simpler and more regular, rather as scientific theories become simpler as they are filled with more numerous and diverse facts.[300]

Consequently, according to Tarde, there is no separate law in social theory that could differ from the monads themselves or a law that connects social macro-structures with their components. Hence, the perception of a hierarchical structuring of different scales of phenomena is false. Once more, according to Tarde's words: "*The prejudice according to which the result is always more complex than its conditions, and the action more differentiated than its agents, whence it follows that universal evolution is necessarily a movement from the homogenous to the heterogeneous, in a progressive and constant process of differentiation*".[301]

That is why Tarde challenges society as we know it. He objects to the architecture of society upon which modern Sociology has been grounded. Instead of following deductive reasoning to examine the micro as a part of the macro, Tarde follows the opposite: inductive reasoning. He claims that the monad is the key to understanding the macroscale system that consists of them. Monads, of course, do create more extensive systems. However, the way that the monads do that does not have a teleological sense. That is why the notion of social structures is invalid: structures follow an orderly reason, a kind of goal, whereas monad formations do not. So, instead of describing monads' systems as structures, we should better conceive them as networks. Now, we may understand Latour's argument that Tarde is the first to invent the idea of networks as a tool that substitutes structures.[302]

There are numerous ideas in Tarde's work that can be described as groundbreaking compared to modern Sociology, even though these have been articulated quite early. However, we aim to underline some of Tarde's key ideas that lead to common conclusions about the mobility paradigm. First, Tarde introduces a post-human view of society that puts an end to the notion of society per se. From a point of view, such an approach is postmodernist. Tarde challenges the belief from the Enlightenment tradition, the human-centric premise. The idea that runs behind most modern theories, even the materialist ones, is that we humans are the centers of the world either as subjects of ideas or as subjects of causal laws. However, Tarde challenges even the very identity of the subjects when he argues that there is no dichotomy between the actors and the laws of their action, or there is no difference between human society and a society of planets. According to his words, a bio-organism can be a more perplexing society than China.[303] The elimination of such a dichotomy is also fundamental in Mobility theories. Actors are involved in mobility networks, which consist of humans, physical factors like the natural landscape, technical infrastructure like highways or optical fiber systems, materials like commodities, technologies like cars or computers, and, of course, information.[304] This scheme looks like as if one tries to explain how Tarde›s monads start being mobilized and what would the interaction mechanism be among them. In any case, human and non-human factors interact equally, consisting of hybrid systems.

So, there is an interesting similarity between Tarde and Mobility Studies. The former describes

300 Tarde, *Monadology*, 37.
301 Tarde, *Monadology*, 37.
302 Latour, "Gabriel Tarde", 117-132.
303 Tarde, *Monadology*, 32. Latour, "Gabriel Tarde", 117-132.
304 See, for example, Cresswell, 'Introduction', 1-18. Urry, *Mobilities*, 15-20.

the diffusion of ideas as a mechanism of brain state propagation (hence both material and intellectual condition) that becomes autonomous by the actors as subjects. The latter treats the information flows as a material and intellectual factor of contemporary phenomena. Both treat this condition as an exegetic tool of the monads' implication to flowing systems and, hence, to networks. The only difference is that Mobility Studies further proposes that studying such networks can explain many societal phenomena, especially in late modernity. Both approaches promote a view that concludes with a paradigm shift from the sociological analyses that introduce a dualistic perception between human and non-human factors.

The second common idea between Tarde and Mobility Studies is the architecture of our world. The term *society* is not used here on purpose, since these needs are redefined, according to Tarde. As mentioned above, Tarde has challenged the deductive reasoning that connects macroscale and microscale phenomena. The macro and micro-level distinction presupposes a distinction between large institutions and humans. However, Tarde has denied the essence of the actors' identity as we know it by using monads as a critical element. So, he attempts to challenge any linear causality to explain the interaction between different phenomena or actors.

Mobility theorists also argue that it is unnecessary to distinguish between the local level of humans and the abstract level of infrastructure or organizations to examine contemporary societies. Within a mobility network system, local levels identified by small groups can bring large-scale changes. Since societies are not orchestrated as structures but as networks, one cannot argue that large-scale objects necessarily consist of smaller-scale parts as components that are structured according to logic. On the contrary, small-scale objects can be even more complex than large ones in a world of flows. These small-scale objects can be combined unpredictably to form more significant flows. That does not mean that no kind of rationality rules these combinations. However, again, this is rationality, which is not linear, and more importantly, it needs to be more human-centric.

This new kind of social order creates what could be called *metastability*, as Urry notes.[305] According to Thrift, another mobility theorist, in a world of electronic signatures, it is at least anachronistic to think subjects or localities conventionally.[306] There are many examples in the globalized environment nowadays that show unpredictable changes that smaller agents can bring to larger scales. A first example is the domino effect that a small group of hackers has repeatedly caused in world politics and the world economy (such as Wikileaks or Anonymous). Such hackers sometimes physically reside in peripheral areas, like Iceland or New Zealand; they do not live in economic centers, like London or New York. Another example is that many groups, either talking about music fans or terrorists without being in physical contact, might live in different areas of the planet.

Finally, the third idea of Tarde, which is also central to the Mobility paradigm, concerns the concept of movement and displacement. Unlike Durkheim, who sought to ground his Sociology on social reproduction, Tarde proposes a Sociology attuned to innovation and creation. Mobility theorists also use this concept to propose that Sociology should focus on the movement instead of established structures and institutions to have a more in-depth understanding of societies.[307] As Tarde argues, in his analysis about being and having, the monads are proprietors and not entities. Still, it is through their action, the changing of their position, in other words, through their Mobility, that monads reveal the nature of their possession.[308]

305 Urry, *Mobilities*, 27.
306 Thrift, "Driving in the city", 54.
307 Urry, *Sociology*, 1-20, Cresswell, *On the Move*, 1-18, Thrift, "Movement-space", 582-604.
308 Tarde, *Monadology*, 52. See also Latour, "Gabriel Tarde", 117-132.

CONCLUSIONS

Even though *Monadology and Sociology* is a work of 1893, a significant part of its argumentation bears similarities with the fundamental concepts of contemporary sociological theories, such as the Mobility paradigm. However, as mentioned at the beginning of this chapter, arguing that Gabriel Tarde has directly influenced contemporary poststructuralist views would be reductionist. Of course, as it has been argued, "*up to a point, at least, we can choose our ancestors*".[309] Therefore, the fact that contemporary scholars, such as Latour, acknowledge the importance of Tarde's intellectual heritage for their work is critical. However, as far as the Mobility paradigm is concerned, apart from Nigel Thrift, who explicitly cites Tarde's work, the rest of the abovementioned scholars do not do so.[310] Still, despite the 100-year chronological gap that exists between them, there are impressively common conclusions drawn from the two theoretical approaches. Regarding this similarity, Tarde's description of what we call information flows nowadays can be elucidating. According to him, we should not view the circulation of ideas as a "spiritualist" process but as a brain reproduction that bears an impetus on its own and, therefore, follows routes not entirely determined by the subjects involved. This point of view better explains that Tarde constructs an argument that remains partly marginal for decades and then becomes gradually mainstream towards the end of the 20th century within the current poststructuralism. Nevertheless, what is noteworthy is that Tarde used a vocabulary that seemed unorthodox and erratic for his age because, unlike the representatives of the Mobility paradigm, he could not use empirical examples from his contemporary era to ground his argumentation.[311] However, Tarde's sociology can explain contemporary phenomena in a way that Sociologists who had been considered to be much more influencing at his age have not done so.

The epistemology of monads is the ground on which many critical theories of the postwar era have been based. For example, within the Historiography of the late 20th century, nations as essentialist notional categories have been revisited.[312] It is exciting that Tarde, over a century ago, noticed that: "*Like stars, like living things, like illnesses, like chemical radicals, nations are nothing more than entities which have long been taken for true beings in the ambitious and sterile theories of so-called philosophical historians*".[313]

In conclusion, one could stress Latour's claim that Sociology might have been different if Tarde's ideas were mainstream in the sense that Durkheimian ideas have been.[314] We could also add that other fields of Humanities, like History or Philosophy, might have been different if Tarde had found recognition in his time, given the fact that in his *Monadology and Sociology*, he seeks to establish a Pansocial Ontology, by examining the common elements of all sciences, and all disciplines, the furniture of the world.[315]

309 Peel J. D. Y. (1971) *Herbert Spencer: The Evolution of a Sociologist*, ix. As mentioned in Candea, *The Social*, vii.
310 Thrift N., "Pass it on: Towards a Political Economy of Propensity" in Canada M. (2010), *The Social after Gabriel Tarde*, 248-270. Thrift, "Driving in the city," 54. Barry A. et al. (2007), "Gabriel Tarde: imitation, invention and economy," *Economy and Society*, 36.4, 509-525.
311 See also, Latour, "Gabriel Tarde", 117-132.
312 Tarde, *Monadology*, 7.
313 Latour, "Gabriel Tarde", 117-132.
314 Latour, "Gabriel Tarde", 117-132.
315 Lorenc Th., "Afterward: Tarde's Pansocial Ontology," in Tarde G. (2012), *Monadology and Sociology*, 73-95.

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CHAPTER 09

MONADOLOGICAL ONTOLOGIES AFTER SPINOZA: LEIBNIZ, HEGEL, STIRNER, MCTAGGART, TARDE, AND WEIL

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ABSTRACT

The concept of the monad offers one of the best explanations of personality-related phenomena, because a monad combines both the ideas of the one and the many –or the ideas of the common and the distinct– without creating a contradiction. Monadological theories of personhood are monistic without being reductive and incorporate the idea of spirit or thought without resorting to complex theories of emergence. Moreover, the monadologists point out that any reductionist monistic theory ultimately results in an implicitly accepted notion of the monad. Otherwise, the philosopher must accept either a kind of solipsism. Gabriel Tarde's monadological theory of sociality provides the necessary adaptations that allow its application to the explanation of the phenomenon of human sociality.

Keywords: Monads, ontology, philosophy, personal existence, sociality

I. THE NECESSITY OF MONADS

The most fascinating puzzle in philosophy is the phenomenon of personality. A person is a conscious entity characterized by a seemingly insurmountable contradiction. The common characteristic of persons is that each is radically and completely different from every other person. This difference is fundamental to our experience as individuals, because we know that we have no access to the inner nature of any other person, except for the information we receive through observation of their potential existence and behavior. We cannot predict the existence of a particular person either from a posteriori data or by a priori reasoning, and we can only make limited predictions about the future behaviors and actions of persons known to us, even if we know all their past actions and behaviors. Moreover, we have only a vague idea of our future actions and personal situations, despite the fact that in most cases we recognize that every activity in the present –including our thoughts– fits perfectly into the course of our past actions, situations and thoughts. Therefore, not only is each person radically and fundamentally different from every other person, but our nature as persons is –at least in part– indeterminable even for us. Thus, from the point of view of the radical and absolute separation of persons, the fact that we share a common world with other persons and can interact with them seems as mysterious as the very existence of our timeless personal identity.

The concept of the monad offers one of the best explanations of personality-related phenomena, because a monad combines both the ideas of the one and the many –or the ideas of the common and the distinct– without creating a contradiction. Monadological theories of personhood are monistic without being reductive and incorporate the idea of spirit or thought without resorting to complex theories of emergence. Moreover, the monadologists point out that any reductionist monistic theory ultimately results in an implicitly accepted notion of the monad. Otherwise, the philosopher must accept either a kind of solipsism (see, for example, Carnap or Fichte) or a kind of monopsychism or hylozoism (as is the case, for example, with Parmenides, Pythagoras, Averroes, and Ernst Häckel).

II. THE NATURE OF THE MONADS AND THE MONADOLOGICAL UNIVERSE

The basic framework of any monadological ontology is a system of completely separate entities (the monads) that are nevertheless linked together by their own intrinsic characteristics. To form such a system, a monad must have a very specific internal structure that allows both its absolute separation from any other monad and the formation of an external interaction between the monads. A monad is considered a simple entity –that is, an entity that is not composed of separate parts. A monad, however, is neither dimensionless, i.e. a point, nor atomic (i.e. indivisible). A monad consists of an infinite number of parts that have the same nature as the monad itself. Each part also consists of an infinite number of parts that are of the same nature as the higher parts and the whole monad (i.e. infinitely divisible). The infinite divisibility of a monad is a necessary condition for the unity of the monad, so that the parts of a monad belong only to that and not to any other monad. Thus, each monad is absolutely separable from every other monad. Only then is it possible for the monad to exist as such.

The unity of the monad, however, requires a second condition: a special relation between the parts of the monad and their subparts and subparts of subparts up to infinity, which ensures that each part and subpart is part of that monad and not of any other. This relationship, which connects all the parts of the monad and ensures its internal unity, manifests itself as activity because the monad is an active one. This activity is traditionally called the momentum (*conatus*) of the monad.

The monad has another active feature that is oriented towards other monads and aims to incorporate them into its own nature. This second form of activity is traditionally called sense (*perceptio*). From the fact that each monad is indestructible because it cannot decompose into self-sustaining parts, it follows that the mutual sense of monads results only in an external relation that forms a complex of monads. Each cluster of monads can be considered an entity in its own right, although not unique in nature, and has its own relationship with other clusters. Because each monad can perceive any other monad, the number of complexes formed in this way is infinite. The absolute complex containing an infinite number of these interconnected complexes is called the *universe*.

As for the number of monads, this issue cannot be resolved from the perspective of each monad. It is clear, however, that the number of complexes formed by the aesthetic activity of the monads, as well as the number of parts of each monad, is infinite.

The sense of a monad includes all other monads as well as the universe –that is, the content of the relations among monads. This total content of the senses makes up the jointly perceived external world, the phenomenal reality, of the monads. It is the world of time, space, matter, quality, quantity, the world of change, of contingency and necessity, of energy and passivity, of life and death. Instead, the absolute reality of the unique universe is influenced and structured not by these categories but by the relations between the monads and between the senses of the monads. These relations are of the nature of logical necessity.

Any monadological ontology must explain how the characteristics of sensible phenomenal reality can be derived from the characteristics of the absolute reality of the monads and their complex universe. This explanation is particularly difficult for phenomena such as time, variation, causality, contingency, and necessity and cannot be discussed in the context of this essay. Suffice it to mention that the majority of modern monadological ontologies, starting from Spinoza's position on the identification of God with Nature, claim that time, change and contingency are the results of the aesthetic activity of the monads.

III. MONADOLOGICAL ONTOLOGIES BEFORE SPINOZA AND THE PROBLEM OF CHANGE

As mentioned above, monadological ontologies are not a modern philosophical invention, although the modern meaning of the term has been shaped mainly by Leibniz. The term "monad", however, was first used in the context of Pythagorean philosophy as a designation of the unique origin of the world. It is therefore necessary to distinguish *monadological* ontologies from *unity-generating* ontologies (i.e. ontologies that reduce the entire world to a single principle). Monadological systems in the sense of the term used here were proposed in Antiquity by Plato in his *Timaeus*, Aristotle in his *On the Soul*, and Plotinus, who can be considered the originator of the post-Spinozist monadological approaches. In the *Timaeus*, Plato describes the system of monads as a system of individual souls that are in heaven as stars and materialize on earth as persons through their confinement in material bodies to live a more or less virtuous life. These souls then enter a series of material transformations on their way back to eternal heaven. In Aristotle's *On the Soul*, the entities corresponding to the monads are the individual souls of living beings, especially the souls of human beings, which, because of their participation in the eternal divine mind, are at least partially incorruptible.

Unlike the post-Spinozist monadological ontologies, the monadological ontologies of Plato, Aristotle, and Plotinus, as well as their successors, especially St. Thomas Aquinas, do not consider change and time as mere constituent elements of phenomenal reality. These ontologies instead propose a world in which change and immobility coexist because the existence of the sensible world is explained as the result of the interaction between form and matter. Thus, change and time are components of absolute reality despite the fact that reality itself is immutable in nature. Another very important difference between ancient and modern ontologies is that the former consider monads as universals, while the vast majority of modern monadological ontologies take a nominalist stance, rejecting the reality of universals.

Saint Augustine seems to have been the first monadological philosopher of late Antiquity to adopt an esoteric approach to the reality of time and change, placing both in the nature of man, because only man knows that he has been given a certain amount of time to achieve redemption. St. Thomas Aquinas was the last great pre-Spinozist monadological philosopher, who in his work *On Being and Essence* (*De ente et essentia*),[316] gave a full and complete account of a universal monadological ontology.

With Descartes the era of modern nominalist philosophy begins. His thought has elements of a monadological approach. However, he separates momentum from sensation by attributing the former to the extended thing (*res extensa*) and the latter to the thinking thing (*res cogitans*). This separation is one of the reasons why his ontology collapsed into the notorious dualism of his substances. Descartes tried to circumvent the problem of the reality of time and change by placing them in the realm of the extended thing, which coexists on the same ontological level as the timeless thinking thing.

IV. THE MONADOLOGICAL TRADITION AFTER SPINOZA

Spinoza occupies a key position in the development of monadological philosophy because in his attempt to overcome the Cartesian dualism, he formulated the general outline of the modern concept of the monad. However, Spinoza considers monads as modes (*modi*) of a monadologically intellectual totality, which he calls "*God or Nature*". The change in this totality is internal, and time is the way in which the modes of God (i.e. the smaller monads) experience the activity of God.

316 St. Thomas Aquinas, *De ente et essentia*, transl. by J. Bobick, University of Notre Dame Press 1988.

Spinoza's monadological universe has an inherent problem: It cannot offer a plausible explanation of the absolute separation of the modes understood as monads from the Whole (God or Nature) and from each other. In fact, the modes are nothing more than parts of the totality itself. Spinoza's dilemma can be formulated in this way: The modes are either (a) self-sufficient and absolutely separately existing entities possessing an individual nature and individual senses (in which case God cannot be conceived as a monad), or (b) they do not have the nature of monads, but are only parts of the monad that is God, if God is to be conceived as a monad. If the latter is true, the modes cannot have their own individual momentum (*conatus*), because that would mean that the nature of God contains a contradiction, because each entity with its own momentum opposes all other entities with momentum.

Leibniz, who introduced the term "*monad*" in its modern meaning, overcame this problem in his *Monadology* by stating that the system of monads (i.e. the universe) is autonomous and as such is absolutely separate from God, who is the only monad with the power to create monads. In this sense, the difference between "*simple*" monads and God is a difference in the degree of perfection. This difference explains why "*simple*" monads can only have a very vague sense of God and an incomplete sense of their own nature. But in Leibniz's universe a new problem arises, that of the synchronization of the senses. If each monad senses itself and the universe in its own unique way, then how is it possible that all monads share a common content of sensations? This problem can only be solved by the assumption that God created the universe of monads with a predetermined order, which includes the synchronization of the contents of the monad's senses and creates in each monad the sense of a uniform flow of time in which law-like changes occur. However, a paradox remains in Leibniz's monadological conception, the fact that the existence of the universe as a system of monads –including the social universe– is not the result of the interaction of monads, but it is implanted as an idea in each monad by God.

Kant tried to avoid the dangerous waters of Spinozian and Leibnizian ontology by resorting to a purely epistemological approach. In this sense, his philosophy cannot be regarded as monadological although it has many features in common with them. Hegel's system also contrasts with the post-Spinozist monadological tradition described here, despite the fact that his philosophy of nature and spirit provides an ingenious synthesis of the ideas of Spinoza and Leibnitz and the monadological hylomorphism of St. Thomas Aquinas. However, the hermeneutical effort required to demonstrate this synthesis would go beyond the scope of this essay.

The concept of the "*one and only*" (*Einziger*) or "*the appropriator*" (*Eigner*) developed by Max Stirner,[317] who belonged to the so-called "*left Hegelians*", is a more explicit application of a monadological ontology. In Stirner's philosophy, the *Eigner* is seen as a monad whose drive manifests itself as a tendency to 'appropriate' and 'consume' the world and other monads. Stirner calls this appropriating capacity or power of the appropriator, which is analogous to the classical monadological activity of the sensation (*perceptio*), "*property*" (Eigentum). As a nominalist monadologist, Stirner strongly rejected the normative force of ideas, including the concept of obligation, especially in relation to moral, social, and political institutions. For him, ideas are only ghosts (*Sparren*) that force people into activities and situations that contradict their immediate needs. For Stirner, the only form of legitimate cooperation among men is the "*Union of Egoists*", which is constituted only by the temporary coincidence of the interests of its members and exists only as long as this coincidence exists. There are two main differences between Stirner's Appropriator and Leibnitz's conception of the monad: First, Stirner's Appropriator is mortal and perishable. His appropriating power fades after he is consumed by the appropriating power of the other Appropriators. Stirner's Appropriator is mortal in the literal sense of the word, whereas the classical monad is not perishable because it is ontologically simple. Second, the appropriating activity of the Appropriator has the character of a

317 The main work of Max Stirner (1806–1856) is the book *Der Einzige und sein Eigentum*, published in 1844.

relationship. Thus, the social universe is created by the activity of the monads themselves, without any need for a divine predetermined order. In this sense, Stirner can be seen as the originator of a school of thought that claims that relations are real and have the same ontological status as properties.

A very important, though completely forgotten, monadologist is the British philosopher John McTaggart Ellis McTaggart,[318] who lived and worked at Trinity College, Cambridge University and was a teacher and friend of Bertrand Russell and George E. Moore. McTaggart belonged to the second generation of so-called British Idealists and considered himself a neo-Hegelian. In his major work, *The Nature of Existence*, McTaggart makes a structuralist and logical reconstruction of Leibniz's monadology and presents a system that explains the nature of monads, here called "*selves*" or "*spirits*", and the existence of the predetermined order of the universe, rejecting the idea of creation by a more perfect monad (i.e. God). McTaggart gives a purely logical description of the momentum of monads by introducing the notion of "determining correspondence", which is a special relation between a "*self*" and its parts. The determining correspondence is the only relation that ensures the internal coherence of an infinitely divisible monad without ending in contradiction. The parts of a McTaggart monad (i.e. a self) have the same 'spirit-like' nature as the 'self' and allow for a special relation between the 'selves', which McTaggart calls perception. Unlike Stirner, McTaggart explicitly states that relations are as real as properties. He also believes that the creation of a relation creates a new secondary property, which in turn creates a secondary relation and so on in an infinite series of properties and relations. Furthermore, McTaggart accepts the negative property –that is, non-being– as a property of a monad or its parts. Consequently, by virtue of their properties and relations, all monads form an ordered complex universe that is –like the monads that make it up– eternal, uncreated and indestructible.

McTaggart's complex universe is not only immutable, but also incorporeal and immaterial. Change, time, matter and all the phenomena that make up our phenomenal reality arise from an inherent error in the content of the senses. This error is not fixed but undergoes a kind of negative evolution. In other words, our senses form a spectrum that extends from imperfection to perfection. This variation is the only kind of movement possible in McTaggart's complex universe. The sense of this evolution creates the phenomenal reality of time, as well as all other phenomenal categories (e.g. space, matter, sense data, knowledge and will). To my knowledge, McTaggart's monadology is the most consistent and metaphysically transparent interpretation of Leibniz's and Spinoza's systems, despite the many explanatory gaps that arise mainly from McTaggart's radical nominalism, something he shares with almost all other nominalists.

Gabriel Tarde's[319] monadological theory of sociality uses a more traditional terminology but provides the necessary adaptations that allow its application to the explanation of the phenomenon of human sociality. Tarde considers any ordered association of monads as a social phenomenon and derives from it the main aspects of monads, *mania* (avidity) and possession (possession). Mania is Tarde's equivalent term to the traditional notion of momentum (*conatus*) and possession is the equivalent for sensation. In this sense, Tarde's approach bears a strong resemblance to that of Stirner. However, in the former, the possessive interactions of monads derive from the normative characteristics of human associations. At the same time Tarde recognizes, like McTaggart, that our phenomenal reality contains a considerable number of contradictions. He seems to think, however, that these contradictions are not indicative of the unreality of phenomenal reality, but rather are a kind of test or trial that we must undergo in order to gain eternal peace when we pass to the inanimate plane of existence.

318 John McTaggart Ellis McTaggart (1866–1925). I refer to his main work, *The Nature of Existence*, CUP 1921 (Vol. I) and 1927 (Vol. II).

319 Gabriel Tarde (1843–1904), *Monadologie et Sociologie* (English translation by Theo Lorenc, repress 2012).

The newest member of the monadological tradition is the French philosopher Simone Weil.[320] Like Tarde, Weil is one of the most overlooked contemporary thinkers, but her work has recently received the recognition it deserves. Weil's position differs in one crucial respect from the philosophical positions of the main post-Spinozist monadologists because she was explicitly antinominalist. Her monadological theory thus more closely resembles the Aristotelian conception of the soul as a form of human nature. According to Weil, man is the embodiment of human nature. Therefore, his momentum is not self-referential and temporal, but aims at the fulfilment of this form. Weil uses the term "*needs of the (human) soul*" to characterize this direction of momentum. The needs of the soul are order, freedom, obedience, responsibility, hierarchy, equality, danger, security, collective and individual property, truth, and freedom of opinion. The whole of human existence has a normative nature and is oriented towards an end, which means that the activity of each monad is directed towards the world and other monads and also has the character of a necessity of the soul, which Weil calls duty (obligation). The proper performance of duty allows the soul's needs to be fulfilled and results in a stable and balanced world. Weil's thought unfolds within the framework of the classical theistic tradition, which logically infers from the imperfection of human existence the existence of the perfect being, namely God, who is also the creator of the imperfect being. God is not part of the sensible world. His action is indirect and comes about through duty. A direct approach to God requires the abandonment of the sensible world and the transition to the divine level of existence, which corresponds to physical death. Thus Weil, like all other monadologists, sees death not as the total negation of existence or as a non-being, but rather as a transformation into another mode of existence, a mode of non-life.

V. EPILOGUE

In this essay, I have tried to give a brief description of the philosophical significance of the monadological approach to ontology, which in my opinion is the best way to address the fundamental problem of personal existence. In addition, I have tried to present some basic elements of the monadological tradition, which has its roots in the philosophies of Plato and Aristotle, and, building on the pillar of Spinozism and Leibniz's monadology, still exerts a great influence on modern philosophical discourse. I do not claim to have presented a complete list of influential monadological philosophers and I believe that other very important philosophical positions, such as Michel Foucault's existentialism or idiosyncratic structuralism and Alfred North Whitehead's process philosophy have strong affinities with the monadological tradition outlined here.

Because each monadological approach reveals a new aspect and provides a new answer to the enigma of personal existence, hitherto neglected approaches, such as those of Simone Weil and Gabriel Tarde, deserve a closer examination.

320 Simone Weil (1909–1943). I refer to her work, *L'Enracinement – Ou Prélude à une déclaration des devoirs envers l'être humain*, Flammarion 2014.

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CHAPTER 10

A SOCIETY OF MONADS?[321]
REVISITING TARDE'S MAIN EPISTEMOLOGICAL ARGUMENT

Spyridon STELIOS

ABSTRACT

In his *Monadology and Sociology* Gabriel Tarde presents the findings in Chemistry, Physics, the Natural Sciences, and Sociology that seem to affirm Leibniz's hypotheses about monads. Within this framework, the social individual in Sociology, the living cell in cell theory and the chemical atom are ultimate elements only in view of their particular science. The ultimate principles of reality are in fact in the domain of the 'infinitesimal'. They exist on the scale smaller than the one which is the current research focus. This descent to the infinitesimal, which is logically leading to the monads, also implies that in phenomenal transitions it is not the large (e.g., the Divine) source of the small but on the contrary, the small (e.g. scientific elements) is source of the large. In this micro level, relations are the crucial factor supporting a renewed Socialized Monadology. Tarde's *modus ponens* is based on the conditional claim that if we observe any phenomenon, then we observe a society. Any continuity in phenomena is formed through the totality of other beings. Everything is a society. The critical examination of that epistemological argument reveals some new insights of his truly innovative theoretical approach.

Keywords: Monadology, sociology, epistemology, infinitesimal, perception, phenomena

INTRODUCTION

Gabriel Tarde (1843 – 1904) published his book *Monadology and Sociology* in 1895 (although a first version was published as an article entitled *Les Monades et la Science Sociale* in 1893). This period was particularly fruitful in terms of intellectual activity in Europe. In Chemistry and in Physics, the atomic theory had entered the scientific mainstream. Scientists were dealing also with Louis Pasteur's remarkable discoveries in the causes and prevention of diseases, the assertion that all living organisms are made up of cells and the discussions caused by the theory of evolution. Within this environment of stochastic excitement, Tarde's book attempted to project the universality of a social nature of phenomena by employing a *modus ponens* argument. In what follows, we will see how he did that.

PULVERIZING THE UNIVERSE

Some 180 years before *Monadology and Sociology*, Gottfried Leibniz (1646 – 1716) published one of his most well-known works, *The Monadology* (1714). In his short text Leibniz introduces the monads; mind-like simple substances endowed with perception and appetite and the only beings that count as genuine and real. Mass is a phenomenon resulting from these simple substances. Matter is reduced to a single mental entity: "*The monad …is merely a simple substance, …that is to say, without parts*".[322] "Now where there are no parts, neither

321 Title borrowed from Latour, B. 'Gabriel Tarde and the end of the social', in Joyce, Patrick (2002). *The Social in Question. New Bearings in History and the Social Sciences*, 120.

322 Leibniz, G. W. (1714/1890). *The Philosophical Works of Leibnitz*. Trans. G. M. Duncan, 218, §1.

extension, figure nor divisibility is possible. And these monads are the true atoms of nature, and, in a word, the elements of things.[323] This work inspired Tarde.

Tarde states from the beginning that all the secondary hypotheses implicit in Leibniz's Monadology have been proved scientifically. In his view, Chemistry, Physics, the Natural Sciences, History, and even Mathematics in late 19th century seem to lead, in their progress, to the monads. More specifically, the new Chemistry of the mid-19th century gave particular value to chemical atoms, by adopting that matter is composed of these discrete units. Discoveries in this field have led people to affirm the atom and to deny a *superficial material continuity*. Extension, movement, and growth that seem to reveal the continuity of the physical and living manifestations of matter is in serious doubt. There is no evolution and no transition: the dividing lines are clear and stark even though everything appears to be harmoniously graduated in phenomena. New theories in Chemistry, such as Charles Adolphe Wurtz's (1817–1884),[324] make an essential point: "*The properties of the radicals are referred to the elements themselves. Formerly they were considered as a whole… To discover and define the properties of radicals we go back to the atoms of which they are composed*". Based on Wurtz's examples, Tarde makes the inference that among the atoms of a radical, there is one in particular on whose atomicity (outlasting the saturation of all the others), the combination, which is produced, ultimately depends.

In Physics, Newton's assumption that the gravitation of a planet is only the sum of the gravitation of all its individual portions shows that the terrestrial bodies gravitate towards each other. So, even the smallest particles of these masses attract each other.[325] Until then celestial bodies have been regarded as distinct superior unities, whose internal relations bore no resemblance to its relations with other bodies. Now, this individuality is broken.

Moreover, cell theory scientists seem to follow Newton's vision.[326] In the entire organism, or in each cell, there is no vital force distinct from matter. Thus, all phenomena of vegetable or animal life must be explained by the constituents of matter, i.e. the properties of atoms. For the same reasons, Darwin's theory of evolution seems to prevail. Here the source, reason, and ground of the phenomenal finite and separate is in the infinitely small, in the integral of individual variations. In turn, these depend to cellular variations whose basis consists of a myriad of elementary changes.[327] Moreover, the germ theory of disease, established by the work of Louis Pasteur, explains any disorders by means of the internal conflicts of miniscule organisms. Tarde states that according to this theory, which is even today the accepted scientific theory for many diseases, these parasites have their own parasites and so on.[328] Illnesses are now pulverized into infinitesimal disorders of biological tissues.

In his review of sciences, Tarde also includes cultural-political entities, namely nations. Similarly with stars, living things, illnesses, or chemical radicals, nations are entities which have long been taken for true beings within historical discourse. Contrary to the "*convenient point of view*" that political or social change (like a revolution) stems spontaneously from the "*genius of the race, from the bowels of the people*", Tarde argues that the cause of any political or social manifestations is individual action.[329] All historical events could thus be explained by individual actions, i.e. the action of inventive men who served as a model for others reproducing thousands of copies of themselves, in the same way that cells reproduce in an organism.

323 Leibniz, *The Philosophical Works of Leibnitz*, 218, §3.
324 (Wurtz, A. (1880). *The Atomic Theory*. Trans. E. Cleminshaw, 265-266 as cited in Tarde, G. (1895/2012). *Monadology and Sociology*. Trans. Theo Lorenc, 7.
325 Tarde, *Monadology and Sociology*, 6.
326 Theodor Schwann (1810-1882) was one of the key early proponents of the theory that all living organisms are made up of cells.
327 Tarde, *Monadology and Sociology*, 9.
328 *Ibid*, 7.
329 *Ibid*, 7-8.

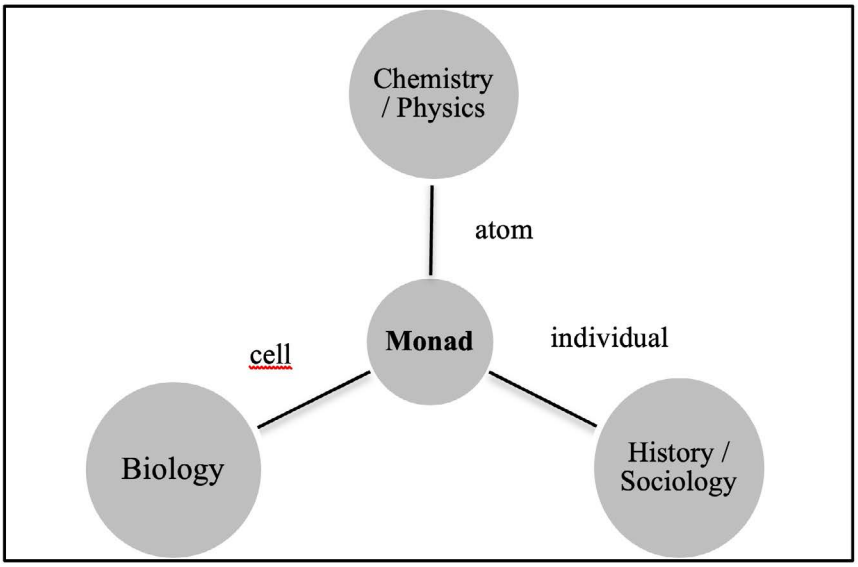

Figure 1.
The monad at the heart of sciences.

THE PERCEPTUAL FACTOR

So, there are ultimate elements that form the final stage of every science. But here a first clarification is made. The social individual in Sociology, the living cell in cell theory and the chemical atom are ultimate only from the *point of view* of their particular science. They themselves are composite, not excepting the atom itself.[330] Atoms are not simple substances. They are in fact complex constructions, animated by complicated internal movements. Following this line of thought, one might argue that there are no ultimate elements in the world, because there is always something existing on the scale smaller than the one which is the current focus of a particular science. These objects of attention are ultimate only from the point of view of that particular science'.[331] For instance, when studying human societies, the element is the individual human, and when studying an organism, it is the cell. It is always the scientifically based infinitely small.

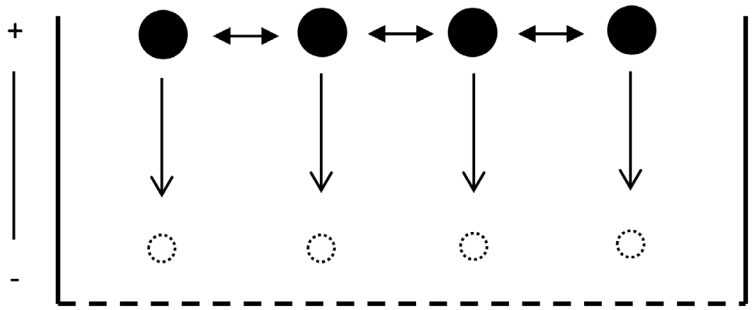

Figure 2.
A graphical representation of the ultimate elements within the infinitesimal "pool."

The principles of reality are in the domain of the 'infinitesimal '. Pragmatically, the elements are smaller than any assignable entity which can be identified, and relative to a particular perspective.[332] These ultimate elements of the world are those that defy its finite conception. In the broader sense, there is no way to put a stop to this descent to the *infinitesimal*, which seems to become the key to the entire universe. This might also explain, and perhaps ratify, the growing importance of the infinitesimal calculus in Mathematics throughout 19th century. This tendency towards the infinitesimal is logically leading to the monads, fulfilling, as Tarde notes, the most daring promises of Leibnizian spiritualism.[333] As Leibniz puts it: "*It is not in the object but only in the modification of the knowledge of the object, that monads are limited.*

330 See William Thomson's (1824 –1907) 'vortex theory of the atom' and the work of J. J. Thomson (1856 –1940).
331 Tarde, *Monadology and Sociology*, 8.
332 Lorenc, 'Afterword', 81.
333 Tarde, *Monadology and Sociology*, 7.

They all tend confusedly toward the infinite, toward the whole, but they are limited, and distinguished by their degrees of distinct perceptions".[334] That is, besides representing the whole, each monad represents most distinctly the body which is particularly appropriated to it.

THE INFINITESIMAL

Then, Tarde makes a rhetorical question: Why is this dominant concept of 'infinitesimal ', as an explanation of phenomena, not widespread? A quite possible explanation is that the human capacity of *reason deceives*. Reason 'sees' finite, e.g. extension, movement and transition in the physical manifestation of matter. For instance**,** if we are presented with two distinct living species (very distant or closely related), let us say a flower and a fungus, in neither case will it be comprehensible (through reason) that one could suddenly and *with no transition* turn into the other.[335] To not be able to grasp the no-transition hypothesis is due to a prejudice which has been formed in us by the *association of ideas*. Following Hume (1748/2007),[336] we naturally associate the idea of the impression of the fungus with that of the plant by combining *resemblance* and *causation* (f.i. fungal reproduction). For us to accept that there is no transition, that is to say there is no common ground between (the foundations of) these two states, seems inconceivable. The rationale here is schematically represented as follows: Reality → Experience → Reason / Prejudice → No transition. In fact, reality, the source of the experience which gives birth to this prejudice, conforms (according to science, as shown above) to the explanation of the finite by the infinitesimal.[337]

Furthermore, this prejudice shows that the way our mind works is more inclined to see in the large (the phenomenal world around us) the source of the small than in the small the source of the large. Any observed phenomenal transition seems as the cause of any change in composition (see the above-mentioned example of the flower and the fungus). Along this line of argument, we would also believe in divine forms. Science though, Tarde argues, confirms that it is not the large (e.g. God/the Divine) the source of the small but on the contrary, the small (atoms etc.) is the source of the large. For that point of view he gives an example: the presence of the correct astronomical theory in millions of human brains is due to the multiplied repetition of an idea which appeared one day in a cerebral cell of Newton's brain.[338]

One could argue here that the use of the concept of God is now changed by referring to the micro, instead of the macro, level of reality. Furthermore, a criticism of Tarde's claim could be put forward. The human capacity of reason that purportedly causes this prejudice is the one that led to the conception of the discrete "*uncuttable*" first units of nature and to the concept of infinitesimal. So, it is not the human capacity of reason that deceives us, but perhaps the unprocessed, in rational terms, sense-data that feed our senses from the beginning to the end of our lives. It is the surplus of experience and observation against rationality that deceives after all.
Back to Tarde's approach, the infinitesimal is not differed only by degree from the finite; it is also qualitatively different. Movement has a cause distinct from what appears in phenomena. It comes from the infinitesimal and returns to it. So, the infinitely small, in other words the element, is the source the goal and the reason of all things. This unique element, initiates

334 Leibniz, *The Philosophical Works of Leibnitz*, 227, §60.
335 Tarde, *Monadology and Sociology*, 7.
336 According to David Hume (1711 – 1776), ideas are drawn from memory or the imagination and arise when we reflect upon our impressions. Thus, an idea is, for example, the memory of seeing the color blue or a thought concerning sorrow. Hume presents three (3) principles by which ideas might be associated: i) *resemblance*, where a picture of a flower naturally leads our thoughts to the original, ii) *contiguity* in time or place, where mention of one apartment in a building naturally introduces a discourse concerning the other apartments, and iii) *cause* or *effect*, where the thought of a wound makes us think of the pain which follows it [Buckle, S. (ed.) (1748/2007). *Hume: An Enquiry concerning Human Understanding and other writings*, 19-20].
337 Tarde, *Monadology and Sociology*, 10.
338 *Ibid*, 10.

(some) change, movement, vital evolution, mental or social transformation.[339] For instance, in scientific theories the expansion of gained knowledge moves by going straight from one thesis to the next and consists of linking them by a chain of logical positions between the two. This coincides with the historical order of appearance of the successive discoveries which are synthesized in science (see the academic field of History and Philosophy of Science). For example, the Theory of Evolution (1859), itself evolves. It evolves by the accumulated efforts of scientists and theoreticians (the elements here), occupied in modifying the fundamental theory to fit it as closely as possible to a) the scientific data known to them, and b) to the preconceived ideas they hold. This theory is for them a *generic form* which they are working to specify, each in her own way.[340] In society this necessity ascribes to all individuals. This direct, regular, and rapid process of any social transformation is accomplished by *hidden workers* who collaborate in realizing some specific plan for reorganization, previously conceived by *one among their number.*

IDENTIFYING MATTER WITH MIND

Therefore, science tends to pulverize the universe and to multiply beings indefinitely. Scientific findings lead to monads which in turn represent an identification of matter with mind. Science thus tends, no less distinctly, to unify the Cartesian duality. Hence it is inevitably leading to what Tarde calls a *psychomorphism*.[341] While in *hylomorphism* change is analyzed as a material transformation –it is matter that undergoes a change of form–,[342] in p*sychomorphism* change is analyzed as a mental transformation; mind is what undergoes a change of form. In the above example with the flower and the fungus, the mental elements within it are transforming it into a fungus. Following this line of thought, we conclude that *matter is mind*, nothing more. This universal psychomorphism can be effectively conceived as a panpsychist monism. For Tarde it is the only comprehensible one, and the only one leading to the desired reduction. Furthermore, identifying mind with matter leads to two alternate readings: an *idealistic* and a *monadological* one.[343] According to the first the material universe, other egos included, is mine, exclusively mine. It consists of my states of mind. If we reject this solipsistic approach, we must abide with the second, monadological reading: external universe is composed of souls distinct from my own but fundamentally similar.

This identification of mind with matter is also examined in light of *perception.* In this regard Tarde puts forward an obvious contrast between the purely quantitative variations of movement in matter, whose deviations are themselves measurable, and the purely qualitative variations of personal sensation, whether they concern colors, odors, tastes or sounds. This contrast which has been and continues to be a main subject in philosophical research, could be normalized, if, among our internal states, distinct *ex hypothesi* from sensation, there were to be found some states which vary *quantitatively.* These states could bridge the gap between sensation of phenomena, such as movement, extension etc. and phenomena (or between sense and sense-data in line with Bertrand Russell). According to Tarde, these states of the soul, or rather these two *forces of the soul* are *belief* and *desire,* whence derive *affirmation* and *will*.[344] Belief and desire play exactly the same role in the ego, with respect to sensations, as do space and time in the external world with respect to material elements.

339 *Ibid*, 11.
340 *Ibid*, 13.
341 *Ibid*, 15.
342 According to Aristotelian *hylomorphism*, being (*ousia*) is a combination of form (*morphe*) and matter (*hyle*). Humans perceive objects through the reception (using sense organs) of their form. These forms refer to shapes, colors, textures, and flavors. For instance, we have a piece of wood that is formatted in a handle. Wood is the matter. In terms of perception, this matter dismisses a form, i.e. the piece of wood, and acquires a new one i.e. a handle.
343 Tarde, *Monadology and Sociology*, 15.
344 *Ibid*, 16-20.

Within this framework, Tarde's monism highlights the most of the Leibnizian idea of force. Monads, according to Leibniz, seem to possess forces or active powers that are necessary conditions for their substantial status. These mind-like substances may be described just in terms of forces: *"… the natural changes of the monads proceed from an internal principle, since an external cause could not influence their interior*".[345] So, as will/desire moves towards certitude within human perception, as the movement of stars and atoms moves towards their definitive agglomeration within the external world, the idea of force, both mental and physical, leads naturally to the idea of substance.

THE SOCIETAL FACTOR (FROM PHENOMENA TO SOCIETY)

Tarde puts forward one main epistemological argument, consisting of two levels. His argument is one from analogy and concerns the natural world. In the first level exists the analogical inference that the observation of reality leads to the ascertainment that it is structured like a society and the entities which make it up behave like living things. In the second level, we humans *know* ourselves a) as beings with both mind and body and b) members of a specific society (that is, members of a culture). This immediate knowledge of ourselves is the only reliable knowledge of being we have.[346] Both levels involve epistemic conditions. As far as the first level is concerned, the mental and the physical are two ways of describing the same elements, that is monads, functioning as a society. For the second lever, the social elements (individuals) hold each other in a variety of ways, and from their competition all the achievements of any civilization are born. In addition, in the second level there is realization of the first level's status. Humans' self-knowledge is simultaneously knowledge of reality. A reality in which diversity rules.

As shown above, within Monadology, the continuity of phenomena is resolved into an elementary (monadic) discontinuity. Furthermore, what we perceive as material continuity is actually continuity in the form of the totality of other beings. At the basis of each thing are all real or possible things. A representative example is the discovery of gravitation, of action at a distance; of material elements that are brought toward one another.

Thus, everything is a society ; every phenomenon is a social fact. Scientific observations tell us of animal societies, societies of stars, of cells (see cell theory) and why not of atoms.[347] So, according to Tarde, all sciences seem destined to become branches of sociology. Societies are not organisms. Organisms have become societies of a particular kind.

Following this line of thought, one could argue that the existence of a particular kind of society is not only a necessary condition for the creation of an organism or the appearance of a phenomenon but also an efficient one. Tarde seems to imply here a *modus ponens* syllogism:

> [*Within the context of any scientific theory*] →
>
> If we observe any phenomenon, then we observe a society.
>
> We observe a phenomenon.
>
> Therefore, we observe a society.

A plant or an animal is a society, as is a molecule. Any apparent difference between cellular

345 Leibniz, *The Philosophical Works of Leibnitz*, 219, §11.

346 According to Lorenc's detailed analysis there are two arguments for *panpsychism*: one analogical and one conceptual. The argument from analogy is that reality is structured like a society. The conceptual or epistemological argument is that we know ourselves immediately and from within not just as thinking subjects. Our introspective self-knowledge is already complex and structured [Lorenc, T. 'Afterword', in Lorenc, Theo (2012). *Gabriel Tarde Monadology and Sociology*, 73]. This paper argues that it is essentially a two-level argument.

347 Tarde, *Monadology and Sociology*, 28.

phenomena observed in plants and animals and molecular phenomena observed through the microscope should in no way lead us to reject this conjecture. The nature of inorganic beings and the nature of living things can be associated with each other. It refers to an evolution that is also evident in our societies.

Human societies can take on alternately the attributes of both natures. They evolve from a barbaric to a mechanical phase. In the former, people simply recall the characteristics and processes of life and they then gradually pass to the latter phase where they adopt an administrative, industrial and scientific reasoning. In addition, all great regular *mechanisms* –the social mechanism, the vital mechanism, the stellar mechanism, or the molecular mechanism can be broken down by one condition: The ascertainment that the constitutive parts of these mechanisms always belong only by one aspect of their being to the world they constitute, and by other aspects escape it. For example, each mass, each molecule of the solar system has for its physical and mechanical property not descriptions like extension, mobility and so on, but all the other masses, all the other molecules.[348] The 'solar world' would not exist without them; without the "solar world", conversely, these elements would still be something. This abides with Leibniz 's assertion that "*… each simple substance has relations which express all the others, and that consequently it is a living, perpetual mirror of the universe* ".[349] There is a connection of all things to each and of each to all: "*And as the same city regarded from different sides appears entirely different and in perspective is as if multiplied, so also it happens that, because of the infinite multiplicity of simple substances, there are as it were so many different universes, which are nevertheless only the perspectives of a single one, from the different points of view of each monad*".[350] In another paragraph, we read: "*Thus, although each created monad represents the entire universe, it represents most distinctly the body which is particularly appropriated to it and of which it forms the entelechy.*"[351] Each substance is thus a *camera obscura* where the whole universe of other monads is represented in a reduced form and from a particular angle.[352]

Tarde's radical move is to expand the discussion on monads within a much broader multi-scalar perspective. His approach is not so much a Leibnizian sociology, as a socialized monadology. It is this radical 'universal sociological point of view' that leads Tarde to conclude that the whole (the whole society, the whole individual) is always less complex and indeed weaker than the sum of its parts, since these parts are always simultaneously part of other wholes ad infinitum.[353]

REVISITING THE ARGUMENT

The main points of Tarde's approach, as set out above, are:

1. The principles of reality are plural in nature. There are ultimate elements that form the final stage of every science.
2. There exists an infinite multitude of these simple substances. Scientific research has a tendency leading to the infinitesimal.
3. Phenomena are caused by the infinitesimally small (element).
4. Elements identify matter with mind (humans included). These substances are souls.
5. Organisms and phenomena are in fact societies.

348 Ibid, 53.
349 Leibniz, *The Philosophical Works of Leibnitz*, 226, §56
350 *Ibid*, 226, §57.
351 *Ibid*, 227, §62.
352 Tarde, *Monadology and Sociology*, 26.
353 Candea, M. (ed.) *The social after Gabriel Tarde: Debates and assessments*, 8-9.

Any progress regarding modern science favors the blossoming of a renewed socialized Monadology. The real property of any reference entity is a set of other reference entities. In Chemistry, each atom of a molecule has for its chemical property all the other atoms of the same molecule. In Biology, each cell of an organ has for its biological property, all the other cells of the same group of tissues. In all these cases, possession is reciprocal, as in every intra-social (or psychological) relation; but it can be unilateral, as in the extra-social relation of master to slave, or of the farmer to his cattle.[354]

Within this socialized Monadology, *strict* Monism seems incapable of explaining our ability to see the parts of organized beings as made for the whole, or the whole as made for the parts. Organized beings do not result from a process of fabrication by a single being, or from the regular differentiation of a single homogenous substance. Strict Monism does not lead to what is observed in sciences and in life. The only viable monistic assumption is that matter is mind. This assumption leads naturally to the theory of monads.

Each monad draws the world to itself, and thus has a better grasp of itself. Monads belong to each other to a greater or lesser extent and each one of these mind-like substances attempts to learn new ways of adaptations with and to the other ones. This explains their transformations and consequently any observed physical transformation.

Now, with regard to the primacy of the social factor (see the *modus ponens* syllogism and point 5), one could argue that it constitutes a logical fallacy. It is an Equivocation (also known as doublespeak), since the term 'society ' is ambiguous and has at least two distinct meanings. On the one hand it refers to a group of people and on the other hand to a group of elements. The use of this particular word in multiple senses makes this argument misleading. Nevertheless, one might counter argue, including Tarde himself, that people (that is, bodies with soul) might be regarded as elements or monads. In fact, Lebniz seems to leave this open: "*… when we fall in unconsciousness or when we are overpowered by a profound and dreamless sleep…the soul does not differ sensibly from a simple monad; but as this state is not continuous and as the soul frees itself from it, it is something more than a mere monad*".[355] So, the fallacy stands only if humans beings ≠elements.

Gabriel Tarde's rationale on how Sociology is associated with Monadology is primarily a conceptual one. Tarde proceeds by clarifying and discussing appropriate terms that could fit in his renewed socialized Monadology. Examples from science and society (atoms, cells, individuals) play a key role in this endeavor. Yet, these references seem odd nowadays because there is a clear distinction between the social and the physical sciences. Social phenomena cannot be reproduced and therefore be predicted based on absolute data. However, at the end of the 19th century, Tarde placed them in the same reference framework. His rationale was that both areas have the same infinitesimal ontological structure (see point 1). After all, that is what Tarde is discussing: ontological status. "*To be*" is "*to have*". Being is having relations, social relations, with the other.

The ontological approach of Leibniz is enhanced through that emphasis on the role of the monads ' relations. Sociology is amending Monadology. The key to resolving any difficulties in Leibniz's theory (for example, individual human beings as both exemplary monadic elements and as composed of numerous elements) is the dominant notion of 'relation'. It is not the element itself which is the basis of reality but its relation to the social aggregates of which it forms a part.[356] It is the theory of Monadology, not Monism that implies the dominance of such relations.

354 Tarde, *Monadology and Sociology*, 54.
355 Leibniz, *The Philosophical Works of Leibnitz*, 220-221, §20.
356 Lorenc, 'Afterword', 80.

CONCLUSION

In his *Monadology and Sociology* Gabriel Tarde attempts to reunite the 'Siamese twins' of Philosophy and Science which had, long ago, been separated. In this context, Leibniz 's metaphysics meets modern sciences. The conceptual figure that emerges explains the world. At the same time, it is been explained by the concept of "society ". Society or in other words the relation to others, is the link between philosophy and science. It is also the key to understanding the world both at the macro and at the micro level.

This society of monads is the basis of reality which, in epistemological terms, is not called into question. Within this interaction of souls, belief and desire as psychological quantities are bridging the gap between sensation of phenomena and phenomena. It is a normative approach of the ego that normalizes the way we derive knowledge about the external world and supports the scientific status of the main argument. However, as mentioned above, a conceptual identification, necessary for validating the argument, could be challenged, especially nowadays.
Concluding, Tarde, a truly daring but also totally undisciplined mind, according to Latour,[357] seems enthusiastic. This enthusiasm stems from the scientific discoveries of his time and the emergence of social theory as a compatible explanation of living organisms. This enthusiasm is also realized in philosophical terms. Through his analysis, he offers a comprehensive response to metaphysical causality, when stating that in phenomena it is not the large (e.g. the Divine) source of the small but the small (e.g. Science) is source of the large. His renewed socialized Monadology is structuring micro and macro reality like a society. All entities are primarily mind and body and members of a society; and this knowledge is the only reliable knowledge of being we have.

357 Latour, 'Gabriel Tarde and the end of the social', 118.

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CHAPTER 11

TARDE'S HERITAGE AND THE BIOGRAPHICAL METHOD IN SOCIAL RESEARCH: THE CASE OF MIGRATION

Katerina VASSILIKOU

ABSTRACT

Tarde gives a preeminent place to the psychological forces of belief and desire. He is not interested in the individual but in inter-individual psychology, i.e., the relations between individual consciousnesses linked by the laws of imitation. By examining the beliefs and desires of individuals, he works at the micro-social level, in opposition to quantitative social science. What interests Tarde is the portrait of the man who is made and unmade in contact with others as well as the portrait of a society which is constantly shaped by invention, imitation, and the subjectivity of the social actors. Inspired by Tarde's tradition, biographical analysis can be used to understand recent migratory phenomena such as migrant networks, migrant-transnational family as well as the individual strategies of migrants that the notion of structure would not suffice to explain.

Keywords: Social research, Chicago school, biographical-interpretative method, migration

INTRODUCTION

Gabriel Tarde (1843-1904), who competed with Émile Durkheim (1858-1917) for the predominance in French sociology, was largely forgotten, only to be rediscovered a few decades later. Tarde draws on philosophy and metaphysics to construct a theory of society. Unlike Durkheim, he tried to understand the social from the individual's point of view. For him, the only social reality is the existence of individual consciousnesses linked to one another by the laws of imitation. Imitation acts like a wave or magnetic current, spreading from individual to individual. Tarde considers this fact to be the fundamental principle of the social fact. Imitation lies at the heart of all social life and explains both human relations and history. History is nothing other than the process by which individuals invent by imitating each other, from one civilization to the next.

Bruno Latour, in *Changer de société. Refaire de la sociologie* (2007), argues that Tarde's contribution to the social sciences was decisive, because he was able to make the human sciences independent from biology (he was against deterministic theories, for example in relation to crime: the causes of crime are to be found in the social and psychological origins of criminals, and are not of biological origin), and to show the importance of psychology in understanding human behavior.

In *Les lois sociales* (1899) Tarde states that the relationship of two persons is the unique and necessary element of social life, and always consists, originally, in an imitation of one by the other. He argues that nobody says a word that isn't an unconscious reproduction of past verbal articulations with a connection to the actual ones, that doesn't reproduce traditional gestures and formulas, through the imitation of the ancestors, and that doesn't perform any act which has not been taught nor copied from a living model. According to Gilles Deleuze, in *Différence et Répétition* (1968), Tarde is a leading philosopher and inventor of micro-sociology, that attributes to the psychological forces of desire and belief their rightful importance. In Tarde's theory, these are forces that enable individual consciousnesses or social groups

to act and imitate one another. By the notion of belief, Tarde means the credence an individual can give to a set of representations and to a particular value system. It is belief which enables imitation, and it is desire which enables invention, as belief fosters the desire, which in turn fosters the belief.[358]

THE CHICAGO SCHOOL AND BIOGRAPHICAL RESEARCH

It is precisely with this micro-sociological approach that Gabriel Tarde -along with other sociologists such as Georg Simmel (1858-1918), Charles Cooley (1864-1929) and Georges H. Mead (1863-1931)- influenced the famous Chicago School. Tarde's social psychology was a major influence on the School's symbolic interactionism.

We will subsequently give in brief the history of the School.[359] The Chicago School is at the origin of American sociology. At the end of the 19th century, the city of Chicago underwent tremendous expansion, growing from around 5.000 inhabitants in 1840 to 1.700.000 in 1900 and 3.500.000 in 1930, at the same time as industrialization attracted migrants from all over the world. Among them were the Poles, who were to be the research material for a major work by William Isaac Thomas (1863-1947) and Florian Znaniecki (1881-1956). They wrote a 5-volume work on the *Polish Peasant in Europe and America* (1918-1920). This study constitutes an important contribution since the personal life was for the first time considered a specific social domain and the concrete individual was placed at the center of the sociological research. Fieldwork, which had been the specialty of anthropologists, became a sociological practice, enabling many sociologists to study the communities of Chicago and other cities. Chicago, described as a 'social laboratory', was studied from the angle of the spatial distribution of communities and social classes. Successive waves of migrants transformed the city, while at the same time they were shaping their own space.

Regarding Thomas and Znaniecki's *Polish Peasant,* it is the situation of migrants that became the subject of the first biographical research based on written or oral biographies; with their study, for the first time, social reality was approached from a biographical perspective. Thomas and Znaniecki used mainly written material and set themselves the task of reconstructing and analyzing the changes in the life of the Polish community and how these manifested through the lives of its members. By examining the evolution of Polish migration to America in the early 20th century, the two researchers demonstrated that the ruptures in the lives of migrants were not simply the result of social mutations in Polish society or the Polish community in America. Thus, people's personal lives were seen as a proper domain of social objectivity, where a social transition was taking place, and the concrete or actual individual became the focus of sociological research interest. The above study has enabled the view of individuals not as the sole vehicles of social structures, but as actors, who try to cope with difficult situations by seeking and developing solution practices. This is what we named above 'symbolic interactionism', which starts from the idea that individuals don't conform to social facts but produce them through their interaction.

Thomas and Znaniecki (1918: 20) express this interaction in the following terms: "there are two fundamental practical problems which have constituted the center of attention of reflective social practice in all times. These are (1) the problem of the dependence of the individual upon social organization and culture, and (2) the problem of the dependence of social organization and culture upon the individual". The two researchers gave the biographical method the central role in the sociological research: "The general character of the work is mainly that of a systematization and classification of attitudes and values prevailing in a concrete group. Every attitude and every value, as we have said above, can be really understood only in

358 For more on Tarde's theory and its rediscovery, see Alliez (2009).
359 For the Chicago School history, see Cortese (1995).

connection with the whole social life of which it is an element, and therefore this method is the only one that gives us a full and systematic acquaintance with all the complexity of social life" (Thomas and Znaniecki, 1918: 77).

THE BIOGRAPHICAL APPROACH IN EUROPE

Although the Chicago School made use of autobiographical documents and material, a coherent biographical method was not really developed at that time. Later, in the 1950s and 1960s, the qualitative methodology and, particularly, the biographical approach were limited due to the rise of structuralist thinking and the retreat of the subject regarding the structure (Pineau & Le Grand 2002: 45). Then, after a period of intensive valorization of collective actors, there was a turn in the 1970s and 1980s towards the re-use of autobiographical documents, through oral history and biographical research. Biographies became an appropriate and effective way of thinking the interaction between individuals, groups, and society. Even though biographical research was established in the early 1970s, in various European countries (England, France, Germany, Holland, Italy, Spain), it was not diffused everywhere in the same way (Chamberlayne, Bornat, & Wengraf, 2000).

An account of the development of the biographical method was given by Daniel Bertaux and Martin Kohli (1984) who, in reactivating it in Europe, approached this method by focusing on two dimensions: (a) the symbolic dimension of social life and its significance for individual life, and (b) the consideration of interviewees as source of information. This perspective would enable the researcher to study the articulation between biography as a social construct and objective everyday life, i.e. to consider biography integrated into social reality. On this point, an important distinction must be made: the expression 'life story' has replaced the term, used in the social sciences, 'life history', since the latter did not offer the possibility of distinguishing between the history lived by a person and the account, he or she might give of it (Bertaux, 1997: 6). The objective story, lived by a person, is something distinct from the account given by this same person in specific circumstances. Thus, several accounts of the lived experience of the same social situation could overcome their singularities to gradually achieve a scientific representation of the social components of the situation (Bertaux, 1997: 33). Daniel Bertaux uses life stories to assemble and analyze the experiences of people, with a view to elucidate the relationship between the particular and the general (Bertaux, 1997: 5).

In this new direction of biographical methods, the biographical-interpretative[360] is included, strongly influenced by historical reality and especially by significant historical periods like the Second World War and the emergence of Nazism, a phenomenon that played an important role as subject-matter of research in biographical studies. On the one hand, the autobiographical approach has, thus, been able to develop and on the other hand, it seemed to offer people the possibility to rebuild their lives, giving, alongside dramatic historical events, a sense of continuity in their life course. The biographical-interpretative method combines an open and unstructured data collection with a rigorous analysis of the data. The process allows each interviewee to develop a gestalt, a main story, without being interrupted by the researcher. In the second part of the interview, once the interviewee states that her/his narrative is over, the researcher focuses on the individual elements of events through internal to the narrative questions.

360 As to the biographical-interpretative method, see: Rosenthal, Gabriele (2004). Biographical Research. In Cl. Seale, G. Gobo, J.F. Gubrium and D. Silverman (eds), *Qualitative Research Practice*, 48-64. Thousand Oaks, New Delhi: Sage Publications; Breckner, Roswitha (2003). Biographical Continuities and Discontinuities in East-West Migration before and after 1989. Two case studies of Migration from Romania to West Germany. In H. Robin, R. Miller and E. Zdravomyslova (eds), *Biographical Research in Eastern Europe-Altered Lives and Broken Biographies*, 191-209. Hampshire: Ashgate; Breckner, Roswitha (1999). The Biographical-Interpretative Method-Principles and Procedures, Annexe. In Pr. Chamberlayne, M. Rustin (Project Co-ordinators), *From Biography to Social Policy, Social Strategies in Risk Societies*, Sostris Working Paper 2, 91-104. Centre for Biography in Social Policy, Sociology Department, University of East London.

The difference of the biographical-interpretative method from other ones in the field of biographical research is that in the former a detailed analysis and interpretation of the data of one life story selected from all the narratives of the sample is carried out through consecutive stages: the presentation of the subject's biographical data, which lists the chronology of his/her real life experiences; the biographical analysis where propositions and assumptions about the life history are made, which are intended to show how the individual has built his or her life around successive or discontinuous choices; the thematic analysis in which the parts of the narrative are placed in one of three discourse forms, argumentation-evaluation-description and, last, the reconstruction of the life story is carried out, which is, in fact, the interpretation of the interviewee's discourse. Finally, there is the comparison of biographies. The comparison leads to the sociological analysis itself. This phase makes extensive use of the principles of 'grounded theory' developed by B. Glaser and A. Strauss[361], according to which the starting point of the analysis is an empirical phenomenon (in the case of this method a narrated event or a part of the text of the narrative) which must be interpreted through a more general observation initially formulated as a hypothesis.

MIGRATION AND BIOGRAPHICAL-INTERPRETATIVE METHOD

In my research on migrants in Greece (Vassilikou, 2007; 2021), I used the biographical-interpretative method to examine the phenomenon of migration and, particularly, women's migration and family. Since migrant women face situations that they are often unable or unwilling to talk about, approaching their life stories with this method enabled the decoding and analysis of their experiences. In the actual economic system that increases the chances of voluntary or forced movement of populations, it is likely that many women will leave their children behind for long periods of their lives; a significant part of the resulting instability that marks family relations falls on the shoulders of migrant women who, as we have seen in these studies, are to a large extent the main factors in conceiving a life plan for the family and maintaining its unity. These dynamics, together with new transnational practices using new media of family communication, constitute a complex habitus of contemporary migration.

Like in Thomas and Znaniecki's work on *Polish Peasant* where for the first time migrant social reality was examined from a biographical perspective, we could say that biographical analysis, inspired by Tarde's tradition, can be used to understand recent migratory phenomena such as migrant networks, migrant-transnational family as well as the individual strategies of migrants that the notion of structure would not suffice to explain. Biographical structuring is multi-relational, since it concerns and produces a web of events and choices that can be combined and continually reinterpreted throughout one's entire life; it is a means of linking the individual and society (Fischer-Rosenthal, 2000). From this perspective, the reality of situations and events is the product of the meaning they acquire in each narrative, a sense of continuity through a complex of discontinuities, interruptions and restarts, elements that characterize the multiple 'lives' that are lived over the course of the migrant's life.

CONCLUSION

Tarde, inventor of micro-sociology according to Gilles Deleuze, gives a preeminent place to the psychological forces of belief and desire. He is not interested in the individual but in inter-individual psychology, i.e., the relations between individual consciousnesses linked by the laws of imitation. By examining the beliefs and desires of individuals, he works at the micro-social level, in opposition to quantitative social science. What interests Tarde is the portrait of the man who is made and unmade in contact with others as well as the portrait

361 Glaser, Barney and Strauss, Anselm (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research.* Chicago: Aldine.

of a society which is constantly shaped by invention, imitation, and the subjectivity of the social actors. Thus, his method makes the separation between the individual and the social non-operative.

The initial question of the biographical approach in social research is how the autobiographical documents represent social facts. The biographical structuration, which is a means of connecting the individual to society, is multi-relational because it concerns and produces a network of events and strategic choices made by the individual; these experiences can be combined and continuously reinterpreted throughout life revealing how the social actors construct the social environment in which they live as well as they depend on. Tarde's theory is thus shown to have deeply influenced the biographical approach in social science.

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