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On the Supposed Societies of Chemicals, Atoms, and Stars in Gabriel Tarde

GRAHAM HARMAN

Gabriel Tarde lived from 1843 to 1904. A failed rival of Émile Durkheim for dominance in French sociology, Tarde fell into obscurity for many decades before enjoying a resurgence, due largely to the admiration of Gilles Deleuze and Bruno Latour. Tarde's sparkling 1895 treatise *Monadology and Sociology* has recently been translated into English by Theo Lorenc,¹ and will serve as the topic of the present article. In the words of the publisher's description, this sixty-page treatise "sets out a theory of 'universal sociology,' which aims to explicate the essentially social nature of all phenomena, including the behaviour of atoms, stars, chemical substances and living beings. [Tarde] argues that all of nature consists of elements animated by belief and desire, which form social aggregates analogous to those of human societies and institutions."² What person of any degree of imagination could resist a book described in this way? If there is any possibility of including non-human entities in the political sphere, Tarde seems

¹ Gabriel Tarde, *Monadology and Sociology*, trans. and ed. Theo Lorenc (Melbourne: re.press, 2012). All parenthetical references in the article are to this work, and will consist of chapter number in Roman numerals followed by page numbers in Arabic numerals. For example: (IV, 30) refers to Chapter IV, page 30 in the re.press edition.

² From the publisher's online advertisement, found at <http://re.press.org/books/monadology-and-sociology/>.

like an excellent candidate for the job. Nonetheless, I will claim that this impression is largely illusory.

In the first sentence of the book, Tarde gives us the name of his hero philosopher, who in some respects is also my own: "The monads, children of Leibniz, have come a long way since their birth" (I, 5). The Leibnizian monads, those tiny atomic souls spread throughout nature, strike many readers as the quaint residue of an archaic era of speculative philosophy. By contrast, Tarde sees the monads as penetrating the whole of natural science in his time. "Monads" is a Greek-derived term that would be "units" in the Latinate.³ *Monadology and Sociology* was written half a decade before Max Planck discovered that heat comes in discrete packets, or *quanta*; this was soon followed by Einstein's quantum theory of light and his proof of the existence of atoms through his explanation of Brownian motion, then Bohr's theory of electrons jumping between discrete orbits in an atom. Nonetheless, the move towards a discrete rather than continuous nature was already underway in 1895. Chemistry had been marching away from continuous matter towards discrete individual atoms throughout the nineteenth century: "The progress of chemistry leads us to affirm the atom and to deny the material continuity which the continuous character of the physical and living manifestations of matter, extension, movement and growth seem superficially to reveal" (I, 5-6). Tarde cites F. A. Lange as holding that for Newton gravitational force does not occur between large-sized celestial

³ And "units" is in fact the favored term of object-oriented philosopher Ian Bogost in *Unit Operations: An Approach to Videogame Criticism* (Cambridge, MA: MIT Press, 2006).

bodies, but is only a sum of the gravity of all the tiniest particles of which these bodies are made. So too in biology, where "the founders of cellular theory have shown themselves to be Newton's true heirs. In the same way they have broken apart the unity of the living body, they have resolved it into a prodigious number of elementary organisms, isolated and egoistic..." (I, 6). Tarde grasps a similar possibility for the study of history. Though he cites no forerunners for this claim, Tarde is adamant that we need "a clearer and more positive form of explanation, which accounts for a given historical event only by individual actions, and particularly by the action of inventive men who served as a model for others and reproduced thousands of copies of themselves, like mother-cells of the social body" (I, 8). He even praises Antoine Augustin Cournot for supplementing Darwin with a theory of "*evolution by leaps or crises*" (I, 13), like Stephen Jay Gould in more recent times, again privileging the discrete over the continuous. Although Tarde enjoys great favor with Deleuze and hence with Deleuzians, he puts a rather un-Deleuzian spin on this theory of discrete individuals, speaking openly of "the superiority of substantialist systems throughout history, from Democritus to Descartes, over the liveliest of dynamistic doctrines" (II, 20). And in yet another challenge to fashionable contemporary dogma, Tarde adds that "the idea of force leads naturally to the idea of substance... [against] the agitations of an illusory phenomenalism..." (II, 20).

All this might suggest that Tarde offers a jungle-like landscape made up of individuals of every shape and scale: with atoms at one level, cells at another, and autonomous human geniuses shaping history at still another. But this is not the case. For Tarde just as for his hero Leibniz, monads exist at one level only: the

tinest level. Tarde notes that "scientists who live in daily contact with the so-called elements have no doubt of their complexity" (I, 8), and for him the complexity of such non-ultimate entities as chemical elements means that they cannot have inherent unity and reality of their own. He cites the prominent chemist Marcelin Berthelot as saying that "the deeper study of the elementary masses which, on our current understanding, constitute the simple bodies leads every day more and more to an understanding of them not as indivisible atoms, homogenous and admitting of movement only as a whole, but as highly complex constructions, furnished with a specific architecture and animated by highly varied internal movements" (cited at I, 8-9). In short, there is a descent into the infinitesimal. Visible finite things are simply the bulk summation of many tinier things that serve as the ultimate source of all things in the cosmos: "Everything comes from the infinitesimal and everything returns to it; nothing in the sphere of the finite and complex—a surprising fact which nobody is surprised at—appears suddenly, nor dies away. What should we conclude from this, if not that the infinitely small, in other words the element, is the source and the goal, the substance and the reason of all things?" (I, 11). The idea that new autonomous entities might *emerge* at each layer of the cosmos strikes Tarde as absurd. For instance: "It is truly surprising to see men of science, so stubborn in repeating at every turn that nothing is created, admit implicitly as though self-evident that relations between distinct beings can of themselves become new beings numerically added to the former" (V, 35). Or restated more sarcastically: "Once embarked on this course, there is no reason to stop: every harmonious, profound and intimate relation between natural elements becomes the creator of a new and superior element,

which in turn assists in the creation of another yet higher element at every step of the scale of phenomenal complexity..." (V, 35-36). In order to forestall such proliferation of entities at every layer of the cosmos, Tarde asserts that in the case of human societies, "however intimate, profound, and harmonious a given social group may be, we will never see springing forth *ex abrupto* from among its members, to their surprise, a *collective ego* which is real and not only metaphorical, a marvellous outcome of which these individuals would be the conditions" (V, 36). Since this is precisely what many people do hold, it would be nice to read an actual argument by Tarde on this score. But he is adamant that whatever looks like a collective entity is really just one or more micro-entities asserting themselves against the others. For example: "Doubtless there is always one member [of a human social group] who represents and personifies the whole group, or else a small number of them (like the ministers of a State) who, each in a different respect, individualize it no less entirely in themselves" (V, 36). Again, nothing exists but the tiniest things. Here Tarde sounds much like the analytic philosopher Peter van Inwagen,⁴ who believes in nothing but physical simples and living organisms, denouncing the supposed existence of all intermediate and large-sized entities.

The difference between Tarde and van Inwagen, of course, is that Tarde thinks physical simples *are* living organisms. The hypothesis of monads, which Tarde fully supports, "implies both the reduction of two entities, matter and mind, to a single one, such that they are merged in the latter, and at the same time a prodigious multiplication of purely mental agents in the world"

⁴ Peter van Inwagen, *Material Beings* (Ithaca, NY: Cornell University Press, 1990).

(I, 5). To give just one practical instance, Tarde cites a report from G. J. Almann that "the movements of spores seem frequently to obey a real volition; if the spore encounters an obstacle, it changes direction and moves back by changing the movement of its cilia" (cited at II, 22). Tarde adds approvingly that "a railway mechanic could do no better" (II, 22). If we accept Tarde's general hypothesis, "the movement of bodies would be nothing other than types of judgements or objectives formulated by the monads" (II, 17). Souls are characterized by belief and desire, which serve respectively as the grounds for affirmation and will (II, 16). This links Tarde unexpectedly with the pessimistic metaphysics of Schopenhauer and Eduard von Hartmann (II, 21), while also providing an unusual point of entry into sociology and politics. Speaking of belief and desire, Tarde asks both rhetorically and beautifully: "Is it not clear that with their reciprocal combinations, passions and intentions, they are the perpetual winds of history's tempests, and the waterfalls which turn the mills of politics?" (II, 21). And more decisively: "[belief and desire] alone can produce societies" (II, 21).

Given that there is no soulless matter and that all is purely mind, it is not metaphorical to speak of "societies" at the infra-human levels of the world. Indeed, "*everything is a society... every phenomenon is a social fact*" (IV, 28). Tarde thinks this merely ratifies what science is already learning on its own: "Science tells us of animal societies... of cellular societies, and why not of atomic societies? I almost forgot to add societies of stars, solar and stellar systems" (IV, 28). But paradoxically enough, for Tarde there is really no such thing as societies of chemicals, atoms, stars, or even humans. There exist nothing but the infinitesimal monads, and these group together into larger units only in the sense that

some dominant monad takes control for as long as a given entity exists. For even if a cell acts as if it were animated by a single soul, "we must rather conclude that it was only the soul of a whole people of workers" (II, 22). When we study "nature, rocks, water, or even plants," we find that each is "a hermetically closed world of elements" (VII, 56). Celestial bodies themselves are created by the dominance of individual monads, as in the following bizarrely beautiful passage: "there still exists, we maintain, at the heart of the sun, the conquering atom which by its individual action extended by degrees to the whole primordial nebula, disrupted the contented state of equilibrium which, we are told, the latter enjoyed" (VIII, 62). The same process holds at the level of humans, who are not unified Christian souls, but swarms of infinitesimal germs: "I call consciousness, soul, mind, the transitory victory of an eternal element, which by some favourable chance rises above the obscure realm of the infinitesimal, to rule a people of brothers who are now become his subjects..." (VIII, 65). The end of this transient reign is described just as Leibniz described it, but even more poetically: "I call death the gradual or sudden dethroning, the voluntary or forced abdication of this spiritual conqueror who, like Darius after Arbela and Napoleon after Waterloo, Charles V at Yuste and Diocletian at Salona, but even more completely stripped bare once more, returns to the infinitesimal where it was born and whence it came..." (VIII, 65).

We have seen that, like Leibniz, Tarde proposes a world made up entirely of infinitesimal monads, in which all larger-scale entities -chemicals, atoms, stars, humans- are merely the result of one dominant monad organizing less dominant collaborators to do its bidding. Where Tarde and Leibniz differ most is on the topic of knowledge and communication. We know that

for Leibniz, "monads have no windows."⁵ They are cut off from direct communication with each other, and mirror each other only through the mediation of God, who makes no appearance in the remarkably secular pages of *Monadology and Sociology*. By contrast, Tarde does not think that monads are windowless at all. Instead, "the whole external universe is composed of souls distinct from my own but fundamentally similar" (II, 15). Accordingly, "if it is the case that this being in itself is fundamentally similar to our own being, then it will no longer be unknowable, and may consistently be affirmed" (II, 15). Whereas "Leibniz made each [monad] a *camera obscura* where the whole universe of other monads is represented in a reduced form and from a particular angle," Tarde favors "open monads which would penetrate each other reciprocally, rather than being mutually external" (III, 26). Citing Newtonian gravity with its action-at-a-distance (refuted two decades later by Einstein), Tarde exults that monads cannot be mutually impenetrable (III, 26). Whereas Leibniz viewed the monad as a "microcosm" closed in on itself, Tarde views each monad as the entire cosmos itself, since it directly grasps all other monads (III, 27). Having begun the book with a discontinuous landscape of discrete units, Tarde emphatically turns the tables midway through: "What do we place within the ultimate discontinuity if not continuity?" (III, 27). Instead of a series of self-enclosed chambers as in Leibniz, the world is a gigantic relational whole in which all infinitesimals make contact at a distance. Here lies the root of Tarde's project of shifting thought from *being* to *having*: "All philosophy hitherto has been based on

⁵ G.W. Leibniz, *Philosophical Essays*, trans. Roger Ariew and Daniel Garber (Indianapolis: Hackett, 1989), 214.

the verb Be, the definition of which was the philosopher's stone, which all sought to discover. We may affirm that, if it had been based on the verb Have, many sterile debates and fruitless intellectual exertions would have been avoided" (VII, 52). This shift to having would amount to embracing an openly relational conception of the world, through which science supposedly outshines philosophy (VII, 54).

We have seen that Tarde's universal sociology condemns most purported entities to non-existence. What really exists are the infinitesimals, universally in contact with one another, but sometimes locally shaped into specific things under the guidance of a dominant monad. Here Tarde joins the pre-Socratic philosophers and many scientists in *undermining* objects by reducing them to tiny subcomponents. But at the end of the day, despite beginning with a discrete cosmic model of atoms, cells, individual humans, and other quanta, Tarde fuses all these entities into a gigantic relational whole. Being is replaced by having; an individual is nothing more than those other individuals it touches. The universe becomes even more a hall of mirrors than it was for Leibniz, for it is now one gigantic Versailles of mirrors rather than trillions of micro-mirrors sealed off from contact with all others. If Tarde's move to the infinitesimal was a way of undermining objects, his talk of immediate having at a distance is a form of what I call *overmining*, since it identifies monads exhaustively with their interactions with others.⁶ It should come as no surprise

⁶ For my previous discussions of the overmining/undermining doublet, see the following publications: "On the Undermining of Objects: Grant, Bruno, and Radical Philosophy," in *The Speculative Turn: Continental Materialism and Realism*, ed. Levi Bryant, Nick Srnicek and Graham Harman (Melbourne: re.press, 2011),

that Tarde affirms both the smallest part of the cosmos (the infinitesimal unit) and the largest (the relational whole), while mocking the existence of everything in between. For as I have often argued in print, these two extremes are almost always parasites on one another, to such an extent that I have called this twofold philosophy “the beast with two backs.”⁷ Parmenides denounces all individual beings, leaving us with nothing but a unified lump, but then must account for plurality by affirming a plurality of things in the sphere of *doxa* or opinion. Mainstream scientific naturalists reduce the world to tiny particles, but to safeguard scientific knowledge they must affirm that the properties of these particles are isomorphic with human knowledge - which is not itself a tiny underlying substratum, but a surface located at some remove from this substratum. Throughout Chapter VI of *Monadology and Sociology*, Tarde gives wonderful descriptions of how higher-level entities might seem to an outside observer to emerge beyond the infinitesimal through a merely subtractive process of simplification. “Forms are only brakes and laws are only dykes” (VI, 46), meaning that whatever seems homogeneous and unified actually swarms with internal diversity. But to be made of parts does not necessarily mean to be *reducible* to one’s parts, since those parts may shift or be replaced without this changing the thing they join to compose. Tarde concedes in passing that things cannot be reduced upward to their foreign relations with other things, since “if [things] were only social... it would follow

21-40; “I Am Also of the Opinion That Materialism Must Be Destroyed,” in *Environment and Planning D: Society and Space* 28, no. 5 (2010), 772-790; Graham Harman, *The Quadruple Object* (Winchester, UK: Zero Books, 2011).

⁷ Shakespeare, *Othello*. Act 1, Scene 1.

that societies and nations would exist without change for all eternity" (VI, 48). In other words, if a thing were nothing more than its relations with other things, it would be identical with its relations, and would thus be devoid of any surplus allowing it to change from its current state.

Yet the same also holds in reverse. A thing also cannot be reduced downward to the domestic relations of its own internal components, since to paraphrase Tarde, it would follow from this that societies and nations would change unremittingly with each tiny change of its internal pieces. The single hair falling from the head of Obama, or from that of an iron worker, football player, or cat, would change not only the United States but the cosmos as a whole - a purely arbitrary assumption. From this we can see that we need a theory of intermediate objects larger than Tarde's infinitesimals, and smaller than his global network of havings and relatings. In between infinitesimals and relations there are objects, and in between them is also *being* rather than having. Indeed, there may be no infinitesimals or global relations at all. Without intermediate realities, there would be neither human nor inhuman societies, and no savagery of savage objects. There could be no societies of chemicals, atoms, stars, or humans. The world would be a colossal but tame savanna made up of tiny swarming creatures always already in contact with every other.