Science, Sensibility and Gender in Argentina, 1820-1852

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This article analyzes how scientific thinking evolved in Argentina during the 1820s and 1830s. I will focus on liberals' association of science with the emergence of a new male sensibility that feminized the role of men in society. This gendered scientific culture explains how liberals clashed in the 1830s with the policies of the governor of Buenos Aires, Juan Manuel de Rosas, whose hyper masculinist model based on the authority of the father was perceived not only as anti-civilization, but also as anti-science. This association of gender and science helps us to explain how the introduction of Darwinian ideas that seemed to support a more masculinist representation of evolution, now ruled by laws of survival and competition, was perceived as a contradiction of past ideas by the 1870s.

1. Introduction

This essay does not focus on the trajectory of researchers' lives and work, but on the context that explains how Argentina's scientific environment was related to the needs of nation building throughout the first half of nineteenth century. The departure point is the association between republicanism and science and how the latter introduced a gendered perspective that drastically contradicted the most masculinist interpretation of Darwin's theory by the last quarter of the nineteenth century. The scholarship devoted to the study of science in Argentina during the nineteenth century has made significant contributions to our understanding of how scientific ideas were popularized in the country, but has not considered the relationship between science and gender, particularly how science was associated to a male sensibility that feminized the men and promoted the cooperation and sense of brotherhood needed to build the nation before 1859. It is for this reason that I will analyze how the linkage of science, art, and gender

was developed from the 1820s and how this defined an idea of masculinity that was at the center of the disputes between conservative and liberals by 1830s. In part one I will discuss the context that allowed the emergence of a new male sensibility to form in the 1820s; in the second part, I will demonstrate how science and sensibility were crucially linked in the ideological civil war that confronted conservatives and liberals. As we will see, the former defended a masculinity understood as "natural" and materialistic, while the latter identified the culture of civilization/science as part of a feminine sphere that promoted self-transformation and progress.

My understanding of context is similar to that of Evelleen Richards, namely, that ideas are "read and given meaning" in an environment that already is charged with its own dynamic, which implies that any ideology means different things at different times (2018, p. 417). In this case, I will conclude by explaining how the pre-Darwinian context of the first half of the nineteenth century might help us to understand how gender categories were viewed after Darwin, and the role that this change had in a nation developed according to the science of the Enlightenment.

2. Republican Sensibility and Science

The process of independence in Argentina started in 1810, but the breakup with Spain was only finally declared in 1816. The institutional formation of the country followed a republican model that, while following the model of the United States, was abolitionist and more radical in its conception of freedom. By the 1820s the liberals who promoted this transformation understood manhood as related to the formation of the citizen, the man who understood himself as governed by the laws of the republic. This implied that education was central to promote the development of the new republican culture through the study of science, philosophy, literature, and art. In terms of gender, its understanding in Argentina was similar to what happened in France, where since the late seventeenth century there was a conviction "that an enlightened society should be constructed on the basis on reason, not superstition, and on the recognition of natural law, rather than the dictates of cultural constraint." This meant "reconsidering the social significance of biology and biological difference," which led to the thought that there was a sexual division of labor and "the necessary ascription of man and women" to separate roles in society (Offen 1986, p. 460).

Diverse authors contributed to the formation of republicanism. They wrote in English, French, and German and were read in multiple translations, or in summaries provided in the leading European journals of the time. It is important to remember that around the 1800s the opposition between science and the arts did not exist; rather, the real division was "between the realm of science, governed by reason, and that of practice,

or rule of thumb; and the apostles of science hoped to replace habit by reason in the affairs of life" (Knight 1990, p. 14). In the early nineteenth century, natural science was a component of the one culture of western Europe," and it was this unified view of knowledge that was so attractive intellectuals in the Americas (Knight 1990, p. 22).

England's utilitarianism, sensationalism, French scientific ideas, German Natürphilosophie and Romantic biology-all played an important part in the understanding of science and the culture of sensibility that were relevant in the particular liberalism created in Argentina. In the 1820s the influence of the *Idéologie*, developed by the French philosopher Antoine Destutt de Tracy, was very important to legitimize the development of the republic, as Klaus Gallo and Jorge Myers have explained (Gallo 1999, 2004; Myers 2003). This philosophy replaced the dominance of scholasticism in the Americas through the readings of de Tracy, the Marquis de Condorcet, Étienne Bonnot de Condillac, Emmanuel Joseph Sievès, Pierre Claude François Daunou, the Comte de Volney, Pierre Jean Georges Cabanis, and Pierre Laromiguière. This followed a common pattern in the Americas; for example, Félix Varela in Cuba and Thomas Jefferson in the United States were instrumental in introducing the work of de Tracy as part of the debates on the nature of republicanism. This philosophy also emphasized, through sensationalism, the study of physiology and also logic, which were understood as part of the republican science against the ideas of the political absolutism that was part of colonialism.

In 1822, through the influence of the Bernardino Rivadavia's administration, *Ideología* [Ideology] became a course taught at the university by Juan Manuel Fernández de Agüero, who published his lectures on the subject. In his class, students learned two important lessons: first, the connection between the physical and the moral; and second, a materialistic understanding of humans, which forced a revision of metaphysics and spiritualist positions. Men were not far separated from animals in this conception, and physiology emphasized the similarities across species. This perspective also introduced the importance of sensibility as a connection between thought and feeling.

De Tracy understood "the words *perception* and *idea* as synonymous in their most extensive signification, and for the same reasons the words *think* and *feel* as equivalent also when taken in all their generality" (de Tracy 1817, p. 40; emphasis in the original). This was due to the fact that "all our thoughts are things felt; and if they were not felt they would be nothing;" and sensibility was "the general phenomenon which constitutes and comprehends the whole existence of an animated being, at least for himself; and inasmuch as he is an *animated* being it is the only condition which can render him a *thinking being*" (de Tracy 1817, p. 40; emphasis in

the original). Sensibility was then the faculty "of being affected" by perceptions that might be agreeable or disagreeable, and this was what constituted "the faculty of willing" (de Tracy 1817, p. 41). An animated being, "and specially man," was endowed "with sensibility and activity, with passion and action," which meant "with wants and means." This turned sensibility into the key to understand humanity and also emphasized the importance of the environment in shaping the perceptions that led to action (de Tracy 1817, p. 41).

The culture of sensibility was also shaped in Argentina by romanticism, with its merging of nature and thought. Robert J. Richards has explained the connection between science and philosophy in the romantic conception of life, emphasizing how important the link between arts and science was in the Romantic sensibility that developed at the end of the eighteenth century. According to Richards, the "erotic power of nature thus transmutes into an artistic force that realizes beauty in another medium. Touch and vision, reason and sense combine in love to produce an aesthetic and intuitive understanding of the unity grounding nature and art" (2010, p. 400). Among Argentine intellectuals, these ideas were merged with the sensibility and perception as understood by de Tracy.

This explains why sensualist psychology was important so early in Argentina's educational efforts. It was the result of assimilating the French model, in which "reformist educational writers increasingly privileged sensation over reflection as a means for shaping the individual," an important influence on those who followed Enlightenment ideas in Argentina (Spary 2000, p. 196). As was the case in France, the "power to sense, sensibilité, was central to the making of natural historical knowledge," supported by the power of vision (Spary 2000, p. 194). Vicente F. López, in his autobiography, explained how he and the other students at the University of Buenos Aires were introduced to these ideas. His professor of philosophy was Diego Alcorta, a follower of Condillac and the French Ideologues. He had written a book manuscript on the subject, and his lectures were based on it. His use of psychology would be very important for his disciples in the future (López 1929).

This view of science and sensibility was reflected in the publication of *La Abeja Argentina* in 1822. Published by the Literary Society [Sociedad Literaria], founded in 1821, this was the fourth attempt at creating an institution that promoted Enlightenment ideas. In 1811 a "Club" was formed, and in 1812 the "Patriotic Society" [Sociedad Patriótica], followed by the "Society of Good Taste" [Sociedad del Buen Gusto] in 1818. Although they did not last long, they nonetheless show how the ideology that was so important by the 1840s had its roots in the country. The Literary Society published a weekly, *Argos de Buenos Aires*, in addition to

the monthly journal *Abeja Argentina*. Its twelve members belonged to the most important families of Buenos Aires, and Cosme Argerich, Juan Antonio Fernández, and Vicente López were the ones mostly responsible for writing about medicine and science (Gutiérrez 1877, pp. 3–229). *La Abeja* gained a reputation, even though it was not published for long. Alexander von Humboldt, for example, cited it in his *Personal Narrative of Travels* (1826, p. 252), and in 1835 it appeared mentioned in *The American Journal of Science and Arts* published in the United States ("On the Reality" 1835, p. 241).

In the first issue of *Abeja Argentina* it was explained that the union of science and art was very important to improve the nation, and for this reason the mission is described as "generalizing all type of knowledge" coming from civilized culture. The sciences are represented as "the image of movement," the needed impulse that transformed societies ("Origen" 1822, p. 24). In the case of medicine, the transformation came through "the rules of public and private hygiene [higiene]," which explains why the journal contained a section on sickness and prevention, and a popularization of scientific ideas ("Origen" 1822, p. 25). The creation of the University of Buenos Aires in 1821, and the school of medicine shortly after, were presented as an example of the new era of development in the country, since science was not able to exist and expand "without the influence of the government" ("Medicina" 1822, p. 71).

In other articles it is clearly mentioned that by the end of the 18th century an important change had occurred. This transformation helped to establish that "observation united to experience was the foundation of all the arts" [artes]. This new approach was translated to politics through "a new science" that belonged to the "moral class" ("La Balanza" 1822, p. 227). It was for this reason that the highest authority was "the professional, or scientist, that is, the authority of those men who make a profession out of an art or a science" ("Sofismas Políticos" 1822, p. 236). In this way "the sciences apply to the arts, and the arts to the public work" ("Ciencias" 1822, p. 247). Music, for example, was part of the union between science and arts.

The daily *Argos of Buenos Aires* featured regular musical criticism together with articles on politics, arts, and science. In one of them, the critic praised Juan Pedro Esnaola, who had perfected his skills as composer and pianist in Paris and Madrid, and whose minuets were later published in *La Moda* by Juan B. Alberdi, the future writer of the 1853 constitution. Upon his return to Argentina in 1822, Alberdi opened a music academy that was supported by the enlightened government of Buenos Aires. Instruction, following the liberal ideas of the time, was given to both men and women. Another article in *Argos* reflected proudly on the program of the opening concert attended

by many important politicians besides "female followers" (quoted in Alberto Williams 1897, p. 264).

On 11 November 1822, the first monthly concert demonstrated the progress made by the music academy. "Eleven of the most advanced girls beautifully played several pieces of the Italian and Spanish song cycle. Three male students helped with the choir together with the young teacher and director" (Alberto Williams 1897, p. 264). According to liberal views, artists were able to make nature beautiful through the study of philosophy, since the latter allowed the understanding of the "immutable laws of universal harmony," a unity in which "the moral and physical world" rested. Among the sciences, "the study of the natural sciences" was the "only origin of all human knowledge," and in the latter man should always base "the foundation of his concepts and works" ("Ciencias. Concluye el discurso" 1822, p. 358). The work of the recently created science commission was, then, "to classify the physical and mathematical sciences in a natural order;" to determine the limits "that their relations have among them, and with the arts and fine arts," in order to "perfect the moral man, and to enjoy the true freedom, and, as a consequence, happiness" ("Noticias Estadisticas" 1822, p. 354). Morality in republicanism was taught through science and the arts, which developed the aesthetics sense that was the distinctive feature of the new society.

Unlike what was defended by the conservatives, whose positions were closer to a Hobbesian perspective, natural law was understood by liberals as the relationship between man's extended knowledge and nature. The dependency that existed between the rights of nature and those of man constituted the principles of natural law. Truth was "the essential principle of the natural law;" justice and liberty resided "in the perfect agreement of the positive and natural laws, and in the meeting of truth, justice, and liberty the moral," which was "the origin of the political and social sciences." On the "perfect knowledge" of these sciences depended "its happiness." But this perfection was only the result of "experience," an experience acquired over time, a time that created a need that made possible the genius, "and the genius creates the arts. For this reason, the natural sciences are applied to the arts and public works" ("Ciencias" 1822, p. 246).

In the same vein, a speech given about the arts, public works, and fine arts intended "to indicate their relationship with the physical and mathematical sciences" ("Ciencias" 1822, p. 242). These ideas were reflected in a program for the study of post-elementary education that started with classes of "drawing, that teach us how to imitate," followed by natural history and languages. The second stage covered the study of math, and the third the study of the "general sciences, being those literary or political"

("Plan De Enseñanza" 1822, p. 141). These three sections followed the education plan put in place in France after the 1789 revolution, but with a larger emphasis on the sciences. The first section taught natural history, one foreign language, and Latin or Greek; the second section introduced aesthetics and geometry; and the third prepared students in Physical Sciences and mathematics (geometry, calculus, physics, astronomy, chemistry, and natural history), Literary Sciences (literature, ideology and grammar), and Moral and Political Sciences (natural law, philosophical history of people, political economy).

The educational plan demonstrates that by 1820s science was understood as a provider of a unity that reflected the interests of the nation and educated the youth in a way that formed a republican sensibility ("Plan De Enseñanza" 1822, p. 141). In analyzing the influence of scientific ideas coming from France, Jessica Riskin's work on science and sensibility is very helpful. As she demonstrated, there was an engagement of Enlightenment French science with sentimental English literature. Natural science and literature "were not far during the eighteenth century, nor were France and England" (Riskin 2002, p. 7). It is for this reason that the culture of sensibility was not restricted "to feminine, English, polite society," but the same preoccupations "were at work in the overwhelming male, French science." Sensualism, for example, named sensory experience "the only genuine source of knowledge," which created a suspicion of abstract theory since it banished Descartes's mind/body dualism (Riskin 2002, p. 8).

In 1824, an education that formed students according to a new sensibility that through science connected the arts was praised by the government of Buenos Aires. According to this text, the youth of this province and others in the country were acquiring means to improve the knowledge of moral and natural sciences. Political economy was also part of the curriculum starting this year, and there was also a school of surgery, chemistry and physics labs brought from Europe "to serve the teaching of natural sciences," together with new collections of minerals and natural species that would help the country's industry. Vaccination had fought the "forces of evil" and defeated diseases ("Mensaje del Gobierno" 1824, p. 5). This hopeful depiction of the situation did not last long. Soon this decade would be characterized as anarchic, chaotic, and dominated by violence, and liberal ambitions would be shaped by a very different reality.

3. Science, Sensibility and Feminization

By the 1830s, civil war had destroyed republicanism, and a dictatorship at the hands of the conservative governor of Buenos Aires, Juan Manuel de Rosas, took control of the nation. The culture that was promoted by the liberals in the 1820s was marginalized, and science and modern sensibility were displaced by an instruction that emphasized tradition and authenticity based on an authoritarian family model that placed the father in absolute control. Rosas also used the failure of republicanism in France, a nation that in 1830 became, again, a monarchy, as proof that the liberals' goal was far from an achievable reality. In 1833 Rosas retired to wage a campaign against the Indians, and it was on that military mission that he met a young Englishman named Charles Darwin, who was part of the H.M.S. *Beagle* expedition. The naturalist noted his early impressions of Rosas:

General Rosas intimated a wish to see me; a circumstance which I was afterwards very glad of. He is a man of an extraordinary character, and has a most predominant influence in the country, which it seems probable he will use to its prosperity and advancement.* ... His states are admirably managed, and are far more productive of corn than those of others. He first gained celebrity by his laws for his own estancias, and by disciplining several hundred men, so as to resist with success the attacks of the Indians. There are many stories current about the rigid manner in which his laws were enforced. (Darwin 1846, p. 92)

Darwin saw in Rosas a defender of civilization through his fight against the "savages" and a knowledge of nature that led to a highly productive commercial cattle industry. But by 1845 he regretted this admiring portrait, adding a footnote that read: "*This prophecy has turned out entirely and miserably wrong. 1845" (Darwin 1846, p. 92). In this section, we will see how this change can be explained by the actions of a new liberal elite that fought the dictatorship of the governor of Buenos Aires, among other things, through an international campaign in which civilized science and gender played a crucial role. This renewal of the association between the culture of sensibility and science pictured the political conflict as one characterized by the protection of a feminized civilization against a barbaric male and authoritarian power that crushed the hopes raised by revolutionary ideology.

After the military campaign during which he met Darwin, Rosas returned to his post as governor in 1835, and under his rule the country lacked a national political organization. The absence of a national organization, and of a constitution determining the type of government and divisions of powers, was not part of an unwitting plan on Rosas's part. He detested liberalism and its secular values "of humanism and progress." He identified liberals with "men of enlightenment and principles," freemasons who were subversives and "undermined order and tradition and whom he held responsible for the political assassinations which brutalized Argentine public life from 1828 to 1835" (Lynch 2001, p. 154).

As Jorge Myers explained, Rosas believed in the "natural' existence of social hierarchies," which were defined by three elements: merit, property and social distinction. Rosas's refusal to participate in a dialogue about the legality of his authority earned him a new generation of enemies among the young people born after the revolution of 1810, a group that aspired to reorganize the country according to what they called "civilized ideas" (Myers 1995, p. 47). Known as the "Generation of 1837," these young men's lives converged "at several important junctures. All were born within a decade of the outbreak of Argentina's independence struggle from Spain." Besides this, "for the next twenty years, as children and adolescents, they witnessed the violent struggles between unitarian and federalist partisans or between advocates of urban, liberal, Europeanized ideals and defenders of Hispanic traditionalism" (Katra 1996, p. 8). Tulio Halperín Donghi characterized the basis of their first stage of political activity in this way:

[it] seems to consider the hegemony of the educated class as the basic element of the political order to which they aspire. ... The hegemony of the educated is justified by the array of ideas and solutions that should permit them to provide effective direction to a society seen by the New Generation as essentially passive, just as it was the responsibility of the educated class to incarnate the very ideas whose possession granted them the right to govern. (1951, p. xiv)

Against the ideology of liberals, Rosas defended an "ideal of good government" that was represented by "a paternal autocracy, intelligent, disinterested and indefatigable" (quoted by Sierra 1972, p. 215). Rosas believed in the infancy of the nation and the need to wait for the natural development of society, an almost organic process that could not be altered by philosophical principles. His liberal enemies saw in his rejection of foreign ideas a defense of an "American System" or "Americanism" that promoted a primitive sensibility that did not transcend the limits of the most primitive organism. Vicente F. López, a member of the Generation of '37, described the intellectual influences that inspired the youth as related to the post-radical sources that resulted from the collapse of republicanism in France by the 1830s. They had begun to read with attention "Victor Cousin, Francisco Renato de Chautebriand, Alexandre Dumas (the elder), Edgar Quinet, Henri Saint-Simon, François Guizot, Pierre Leroux, Claudio F. Jouffroy, Walter Scott, Madame Staël, George Sand, François Villemain, Lord Byron, Désiré Nisard, Félicité Lamennais, Victor Hugo, and Alexis de Tocqueville" (quoted by Davis 1972, p. 72). This generation was shaped internally by the 1820s civil wars and also by the philosophical

and scientific literature that emerged from France after the restoration of the monarchy in 1830, which had given many liberals pause and filled them with uncertainty.

In an article written in 1839, Domingo F. Sarmiento, another member of the liberal youth and future president of Argentina, explained that the science of his time came from Saint-Simonian and Pierre Leroux's writings, the later the popularizer of the term socialism. According to Sarmiento, "the supreme thought" of the nineteenth century was "the continuous progress applied to all the human elements, science, art, industry and politics," and Leroux's synthetic thought was the one that would allow the continuing progress and creation (1839). Sarmiento's interpretation was correct, since the social science of the socialists "was not a closed system or rigid social blueprint. Rather, they assumed that it was a genuine experimental science, and that its findings must be achieved by piecemeal empirical trials combined with the fortuitous powers of inventive genius, just as any science achieves a theoretical and practical" breakthrough (Corcoran and Fuchs 1983, p. 8). In Facundo, his most famous book, written in 1845, Sarmiento explained that the French restoration meant for his generation the "vanishing of the illusions," which paused the emphasis on the natural and physical sciences as the main source of knowledge to favor the "social sciences" that could reorganize republicanism. From these sources it became clear that "Voltaire was not much right, Rousseau was a sophist, Mably and Raynal were anarchists, and there were not three powers, nor social contract, etc. etc." (1888, p. 44). This turning point revealed the importance of "race, tendencies, national habits, historical antecedents." Tocqueville revealed "for the first time the secret of North America, Sismondi discover[ed] for us the emptiness of constitutions; Thierry, Michelet and Gizot, the spirit of history" (Sarmiento 1888, p. 45). Eclecticism became the leading philosophy against the materialism of the Ideologues that had supported the development of the natural and physical sciences in the previous generation.

The focus of the new science was not on the natural world but on human society, which was "the focus of any moral, scientific, artistic or political inquiry." While socialism was a term that in England was used to oppose capitalism, for Leroux the opposition was framed as socialism and individualism (Corcoran and Fuchs 1983: 3). In terms of gender, this new ideology promoted a less authoritarian family structure, where the "indissoluble marriage" was eroded in an attack on monogamy, which liberated women from what was a limitation of their freedom (Corcoran and Fuchs 1983: 3). The fight for women's rights could follow many different paths, from the extremism of Enfantin and his *femme libre* to Hugo's and Leroux's emphasis on the importance of the family to socialize members

of society. These debates about the condition of women were followed by the young liberals in Argentina. Alberdi, for example, in *Tobias*, written in 1844 and published in 1851, made a parody of the extreme gender ideas of some French socialists.

In the present century, the sexes have had a tendency to become confused. The anatomical research of certain socialists has revealed that there is not, after all, any real organic difference between woman and man. This doctrine will doubtless lead the women of Paris, at this unlikely date, to renew the famous *Tennis Court Oath* in protest against their age-old duty to propagate the species. And if the men fail to assume this burden, God only knows how, and by whom, the human race will be renewed. (1886, p. 347)

The youth that emerged in 1837 attempted to renew the revolutionary thinking of 1810 that had failed to organize the republic. In order to do so, they emphasized their commitment to a new science that linked the emergence of a new male sensibility to revolutionary action in order to fight Rosas's naturalism and selfishness. Unlike Leroux, who opposed economic laisser-faire, this youth continued their support for English thinkers like Adam Smith, for example. Their enemies were authoritarianism, selfishness, and individualism, or Rosas's natural law against a gendered culture defined by progress and the aspiration to improve. In addition, romanticism and science were also merged by the intellectuals of this generation through their devotion to the work of Alexander von Humboldt, who was very influential in introducing a conception of gender linked to a vitalist understanding of nature.

This vitalism contradicted the previous mechanist interpretations and proposed instead a reconciliation of mind and matter. Matter was alive and able to activate itself, and it had principles of self-organization that promoted a teleological perspective that associated the organism with an internal plan of development. Applying this idea to gender, vitalists rejected a clear natural division of masculine/feminine roles, as it was defended by Rosas, and instead promoted the idea of cooperation, reciprocity, and interest in otherness and similarity. According to these ideas, the sexes could both exchange their mutual qualities, though the male was considered the active part and the female the receptive one. Humboldt believed that a "reconstruction of gender" was the "necessary condition for a leap in human consciousness and its progressive development" (Reill 2014, p. 72). Love became an important concept that defined the merging of the genders and their mutuality.

It was for this reason that one of Rosas's worse crimes was his inability to love others, to create a brotherhood of enlightened equals that led to the emergence of a perfecting society. This interest in philosophical and scientific ideas that were connected with conceptions of union and sameness resulted from the synthesis of a wide ideological repository, as it was in the 1820s. Against the individualism that traditionally had defined liberalism, this liberal generation was interested in ideas that promoted solidarity and commonality in order to restore republicanism. If Humboldt's views on science were helpful to understand nature and gender, French socialists, and particularly Leroux, was equally important to propose a new political order that defined "man by relation to his fellow man, using the term semblable, defining the individual by that which is common rather than by difference." The goal of this thinker "was to alleviate the conflicts between people by erasing the differences among them. This is significant for class differences as well as for sexual difference" (Andrews 2002, p. 706). His followers in Argentina, though, emphasized sameness to unite those who were part of the culture of civilization, but differentiated the former from the primitive, masculinist, barbarians that supported Rosas. Gender difference became for them more important than sexual difference, and for this reason they depicted themselves as part of a feminized society that defended a new sensibility that changed the world of the experiential. Science, literature, and the arts provided a feminine environment that allowed them to sense civilization and to think through its principles.

In the speeches given at the opening event of the Literary Salon (Salón Literario) in 1837, Marcos Sastre proposed, for example, the establishment of "scientific readings" that helped to discuss the philosophical ideas of "Vico, Herder and Jouffroi [sic]" together with the "poetic and religious accents of souls like those of Lamartine and Chautebriand," and, in general, the communication of "ideas and notions that were important in religion, philosophy, agriculture, history, poetry, music and painting." In order to bring together the group of young men that had gathered at the meeting, Sastre defined them as "virtuous, sensible, and enlightened," men who loved knowledge and possessed the "seed of genius" (Sastre 1837, p. 14). The convocation was not issued on the basis of Rosas's emphasis on force, material strength, and order, but rather on a call to unite "your souls with the divine bonds of love," making a wish that through "the harmony of your feelings, and the fragrance of your virtues," the youth would wake up from the abandonment of the time. Science and literature would be the areas on which the youth should focus, and an Argentine literature would promote "social improvement" [mejora social], allowing the authors to discover the "strings of their sensibility that were hidden in all hearts" (Sastre 1837, p. 24). This sensibility's mission was to "wake up men from the dreams of selfishness, screaming deep in their chests that "you are all brothers! And you must unite through the sweet bonds of love" (Sastre 1837, p. 24, emphasis in the original).

The "spontaneous result" of these feelings would be the creation of a "scientific establishment" which would fulfill "the national intellectual demand" (Alberdi 1837, p. 21). Obviously, these men were a great departure from Rosas's own views on manhood, based on a naturalistic and realistic understanding of political power that did not assume a future much different from the present. In his speech, Juan B. Alberdi repeated Sastre's message, affirming that the revolutions that had produced republicanism were the result of the "development of the human spirit" that would create the "definitive world." (Alberdi 1837, p. 34). In addition to Alberdi, the most prominent intellectual of the group was Esteban Echeverría, the author of the *Socialist Dogma*, the foundational text of this generation written in 1837. In it, there was also a reference to the importance of the 1830 revolution for his generation:

It is for this reason that we are looking for a manifestation of the historical *law of human progress* that was supported by Leibnitz and formulated by Vico in the seventeenth century. [this law] was also demonstrated historically by Herder, Turgot, and Condorcet in the eighteenth century and unveiled and discovered not long ago by Leroux in the development and manifestation of the continuity of life among all the beings of the visible creation and human societies. Thanks to this law all societies are destined to develop and perfect themselves over time, according to certain determined conditions, and in this we should find, and find ourselves in, the May revolution, the first page of our country's history. (Echeverría 1871, p. 307; emphasis in the original).

In this programmatic work, "politics, philosophy, religion, art, science, industry, and all the intelligent and material labor" would be used to found "the empire of democracy" against Rosas's dictatorship (Echeverría 1871, p. 191). In a letter written ten years later to answer the attacks on this text made by the intellectual behind Rosas's propaganda, Pedro de Angelis, Echeverría rescued the importance that science and sensibility had in the revolutionary culture that had founded the country. He defended his attempt to recreate "a social, scientific, and Argentine doctrine", and he admitted that there were two intentions behind this project; first, to elevate politics to a "true science," both in theory and practice; second, to oppose Rosas's view of society as "a machine," made of "materialistic triggers," that made impossible to think about a plan to perfect the existing chaos (1874a, p. 321).

Rosas (and de Angelis's) "social machines" were supported by "brute force," material strength, and a masculinist violence that was opposed

by the language "of science," which supported the revolution that had emancipated Argentina from colonialism (Echeverría 1874, p. 270). Philosophy was for Echeverría "the science of life in all its manifestations, from the mineral to the vegetal, from the vegetal to the insect, from the insect to man, and from the man to God." At the same time, the only useful science for man was the one that served the interest of the republic (Echeverría 1874, pp. 168-9). Democracy was possible because of the support of politics, philosophy, science, religion, art, and industry, all elements that developed "naturally, harmonically, and completely" to solve "the problem of the emancipation of the American spirit." Philosophy was "the eye of intelligence" that examined and interpreted "the laws that ruled and organized the physical and moral world, or the universe"; religion was the "moral foundation in which society rested," the "pure source of our future hopes, and the mystical scale from where the earth's thoughts reach heaven"; science taught "man to know himself, to penetrate the mysteries of nature, raise his thought to the Creator, and to find the means to improve and perfect the individual and the society"; and art comprised "in its divine inspirations all the moral and affective elements of humanity" (Echeverría 1874, p. 169). It is clear that, for Echeverría, America was not the material organism that limited progress defended by Rosas, but a spirit that developed into matter through democracy.

Echeverría merged science, literature and art through a sensibility that made the female the representation of modernity. His poetry is a clear example of this attitude. In the poem "La Cautiva," he describes a couple, Maria and Brian, who ended up trapped by the Indians in the Argentine desert. This text starts with a quote of Lord Byron that clearly indicates the gender tone of the whole poem. "Female hearts are such a genial soil / For kinder feelings, whatsoe'er their nation, / They naturally pour the "wine and oil" / Samaritans in every situation" (1870, p. 33). As Susana Rotker has written, the poem shows that the country and civilization are "in the hands of this woman who more than a wife seems the protective mother of her debilitated husband" (2002, p. 89). It is for this reason that what were considered male characteristics are shared by both men and women. While Brian is described as having a "virile face" [rostro varonil], María is characterized as possessing "male strength" [Fortaleza varonil] together with youth and beauty (Echeverría 1870, pp. 106, 131). The relation between the protagonists is a perfect example of the vitalist idea of gender mentioned above, and that those like Echeverría took from romantic sources. It produced the same effects in German authors, and the scholar Anne-Charlott Trepp characterized the result of this understanding of gender as "tender masculinity and self-reliant femininity" (quoted by Reill 2014, p. 72). Brian's sensibility made him a tender and fragile character, while María's confidence and strength balanced their relationship.

In front of this understanding of gender, Rosas appeared as a Hobbesian defender of a state of nature that negated the feminine presence. The latter was also represented in the association between the culture of civilization and femininity that could be found in the German and English texts that this generation read, even in French positivist sources. Auguste Comte, for example, believed that his own philosophical ideas had more affinity to women than to men of the working classes (1865, p. 223). In the process of fighting the old political system, Comte noticed that the female image represented all the values he was defending. As a representation of the "purest and simplest impersonation of Humanity" femininity served the purpose of embodying a different order that was an alternative to continuity and blood. It is for this reason that Humanity "can never be adequately represented in any masculine form" (1865, p. 224). This feeling was shared by those who defended the new sensibility based on the development of science, literature, and the arts.

A good example of this attempt to promote a culture of feminization was the publication, on November 18, 1837, of the first issue of La Moda [The Fashion]. Alberdi had been preparing this new project together with Rafael Corvalán, the son of a man who worked in the Rosas administration. It followed the example of the genres that evolved in France after the revolution of 1830, the journal of modes and moeurs. Magazines "such as La Mode (1829-54) and Psyche (1835-78) provided detailed accounts of the latest trends in fashion and toilette" (Bergman-Carton 1995, p. 30). The purpose of these publications was to nurture "the cult of the female consumerism that reached its full maturity during the Second Empire and cultivated interest among middle-class women in a new preoccupation: obsessive self-adornment" (Bergman-Carton 1995, p. 30). Using this model, Alberdi developed a publication that intended something different, the resurrection of the liberal male sensibility associated with science to oppose the masculinist and materialist power of Rosas. In La Moda, Alberdi restored the past culture that linked sentimentalism, Enlightenment, and social transformation. He knowingly adopted a feminine role in front of the manly model associated with primitive nature that characterized Rosas's political organization according to liberals.

In "The Present Generation versus the Past Generation," Alberdi mocked the criticism the liberal youth received from Rosas and his followers. The traditional associations of passivity and femininity are voiced by the story's protagonist, an old man identified with conservative, Rosist, values. For him the young admirers of Europe were "cowards who instead of weapons seek shields: insolent as women and children when a strange force protects their impotence," also, "[w]eak hypocrites full of greatness in their mouths and languor in their hands!" (1887, p. 386). *La Moda* stopped

publishing after 23 issues, the last in April 1838. According to Doris Sommer, this fashion magazine "was correctly suspected of fronting for the unmanly Europeanized 'fops'; it was a coy screen in both senses of hiding and showing, a womanly voice as the men's public organ." Moreover, according to Sommer, "Alberdi did not hesitate to describe himself as feminized, although the suggestion of homosexuality would have been an outrage." (1991, p. 88). Rosas's violent repression against the youth that had revived the ideology of the past, and established alliances with foreign powers, increased after their political statements. Between 1838 and 1840, the members of this association went into exile to begin a new stage in their struggle to the form the direction their nation ought to take. Their departure from the country reaffirmed Rosas's belief that they were youths without honor, valor, or patriotism, an accusation that would be the central theme of the exchanges between factions opposed to and within the exile community.

4. The Rape of the Civilization and Science

As it was mentioned, in 1845 Darwin revised his previous favorable comment about Rosas with a comment that repudiated his political system. Darwin knew the stories coming from the exiled community that characterized the "tyrant" as the enemy of civilization and science. For example, in a text published in English in Montevideo, the main center of the exile community, it was claimed that Rosas was "at times the self-avowed enemy of civilization and of her twin-sister commerce" (Rosas, and Some 1844, p. 6). A pamphlet written by Florencio Varela in the same city also reached a wide audience and influenced the opinion the liberals spread about Rosas. In an article published in the United States, Varela's words were cited, including his description of the goals of the dictatorship, described as being the "annihilation of every germ of morality, civilization and intellectual advancement," as demonstrated by the end of the government's support for the "literary, scientific and humane institutions" that had been established "and liberally maintained" by the previous administration" (Jenkins 1846, p. 161). Together with this destruction of civilization, frightful "tortures have been inflicted upon those who have fallen into the hands of the sanguinary tyrant," and were being reported both in the Americas and Europe. For example, "the noble and fearless O'Brien" was spreading word of the crimes in England, and the "voice of the companion in arms of the brave and illustrious Lord Cochran" was also being heard (Jenkins 1846, p. 161). The denunciations of the violent attacks reproduced the existent gendered dynamic, since the victims were those who symbolized civilization: the women and feminized men who were victims of the "Mazorca," Rosas's secret police.

In 1842, Pedro C. Avila, an alleged member of this organization, published a book in Lima, Peru, denouncing the governor of Buenos Aires, and

requesting foreign intervention to end a system of oppression that was at the service of the most barbaric forces. As a close witness of the events, Avila presented himself as a privileged commentator of the disgraceful situation in which Argentina had fallen. The members of the *Mazorca*, confused in the alcohol infused stupor that accompanied the torture sessions, heard every night such desperate and scary screaming that "not only made the house trembled, but also the entire neighborhood," a scene so disturbing that it led to the terror that dominated the whole city (Avila 1847, p. 94). "The painful moans of the beautiful sex arrived to heaven," but the carnage continued. One day a father was beheaded while embracing his six daughters, and once he was dead the secret police started to "kiss them on the head," ending the abuse by "raping them all" and destroying their home so they did not even have a place to sleep (Avila 1847, p. 22).

The popular rabble that participated in such acts took great pleasure in the sexual violence against women and men of the best families. In another incident, this time in the city of Cordoba, three small children were kidnapped and a ransom sent to the families. After the three mothers, all belonging to the best of society, had gathered all the money they could find, they begged for the freedom of their sons. But instead of seeing their children, they were raped and then shown the heads of their children "dripping blood and still moving," a spectacle so shocking that killed the mothers on the spot. The bosses then started laughing and "tied up the heads [of the children] to their mother's braids" (Avila 1847, p. 25). Avila makes clear that the dishonor of women who belonged to Unitarian families was part of a political strategy to terrorize society. Rosas gave his supporters permission to "rape the women that were known to be Unitarians." The author makes clear that he does not want to mention "the considerable number of people that had been raped because many of them are still alive," and also out of consideration for the families of those who had died, "among them Miss Dolores Amaral, one of the most interesting young women of Buenos Aires" (Avila 1847, p. 26).

The men of sensibility were the other popular target of Rosas's supporters. Avila described an order given to three hundred men "to get out to the streets with the sticks [vergas]" to hit "everyone who wears a frac, leva, or cape" (Avila 1847, p. 27). After a horrific beating session, the clothes were cut with a knife to change their symbolic meaning. A hole in a cape made it into a "poncho," a native piece of clothing that reflected the American values defended by Rosas. On another occasion the secret police received an order to beat up "everyone who we found without the red vest, without moustache, or whoever was wearing some blue or green piece of clothing, without exception of age, sex or marital status" (Avila 1847, p. 28). Another was to shave anyone who had a beard shaped into a U, the symbol of the

hated enemy. A manly culture of authenticity, associated with domination over femininity, was at odds with the emergence of a male subjectivity described as passive and dominated by outside influences. According to some of the exile publications, civilized men were also raped by the members of the secret police, who enjoyed the perverse act.

In the legal case against Rosas, a trial that took place after his defeat in 1852, Emilio Agrelo mentioned that the tyrant used to order "the extermination of all that was civilized: he rejected the moderate and progressive element in order to substitute it with ignorance and barbarism." This attempt to destroy civilization was another crime "that increased the catalog of those committed by Rosas" (Palumbo, *Causa Criminal* 1908, p. 24). In the documents presented by his accusers, Rosas was depicted as a figure who controlled the forces of nature against those who wanted to impose science and reason in the country. The experience created by the culture of sensibility was impossible in a country dominated by an environment deprived from the feminine sphere because of the masculinist supremacy that Rosas imposed with his rule (Avila 1847, p. 117). Against this logic, his enemies affirmed the undeniable civilized right to freethinking, making the campaign to exterminate European ideas and education a crime against humanity.

Conclusion

This essay analyzed how science and gender were associated among liberals in the first half of the nineteenth-century due to the political context in which scientific thought existed in Argentina. Since modern science was the result of a civilization that was symbolized as feminine, scientific culture was gendered. Those who defended the formation of an environment that developed a republican sensibility, grounded on the study of science and the arts, adopted a feminized identity that aligned them symbolically as enemies of Rosas's conservatism and natural primitivism by the 1830s. By this time, Liberals defended a science associated to a culture of sentiment that clashed with traditional values. The exaggerations that populated the exile press identified the feminine men with the feminine civilization they defended, which blurred the differences between men's and women's roles.

This Argentine liberal interpretation was ridiculed in 1850 by Pedro de Angelis, Rosas' defender and promoter, who included in his *Archivo Americano* an article written by the socialist Paul-Mathieu Laurent (also known as Laurent de l'Ardèche) published in the French journal *République* on January 8 the same year. In it appeared a defense of Rosas's authority as truly civilized and the only hope for the development of Argentina. Laurent was a historian and journalist, and an active participant in French political life as a disciple of Prosper Enfantin and a Saint-Simonian. In this

article he attempted to contradict the view that those Argentines in exile presented of themselves through their political propaganda. According to Laurent, the Unitarians who supported French ideas represented "the metropolitan element, the ancient colonial spirit, the predomination of the old world over the new, of the cities over the country districts, of the rich or privileged classes over the laborious masses, of speculation and foreign capital over native industry" (1850, p. 1). While Laurent's attack was related to French politics, and specifically the monarchy's involvement in the River Plate War, the use of this article by Rosas intended to show him in the role of the true civilizer.

It was somewhat inconsistent, that a Republic where the federal American party had an immense majority in its favour, should be governed by a man [Rivadavia] who represented in the highest degree the unitarian spirit, and the European genius. The noble qualities of this man justified this anomaly for a moment; but sound reasoning speedily recovered its ascendency. Rivadavia, besieged by popular clamours, had to abandon the reins of the Argentine State, and his withdrawal served to demonstrate two things: 1. that the real civilizer is he who only attempts to realize the progress which is immediately practicable, and who only undertakes reforms proportionate to the gradual development of the necessities and faculties of a community; 2. that Unitarianism and European preponderance were in such disrepute in South America, that no human power could mantain or cave them, not even that of knowledge and of virtue. (Laurent 1850, p. 8)

Presenting Rosas as an ally of civilization, and the Unitarians/Liberals as partners of the old regime that attacked modern republics and part of a corrupt youth, the article justifies Rosas's reticence to craft a constitution because of his concern for natural and local developments. Culture could not trump nature in the development of the republic.

The dictatorship ended in 1852, a year in which the liberal ascendancy finally imposed its rule, but by 1870 the beginning of the Darwinian revolution in the country started to put in doubt liberals' gendered views. At the beginning, those who embraced this new version of modern science recognized in sexual selection the possibility to perpetuate their views on the importance of a feminized social culture that relied on aesthetics; but by the 1880s this mechanism was not taken seriously among scientists and the dominance of natural selection started to be seen as too close to Rosas's ideological conception of the republic. Since the dominance of the new scientific culture imposed a view of nation building aligned to a slow organic process that paced change as internal and not dominated by the

external or artificial environments, social sciences seemed to be subordinated to biological process. In addition, the emphasis on competition and survival supported a more masculinist conception of gender that ridiculed the support of a culture driven by love, beauty, and unselfishness, an important factor in the shift that liberal thought experienced in what is so-called the "generación del '80." It is during this decade that the ideas about sensibility and gender entered a crisis that ended with the adoption of spiritualism and nationalism by the beginning of the twentieth century.

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