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Work in the Twenty-First Century and the Relevance of the Theory of Value*

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Abstract

This article is a review about the book of Ricardo Antunes, *The Meanings of Work: Essay on the Affirmation and Negation of Work* that has been released in United States (Haymarker books, 2013), United Kingdom (Brill Books, 2013) and India (Akkar Books, 2013). The author, Ricardo Antunes, is an internationally renowned scholar in the field of sociology of work with several publications in Argentina, France, India, Italy, Portugal, Spain, United Kingdom and United States. The author, Ricardo Antunes, is an internationally renowned scholar in the field of sociology of work with several publications in Argentina, France, India, Italy, Portugal, Spain, United Kingdom and United States. In the book, originally published in 1999 by Boitempo Editorial, Sao Paulo/Brazil, after his research conducted in 1999 at the University of Sussex, under the supervision of István Mészáros, Antunes starts with rigorous analysis of the increasingly heterogeneous and multifaceted configuration of the working class as well as the overlaps between productive and unproductive, material and immaterial labour, to restore and complicate the thesis of the centrality of labour and its importance in human sociability.

Keywords

Work, Labour Force, Capitalism

1. Introduction

Theory of flexible accumulation (Harvey, 1992, 2011) brought profound changes to the world of work, among others: huge structural unemployment, increasing

*Review: *The Meanings of Work: Essay on the Affirmation and Negation of Work*, Ricardo Antunes (Translated by Elizabeth Molinari).

Brill Books/Historical Materialism Book Series, Vol. 43, Leiden/ Boston, 2013, 235 p. (Published also by Haymarket Books, Chicago, 2013, IL., 248 p. and AAKAR Books, 2014, Delhi, 2014, 248 p.).

number of workers facing job instability and hyper-exploitation, all this result of social changes, oriented to production of goods and capital appreciation. Taylorism-Fordism accumulation crisis started in second half of decade of 1970, compelled companies to find a more complex, heterogeneous and multi-functional workforce, to be exploited in more intense and sophisticated way by capital (Antunes, 2013). Therefore, productive restructuration process is really nothing more than capital restructuration, to grant its expansion and accumulation. In every step taken to introduce technical and/or organizational innovations, there is an opportunity to overcome ways of resisting labour exploitation controls (Thompson, 2010; Milkman & Luce, 2013; Carter et al., 2014). More and more, companies benefit from neoliberal work deregulation to modify relations with working class via intensifying flexibilization processes, including such practices as outsourcing and subcontracting, temporary and group work and inflicting heavy defeats to trade-union movement born under Taylor-ford practices. For Harvey (2011: p. 16), “[...] neoliberalism legitimates draconian practices aiming to restore and consolidate capitalist class power”.

Taking this into account, present paper will analyze the book of Ricardo Antunes, *The Meanings of Work: Essay on the Affirmation and Negation of Work* has been released in United States (Haymarker books, 2013), United Kingdom (Brill Books, 2013) and India (Akkar Books, 2013).

2. The Meanings of Work and the Relevance the Theory of Value

The author, Ricardo Antunes, is an internationally renowned scholar in the field of sociology of work with several publications in Argentina, France, India, Italy, Portugal, Spain, United Kingdom and United States.

In the original book, originally published in 1999 by Boitempo Editorial, São Paulo/Brazil, after his research conducted in 1999 at the University of Sussex, under the supervision of István Mészáros, Antunes starts with rigorous analysis of the increasingly heterogenous and multifaceted configuration of the working class as well as the overlaps between productive and unproductive, material and immaterial labour, to restore and complicate the thesis of the centrality of labour and its importance in human sociability. The author argues for the ontological significance of work as an essential element of human existence.

The book is structured in eleven chapters, in which Antunes argues vigorously about the centrality of work in the contemporary world, both at a theoretical level, in so far as it is an explanatory category of human existence, and at an empirical level, of praxis, which involves societal transformation with a concomitant change in the proletariat’s material activity, consciousness, and social relations.

The central thesis of the book is that, despite the crisis established in capitalist society, it is possible to argue in favor of “[...] centrality of the category of work in contemporary societal formation, against the theoretical deconstruction

which was held in recent years” (p. 13). Antunes explicitly opposes Habermas’s theory, which affirms the preponderances of science and technology in the social relation in detriment of the work as the main productive force in contemporary society.

Leaning from Marx, Lukács and Mészáros, among others, the author argues that, to the extent that the capital needs living labour to breed, it is wrong to say that a capitalist society without exploitation of labour and founded on the preponderance of science as the main productive force is possible. For Antunes, one thing is capital’s need to reduce its variable dimension and increase the constant part; another thing is to realise that, as the living labour is eliminated, capital can continue to reproduce. The author is emphatic in stating that “[...] The abstract labour elimination thesis does not find theoretical and empirical support for its sustenance in the advanced capitalist countries like the US, Japan, Germany, let alone the so-called Third World countries” (p. 122).

Antunes (2013) corroborates with Marx for whom value is not a natural attribute of commodities, but a social relation that is materialised in them. Despite taking a variety of forms, the act of working is always a productive expenditure of the mind, muscle and human nerves. Work is therefore an intrinsic capacity of human beings who realise themselves by its action. It is concrete labour, endowed with specific skills and qualifications. In this sense, Braverman (1998) argues that over the course of history, knowledge has been expropriated from the working class and concentrated in the hands of property holders. Under capitalist relations of production, the means used by capital to further exploit workers, gain control over them and increase their productivity has been the technical division of labour, which emphasises the division between manual and intellectual work. In this process, only a small portion of the population has access to the conditions that make it possible to understand the entire process of social production. This comprehensive knowledge is restricted to those who are destined for command and control, perpetuating the cycle of exploitation.

Antunes (2013) argues the relation of production and exchange in capitalism abstracts the concrete character of labour. Value is created by this accumulation of human labour abstracted from its concreteness, based on the assumption that work is performed in an average, socially necessary, time, under normal production conditions, with an average degree of skill and intensity of labour. The value of commodities therefore changes in accordance with the productivity of labour, which depends mainly on the technical means of production and the workers’ skill in operating it.

For Previtali & Fagiani (2015), capital increases surplus value through a continuing process of change both in the means of production and in methods of labour organisation through the application of technology. These changes in turn reduce the value of the commodity and of labour power. Each individual capitalist is stimulated to reduce the labour time of the workforce (that is the cheapening of commodities) by competition from other capitalists. Competition thus drives the capitalist to transform the organisational and technical condi-

tions of the labour process through the appropriation of the worker's knowledge.

In this way, the introduction of technological and organisational innovations in the labour process is continuous in the capitalistic mode of production, because it reduces the necessary labour time, as well as the value of the goods and the labour force. In this sense, it is necessary to take into account that the development of science and technology is determined by the logic of capital accumulation and not by the logic of human needs. In the words of Antunes:

[...] living labour, in conjunction with science and technology, is a complex and contradictory unity, under the conditions of capitalist development. [...] Released by the capital to expand, but being in the last instance the prisoner of the need to be subordinated to the imperatives of the process of creation of values, science cannot be converted into primary productive force. (122-123).

Antunes backs on Marx for whom labour process is a capital appreciation process, where main objective is increasing surplus value production. The issue is how capital can increase surplus value production independently of increasing working hours. It is possible through a reduction of working week-the part of time worker needs for own use-and increase in work, corresponding to the capitalist's working hours. Therefore capital will increase working productive force "[...] through changes in ways of working or in working methods or in both" (Marx, 2010: p. 238) and capital appreciation process is established through relative surplus value.

In this way, introduction of technological and organizational innovations in productive process is a constant in capitalist production way, and has no connections with natural, neutral or autonomous issues. The innovation process must be understood within the environment of different social practices, which at the time are the result of class relations in struggle for social control of work in capitalism. It is part of class struggle dynamics, being a political and social control variable. This leads to a complex and contradictory interrelationship between science and value insofar as the potential of science is limited by its class determination (Previtali & Fagiani, 2015).

As Braverman (1998) already pointed out, the fundamental innovations in production did not come from chemistry, electronics, mechanisation or automation, but from the transformation of science itself into capital; they came from the knowledge of artisans, incorporated into machines built by engineers, in order to obtain the highest efficiency of labour.

Antunes (2013) highlights that social knowledge generated by science has its objective constrained imposed by the logic of the capital, at the same time that occurs unequal appropriation of the results and benefits of science and technology, as well as increasing the productivity of social labour. The author points out that the theory of value acknowledges the growing role of science, but states that, given the subjection of its development to the material base of the relations between capital and labour, it, "[...] cannot, under the capital, become the primary

productive force in the place of work” (p. 126). Thus, contrary to the idea of the demise of the working class, Antunes explains the changes in the world of labour as part of capital’s productive restructuring process.

For Previtali & Fagiani (2015), the restructuring process can be seen as nothing more than capital restructuring itself to ensure its continuing expansion and accumulation. In this new context, it is possible to modify relationships with the working class through the introduction of a range of flexibilisation processes, including outsourcing and subcontracting of labour, the introduction of temporary work and group work and a series of heavy defeats of the trade union movement that was born when Taylorist-Fordist practices held sway. In a context where the watchwords are ‘flexibility’ and ‘quality’, companies have noticed that much of the innovation process, particularly incremental innovations in the labour process, depends on the direct participation of the worker.

Antunes calls that the “phenomenal dimension” (p. 35) the Taylorism/Fordism crisis and the diffusion of new productive models, highlighting the developing of Toyotism. According to the author, the productive restructuring consists of a response from the capital to its destructive logic and its structural determinants, such as the decreasing rate of profit, the workman resistance and the impossibility of capital control, as a societal metabolism oriented towards the expansion and accumulation of capital.

The author states that theory of value recognizes increasing role of science, but he stresses that is hampered in its development by material basis of relations between capital and labour, and cannot become main productive force to substitute labour. According to him, the new productive model implies a greater integration between living labour and dead labour, assuming as consequence the following outline: a) the convergence of living labour into dead labour; b) the reduction of the labour called unproductive, related to the management and supervision activities; c) the reduction of unproductive times in the labour process; d) the expansion of immaterial labour, which is endowed with greater intellectual dimension in the productive and service sectors. These tendencies occur in different ways as a function of an unevenly distributed capitalist division of labour.

One of the highlights of the book is the exhibition, with great detail, of the productive restructuring in England, in the midst of neoliberal policies and the introduction of Toyotism in the processes of labour. Antunes discourses, relying on dense and rigorous empirical research, about class struggles in that country, with major opposition movements, among which the wave of social explosions of 1989 and 1990 that hit the conservativeness of Thatcher and made the victory of Tony Blair possible with the so called “Third Way”. This, in turn, was configured, according to Antunes, as the preservation of what is essential in neoliberalism, therefore, doomed to failure as early as his birth.

From Antunes’s point of view, the working class that rises simultaneously, as a result of the class struggle and the inner logic of global capitalism (i.e., the rela-

tionship between economics and politics), is more comprehensive than the working class from the middle of the last century, being even more complex, more heterogeneous and fragmented than that which prevailed in the golden period of the Taylorist-Fordist system. Disagreeing with those who understand working class as merely the industrial proletariat and reduce productive labour exclusively into the manufacturing universe, the author proposes the notion of class-who-lives-from-labour, by which he seeks to reinvigorate the Marxist concept of class and the particularities of the new social forms of labour relations.

For [Antunes \(2013\)](#), the “class-who-lives-from-labour” relates to all men and women, productive and unproductive, deprived of means of production who are forced to sell their labour power in the countryside and in the city in exchange for wages; namely, industrial and rural proletariat, outsourced, subcontracted and temporary workers, wage earners in the service sector, telemarketing and call center workers, and the unemployed. The author points out that the industrial proletariat is its main core, because it directly produces surplus value. However, capital managers and those living from interest and speculation, small businessmen, small urban bourgeoisie and rural landowner bourgeoisie are excluded, although all of them can be important allies of the working class in the political field.

In this sense, [Antunes \(2013\)](#) throws the challenge of understanding the mosaic of forms that configure the current working class, considering its heterogeneity and its polysemic and multifaceted character. The author indicates the downward trend of the industrial proletariat, stable and specialized, which developed during the Taylorism-Fordism, at the same time that it expands temporary and part-time work in a productive model based on the informational technology integration, in the de-concentration of the productive space and in a horizontal network of production.

New labour relations imposed workers an intense and detailed electronic monitoring through constant analysis of productivity, performance and satisfaction levels among others, introducing workers qualification, and a way of improving its intellectual integration in work. According [Fagiani & Previtali \(2014\)](#), from the 1990's and especially during current decade, in OECD countries there is an increasing trend of hiring workers in part time, with consequent full time decrease in full time. See down here in [Figure 1](#).

These strategies, corresponding to work and unions controls within class struggle environment, fragment workforce and flatten wages, deregulate labour in name of flexibility and consequently reduce labour rights. The new management toyotist practices enlist the collaboration and involvement of employees by means of individual premium payments. But this element is not new in itself in the field of control of workers and attempts to break class solidarity. The novelty consists in the development of subjective elements that constrain workers to participate in the management of their own work making them, in effect, co-managers of the streamlining of the production process ([Previtali & Fagiani, 2015](#)).

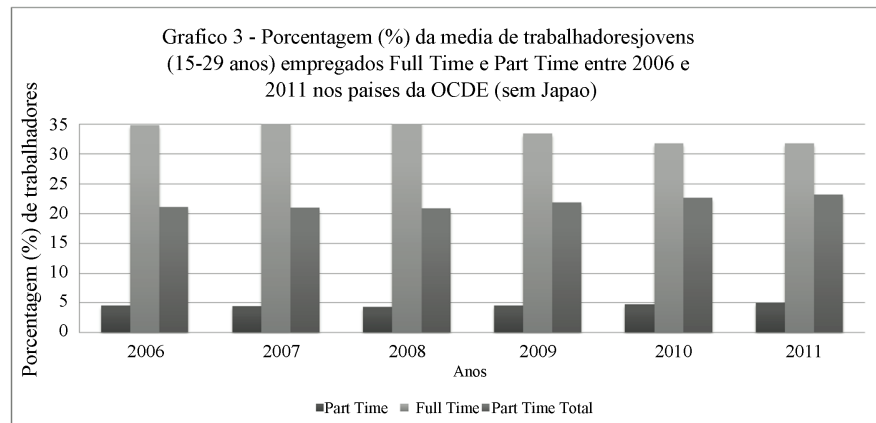


Figure 1. Average Percentage of young workers, between 15 and 29 years, hired full and part time, between 2006 and 2011 in OECD countries, except Japan. Source: Fagiani & Previtali (2014).

In this context, Antunes draws attention to the new techniques of management of the labour force including the production cells, working in teams and in semi-autonomous groups, the multifunctional labour, more qualified and participatory. For the author, the purpose of these changes is to control the worker's subjectivity with a speech of involvement that, in fact, is a manipulative participation and preserves, in essence, the terms of the alienated and estranged labour.

Either by manual labour exercise, either by immaterial labour, both, however, controlled by the capital's societal metabolism system, the estrangement (Entfremdung) of the work is, in essence, preserved (p. 132).

Sewell (1998, 2005) argues in the same way. To him, there is a limited reintegration between conception and execution in the way that working groups are set up, providing, at best, a merely nominal degree of autonomy to workers. Indeed, the main innovation in Toyotist model is to make such groups responsible for the streamlining and intensification of their own labour. The new management practices enlist the collaboration and involvement of employees by means of individual premium payments.

Antunes (2013: p. 52) points that "the subjectivity that emerges in the workplace is the expression of an inauthentic existence and remains alienated in relation both to what is produced and who produces it". In his view, discourses that refer to the involvement and participation of workers, characteristic of Toyotism, refer to the company's goals. They offer no better working conditions and, much less, imply in overcoming alienation of the work.

3. Conclusion

For Antunes (2013), the understanding of contemporary forms of labor value's aggregation is fundamental. Once the surplus value is not extracted only from the material plane of the labour, but also from the immaterial plane, intensifying the conditions of exploitation of the labour force by reducing or even elimi-

nating unproductive labour. But the author makes a caveat when arguing that the material labour is still prevalent, in relation to the immaterial, especially when analyzing capitalism on a global scale. In the field of labour relations, the author states the tendency towards flexibility, to the outsourced, precarious and unregulated work, highlighting the increase in female labor in many countries.

The author highlights the role of social struggles for the accomplishment of a process of human emancipation, despite the way the working class is forced to be more heterogeneous, complex and fragmented. Arguing that all forms of rebellion are equally important, Antunes makes a caveat, which is that in a commodity-producing society labour revolt takes a statute of centrality and the ecological struggles and the feminist movements acquiring greater vitality just when they are associated with the denunciation of the capital's destructive logic.

At the end of his work, discussing about the relationship between labour, work and freedom, Antunes (2013) underscores the imperative need for elimination of wage labour, the fetishized and estranged labour and the creation of freely associated individuals. But this new social order, endowed with meaning in and out of labour, is linked to the need to fully eliminate the capital and its social metabolism system in all its forms. In the author's words:

In an upper sociability way, the labour, when restructuring the social being, will have unstructured capital. And in this same self-determined work which made meaningless the capital will generate social conditions for the flourishing of an authentic and emancipated subjectivity, giving a new meaning to the work. (p. 184)

It is evident that *The Meanings of Work*, by Ricardo Antunes, not only represents an instigating theoretical reflection which aims to apprehend the new constituent elements of capital's societal metabolism, but it represents an essential contribution to a project to build a society beyond abstract labour, founded on an authentic freedom. Its reading becomes, thus, crucial to all those committed with the developing of an opposite alternative to the capitalist logic.

Support

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Author Fagiani: Researcher CNPq-Brazil (150243/2017-5). Supervisor: Professor Afrânio Mendes Catani-FEUSP.

References

- Antunes, R. (2013). *The Meanings of Work: Essay on the Affirmation and Negation of Work* (Vol. 43). Leiden/Boston: Brill Books/Historical Materialism Book Series.
- Braverman, H. (1998). *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century*. New York: Monthly Review Press.
- Carter, B. et al. (2014). They Can't Be the Buffer Any Longer: Front-Line Managers and Class Relations under White Collar Lean Production. *Capital & Class*, 38, 323-343.

<http://cnc.sagepub.com/content/38/2/323>

Fagiani, C. C., & Previtali, F. (2014). The Twenty-First Century and a New Working Class Arrangement: Qualification and Precarization. *Revista Ciências do Trabalho*, 3, 53-67.

Harvey, D. (1992). *Condição Pós-Moderna*. São Paulo: Edições Loyola.

Harvey, D. (2011). *O Enigma do Capital: As crises do capitalismo*. São Paulo: Boitempo.

Marx, K. (2010). *O Capital* (Vol. 1). São Paulo: Boitempo.

Milkman, R., & Luce, S. (2013). *The State of the Unions 2013: A Profile of Organized Labor in New York City, New York State, and the United States*. New York: The Joseph S. Murphy Institute for Worker Education and Labor Studies and the Center for Urban Research, CUNY Graduate Center.

https://sps.cuny.edu/filestore/8/6/3_bc4b97196c5659e/863_916e1989d05f0e6

Previtali, F. S., & Fagiani, C. C. (2015). Deskilling and Degradation of Labour in Contemporary Capitalism: The Continuing Relevance of Braverman. *Work Organisation, Labour & Globalisation*, 9, 76-91. <https://doi.org/10.13169/workorglaboglob.9.1.0076>

Sewell, G. (1998) The Discipline of Teams: The Control of Team-Based Industrial Work through Electronic and Peer Surveillance. *Administrative Science Quarterly*, 43, 397-428. <https://doi.org/10.2307/2393857>

Sewell, G. (2005). Nice Work? *Rethinking Managerial Control in an Era of Knowledge Work, Organization*, 12, 685-704.

<http://www.uk.sagepub.com/managingandorganizations/downloads/Online%20articles/ch12/2%20-%20>

Thompson, P. (2010). The Capitalist Labour Process: Concepts and Connections. *Capital & Class*, 34, 7-14.

<http://www.izt.uam.mx/sotraem/Bibliografia/Thompsonthecapitalist.pdf>



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Girolamo Fracastoro and the Origin of the Etymology of Syphilis

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Abstract

In 1530, Girolamo Fracastoro, an illustrious Italian physician and poet, published a book about a disease that was then known as the “French disease”, which he named *syphilis*. Fracastoro’s book, *Syphilis sive morbus Gallicus*, was written as a poem in hexameters verses, using figures from Greek mythology that provided facts about the Spanish discovery of the New World in 1492. A thorough literature review of the historical facts and mythological figures mentioned in Fracastoro’s book enabled us to complete an in-depth analysis of the poem and understand some its smallest details. Hence, we propose a new hypothesis that the origin of the term Syphilis is based on the name Sypilus as well as the appearance of people who suffer from the disease.

Keywords

Girolamo, Fracastoro, French Disease, Syphilis, New World

1. Introduction

In 1530, Girolamo Fracastoro published one of his masterpieces, *Syphilis sive morbus Gallicus* (Syphilis or the French disease). Written in three books as a poem and in the text used 1300 hexameter verses to describe the details of the disease known as the “French disease.” In the third book, Fracastoro told the story of a shepherd named *Syphilus*, who was the first person to have the disease that he would name *syphilis* (Fracastorii, 1530).

Currently, there are two main hypotheses about the origin of the disease’s

name: one hypothesis claims that the term was derived etymologically from the Greek expression meaning “friend of pigs”; the other hypothesis is based on the mythological name *Sypilus*, the son of *Niobe*, who was mentioned in a poem written by the Roman poet Ovid (Catellani & Console, 2008).

However, by studying the voyages of Christopher Columbus in 1492, which were described by Pietro Martire d’Anghiera and Gonzalo Fernández de Oviedo y Valdés, and cited in Fracastoro’s poem, we discovered a relationship between this historical event and Fracastoro’s poem about the disease.

Indeed, in light of the knowledge of historical facts and an analysis of the mythological stories mentioned by Fracastoro, a more detailed reading of the poem allowed us to formulate a new hypothesis concerning the origin of the disease’s name, Syphilis.

2. About Girolamo Fracastoro

Girolamo Fracastoro (Pellegrini, 1948; Pastore & Peruzzi, 2006; Martellozzo, 1982; Simeoni, 1953) was born in Verona, although existing records do not establish the exact year of his birth. He studied at the University of Padua and received his degree in *Artium* on November 5, 1502. At this time, the same university hired him to be a Professor of Logic. In approximately 1505, Fracastoro graduated with a degree in medicine. He returned to Verona in 1509.

Following the publication of *Syphilis sive morbus Gallicus*, Fracastoro also published *Homocentrica*, which was about the movement of the stars (1538), *De sympathia et antipathia rerum liber unus*, which was a book on sympathy and antipathy of things, and *De contagione et contagiosis morbis libri III* (1546), which was about infection, the transmission of diseases and their cures.

After his death, Fracastoro’s entire work (*Opera Omnia*) was published in 1555, including his unpublished philosophical treatises entitled *Naugerius sive de Poetica dialogus* (Naugerius or dialogue on the poetic), *Turrius sive de intellectione dialogus* (Turrius or dialogue on the intellection), and *Fracastorius sive de anima dialogus* (Fracastoro or dialogue on the soul).

3. The Discoveries of Columbus and Fracastoro’s Poem

In his poem about syphilis, Fracastoro presented several facts related to the discoveries of Christopher Columbus. Several essays that were written by explorers about the discovery of the new lands were quite detailed, although they were not always published, and some were printed many years after they were written. The discovery of the Indies (now known as the Americas), including the islands and the continents, was reported by Diego Alvarez Chanca, a medical doctor of the Spanish Court who accompanied Columbus on his second trip in 1493, as well as Pietro Martire d’ Anghiera and Gonzalo Fernandez de Oviedo y Valdés (Gallinari, 1992; Angleria, 1537; Valdés, 1526).

In Venice, Giambattista Ramusio wrote in Italian three books about the reports of several captains, sailors and travelers in close collaboration with his

Italian friends, including the Gasparo Contarini, Andrea Navagero, Pietro Bembo, Girolamo Fracastoro, Pietro Martire, as well as Oviedo (Ramusio, 1568, 1583, 1606; Del Piero, 1902; Milanesi, 1985).

In addition to his observations about the fauna, flora, and habits of the people, Pietro Martire also recounted a fascinating story of the natives of the “Spanish island” regarding their belief about the origins of men in the world. According to the story, the island had two caves where all of the people lived. They were forbidden by the God Sun to leave the caves. To ensure that no one would leave, the caves were watched by a guard. One day, the guard went for a walk around the island and failed to return before sunrise. As a punishment, he was transformed, by the God Sun, into a rock. On another night, many men left the caves and also did not return before sunrise, so they were all transformed into trees that were scattered throughout the island (Ramusio, 1606).

However, many still remained in the caves, including a man named Vaguoniona, an old inhabitant who had many children. One day he sent one of his sons out, but as a punishment from the Sun, his boy was transformed into a nightingale. Later, Vaguoniona sent out of the cave all of the women who had children to find his beloved son, and they were all turned into frogs. When Vaguoniona began to wander around the island, by the Sun’s grace, he was never transformed and remained a human for the rest of his life (Ramusio, 1606).

4. The Mythology (Buxton, 2009; Butler, 2009; O’Connell, 2010; Colección Carrascalejo de la Jara, 2004; Wilson, 2010; See, 2014)

In addition to his reports about the New World, Fracastoro used his vast knowledge of Greek mythology to write his poem, referring to local names and many episodes that were described by ancient Greek poets. In the following section, several details related Greek mythology that were cited by Fracastoro will be described. Further, these details will be associated with the poem and the historical facts of Columbus’ New World discovery.

The current Turkish province of *Manisa* takes its name from the ancient city name *Magnesia ad Sipylum* due to its proximity to *Mount Sipylus*, where there is a rock that resembles a face. This rock was believed to be *Niobe*, a mythological character who was transformed into a rock. *Niobe* was the daughter of *Tantalus*, King of *Tantalus* city, which was also known as *Sipylus*. There are similarities between the stories of *Atlantis* and ancient *Tantalus*, as well as between *Atlas* and *Tantalum*.

It was *Tantalus* who cut his son, *Pelops*, into pieces, offering them to the Gods at a banquet. When it was served to them, the goddess *Persephone* absently ate part of *Pelops*’ shoulder. As punishment, *Tantalus* was thrown into *Tartarus*, the deepest hell, where, as a torment for him, he was surrounded by food and water without being able to touch them.

The daughter of *Tantalus*, *Niobe*, insulted the goddess *Leto* (*Latona* to the

Romans) and was harshly punished by *Leto's* offspring, *Artemis* and *Apollo* (the God Sun for the poets), with the death of all of her children. One of *Niobe's* murdered sons was named *Sipylos*.

Another character in Greek mythology mentioned in Fracastoro's poem is *Phyllis*, a young woman who espoused *Demophonte*, son of *Theseus*. One day, *Demophonte* traveled to *Cyprus*, but he did not return. Out of despair, *Phyllis* hanged herself and was transformed into an almond seed. After a long time, *Demofonte* returned and wept on *Phyllis's* tomb, causing the seed to grow into an almond tree.

5. The Poem

As already mentioned, Fracastoro showed in his poem that he possessed a lot of knowledge about the Spanish discovery of the "New World", the lives of the native populations, and the disease that was then known as the "French disease."

In Book I, he referred to the discovery of the new land, mentioning the name of what would be the main island for the Spanish: "*Hac ignota tenus, tractu iacet insula longo: Hispanam gens inventrix cognomine dixit.*" ("There is in a great distance an island unknown until now, called Spanish by the people who discovered it.")

In Book III described a land where cannibals lived: "*Linquitur incerto fluitans Anthylia ponto, atque Hagia, atque alta Ammerie, execrataque tellus cannibalum.*" ("They leave behind Anthylia floating in the fickle sea, Hagia, the high Ammeria, and the accursed land of cannibals.")

Fracastoro referred to the Spaniards' navigation from the Iberian coast and their discovery of new lands, where there was "some disease" that afflicted almost the entire population. However, he questioned the reasoning that the contagion of Europeans was due to their coexistence with the natives.

"*Num tempore ab illo vecta mari occiduo, nostrum pervenit in orbem: ex quo lecta manus solvens de littore Ibero ausa fretum tentare, vagique incognita ponti est aequora: et orbe alio positas perquirere terras? Illic namque ferunt, aeterna labe per omnes id morbi regnare urbes, passimque vagari perpetuo coeli vitio: atque ignoscere paucis. Commercine igitur causa accessisse putandum est delatam contagem ad nos: quae parva sub ipsis principiis, mox et vires et pabula sensim suscipiens, sese in terras diffuderit omnes?*"

"Do not come at that time to our brought world (referring to the disease) from the western sea, in the event that a selected group, departed from the Iberian coast, dared to venture into the sea, out in the unknown ocean waters in search of land situated in another orbe? Therefore they say that there reigns such a disease passing to eternal scourge in every city, wandering everywhere because of a perpetual habit of heaven and forgiving few. We should not think, then, that it was because of the address with those people that came brought the contagion to us, which, being small at first, then gradually gaining forces and food, has spread throughout the lands?"

Fracastoro noted that the disease had already existed in various regions of the world, but until that time, it had no name. In our understanding, this demonstrates his concern about this fact.

“...quamquam nobis nec nomine nota hactenus illa fuit: quoniam longaeua vetustas cuncta situ involvens, et res, et nomina delet: nec monumenta patrum seri videre nepotes.”

“... Although it (the disease) was not known to us with a name so far: because the long-lived antiquity, involving all with its mold, destroys things, and names, and does not see the grandchildren that come later, what it is worth remembering left by the parents.”

Further, Fracastoro described some of the disease’s clinical features, such as the mucus in the lesions, which appeared scattered throughout the patient’s body.

“Protinus informes totum per corpus achores rumpebant: faciemque horrendam, et pectora foede turpabant: species morbi nova: pustula summae glandis ad effigiem, et pituita marcida pingui. Tempore quae multo non post adaperata dehiscens, mucosa multum sanie, taboque fluebat.”

“Throughout the body disgusting and deforming ulcers soon broke out, disfiguring the face in a horrible way and also damaging the chest: a new form of this disease, with pustules with thick mucus. Which not long after, opened up cracking, and from there flowed an amount of mucus with pus and rot”.

6. The Poem’s Content and the Disease’s Name

It is worth noting that Fracastoro had vast knowledge of classical languages (Greek and Latin), classic literature, mythology, geography, medicine, astronomy, the arts, and science in general, as well as a concern about creating a name to identify the disease.

In the poem, Fracastoro changed a few words in a very subtle way so that only attentive readers could realize the changes. For example, i) Ophyre was changed, with the intentional alteration of the biblical Ophir, the land of gold; ii) Anthylia was the name given to the Caribbean Antilles islands; iii) Gyane island replaced Juana island, which was named thus by Christopher Columbus; and iv) Ammeria, in reference to America, was changed due to was the name given to the Indies by Martin Waldseemüller’s world map in 1507.

In Book I, after describing the clinical features of the disease, Fracastoro wrote about the Phyllis tree in exactly five lines after, pointing out the relationship between the nodes of the almond tree and the lesions caused by the disease.

“Tum saepe aut cerasis, aut Phyllidis arbore tristi, vidisti pinguem ex udis manare liquorem corticibus: mox in lentum durescere gummi. Haud secus hac sub labe solet per corpora mucor diffluere: hinc demum in turpem concrescere callum.”

“You must have seen too often that, as the humid cortices of the cherry or the sad Phyllis tree exudes a thick liquid, which then hardens and becomes a viscous

gum. It is no different from this disease that pours mucus in the body and, from there, finally grows in the form of an ugly callus (node).”

In Book III, Fracastoro described the origin of the disease and also created a new name for it—syphilis. In the beginning, he described a ceremony among the natives and the sick individuals who were witnessed by the Spanish. The chief of the tribe and Columbus were present at this ceremony. According to the author’s description, they were already able to understand each other and communicate: “*Ipsi inter sesereges in littore laeti complexu iungunt dextras, et foedera firmant.*” (“The Kings gladly narrowed their right hand on the beach and confirmed the covenant.”)

At the ceremony, the natives killed various types of animals, eating their meat and viscera; and the medicine man used a leaf branch to spread a liquid all over the body of the wounded, including the lesions, to cure them of the disease. This liquid was made from cooked leaves and the stem of a plant called guaiacum.

Amazed, Columbus, the “King” of the Spaniards, asked why such a ceremony was held. Therefore, the native “King” began to tell him about the origin of his people: “*Forsitan Atlantis vestras pervenit ad aures nomen, et ex illo generis long ordine ducti. Hac et us long series of Stirpe profecti Dicimur.*” (“Perhaps the name of Atlantis has reached your ears, from Atlas whom a lineage continues through a long succession. It is also said about us that we proceed by a long series from this breed.”)

And then, the native “King” described where they lived during ancient times. Because of lust, they were punished by an avenging God: “*ingenti terrae concussa Atlantia motu corruit, absorpta ocean*” (“then Atlantia was hit by a very strong earthquake and destroyed, sinking in the ocean”).

The native King explained to Columbus that the disease was also a punishment, which referred to a shepherd named *Syphilus*. It was Syphilus who made offerings to a mortal, King *Alcitoo*, to try to make him equal to *Apollo* (the Sun God). *Syphilus* was punished as the first to have the disease. However, he was spared and did not die as a result of it. Speaking on behalf of the Sun God, it was the nymph *Ammerice* who warned that evil (the disease) would be eternal. She said all people born in that land would have the disease, and she explained what type of offerings should be made. Thus, as a reminder, the ancestors of the natives created an annual rite such as the one that was witnessed by the “Spanish King.”

7. The Relationship between Beliefs of the Natives of the New World, Greek Mythology and Fracastoro’s Poem

In the tale told by the natives, all of the men who fled the caves were punished by the Sun God. In Fracastoro’s poem, the same event occurred when the shepherd and other people were punished by *Apollo* for *Syphilus’* offense. Indeed, similar to *Phyllis*, who was transformed into an almond tree, the natives were transformed into trees. In addition, Fracastoro wrote that the sick people had lesions

that made them appear similar to an almond tree.

As mentioned above, Vaguoniona, one of the inhabitants of the caves, left the cave but was never metamorphosed into anything; he lived wandering the lands as a human. Similarly, in the poem, *Syphilus* was spared because he was the first person to have the disease, but he did not die from it; however, he was doomed to see the suffering of all the natives.

Tantalum was the King of the city of *Tantalus*, also known as *Sipylus*, which disappeared like Atlantis, which Fracastoro cited as *Atlantia* at the beginning of the conversation between the native “King” and the Spanish “King.” *Tantalus* had a daughter, *Niobe*, whose children were killed by *Apollo*, the Sun God, including her son named *Sipylus*.

Due to *Niobe*’s great sorrow that was caused by the loss of her children, she was turned into a rock, just like the guardian of the caves in the history of the natives.

The rock that resembles *Niobe*’s face is close to Mount *Sipylus*, which is located in the region of Turkey that is now known as *Manisa*. This city’s name originated from the ancient toponym *Magnesia ad Sipylum*, named thus because it was next to the mountain.

Fracastoro, therefore, created the story about the origin of the natives, kept the god Sun as the punisher, and made several associations or correlations between Greek mythology and the natives’ story narrated by the “King.” By connecting the origin of the New World people with Atlas and *Atlantis* Fracastoro created a relation between the origin, *Tantalus*, *Niobe* and *Sypilus*. He also included the story of young *Phyllis* when he observed the similarity between lesions in the patients and the almond tree.

Thus, it was possible to find several similarities between classical literature, the stories collected and described by Pietro Mártire, and Fracastoro’s poem. Therefore, we propose another hypothesis about the origin of the disease’s name.

8. Conclusion: The Origin of the Term Syphilis

Understanding the facts presented in the poem made it possible to deduce how Fracastoro created a name for the disease in order for it to be easily identified.

Fracastoro searched for a character in a mythological world and found *Sipylus*. He made an analogy between the sick people and the almond tree, highlighting the fact that individuals sick with the disease resembled the tree into which *Phyllis* was transformed.

It is important to mention that although Fracastoro interchanged some letters in the names, he did it in such a way that readers could deduce the origin of the name that he created.

Our understanding is that, to create a name for this disease, Fracastoro invented a story that was inspired by *SIPYLUS* and included *PHYLLIS* to express the appearance of the disease: *SIPYLUS* + *PHYLLIS* = *SIPHYLLIS*. Then, to keep the euphony, he switched the letter “I” for “Y” and *vice versa*, withdrew one let-

ter “L” and created the name of the disease, SYPHILIS. The two last letters, “IS,” are commonly used for disease designation. After gave a name for the shepherd and created the name SYPHILUS. Hence, those who knew these mythological characters could understand to whom Fracastoro referred.

Fracastoro probably intended to create the word Syphilis to avoid terms such as the “French disease,” “Italian evil,” “Napolitan evil,” and so many other designations that have been given to the terrible disease. He created a new character, Syphilus, and made his home Atlantis, a lost continent, so that any people could not be accused of spreading the contagion.

Even today, as Fracastoro wished, the disease is called syphilis.

References

- Angleria, P. M. (1537). *De rebus oceanicis et & Orbe novo decades très* (pp. 1-214). Basilea. <https://www.bsb-muenchen.de/index.php>
- Butler, S. H. (2009). *Iliad*. The Floating Press, 1-622.
<http://site.ebrary.com/lib/buufsc/detail.action?docID=10808275&p00=greek+mythology>
- Buxton, R. (2009). *Forms of Astonishment: Greek Myths of Metamorphosis* (pp. 1-298). New York: Oxford University Press.
<http://site.ebrary.com/lib/buufsc/reader.action?docID=10348644#>
- Catellani, P., & Console, R. (2008). Girolano Fracastoro: Syphilis, Morbus Gallicus e il “Mal Francese”: Ricerca di una cura per la sifilide. *Memorie Scientifiche, Giuridiche, Letterarie. Acc Naz Sci Lett Arti di Modena* (Vol. XI, Prima parte-Fasc. II): Cer. VIII.
- Colección Carrascalejo de la Jara (2004). *Santa Fé: Ovidio*.
<http://site.ebrary.com/lib/buufsc/detail.action?docID=10049228&p00=ovidio>
- Del Piero, A. (1902). *Della Vita e degli studi di Giovanni Battista Ramusio*. Venezia: Prem. Stabilimento Tip.-Lit. Visentini Cav. Federico.
- Fracastorii, H. (1530). *Syphilis Sive Morbus Gallicus*. Verona: [Unknown Publisher].
- Gallinari, L. (1992). *Diego Alvarez Chanca médico di Cristoforo Colombo*. Cagliari: Edizioni Universitarie della Sardegna.
- Martellozzo, E. (1982). *Acta Graduum Academicorum Gymnasii Patavini: Ab Anno 1501 ad annum 1550: Indexnominum cum aliis actibus praemissis*. Padova: Antenore (Vol. XXVII).
- Milanesi, M. (1985). *Navigazioni e Viaggi* (Volume Primo). Torino: Giulio Einaudi Editore.
- O’Connell, T. (2010). *Atlantipedia*. Dublin: A Mifsud.
<http://site.ebrary.com/lib/buufsc/detail.action?docID=10835245&p00=atlantis>
- Pastore, A., & Peruzzi, E. (2006). *Girolamo Fracastoro: Framedicina, filosofia e scienze-dellanatura*. Firenze: Leo S. Olschki.
- Pellegrini, F. (1948). *Fracastoro* (Monografia; n. 3). Trieste: Zigiotti.
- Ramusio, G. B. (1568). *Dellenavigationietviaggi* (3th ed., Primo Volume). Venezia: Stamperia de Giunti. <https://www.bsb-muenchen.de/index.php>
- Ramusio, G. B. (1583). *Delle navigazioni et viaggi* (Secondo Volume). Venezia: Stamperia de Giunti. <https://www.bsb-muenchen.de/index.php>
- Ramusio, G. B. (1606). *Dellenavigationietviaggi* (Volume Terzo). Venezia: Stamperia de Giunti, 35 back. <https://www.bsb-muenchen.de/index.php>

See, S. (2014). *The Greek Myths*. Hong Kong: S&T.

https://books.google.com.br/books?id=onDwBQAAQBAJ&hl=pt-BR&source=gbs_navlinks_s

Simeoni, L. (1953). *Studi Storici Veronesi* (Volume 4). Verona: Presso la direzione della rivista.

Valdés, G. F. de O. y. (1526). *Oviedo dela natural hystoria delas Indias*. pp. 1-106.

<http://www.wdl.org/pt/item/7331/>

Wilson, E. S. (2010). *Six Tragedies*. New York: Oxford University Press.

<http://site.ebrary.com/lib/buufsc/detail.action?docID=10365183&p00=tantalus>



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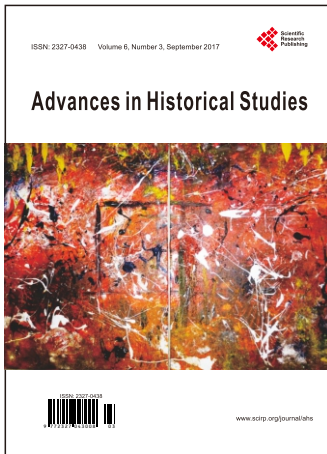
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