

Territorial Philosophies of Relativity and the Unity of Spain: Ors and Ortega on Einstein and Relativity at the Service of Catalan Noucentisme and the Spanish Republic*

Filosofías territoriales de la relatividad y la unidad de España: Ors y Ortega sobre Einstein y la relatividad al servicio del novecentismo catalán y la República española

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Abstract

In the aftermath of the Spanish War, the Catalan philosopher Eugeni d'Ors and the Spanish philosopher José Ortega y Gasset offered a reading of Einstein's theory of relativity in which discussions of unity and plurality connected their respective synthetic philosophies and nationalist projects of political and cultural analysis and reform. In particular, frequent references to Einstein tracked their respective philosophical views, territorial concerns and personal circumstances regarding the relations between Catalonia, Spain and Europe. Einstein's theory symbolized the saving connection between the classical and the modern, Europe and the Mediterranean, and science and philosophy. In this paper I examine the inseparable case of Ors in relation to Catalan nationalism and the project he called *Noucentisme* and of Ortega in relation to Spanish nationalism and his political philosophy in *España Invertebrada*.

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Resumen

Tras la Guerra Civil el filósofo catalán Eugeni d'Ors y el filósofo español José Ortega y Gasset ofrecieron una lectura de la teoría de la relatividad de Einstein in la cual conectaron discusiones de unidad y pluralidad con sus respectivas filosofías y proyectos nacionalistas de análisis y reforma política y cultural sintetizantes. Además, frecuentes referencias a Einstein distinguen sus respectivas ideas filosóficas, sus preocupaciones territoriales y sus circunstancias personales en relación a Cataluña, España y Europa. La teoría de Einstein simbolizó la conexión salvadora entre lo clásico y lo moderno, Europa y el Mediterráneo, y ciencia y filosofía. En este artículo analizo los casos inseparables de Ors en relación con el nacionalismo catalán y al proyecto que denominó Noucentisme y de Ortega en relación con el nacionalismo español y a su filosofía política articulada en *La España Invertebrada*.

Palabras clave: Eugeni d'Ors; José Ortega y Gasset; Albert Einstein; Joan Crexells; Esteve Terradas; teoría de la relatividad; nacionalismo español; nacionalismo catalán; imperialismo; Catalanismo; europeísmo; paradojas de Zenón; perspectivismo; unidad y pluralidad.

1. Introduction

In *Concepte General de la Ciència Catalana* (1918) the Catalan philosopher Francesc Pujols declared Ramon Llull the founder of Catalan science and Eugeni d'Ors (1881-1954) his equal in genius but also his diametrical opposite (Pujols, 1918, Preface and chapters LX and LXII). To Llull's universal science, according to Pujols, Ors opposed a no less Catalan science-based synthesis that includes most prominently modern Northern European and Greek philosophical doctrines. In this paper I situate this science-centered

internationalism within Ors' program for social reform known as Catalan *Noucentisme* and illustrate it with his evolving discussion of Einstein's theory of Relativity, first in his doctoral dissertation of 1913 and in subsequent discussions. Then I connect and contrast Ors' philosophical, European and Catalan reading and use of Einstein's theory with a no less territorial and European but Spanish reading, between 1915 and 1923, by the Madrid-born Spanish philosopher José Ortega y Gasset (1883-1955). Besides establishing the intellectual and personal connections between Ors and Ortega, I will present their own respective projects and circumstances. I will discuss, in particular, how Ortega was engaged in a related intellectual and political project, albeit explicitly concerned with the deteriorating unity of Spain, and how Ortega as well as Ors engaged the figure of Einstein and the theory of relativity to express and support a philosophical view in epistemology and politics. Catalan and Spanish readings of relativity, represented respectively by Ors and Ortega, were indirectly cultural and political. The respective national ideologies and interests prompting them were complexes of ideas and suggestions that Ortega as well as Ors intended as expressions social reform. Their respective readings and uses, I argue, were part of projects of transformation linked to territorial units and embody different syntheses of different ideals of Europeanism and nationalism.

By 1910 Einstein's relativity theory had taken the world of science by a storm (Einstein, 1905). It overcame conceptual conflicts between the theories of mechanics and electromagnetism (and optics) by setting the new theory of electrons not on more detailed physical hypotheses but on new general principles: one, that physical laws are the same for all observers moving with uniform velocities and the other, that the velocity of light, unlike any other speeds, was also absolute, the same for all observers and independent of its source. Classical properties such as length, time lapse and mass are not just relational, but relative to the uniform velocity of a measuring observer. By 1921 the theory had been extended to include a curved four-dimensional space-time, it had been declared confirmed by new astronomical observations and Einstein had received a Nobel Prize –although for earlier work on quanta of radiation (Einstein, 1916).¹ Popularizations of his theory were beginning

¹ On the build-up to the declared astronomical confirmation, see Crelinsten (2006).

to proliferate, including his own in German and in translation (Einstein, 1917; 1920; 1925). By this time the storm had captured the attention of international readers, and the interests of politicians, academics and intellectuals.

A vast body of literature has explored the national appropriation –reception, transformation and utilization– of science and, in a much smaller body, of relativity theory in particular; and, typically, the focus on relativity theory has emphasized national differences in scientific communities, or the use of science to support or develop philosophical doctrines.

In the case of Spain, Thomas Glick has emphasized national conditions, but, unlike other national histories of relativity, Glick's doesn't adopt a homogeneous view of the Spanish nation or reduce it to the scientific scene in its capital (Glick, 1988). Not only does he distinguish between Madrid and Barcelona, and between Spain and Catalonia; he also lists, in a brief survey of Spanish philosophical responses to Einstein's theory, Ors' dissertation from 1913 alongside Ortega's essay from 1923 (Glick, 1988, 160-170). In this type of account, however, especially in Glick's, we find also a gap between two centers of attention, the listed philosophical responses and the national conditions of science and politics, the latter including expressions of nationalism in statements by Catalan politicians and the local press.

I argue, to bridge the gap, that Ors and Ortega offer territorial readings of relativity theory within their respective philosophical doctrines both as projects at the service of social goals and in the terms of their political thought; their readings shift along with their respective circumstances and perspectives. What I am providing is an account of how relativity theory and the figure of Einstein himself get adopted in territorial representations of social, economic, political, cultural and intellectual fluxes.

My discussion will benefit from a rather weak conceptual setup around the spatial notion of territory and clusters of spatial categories and terms –many, political and geographical units– such as city, province, region, nation, Madrid, Barcelona, Catalonia, Spain, Empire, Europe and Mediterranean. They mediate between the intellectual, whether philosophical or scientific, and the political. Occasionally, I frame the significance of a number of episodes and their interpretation in abstract terms of territorialization –and the duality 'de-territorialization'/'re-territorialization,' concerning shifting boundaries and fluxes across them, but my use of the territorial focus and terminology

Jordi Cat

should not be identified with, for instance, more specific technical details of the conceptual apparatus employed by Gilles Deleuze (especially in Deleuze, 1980). The cluster of territorial terms will help track Ors' and Ortega's respective territorial references and their associated geographic, historical, political and cultural meanings. As a result, I believe, this territorial perspective will help present, organize and unify the integrative and comparative analysis of both (1) connections within Ors' and Ortega's respective body of work and (2) connections between their intellectual and political activities as well as their respective historical and biographical circumstances.

From this standpoint, I consider the Ors-Ortega pair a more insightful unit of analysis. My account complements both individual and comparative discussions of the two figures.² Their intellectual and political projects were related as much as their personal and historical circumstances and the comparison makes clearer the shared and differing themes, thoughts and circumstances. Among the themes I examine in this exercise, partly in historical and political epistemology, I emphasize the connective role of different expressions and significance of the problem of the relation between unity and plurality—especially in territorial and political terms.

In the hands of Ors and Ortega, I argue, Catalan and Spanish readings of relativity were informed by philosophical considerations, but their significance is indirectly and connectedly also specifically cultural and political. The underlying national ideologies and interests found different expressions in complexes of ideas and proposals that operated as instruments for social reform. The intellectual and political problems and their proposed solutions were framed in terms of three kinds of polarities to be challenged: the historical polarity between classicism and modernity, the geographical and cultural polarity between Europe and the Mediterranean, and the intellectual polarities between science and philosophy and between science and art.

Key to the territorial problematic operating as background to Ors' and Ortega's projects is Spain's loss of colonies in the American War, or Cuban War, of 1898, the so-called Disaster of 98. The consequences included a crisis both in Spain—for Ortega—and in Catalonia—for Ors. In Catalonia political chang-

² For a general comparative analysis of philosophical approaches and political attitudes, see Martínez Carrasco (2013).

es affected the colonial fortunes of “Indiano” families (including Ors’ maternal family) and the loss of colonial markets badly affected the region’s industry –especially textile manufacturing, which depended on American exports. One consequence was an expansion of the urban proletariat with migration from the countryside that led to popular unrest, the popularity of anarchism and episodes of violence, most notably, the so-called *Semana Tràgica* (Tragic Week), in the hot summer of 1909. Refusal to pay new taxes levied by the Spanish government prompted the formation of new political parties, liberal and regionalist in character, seeking better economic conditions and administrative powers. In Spain and Catalonia there was a growing public perception of tensions between ideals of order and states of disorder and decay.³

Meanwhile, in Europe the century ended in an intellectual landscape of critical reactions to the dominating new cult of positivism, utility and rationality aligned with the social establishment of science and the middle-classes. They shared an emphasis on spiritualism, subjectivity, irrationality and nihilism.

In response to these social, political and cultural conditions emerged a project of so-called regenerationism: sense of public mission to revitalize and modernize Spain –Ortega and Ors–, whether from the center –Ortega– or Catalonia –Ors. Both Ors and Ortega sought intellectual leadership as leading members of a rising self-conscious intellectual class that aimed to acquire and exercise public authority without political power (unlike so-called organic intellectuals) (Cacho Viu, 1997; 2000; Martínez Carrasco, 2013). For Ors the critical attitude was an expression of the political and cultural situation of Catalonia in relation to Spain; for Ortega a historical relation to Spain’s future in relation to its history.

Both criticized the negative nature of earlier intellectual and political positions based merely on opposition. It was with this in mind that they responded by replacing dualism with synthesis, and arrived at varying synthetic positions that balanced, more generally, intellectual unity and plurality; for instance: (1) synthesis in space, with some expression of territorial integration whether national, such as federalism or, more importantly, international, such as Eu-

³ Cf. Jardí, 1967; Cacho Viu, 1997, 2000; Zamora Bonilla, 2002; Lasaga Medina, 2003; Fuentes Cordera, 2019; Martínez Carrasco, 2013; Gracia, 2014; Valera, 2016.

Jordi Cat

ropeanism (either Spain or Catalonia in relation to Europe); (2) synthesis in time, with some integration of the past, the Imperial, traditional or classical, the present, modernity and a new generation, and future, progress; and (3) synthesis in thought and culture, with some form of relation between philosophy, science, education and art (and within philosophy, between rationalism, pragmatism and empiricism). These three forms of syntheses helped articulate the aims of reform and contributed to a fourth, institutional synthesis that integrated political and educational institutions, and was made concrete by an ideal of the City.⁴ Ors, I will argue, considered Einstein's theory of relativity in relation to these four syntheses.

2. Catalan Political Background

Newly formed Catalan parties ran together in 1901 as La Lliga Regionalista. One of its leaders is the lawyer Enric Prat de la Riba. After a second confrontation with the Spanish government, this time involving the army targeting the satirical political publication *¡Cu-Cut!*, in 1905 La Lliga joined other parties and more radical forms of nationalism to run as a new and more comprehensive single platform, Solidaritat Catalana.

Prat's status as the intellectual leader of the rising Catalan regionalism grew with the publication of his book *La Nacionalitat Catalana* (1906). There he criticized as meaningless and arbitrary the provincial territorial units imposed by the Spanish government. Instead, he defended natural national units with a collective history, will, language, literature and legal system. Their existence and distinctive identity, Prat claimed, were independent of its legal recognition. More importantly for my argument, he framed his discussion in terms of a conflict between territorial unity and variety, and, from that standpoint, he dismissed a solution based on a false harmony between the two based on centralized dominance. At the same time he acknowledged a more general conflict between forces of nationalism and universalism that, on his view, drove the evolution of nations towards international federations of nation-states and expansive imperialism, after Greece and Britain, especially through peaceful penetration of other cultures. Here are some of the central terms of Ors' project of reform.

⁴ The synthetic nature of the ideal city and Ors' "civilism" is partly addressed in Rius (1991).

In 1907, Prat was appointed President of the Diputació Provincial de Barcelona and established the Institut d'Estudis Catalans, seeking the scholarly promotion of Catalan language and culture. Part of the new cultural politics had involved already the founding in 1903 of Estudis Universitaris Catalans, an alternative higher-education institution that, unlike the Universidad de Barcelona, prompted the use of Catalan in higher education and scholarship. In 1914 Prat became the first President of the new Mancomunitat de Catalunya, a hard-won new regional administrative unit, until his death in 1917 (six years before its abolition when the dictator General Primo de Rivera gained power).

3. Ors: Paris and Back to Barcelona

Ors secured from Prat administrative protection and opportunity and also financial support: first through the possibility of publishing articles, especially the famous series of daily short reflection pieces, which he called *gloses*, on intellectual and social matters that he began publishing in La Lliga's publication, *La Veu de Catalunya* in 1906, shortly before he took over the post of correspondent in Paris. His stay was extended til 1910 partly through Prat's grants, through both the Diputació Provincial and the Institut d'Estudis Catalans, and the declared purpose was to study scientific methodology and methods of higher education. In Paris these projects kept him attending lectures by the most celebrated philosophers and scientists of the time, from the philosophers Émile Boutroux and his student Henri Bergson to the polymath Henri Poincaré and his student the physicist Paul Langevin. He also attended experiments in psychological laboratories at several clinics around Paris and Munich (Jardí, 1967).

A self-styled scientist and philosopher, albeit with a degree only in Law, Ors attended the 3rd International Congress of Philosophy in Heidelberg in September 1908, as the sole Spaniard representative. He attended also the 4th, in Bologna, in April 1911, when he met Ortega, who was the other Spanish representative during his own philosophy studies abroad, in Germany. He gave three presentations in total, in French, and became all too aware of the national dimension of intellectual activity. In Heildelberg, Ors presented in the sessions on logic and philosophy of science and on philosophy of religion. In Bologna, Ors participated in the four-day session on logic and philoso-

Jordi Cat

phy of science, speaking on Monday April 10, alongside Gregorius Itelson and Pierre Boutroux, among others, and, on Tuesday, co-chairing a meeting alongside the mathematician Giuseppe Peano (d'Ors, 1909a; 1909b; 1911). While he succeeded in making Spanish an official Congress language, he failed to take the 6th meeting to Barcelona. Still, in the midst of his new international intellectual life, in 1908 Ors accepted the new chair of Philosophy at *Estudis Universitaris Catalans*, which he renamed of Logic and Methodology of Science, after the section rubric at the International Congresses.

On his return in 1911, he declared 'Europe is Science'; and philosophy had to look to science too (d'Ors, 2003, 523). Not surprisingly, he decided to pursue a degree in Philosophy, which before 1912 was offered only in Madrid, and he obtained a doctorate in 1913. It is not surprising either, and here is another significant personal and intellectual interaction, that Ors attended one of the doctoral courses Ortega taught and that Ortega became a member of the dissertation committee (Pla, 2005, xix). Ortega later reported to Ramiro de Maeztu that he had felt very impressed by Ors' thesis (Martínez Carrasco, 2013, 65). I return to the dissertation below.

Ors also became more broadly and actively involved in the political leadership of educational and cultural initiatives. In 1911 he secured a controversial appointment to the newly established Science Section of the *Institut d'Estudis Catalans*, where he would initiate the publication of its journal, *Arxius*, alongside the physicist Esteve Terradas and the biologist and philosopher Ramon Turró. (Jardí, 1967; Roca i Rosell, 1984; Sallent del Colombo, 2004). On the educational front, he also led the Philosophy and Pedagogy Seminars, started an education journal, *Quaderns d'Estudi*, established the School of Librarians for women and headed the *Direcció General d'Instrucció Pública* of the *Mancomunitat*. Then it all came to an end when he was forced out in 1920 after repeated clashes with Prat's successor –an episode known as *la defenestració* ("the defenestration")– and opted for a life in "exile," first traveling to Argentina and, after 1922, settling in Madrid (Jardí, 1967; Díaz-Plaja, 1967).

4. Ors: Philosophy and Science, Noucentisme and Classicism

Like much else, Ors' doctrines in philosophy and philosophy of science are best understood in terms of their dualistic and synthetic formulations.

He primarily sought to overcome the conflict between the tradition of pure rationalism and more recent doctrines of vitalism, intuitionism and pragmatism. Reason and reasoning, Ors objected, only captured the abstract structure of reality, without the aesthetic element of sensible order. The alternatives denied any role for reason. Pragmatism, grounded on economy and biology, constituted a standard of success for the practical capacity to meet needs and solve problems.⁵

In Ors' synthetic brand of intellectualism, reason is itself a biological mechanism, but intelligence operates within the dual conditions of human activity, in a struggle between subjective potency –of unbounded internal energy and free will– and objective resistance –from the bounding environment. When resistance dominates, Ors observed, the activity is work, with a goal in mind, and it includes mechanical reasoning and calculation. When potency dominates, without goals, it's creation and play, and curiosity. This is the irreducible epistemic element that Ors claims he has identified and he calls 'the residue in the measure of science by action.' (d'Ors, 1909a). They are unified in the sensible, measured, ordered transformation of reality. This is the doctrine Ors labeled 'philosophy of the man that works and plays.'⁶ Knowledge is the activity of intelligence that combines reason and curiosity, rule and creation, work and play.⁷ The virtue of *seny* (good sense), distinctively extolled in Catalan culture, exemplified this Mediterranean kind of intelligence.

Science and philosophy fit this view as well. According to Ors, in the exercise of curiosity alongside reason, scientists as well as philosophers adopt an aesthetic attitude that, besides engaging in free, experimental activity, also presents the world to itself as a sensible object. The abstract rational structure of reality is supplemented with a sense of order through figurative and hierarchical structure (d'Ors, 1911a). Science is, thus, as aesthetic an activity

⁵ See Pérez-Ilzarbe (2007); it provides a general survey, although based especially on Ors' later systematic formulation in d'Ors (1947a); see also Garriga (1981) and Bilbeny (1988).

⁶ 'La filosofía del hombre que trabaja y juega' (unless otherwise noted, all translations from the Catalan and Spanish and Catalan are mine); see d'Ors (1914).

⁷ *Glosa* of 19 May 1911, in d'Ors 2003, 625.

as art, and Ors declared his admired Poincaré, with his acknowledgement of the different kinds of activities of the mind, his sense of play and intellectual beauty, the thinker with the most aesthetic sense of science.⁸

In his brief *gloses* from 1910 and especially 1911 Ors repeatedly situated philosophy in relation to Catalan *seny* and the Mediterranean intellectual lore. For Ors, accordingly, philosophy was thinking according to harmony, ordered pluralism, rhythm of rest and motion. In the tradition of Greek philosophy, he sought to address, with Plato and Aristotle, the dualities such as unity and plurality and rest and motion, that is, the dialectical conflict between Eleatic, Parmenidean absolute rest, unity and reason and Ionic, Heraclitean change and plurality –which he also found in James’ pragmatism (after a heated session in Bologna).

Ors declared harmony the good of unity in diversity, ordered hierarchical pluralism, beyond intellectual abstractions: it was a model of intellect, aesthetic and society as in music and the Greek city.⁹ Neither Greek Logos nor German Pure Reason, thinking is Greek *Nous* and Catalan *seny*, concluding that ‘the man of great *seny* is a musician.’¹⁰ This emphasis on Greek philosophy and the theme of unity was hardly unique or uniquely his: In fact, in Bologna Émile Boutroux had opened with a talk on the relation between philosophy and the sciences and emphasized, citing Plato, philosophy’s distinctive synthetic, or unifying, perspective (*Atti*, 26).

The theme of unity and plurality and its symbolic value connecting to classical Greek culture would next enter Ors’ teaching as well. For the 1911-1912 academic year at *Estudis Universitaris Catalans* he organized a course titled “The arguments of Zeno of Elea against the existence of motion and the modern notion of space-time.”¹¹ The title and the topic closely correspond to the title and topic of his dissertation of 1913. In the same period, he published the article “Irreversible phenomena and the entropic conception of the universe,” in which he pointed to the significant challenge to the classical Greek static image of the universe from the modern theories of thermodynamics and

⁸ *Glosa* of 19 July 1912, d’Ors 2005, 217-19.

⁹ *Glosa* of 13 May 1911, d’Ors 2003, 612.

¹⁰ “L’home de gran *seny* és un músic;” *glosa* of 20 June 1910, d’Ors, 2003, 193.

¹¹ *Estudis Universitaris Catalans. Curs de 1911 a 1912* (Barcelona: L’Avenç, 1912), 15.

evolution (d'Ors, 1911b). The examples suggest that for Ors modern science had to be assessed by classical standards, and he had decided to pay attention to both.

All these ideas and projects were in turn a coherent set of contributions to the reformist program of *Noucentisme*. Relations between science, philosophy and Mediterranean classicism received their special significance as part of a comprehensive and transformative political-cultural vision. In the rest of the section I provide a brief overview of the interconnected dimensions of *Noucentisme* relevant to my argument.

What is *Noucentisme*? An adequate answer must include the following features: (1) cultural regeneration, (2) Imperialism, (3) Europeanism, (4) Federalism, and (5) classicism.

(1) Ors' introduced the term 'Noucentisme' in 1906 to describe a generation of individuals marked by the coincidence of their public appearance with the first years of the new century, the nineteenth-hundreds.¹² I have already mentioned the surge in demand for cultural regeneration in reaction to the aftermath of the Disaster of 98 and the rise of different anti-positivist cultural movements in Europe. To engage in politics and to engage in culture were considered equivalent (Murgades, 1976; Cacho Viu, 1997).

In Catalonia three main venues for communication of ideas enabled three modes of philosophical writing: university, church and public print media. It is the third that supported a mode of philosophical writing more attuned to the interest of different social classes and to social, cultural and intellectual changes locally and abroad; Ors represented the more spiritualist currents while the younger philosopher and economist Joan Crexells represented the more analytical and scientific (Bilbeny, 1979). The contrast with Ors is illustrative.

Crexells (1896-1926) was, like Ors, interested in philosophy, the sciences and literature –especially the Greeks, to the point of translating into Catalan a number of Plato's *Dialogues*. He attended Ors' philosophy courses at the IEC and in 1919, the year he received his doctorate in Philosophy from the Universidad Central de Madrid, he was appointed Assistant Professor at Ors'

¹² *Glosa* of 28 June 1906, d'Ors, 1996, 169.

Philosophy Seminar, to which in 1920 Bertrand Russell was invited to speak. Unlike Ors, Crexells was attracted to the formal developments in analytic Anglo-Saxon philosophy and in mathematics and its applications, especially economics and statistics, developments that were taking place in Germany and Britain. After he was denied funding to study with Russell, he became head of Statistics in Barcelona's city government and in 1923, during his third visit to Germany, he took the opportunity to study statistics and economics with Pearson and Marshall in London.

(2) The term 'Imperialism', Ors wrote to Amadeu Vives as early as 1904, carried a political meaning: to designate the political character of the Catalan movement.¹³ An Empire was Prat's solution to his problem of harmonious unity of plurality: the superior unity within which all freedoms can coexist harmoniously. In the wake of the formation of Solidaritat as a common front against a perceived Spanish anti-Catalanism, Ors offered a series of six *gloses* presenting a "scientific" defense of solidarity and the political ideal of the city as a natural phenomenon grounded in natural law.¹⁴ The key idea was interdependence as a creative union.

He associated the territorial ambitions of Catalanism with the exemplary precedent set by the territorial exploits of Ramon Llull's intellectual and religious missions and polemics, which he considered imperialistic, declaring, in 1909, that 'the battle philosophy in Catalonia must be Lullism, a magnificent instrument of nationalization and "imperialization".'¹⁵

(3) Striving for modernity involved breaking free from isolationism and joining European culture by introducing European intellectual, educational and scientific spirit and institutions. This raised for Ors –and Ortega– the challenge of how to integrate northern products and ideals with southern, Mediterranean culture.

¹³ Letter to Amadeu Vives, 25 July 1904, in Cacho Viu, 1997, 37.

¹⁴ *Gloses* of 21, 23, 24, 25, 26 and 28 May 1906, Ors, 1996, 125-33.

¹⁵ d'Ors writes: "la filosofia de batalla a Catalunya, ha de ser, és, el lul·lisme –instrument magnífic de nacionalització i d'imperialització." *Glosa* of 25 January 1909, d'Ors, 2001, 394 (I have replaced Ors' pre-normalized terms –that is, prior to the publication by the Institut d'Estudis Catalans of Pompeu Fabra's norms of Catalan orthography in 1904 and the first dictionary in 1917– such as 'lulisme', 'nacionalisació' and 'imperialisació'.)

(4) Imperialism, for Ors, was in turn a form of federalism. He framed the relation within his naturalistic defense of political interdependence, echoing Prat's dynamical account of nationalism and its imperialistic phase. Thus he postulated two tendencies that he associated with an imperialist nature: a centrifugal tendency to strict autonomy or secession and a centripetal, unionist tendency. The model constituted a related solution to a problem of unity and plurality, where plurality involves social conflicts of freedom among individuals, whether citizens or nations.

(5) Distinctive traits of *Noucentisme* are also traits of classicism, from which they receive their historical origin, their examples and their ethical, aesthetic, intellectual and political exemplary force. To the extent that Ors conceived of *Noucentisme* as historically rooted in standards of classical culture, the social project was ultimately a project of classical restoration.

Ors identified with an idealized European tradition that originates, in particular, in Greek and Roman cultures, which he declared classical and had flourished on Catalan land. They also established, according to Ors, a Mediterranean "race" as the cultural expression of racial and geographic conditions: the Latin race of the Mediterranean peoples, which he distinguished, as did also Ortega, from a Nordic race. The Mediterranean symbolized for Ors an environment that prompted figurative representations: sensualism and especially finitism. After quoting Plato, 'the first good is Measure', Ors concluded that 'the Mediterranean is the best sea, because it's the sea of Measure.'¹⁶

Classicism, in its finitist framework, also extolled the civilizing spirit of the City, with inseparable aesthetic and ethical ideals such as were hygiene, discipline, regularity, regulation, rhythm, solidarity, construction, beauty, proportion and measure, all opposed to the spirit of the barbarian and, later, the romantic.¹⁷ Ors recovered from the finitist character of Greek culture also its anthropocentric nature. Man, his life and faculties are the measure of all things. It includes the "scientific spirit," with its promotion of philology,

¹⁶ "El primer bé és la Mesura" and "el Mediterrani és el millor mar, perquè és el mar de la Mesura." *Glosa* of 20 December 1912, d'Ors, 2005, 381.

¹⁷ *Glosa* of 23 May 1910, d'Ors, 2003, 157. See Bilbeny, 1988 and Rius, 1991.

Jordi Cat

history, archeology, philosophy, physiology and the other sciences. Ors mentioned in this regard the iconic role of figures such as Euclid, Plato, Aristotle, Erasmus and Galileo.

Ors could then claim that science was a form of aesthetics insofar as it embodied at least three classical features. (1) *Irony or dialectics*: Socratic irony is dialogue and playful exploration, seeking alternatives, considering challenges and refusing dogmatism; dialogue is also public and objective deliberation, a feature that would be central to his consideration of relativity theory. (2) *Figurative intelligence*: The exercise of the faculty of intelligence is first and foremost seeks figurative order and representation. (3) And *Geometry*: science and art are informed rules of transformation and construction of visible representations expressing order, proportion, regularity and finitude.

5. Relativity Arrived in Spain: From Germany and France to Madrid and Barcelona

In Paris in 1910 Ors was exposed to the technical details of Einstein's theory of relativity at Paul Langevin's course at the Collège de France (d'Ors, 2009, 102 n. 129; Jardí, 1967, 73). Langevin was a student of Poincaré and had found in Einstein's theory the completion of his own project of a general theory of matter and energy that could resolve the noted conflicts between mechanics and electromagnetism. To that effect he adopted Herman Minkowski's intuitive, geometric re-formulation of 1908, centered on the relation between space and time intervals –intervals between pairs of events– and on the ensuing geometric synthesis of space and time. In 1911 he developed a famous discussion of the concepts of space, time and causality in a paper he presented at the Congress in Bologna. In this paper Langevin introduced the famous twin paradox with the example of a space traveler also traveling in time on a round trip to Earth (Langevin, 1911).

Ors' second direct source was his admired colleague Esteve Terradas. Terradas had attended school in Berlin and kept up with German literature during his subsequent studies. In 1904 he received his first doctorate in mathematics, with a dissertation on the geometric properties of suspended or moving elastic strings (Sallent del Colombo, 2004). This area of research was relevant to applications in the textile industry and to his own subsequent work on

phone lines for the Mancomunitat. Then he learned of relativity in 1905 in the context of the electron theories of electromagnetism and optics associated with the Dutch physicist Hendrik Lorentz; they were relevant to his dissertation research in optics (on the absorption of light by crystals) for which he received his doctorate in physics in 1905. Meanwhile, Ors had met Terradas in Madrid during his own doctoral work and listed him in one of his *gloses* as one of the exemplary “noucentist” scientists’ (“científics noucentistes”).¹⁸ In 1907 Terradas became professor of electricity and magnetism and rational mechanics at the Universitat de Barcelona.

To him we owe the first mention of relativity theory in Spain, in 1908, at the first meeting of the Asociación Española para el Progreso de las Ciencias, in Zaragoza. The paper, “Modern theories of light emission,” concluded by highlighting the chief applications and significance of Einstein’s theory (Terradas, 1908, 1-21 and 186; Glick, 1988, 32-7; Roca, 1994). A second mention followed in a presentation in Barcelona in 1909 (Terradas, 1909). Still, Terradas was not alone in his interest in Einstein. A chemical physicist in Madrid, Blas Cabrera, had also become familiar with Einstein’s work, especially on magnetism, while doing research in Germany and Switzerland. In 1908 both Cabrera and Ortega participated in the Zaragoza conference. Despite having joined other European scientists in mentioning Einstein’s theory merely as a convenient reformulation in the context of electron theory, Cabrera would become one of the physicists lecturing on relativity in the 1920s and reaching the widest audiences (Glick, 1988, 38-44 and 58; Ruíz de Olano, 2012).

Meanwhile, in 1912, Terradas wrote the first presentation of Einstein’s theory in Catalan. Terradas’ article was a review of the first German book-length monograph on the principle of relativity by the physicist Max von Laue (von Laue, 1911). The significance of this event lies in its social context and purpose: it was meant for Catalan audiences in the educational, scientific and internationalist spirit of the mission of the Institut d’Estudis Catalans. It was published in *Arxius de l’Institut de Ciències*, which he and Ors edited (Terradas 1912). More significantly, Ors would borrow from it in his dissertation (d’Ors, 2009, 98). Terradas emphasized, like Langevin, the empirical basis of the principles of the new theory, inferred by induction from negative experimental results in optics. He also drew particular and enthusiastic atten-

¹⁸ *Glosa* of 1 July 1908, d Ors, 2001, 174-76.

Jordi Cat

tion to Minkowski's four-dimensional geometrical synthesis of the new concepts of space and time in the space-time interval (d'Ors, 2009, 84 and 86). As other scientists begin publishing accounts of the theory, Terradas would write next the first encyclopedia article on relativity (Terradas, 1923).

6. Ors and Relativity Before the Fall

In June 1913 Ors defended his doctoral thesis with the telling title "Zeno of Elea's Paradoxes and the Modern Notion of Space-Time" (d'Ors, 2009). Throughout 1911, Ors had already referred to Zeno's paradoxes to illustrate the fundamental theme of the conflict between unity and plurality that characterized and connected different issues in the ideology of Noucentisme. The conflict, in turn, also allowed him to connect classical problems in philosophy with developments in modern science; in other words, it allows him to synthesize science and philosophy, society and rationality, northern and southern Europe, classicism and modernity. Looking at the earlier course title, we can notice in the dissertation's title a shift from "new" to "modern." Also a number of remarks in the introduction, conclusion and different observations throughout the analysis made clear his broader ambitions and the analysis' broader meaning.

The famous paradoxes typically have the form of *reductio ad absurdum* arguments against the conceptual possibility and existence of motion. The two more famous ones involve the flight of an arrow and the race between a tortoise and a hare. Like Parmenides and the Eleatic School, Zeno represented for Ors the constellation of concepts and doctrines about reality in a constellation of dualities at the origin of modern philosophy and science: static (as opposite to dynamic), quantitative (not qualitative), unified (not plural), rational (not intuitive), infinite (not finite) and discrete (discontinuous).

Ors sought to eliminate the paradoxes by defending one term in the dualities: the discontinuity, discreteness, or limited divisibility and finitude of all distances in geometric space. To do so, he challenged Zeno's classical premises in light of several conceptual insights into relativity theory, based on Langevin's presentation: (1) the logical and methodological value of the principle of relativity consisting in its role resolving, that is, eliminating, paradoxes –for instance, the conflicts that had been noted in the integration of optics

and mechanics—(d’Ors, 2009, 94); (2) Minkowski and Langevin’s emphasis on the mathematical and physical value of the synthetic conception of space and time (d’Ors, 2009, 17); (3) the relativity of all motion, with the exception of the uniform speed of light; and no less importantly, (4) the inference from the synthetic definition of events as intersection points to the claim that sequences of events constituting the world-line are finite, discrete, discontinuous, aggregates of events, and that this anomalous physical continuum, while given typical graphic representation by continuous geometric lines, cannot be strictly speaking considered mathematically continuous (d’Ors, 2009, 121).

But already in the introduction to the dissertation Ors made clear his related interest in modern philosophical issues and his own standard of classicism, in contrast to a mere historical problem in classical philosophy. He pointedly described the manner in which the new scientific development had been achieved “most modernly” (*modernísimamente*) (d’Ors, 1009, 17). At the same time, while the theory was modern, it was, despite its recent origin, no longer ‘current’; it had become, instead, classical. While this might seem paradoxical, Ors considered that its authoritative modernity wasn’t incompatible with classicism, since it was relevant to solving classical problems and inheriting classical notions and a classical spirit. Then he announced his resulting philosophical thesis as a defense of a general doctrine of finitism, which he had already declared a distinctively classical theme. In the conclusion he added another: ‘a contribution [...] to the great contemporary debate between intellectualism and anti-intellectualism.’ (“una contribución [...] al gran debate contemporáneo entre intelectualismo y anti-intelectualismo.” d’Ors, 2009, 131.)

Still, these did not make up the final aim and result; they concerned, instead, the doctrines’ relevance to his own interest in classicism, an interest expressed in precisely the same terms he had used to articulate the cultural vision of Noucentisme. He aimed to ‘situate this [thesis of finitism] within a general combat in favor of *clear* ideas and against the commonplaces of romantic Philosophy.’ (“situaremos ésta [nuestra tesis finitista] dentro de un combate general a favor de las ideas *claras* y contra los lugares de la Filosofía romántica.” d’Ors, 2009, 17, original emphasis). In the conclusion, we find a more detailed statement in the same spirit:

Jordi Cat

‘In various works, we are carrying out [...] a sustained combat against certain *commonplaces* in romantic philosophy and in favor of *clear, concrete and precise ideas*, of the sacred inheritance of the Greeks’ culture! We have fought, fight and want to fight further the ghost of *mystery*, against the ghost of *internal life*, against the ghost of the *unconscious*, against the ghost of the *ineffable*. The present thesis is an episode in the parallel battle against *the infinite and continuity*.’¹⁹

It is worth noting that in the wake of writings by Russell and Whitehead on modern mathematics and physics, in 1925 also Crexells took on the problem of Zeno’s paradoxes, except he did so from a formal standpoint in relation to developments in modern mathematics rather than in physics (Crexells, 1925b). Here it is also worth noting that, while Crexells made scant references to Einstein, his historiographic essay ‘History upside-down’ (1925) was inspired by his teacher Karl Pearson’s discussion of the implications of relativity theory in the first volume of *The Grammar of Science* (Pearson, 1911; Crexells, 1925a).

Finally, it must be noted that, for Ors, Zeno’s character had yet additional significance, expressing the cultural-political dimension of the *Noucentisme*. Besides Zeno’s place in the dualistic cartography of western thought, in the dissertation Ors placed him at the heart of classical philosophy as the recognized inventor of dialectics, practiced by Socrates and celebrated by both Plato and Aristotle (d’Ors, 2009, 45). Moreover, Ors identified the target of Zeno’s new deliberative practice: common-sense realism and vulgar opinion. This target placed Zeno’s argumentative practice in the public scene.

Ors imagined Zeno as a “Noucentist” hero, identified with the inseparability of his intense philosophical and political lives (d’Ors, 2009, 41-2). In a social context of hostility towards his political and philosophical ideas –that is, his master Parmenides’–, Zeno was bound to develop a combative antagonistic attitude. Thus, Ors cast Zeno as a model of civic aesthetic and ethical

¹⁹ “En diversos trabajos estamos llevando, en la medida de nuestras fuerzas, un sostenido combate entre algunos lugares de la filosofía romántica y a favor de las *ideas claras, concretas y precisas*, ¡de la sacra herencia de la cultura de los griegos! Hemos luchado, luchamos y queremos luchar aún contra el fantasma del *misterio*, contra el fantasma de la *vida interior*, contra el fantasma de lo *inconsciente*, contra el fantasma de lo *inefable*. La presente tesis es un episodio de la batalla paralela contra *el infinito y la continuidad*.” Ors, *Aporias*, 132, original emphasis. The broader dimension of the conclusion has been noted in Jardí (1967, 138) and, more recently, Garriga (1981, 97).

virtues, a model of physical beauty and philosophical and political nobility. In the end, Ors noted, Zeno had to endure martyrdom and death with stoic virtue.

With his philosophical application of relativity theory, Ors provided an illustration of, and an argument for, his intellectual and social philosophy of *Noucentisme*. Engaging relativity supported *Noucentisme* as a project of social regeneration through cultural integration and differentiation of an ideal Catalonia. Relativity theory is, for Ors, an instance of northern-European, transformative modern scientific development that he applies to solving a classical, Mediterranean philosophical problem, namely, the rational, dialectical elimination of classical conflicts between unity and plurality, finitude and infinity, opinion and truth. It is within such a framework that Ors' argument for finitism and intellectualism emerged as a synthesis of unity and plurality that embodied and synthesized, in turn, the metaphysics, aesthetics, cognition and civic, political life in the vision of *Noucentisme*.

7. Ors and Relativity After the Fall

Ors' remarks on relativity and Einstein continued after his fall from political grace in January of 1920. Even before his long visit to Argentina in 1921 and his permanent move to Madrid at the end of 1922, his rhetoric shifted politically away from specific and constructive statements and from leadership positions within the national project of Catalanism. He would focus, instead, on Einstein's negative territorial and cultural circumstances, like Ors' own, on the generic cultural value of Einstein's theory and on Ors' purely philosophical early claims about its significance. More broadly, in the background was also Ors' sense of a European crisis in the wake of the Great War (Fuentes Cordera, 2015).

In March 1920 Ors penned for the Barcelona newspaper *Las Noticias a glosa* in Spanish on Bertrand Russell in the wake of his presence at Ors' Seminari de Filosofia.²⁰ In the piece, Ors denounced a worldwide prosecution of thought in general. To draw attention to his recent fall from grace and further inflate his international persona, he grouped himself with Russell, the

²⁰ *Glosa* of 28 March 1920, d'Ors, 1947b, vol. 1, 82-86.

Jordi Cat

Socrates of Cambridge, under the rubric of “the expelled.” And in the same vein he pointed to Einstein becoming the recent target of anti-semitic hostility at the University of Berlin: “the students’ kicking of Einstein and the shouts of “Jewish dog” against the sage that has defeated Newton.” (“el pateo de los estudiantes contra Einstein y los gritos de “perro judío” dirigidos contra el sabio que ha ven[c]ido a Newton,” d’Ors, 1947b, vol 1, 84). In the same year also Crexells reported on another anti-semitic denunciation of Einstein’s ideas, by Paul Weygand, in one of his newspaper chronicles from Berlin, from 28 September of the same year (Crexells, 1920). Ors cast Einstein as a victim in his own homeland; the not so veiled implication was that Einstein, ever Ors’ ideal for Catalonia’s national ideals and mirror of its defects, was in the process of becoming de-territorialized and re-territorialized, like Ors himself. The analysis can easily be extended to his stays in South America (Fuentes Cordera, 2012).

Next came a *glosa* in the Madrid newspaper *La Libertad* of July 1921 titled “Einstein and his efficacy”: Ors reacted to an interview with Einstein published in London about relativity (*La Libertad*, 12 July 1921, 1-2). In the interview, Einstein denied his theory was also a philosophy; yet, echoing his earlier views on the cognitive role of intellectual play, Ors added that Einstein’s theory was pregnant with possible philosophical effects. As a historical precedent, Ors pointed to Copernicus’ effect on the moral life of the Modern Age, which, he declared, included the Reformation, Enlightenment (Ors used the term *Aufklärung*), Baroque, Romanticism, Revolution, etc.

8. Einstein in Spain: Barcelona 1923

In 1919 Einstein enjoyed an international consensus around the astronomical confirmation of his general theory; the satisfaction was followed in 1921 by a Nobel Prize. He was an international celebrity and his presence was requested accordingly.

Terradas had invited Einstein on several occasions already since 1918 and Einstein finally visited Spain in 1923. He stayed in Barcelona during the last week of February and subsequently in Madrid til March 11, followed by a two-day visit to Zaragoza and one last day in Barcelona on his way back to Berlin through France.

In Barcelona, Terradas was the main unofficial acting host, with the engineer and politician Rafael de Campalans at his side. Einstein had said of Terradas, ‘I was in Spain, looked at Spanish science, and discovered Terradas.’²¹ In Madrid the unofficial host was Blas Cabrera, already on friendly terms with Einstein and, like Terradas, a German speaker and familiar with Einstein’s work. There, the political attitude was one of aligning the aristocracies of blood and intelligence; in Barcelona, by contrast, the political reaction reflected the social and economic situation of the industrialized region and revolved around workers’ conditions and Catalan nationalism.²²

The industrial bourgeoisie was eager to celebrate the latest scientific novelty, especially without the religious challenges Darwinism had posed. And the cultural policies that the Mancomunitat values encouraged contact with modern international science of Catalan scientists and the Catalan language. Before any of his talks in front of scientific societies or at the Escola Industrial, the Diputació Provincial had sponsored an opening series of three popular lectures, in which Einstein performs surrounded by Catalan flags and shields. And the Mayor of Barcelona welcomed Einstein speaking in Catalan.

Einstein also enjoyed an international reputation for political involvement. Although his involvement focused mainly on pacifist and Jewish causes, it easily suggested connections between science and politics. True to his pacifism, Einstein extolled the ideal of a human community without political or personal conflicts. In its editorial the following day, the newspaper *La Veu* identified the scientist and the city, and Catalan with the international language of science (Glick 1988, 113). Other publications publish more satirical political readings in territorial terms: ‘In Barcelona the theory of relativity has served our political ends, and we present Einstein as a perfect regionalist, as a kind of Cambó of mathematics.’ Or, ‘Catalonia is the land of relativity.’ (*L’Esquella de la Torratxa*, quoted in Glick, 1988, 114-5).²³

²¹ The statement was reported by the physicist Theodor von Karman in *The Wind and Beyond* (1967), quoted in Glick 1988, 118 n. 47.

²² Here I follow Glick, 1988.

²³ Lluís Cambó and Francesc Macià were Catalan political leaders.

Jordi Cat

9. Ors and Relativity from Madrid

On March 9, 1923, Ors was already living mainly in Madrid, when not abroad, and attended Einstein's conference introduced by Ortega at the Residencia de Estudiantes. If Ors exchanged any words with Einstein, he never reported it. Ors' reaction, recorded by a fellow member of the audience, repeated his early defense of the historical significance of Euclid's three-dimensional geometry (Glick, 1988, 166).

Ors's main public reaction appeared in a set of three brief *glosas* he filed for the Buenos Aires newspaper *La Nación* on March 6, 1923, in the midst of Einstein's Madrid visit. The telling titles were "Einstein –his visit in Spain," "His Rationalism" and "His Homeland." (d'Ors, 1947b, 794-7). Ors focused on the impact the war had on attitudes to German science, Einstein's own territorial and political status in his German motherland and a selectively philosophical emphasis on Ors' old project of reform of intellectualism (perhaps a nostalgic echo of his earlier Europeanist classicism).

In the first *glosa* Ors drew out the sarcastic lament that Einstein had not been presented with a collection of the pro-alliance journals from the years 1916-18 published in Barcelona and Madrid; in them Spanish authors attacked German science, denying its achievements, prevented, they add, by the sad constitution of German brains (d'Ors, 1947b, 794-5).

In the second *glosa*, Ors situated the philosophical significance of Einstein's theory in relation to different doctrines and authors he had mentioned in the past, especially himself and his own doctoral thesis, which he let the readers know it had been presented in June 1913 and was since lying archived at the Faculty of Philosophy and Letters of the Universidad Central (d'Ors, 1947b, 796-7). Ors wanted to dispel the widespread misinterpretation that Einstein's theory was a justification of relativism making truth relative to circumstance, or even of pragmatism. Instead, he insisted that the finite theory of the world was a contribution to finitism and Ors' own qualified, new type of rationalism or intellectualism (d'Ors, 1947b, 796).

In the third *glosa*, Ors returned to the territorial and national perspectives on Germany and Einstein himself. He recalled the anti-semitic hostility against Einstein in Berlin and cast it first as a case of conflict between local violence and worldwide veneration. Next, he cast it as a conflict between

Prussian nationalism and German patriotism. The anti-semitic student involved had mistaken one for the other thinking he could be guardian of the German nation. Ors quickly proceeded to de-territorialize and re-territorialize the German homeland, whose essence, he claimed, was now located within Einstein, so that, when Einstein had visited Japan the previous year, the German homeland had moved there as well (d'Ors, 1947b, 797). We may ask whether Ors intended a veiled implication concerning the re-location of the Catalan homeland in his own soul in exile.

This *glosa* was followed after the summer by Ortega's veiled criticism of classicism in his own discussion of relativity.²⁴ It included a hostile criticism of Ors' statements on culture and history.²⁵

Ors revisited relativity one last time in 1947, in an examination of the philosophical implications of modern physics in his most systematic and detailed exposition of his philosophical views of the same year, *El Secreto de la Filosofía* (d'Ors, 1947b, 236-39). He offered a purely philosophical discussion of the relation between relativity and rationalism. Still, he illustrated the tension between space and time from a rationalist, static perspective with a political example, presumably from an actual episode in the history of Spanish politics: the ideological tension between a conservative government cabinet and two socialist members in its midst ready to undermine it with sustained workers' strikes (d'Ors, 1947b, 237). The philosophical and political readings had survived, but they were no longer territorial, and no longer Catalan.

We can conclude about Ors, then, that his social and cultural project of *Noucentisme* was a program that integrated intellectual, aesthetic and social views and values for the cultural transformation of Catalonia, in particular during a period of political and territorial crises afflicting the Spanish Empire. The vision aimed to synthesize classicism and modernity, northern and southern Europe, science and philosophy, reason and imagination, free will and intellect, individual and society, all the while addressing the unity and plurality of, for instance, Spain and of Ors' own public life. In his dissertation, Ors used relativity theory to defend finitism and intellectualism, aiming

²⁴ "El Sentido Histórico de la Teoría de Einstein" (1923), in *El Tema de Nuestro Tiempo*, Ortega y Gasset, 2004-5, III, 642-654.

²⁵ "El Sentido Histórico" (1924), in Ortega y Gasset, 2004-5, III, 695-698.

Jordi Cat

to undertake the various syntheses and further the cause of *Noucentism* as a result. Afterwards, he continued to refer to the figure of Einstein and his scientific theory to track Einstein's and his own intellectual and territorial positions as political circumstances changed both in Germany and Spain. Next, I turn to how also Ortega, an evaluator of Ors' dissertation, was engaged in a related intellectual and political project, albeit explicitly concerned with the deteriorating unity of Spain; and how also Ortega engaged the figure of Einstein and the theory of relativity to express and support a philosophical view in epistemology and politics.

10. Ortega: From Philosophy to Political Thought and Action

In Ortega's thought, politics and epistemology were integrated in the project of a philosophy of culture that, in the period prior to his interest in relativity theory, was centered on the value of science. References to Ortega's attention to relativity theory consistently mention his essay in an appendix to *El Tema de Nuestro Tiempo* (1923) and, when suggesting a philosophical connection, they declared the discussion a matter of perspectivalism in knowledge.²⁶ Instead, I want to draw attention to the territorial dimension and will point to perspectivalism and the critique of particularism in Ortega's political thought and program, and especially to the influence of *España Invertebrada* (1921), where he famously articulated his own solution to the problem of the conflict between political unity and plurality.

His early intellectual and academic trajectories paved the way. After receiving a doctorate in philosophy from the Universidad Central de Madrid in 1904, he studied in Germany during the years 1905-1907 and 1911. In Berlin, Ortega studied with philosophers such as Alois Riehl and Georg Simmel –sociology and Kant–; Ernst Cassirer, the neo-Kantian from Marburg, was there too. In Marburg, Ortega studied with Cohen –especially Kant– and Natorp –psychology and pedagogy–, strengthening his sense of the possibility of theorizing culture and the role of values and his sense of the value of education as tool of social reform. Not surprisingly, in such intellectual environment, he embraced tenets of neo-Kantianism, for instance, that knowledge is constructed by the intellect and in the modern age the standard is set

²⁶ See also monographic discussions such as González de Posada (2006) and Harada (2006).

by science. He also became acquainted with Husserl's philosophy, in which phenomenological investigations into the absolute conditions of subjectivity were informed by scientific standards.²⁷ During his second stay in Marburg, he attends the Bologna Congress, where he meets Ors. In between trips, in 1910, he is appointed to the Chair of Metaphysics at the Universidad Central de Madrid, where Ors obtained his doctorate in 1913.

The period 1902-1914 is typically considered Ortega's objectivist phase (Ferrater Mora, 1963 and Lasaga Medina, 2003). He endorsed the foundations of knowledge on a priori concepts and the sought to articulate the phenomenological structure of the presence of things. More generally, he declared that philosophy, after the model of science, was distinguished by method and system—a view endorsed by Cohen—and this in such a way that the system in turn leads to new methods. And at the opening conference of the Asociación Española para el Progreso de las Ciencias in Zaragoza in 1908 he spoke on Descartes' transcendental method (Gracia, 2014, 134).²⁸

But he also adopted a more general constructive view, beyond the epistemology of idealism, that would be developed further in later periods: That a person wasn't constituted, or lacked a fixed nature; his being is a project into an imagined future that must be realized through commitment and action. The determination to act, on commitment, leaves open what actions to take.

At the collective level, such views take an expression similar to the commitments driving Prat and Ors', that a society can be reformed only through education, political pedagogy.²⁹ Man, Ortega declared, is not a political animal, but an animal that must become political; and intellectuals must lead the effort.³⁰ This was hardly a purely philosophical reflection; it was a political project. In response to political inaction and a social crisis that includes the

²⁷ On Ortega's German intellectual influences, see Orringer (1979).

²⁸ The essay, 'Descartes y el método trascendental', was written in fulfillment of the terms of his grant to study abroad; see Martínez Carrasco (2013, 39).

²⁹ See his speech from 1910 'La pedagogía como programa político' (1916), in Ortega y Gasset (2004-5, II, 86-102).

³⁰ See also his political program in 'Prospecto de la "Liga de Educación Política Española"' (1914), in Ortega y Gasset (2004-5, I, 738-746).

Jordi Cat

events of the *Semana Trágica* of Barcelona in the summer of 1909, he initiated an attempt at reforming the Spanish character and the culture of political liberalism, with a role for socialism.

The political problem was endemic to the governance culture of the Restoration period, namely, the fact that since in 1874 a new dynamics of alternation in government (*turnismo*) between the two main parties, Conservative and Liberal. In 1914 Ortega helped fund the reformist political platform *Liga de Educación Política Española*. On March 23, 1914 he delivered his most influential speech, “*Vieja y nueva política.*” (1914) (Ortega y Gasset, 2004-5, I, 710-737). There he decried the rigid and ineffectual Spanish political parties and institutions and also the political passivity of citizens. As the new movement’s lemma, he suggested ‘liberalism and nationalization’, distinguishing his emphasis on the national from nationalism, a form of imperialism: ‘Nationalism supposes the desire that a nation lord over others, which supposes, at least, that such a nation is alive. Our aim is very different: [...] nothing more than a vertebrate and standing Spain.’ (“*Nacionalismo supone el deseo de que una nación impere sobre las otras, lo cual supone, por lo menos, que aquella nación vive. [...] Nuestra pretensión es muy distinta: [...] nada más que una España vertebrada y en pie.*” Ortega y Gasset 2004-5, I, 737). In the *Liga*’s program, he listed as its aims ‘democracy and Spain.’ (“*democracia y España.*” Ortega y Gasset, 2004-5, I, 743).

Ortega’s sense of patriotism was nevertheless rooted in Europeanism rather than nationalism, which had been growing in Catalonia around *Solidaritat* and in Germany had been exacerbated by the Great War. Europe mattered more than Spain, which mattered to him only if it could incorporate Europe “spiritually,” that is, through its dominant values. Even his socialism was another faith cemented in Germany. From this internationalist standpoint, the socialist party would be the vehicle for Spain’s Europeanization. In his famous words, ‘Spain was the problem and Europe its solution.’ (“*España era el problema y Europa la solución.*” Ortega y Gasset, 2004-5, II, 102). Spain, he declared, lacked especially Germany’s love of science, the faith in a method characterized by epistemic virtues such as honesty and the pursuit of truth. At the same time he sought to empower a Mediterranean, southern culture that could absorb and resist German imperialism, and, in the process, oppose its fixed universal abstractions and artistic and political insensitivity, the transcendent and invisible, with defiance through attention to the fleeting

Jordi Cat

world of concrete sensations; in territorial terms, the Spanish emotion towards the world. It is in the spirit of this effort that he introduced Ors in 1914 to an audience, after Ors' failure to get appointed to the Psychology Chair in Barcelona, despite Ortega's vote. He declared Ors a brother in the 'war for the Spanish moral independence', the 'spiritual liberation of our country.' ("la guerra por la independencia moral de España" and "la liberación espiritual del país." Quoted in Martínez Carrasco, 2013, 67). In this shared modernizing, Europeanist spirit, Ors immediately proposed collaborating in the publication of recent works by European authors in translation.³¹ Ortega would pick up the idea only in 1921 with the creation of his *Biblioteca de Ideas del Siglo XX*.

The Great War of 1914 he perceived as clarifying the map of national principles and the destruction of internationalism at their hands. Recall that for d'Ors the war alerted to nationalism as a problem. Ortega's attitude was, by the war's end, to reject Spain's passive position of official neutrality, which he criticizes as 'neutral neutrality' ("neutralidad neutral"), 'absolute neutrality' ("neutralidad absoluta"), and 'death of the best possibilities' ("muerte de las mejores posibilidades")(Ortega y Gasset, 2004-5, III, 243). This was not his solution to a problem of political and cultural unity and plurality, especially in the face of German imperialism. Catalan nationalism had revealed that the problem of unity was also, and more importantly, internal. Spanish power had been in decay through territorial disintegration, through political loss of its distant colonial parts; the same lack of unifying imperial drive next weakened its grip on the plurality of peninsular parts. In its face, Ortega's mission was to solve the problem of unity without reduction, or, according to Prat, of false harmony. Ortega wrote in 1916: 'if nine centuries ago it was Castille's mission to reduce to unity our peninsular variety, perhaps it is its task for today to make life return from such a unity to a diversity that is stronger and more fertile than the primitive one.' ("si hace nueve centurias fue la misión de Castilla reducir a unidad las variedades peninsulares, acaso sea su menester de hogaño hacer que la vida española retorne de esa unidad a una variedad más fuerte y fecunda que la primitiva." Ortega y Gasset, 2004-5, II, 384). Against city and capital, Ortega defended wistfully the State's centripetal form of imperialism: a centrally imposed coordination of a new

³¹ Letter to Ors of 28 March 1914, in Cacho Viu, 1997, 304.

Jordi Cat

political plurality, a forced ‘collaboration’ of empowered territorial wills, the rural world of the provinces.³² This was his ‘true regionalism.’ The opposite, without active unity, of his model of active plurality and individuality was what he called particularism; and its most blaring expression was the case of Prat’s Catalanism.

The period of 1914-1923 is widely considered his perspectivalist phase. His landmark works are *Meditaciones del Quijote* (1914) and *El Espectador* (1916). In his project of a European synthesis, the universal ideals of science, ethics and aesthetics were embodied, as were for Ors, in concrete individuals in a time and place. On the philosophical plane, he famously declares the radically situated nature of the self and its circumstances: ‘I am I and my circumstance.’ (“Yo soy yo y mi circunstancia.” Ortega y Gasset, 2004-5, I, 757). In this formulation idealism received its pluralistic, naturalistic, and also historical, contingent, perspectival formulation.

Accordingly, Ortega adopted a functional approach couched in biological and territorial terms. Circumstance became environment, in Uexküll’s sense (*Umwelt*), created by each organism, its envelopment, both empowering and delimiting, which in turn becomes landscape (perceptually, locally, aesthetically) and country (‘my country is my landscape’ – “my país es mi paisaje”–), and then culture (collectively).³³

He developed his perspectivalism in relation to politics and knowledge in two other landmark works: *España Invertebrada* (1921) (Ortega y Gasset, 2004-5, III, 423-514) and *El Tema de Nuestro Tiempo* (1923) (Ortega y Gasset, 2004-5, III, 559-616).

There he stated that nations and empires were political structures emerging out of organizing or incorporating pre-existing social units. This set Ortega’s own version of the problem of political and territorial unity and plurality. According to Ortega, national unity was not a static state of internal coexistence, reliably sustained by a nationalizing or “totalizing” central force alone; this is the situation that led only to decay by disintegration. Its unity was rather a dynamical state involving a central force and a centrifugal, dis-

³² Like Prat and Ors, he adopted a dynamical models of Spain’s political history based on the action of two opposed forces.

³³ Already in 1906 he had spoken of pedagogy of landscape.

persive force (*España*, Part 1, ch. 1, in Ortega y Gasset, 2004-5, III, 433-36). The similarity with Prat's and Ors' respective dynamical models of territorial unity is notable.

The force of dispersion was activated by *particular* interests, passions and prejudices, where the particularity concerns both individuals and collectives. Ortega distinguished between expressions of empowering, territorial *pluralism* and destructive atomization (*España*, Part 2, ch. 6, Ortega y Gasset, 2004-5, III, 494-506). The first was illustrated, according to Ortega, by France, Germany and England's powerful feudal, aristocratic pluralism, with vital and exemplary minorities personalities and projects; the second was illustrated by Italy's cities.

The force of nationalization, he noted, is centralizing. Effective nationalizing action combines two necessary elements: material enforcement—that is, coercive violence—(the material component) and a “national dogma” or moral suggestion, a future-looking project of joint life (the vital component). The project, on this view, is not to be together (mere coexistence), but do something together, collaborate. Historically, the unification of Spain was the unification of two foreign policy projects. But, for Ortega, this was a weak sort of unity, lacking in strong pluralism (of feudal powers and exemplary minorities and personalities).

In the absence of a full nationalizing force, the disintegration of the Spanish empire began at the end of the 16th century from the periphery towards the center with a continual loss of colonial territories culminating in 1898 with the Spanish defeat in the American War. Then, 1898 marked the start of the force of “intra-peninsular dispersion” with the 20th-century proliferation of actions and discourses driven by sentiments of regionalism, nationalism or separatism, especially in Catalonia and the Basque Country.

The predominance of the dispersive force was expressed in the phenomenon he called *particularism*: ‘*The essence of particularism is that each group stops feeling a part, and, as a consequence, gives up sharing the feelings of the other parts.*’ (“*La esencia del particularismo es que cada grupo deja de sentirse a sí mismo como parte, y, en consecuencia, deja de compartir los sentimientos de los demás.*” Original emphasis; *España*, Part I, Ortega y Gasset, 2004-5, III, 454). It would ignore its parts' needs or hopes and will not be of any assistance. Its perspective, we may say, becomes independent and

Jordi Cat

blind, unlimited, and thus absolute rather than relative or relational. The rise of particularisms is thus a form of decomposition, or disunity. Interestingly, the failure of central power to exert the future-looking, motivational component of the nationalizing force is, for Ortega, another form of particularism. The conclusion recalls a fitting expression of territorial particularism that he had considered earlier: provincialism, the provincial attitude of mistaken the (relative) periphery for the (absolute) center.

To regional territorial particularisms, Ortega added social particularisms, the relations between social orders are replaced by an independent, absolute, unlimited sense of self-interest: the landowners, the Army, the Church, the Crown, the workers, etc. Each particularism disrupts the sense of *limitation* and the relations of dependence and coordination (Ortega y Gasset, 2004-5, III, 465-67).

For instance, in this account Ortega included the social kind of particularism of individuals that prevented society from recognizing the exemplariness of the talented minority, the concrete heroic standards of culture. This is the “aristophobia” he would famously call the rebellion of the masses (Ortega y Gasset, 2004-5, III, 475-78). It led to the progressive elimination of plurality of perspectives (Ortega y Gasset, 2004-5, III, 489-93).

The territorial particularism of the central power and the social, moral one of the masses characterize what he called “old politics.” The alternative, which he also rejected, was a culture and social reform driven from above, by abstraction and reason divorced from concrete life. Utopianism and revolutions are, therefore, expressions of radical intellectualism or rationalism. This is the topic he developed in *El Tema* with a defense of perspectivalism, a synthesis of life and reason.

Finally, we find yet another expression of mutual coordination and dependence among the plurality of wills in the role and value of legal and political institutions and mechanisms expressing the general will, e.g., the value of politics and role of Parliament. From that standpoint, particularisms reject the value of legal and political action and engage, instead, in the pursuit of what Ortega called immediate or direct action (which evokes a central feature of the explanatory concept of force in Newtonian mechanics).

11. Perspectivalism as the Theme of Our Times

Ortega developed the doctrine of perspectivalism in a series of lectures from the academic year 1921-1922 published as *El Tema de Nuestro Tiempo* (Ortega y Gasset, 2004-5, III, 559-654). The form of the doctrine is a synthesis and critique of sets of doctrines he considered opposite alternatives: on the one hand, radical rationalism, or intellectualism, and absolutism and, on the other, radical voluntarism, vitalism and relativism. The synthesis, a critique of physical reason, would become the doctrine of “vital reason” (“razón vital”) or “living reason” (“razón viva”) he developed in the 1930s.

Perspectives are true in what they capture, defended Ortega, but they are neither absolute truths (relativism) nor false views from nowhere (utopianism). As in exemplary cases, some perspectives have more reality or truth than others; truth more generally is a matter of composition of different perspectives. Similarly with the social and political absolutism of particularisms; they are to be replaced by a unifying, vital project of collaboration based on mutual dependence and recognition.

Ortega addressed the problem of relativism in both science and philosophy; both rely on some kind of faith in truth: relativism is a resolution of the conflict between invariant truth about a fixed reality and the social and historical multiplicity and mutability of human life. Then truth is relative to each condition. But the absolute standard of truth turns relativism into a form of skepticism (Ortega y Gasset, 2004-5, III, 572-7). Relativism, he concluded, defends the priority of life over reason.

By contrast, rationalist absolutism defends the priority of reason over life and ignores the latter’s essential multiplicity and contingency. Ortega associated idea of an absolute standard with the modern tradition initiated by Descartes based on the notion of physical reason, the source of logical and mathematical constructions and the assumption that nature is in reality the world as their perfect embodiment. Concomitantly, for Ortega, the political expression of rationalism was the radical utopianism that proposes and incites revolutions, the subjugating life, culture and history to simple first principles, after the standard set, for instance, by axioms of geometry.

His alternative position involved adopting as fundamental the dual dimension of the exercise of the intellect and will, subjective and objective,

Jordi Cat

immanent and transcendent. To think is to think something, to will is to will something. The intellectual, spiritual or cultural are grounded in historical life, even in biological life.

The exercise of the new notion of rationality is characterized by the role of perspective: individual or collective; perceptual, cultural or historical. Ortega introduced his view of the epistemic status of perspective and the perspectival form of the duality of knowledge with his original example from 1914: the plurality of possible perceptions of the same landscape from different positions. Perspectives on the landscapes, he observed, are not illusions in contrast with a true landscape. The real, 'like a landscape, has infinite perspectives, all equally veridical and authentic.' ("como un paisaje, tiene infinitas perspectivas, todas ellas igualmente verídicas y auténticas." Ortega y Gasset, 2004-5, III, 614).

The true landscape, the absolute landscape, then, doesn't exist. The absolute point of view does not see reality; it is in fact the abstract point of view of pure reason and it only yields pure abstractions (Ortega y Gasset, 2004-5, III, 611-16). In general, Ortega added, the false perspective is the absolute perspective claiming to be the only one. Ortega's alternative was to claim reality, in relational sense, for perspectives. We are part of the real world and perspectives are components of reality. The divergence that characterizes the plurality of perspectives is not a form of contradiction but of complementarity. We can readily recognize the political counterpart: instead of the absolutes of particularism and revolution, unity in collaboration.

For Ortega, then, absolutism acquired a dual significance, against particularisms (including provincialism) in politics and in physics (relativity). In this sense, perspectivalism had become the encompassing framework since 1914: first in politics (1921) and then physics (1923), through the interpretation of relativity, and in turn, as he declared in a note added after writing the appendix on Einstein's theory, relativity provided confirmation of his philosophical theory (Ortega y Gasset, 2004-5, III, 614 n.1). Between his discussion of politics in 1921 and his discussion of physics in 1923 we can recognize not only the shared perspectival framework, also direct specific connections.

12. Ortega and Relativity Before Einstein's Visit

Ortega's first mention of relativity theory in print appeared at the end of 1913 in relation to Minkowski, most likely written in the wake of reading the dissertation that Ors had defended earlier that year. In 1910 Cassirer has published in Berlin his neo-Kantian interpretation of relativity, *Substance and Function*; but Ortega's emphasis differed from Ors' and Cassirer's, although it is closer to Cassirer's in its epistemological character: Ortega sought to defend with a recent scientific exemplar of the highest visibility the role of intuition within a discussion of neo-Kantianism and phenomenology ("Sensación, construcción e intuición" (1913), Ortega y Gasset, 2004-5, I, 652).

Also his teacher Cohen and Husserl's student Moritz Geiger, another influence on Ortega, had written on the significance of the theory of relativity. Geiger's interest was of course the phenomenology of space, which, like Cohen's own take on Kant's third Critique, Ortega incorporated in his early reflections on aesthetics and painting (Orringer, 1979).

The next consideration of relativity appeared several months into the European war in his 1915 lectures on psychology ("Sistema de la psicología" (1915), Ortega y Gasset, 2004-5, VII, 429-536). He articulated in the context of the science of psychology the role of problems, systems and methods that characterized science and philosophy (Ortega here adopted from Cohen's Kantianism the emphasis on systematicity). In particular, the methodological role of revising specific methods and principles in the face of phenomena he called nodal problems; they trigger a radical crisis. It is in situations of this kind that new scientific projects (as well as other cultural expressions) have organized themselves and emerged as *particular* sciences out of philosophy, carving out precisely a new territory of problems and become independent (Ortega y Gasset, 2004-5, VII, 441). According to Ortega, one such nodal problem was precisely 'Michelson's experiences in relativity.' (Ortega y Gasset, 2004-5, VII, 438). The ensuing reform is one of fundamental intellectual kind he now associated with Einstein, on the year of his general theory, and presented in familiar territorial and political terms:

"To do physics is to set out from certain given principles and apply certain methods derived from them; it is, so to speak, to set foot in physical territory and march forward on it. Yet to reform physics is precisely to discredit the principles that define its territory and to impose new ones; it is, thus, to leave

Jordi Cat

physics and to stand on a neutral terrain, deeper than that in which the sciences become particular. Thus, the transformation of physics that is connected to Einstein's name is an intellectual act as well as that of a physicist and a philosopher."³⁴

The philosophical move to seek new, fundamental territory in order to establish new principles was the move of adopting a position of fertile neutrality in case of conflict rather than the disengaged and extramural 'neutral neutrality' or 'absolute neutrality' he would criticize in Spain's position in the Great War. This was also a philosophical development, since philosophy's fundamental aim, he'd tell students in Argentina the following year was 'to secure the plot of land on which to erect its building.' ("asegurarse un terreno sobre el cual levantar su edificio." Ortega, *Introducción a los problemas actuales de la filosofía*, in Ortega y Gasset, 2004-5, VII, 625). Otherwise, as a matter of reality rather than ideality, philosophy, rather than a positivistic attitude, had no place in natural science at the risk of having only a perturbing effect. In fact, to the same audience he illustrated the cultural crisis triggered by the war interrupting the radical transformation of the sciences initiated with the new century, for instance, the fact that 'physics was starting to build all its laws in view of the principle of relativity.' ("la física comenzaba a edificar todas sus leyes en vista del principio de la relatividad." Ortega y Gasset, 2004-5, VII, 665).

Ortega's public engagement of Einstein's theory resumed in 1921, the year Einstein received a Nobel Prize and in the wake of recent astronomical support of the general theory and Hans Reichenbach's publication of *The Theory of Relativity and A Priori Knowledge* (1920) – a neo-Kantian, axiomatic discussion of the philosophical significance of the theory developed alongside Einstein's lectures in Berlin 1917-1920 (Reichenbach's book reflects the approaches of two of his teachers, Ernst Cassirer and David Hilbert).³⁵ In Spain, the publisher Calpe had released a comprehensive presentation by the

³⁴ 'Hacer física es partir de ciertos principios dados y usar de ciertos métodos que de ellos se derivan, es, por decirlo así, pisar sobre el territorio físico y avanzar por él. Pero reformar la física es precisamente descalificar los principios que definen su territorio e imponer otros nuevos, es, por tanto, salirse de la física y apoyarse en un terreno *neutro* más profundo que aquél en que las ciencias se *particularizan*. Así la transformación de la física que va unida al nombre de Einstein es un acto intelectual a la vez de físico y de filósofo.' Ortega y Gasset, 2004-5, VII, 441.

³⁵ A copy of the book in the original German edition was in Ortega's library; Lemke Duque, 2005.

astronomer Erwin Freundlich, with a foreword by Einstein and a translation by the physicist José María Plans (Freundlich, 1920). In fact, Plans would publish his own presentation of relativistic mechanics the following year (Plans, 1921).

Ortega had started his Europeanist, modernizing publishing project suggested by Ors, Biblioteca de Ideas del Siglo XX, with the publisher Calpe, and the book series included recent titles by German authors such as Spengler, Adler, Rickert, Wöfflin, Uexküll, Bonola, Brentano, Bühler, Dilthey, Simmel and Scheler. The series, then, established his notion of modern 20th-century European scientific culture, characterized by its rejection and overcoming of 19th-century ideas and its immunity from the political ravages of war. Ortega emphasized the new century, a new time, a new spirit (without using the word “modern”, which he associates with Descartes’ rationalism). In the same spirit, he promptly commissioned a translation of two recent German discussions of Einstein’s theory, one by the physicist Max Born and the other by the physicist and philosopher Moritz Schlick.³⁶

Schlick emphasized the gap between the objective mathematical conception of physical reality and the one derived from our subjective sensations, and the challenge to coordinate them uniquely, that is all truth can be, though quantitative measurements. He noted the simplicity of Einstein’s four-dimensional geometric theory over its alternatives.

Ortega himself wrote an Introduction to the Spanish translation by the philosopher Manuel García Morente of Born’s *Einstein’s Theory of Relativity* (Born, 1922).³⁷ Ortega emphasized Einstein’s radicalism as an expression of the new time (modernity stands for Cartesianism and its ushering of rationalist and utopian modern times). It was breaking away from millenary intuitions and education replacing them with a new image of the world for a new generation. The four-dimensional, curved and finite image, Ortega declared, would yield a radical change that cannot be culturally isolated, and, as part of an integrated culture, it contains the seed of a new morality and politics (Ortega y Gasset, 2004-5, III, 414). Born himself pointed, in a language and

³⁶ The philosopher M. García Morente translated the third edition of Schlick’s book; Schlick, 1921. García Morente added eleven explanatory appendices totaling 45 pages, almost half the length of Schlick’s text.

³⁷ Einstein’s portrait and short biography is omitted from the 1922 edition of the original due to widespread anti-semitic climate; Lemke Duque, 2005, 281.

Jordi Cat

scope familiar to Ortega, to a new direction in the spirit of the age and to a world conception and delves into a philosophical discussion of a strife of the knowing subject to attain an objective representation of the world, free from the self, sensation and intuition, yet without committing to any absolute. Einstein's theory managed both to 'relativize and objectify the concepts of space and time.' (Born, 1922, 15) It represented a spiritual tendency that aims at an equilibrium between creative fantasy, critical logic and submission to facts (Born, 1922, 374).

In the year 1921-1922 Ortega delivered the lectures that he publishes in 1923 as *El Tema de Nuestro Tiempo*. There, Ortega pointed to Einstein's work to illustrate the modern standard of inquiry that springs from Descartes' rationalism. It involved an intentional element in the search for a rational, mathematical property, which, in Einstein's case, according to Ortega, was a four-dimensional physical theory (Ortega y Gasset, 2004-5, III, 575).

The following academic, prior to Einstein's visit, Ortega was teaching a doctoral course in metaphysics when he got news of Bergson's publication of his *Duration and Simultaneity* (1922). In fact, the book offered a philosophical analysis of the nature of time that included a criticism of Einstein's new concepts and paved the way for a famous public debate between the philosophers and the physicist (Canales, 2015). Despite his sustained aversion to Bergson's vitalism and intuitionism, Ortega decided to focus much of his lectures on this work (Gaos, 1958, 70-71).

13. Ortega and Relativity During Einstein's Visit

In Madrid Einstein enjoyed a busy and demanding visit. He spoke in front of different scientific bodies, was introduced to leading scientific figures especially in the biological and medical disciplines such as Gregorio Marañón and Santiago Ramón y Cajal, and to aristocrats of all ranks, visited the laboratory of Blas Cabrera, who emphasized the experimental confirmation of Einstein's, spoke at cultural institutions such as the Ateneo and also educational ones such as the Residencia de Estudiantes and attended public and private receptions. Along the way, his wife's cousins, living in Madrid, make sure the Einsteins enjoyed some sight-seeing as well.

On March 6, Ortega joined a sight-seeing trip to Toledo. The following month he published in the Argentinean newspaper *La Nación* a brief account of the trip with the ‘most popular man of science in the world.’ (“Con Einstein en Toledo” (1923), Ortega y Gasset, 2004-5, III, 521-25). Both during the trip, playing host, and in his published account, Ortega introduced a cultural and political focus. In Toledo he had offered Einstein a cultural explanation of the popular success of his abstract theory: only science had survived the Great War, unlike many political and economic organizations. It was the new myth and faith. What about Toledo? For Ortega Toledo represented landscape, art, war and an old history of successive civilizations. But Einstein lamented his limiting German education, specializing in science with no interest in history or art. By contrast, Ortega displayed his synoptic cultural vision in a complex analysis of El Greco’s painting *El Entierro del Conde de Orgaz*, which is beyond Einstein’s grasp. It was Ortega’s purpose to present himself as an instance of his idea of integrated southern Europeanism.

Back in Madrid, on March 9 Ortega introduced Einstein to the audience at the Residencia de Estudiantes, with Ors present (“Mesura a Einstein” (1923), Ortega y Gasset, 2004-5, VII, 799-802). Ortega, again, took a broad intellectual perspective: Einstein’s theory represented the culmination of physics as the discipline distinctive of Western culture. Yet, for Ortega, it opened a new philosophical path in deciding truth after the intellectualism of Descartes and Kant. Truth about physical reality lies not in pure mathematics, which can only suggest formal possibilities, but in what experimental results decided. The theory may be geometric in formulation, but, in the lesson Ortega sought to draw, it replaced the Cartesian geometric method with the physical method.

14. Ortega and Relativity in the Wake of Einstein’s Visit

The reading of relativity intended to support Ortega’s perspectivalism appeared in an essay written after Einstein’s visit, “The Historical meaning of Einstein’s theory,” published as an appendix to *El Tema de Nuestro Tiempo* (Ortega y Gasset, 2004-5, III, 642-652). On Ortega’s reading, he insisted, the philosophical meaning was its historical meaning, not, as he had mentioned before about Cartesianism, the truth or error of its theoretical claims. In that example, the historical meaning of Cartesianism and, by association,

Jordi Cat

relativity theory was also philosophical: the scope and foundational role of a new perspective, physical rationality and the purposive search for theoretical articulations.

But Ortega was preoccupied also with the independent philosophical question of the kind of theory Einstein's was. Again, the shift in his reading of Einstein's celebrated ideas was compatible with the earlier Cartesian reading from the standpoint of methodology, since the new reading also identifies the absolutist dimension of the theory.

I suggest that Ortega's reading can be taken to show two separate connections with his recent discussions of perspectivalism, one at the more abstract epistemological and metaphysical levels (1921-1922) and another at the political level in the terms used in *España Invertebrada* (1921). In the second, the connections concern ideas that are either arguably an implicit application of the doctrine of perspectivalism or else only more indirectly related. This is a territorial and political reading that echoed and implicitly lent rhetorical support to Ortega's political analysis of Spain and its circumstances. At the very least, the terms and considerations in the political discussion appeared to inform the reading of relativity theory. Is it a rhetorical accident or itself a political tactic? Just as he was eager to claim for his philosophical positions the status of Einstein's radical new science, and by implication Einstein's status for himself, or to claim at least the same degree of intellectual credibility, the historical and territorial political elements appeared to receive it too.³⁸

España Invertebrada has two parts. The first concludes with a quasi-Leibnizian defense of collaboration in a joint project as the ideal form of political unity based on mutual dependence and solidarity among the different regions and classes rather than on the absolutist character of different *particularisms* and their independence. Ortega illustrated this unity with biological and architectural analogies. The second concludes with an analysis of an example of this dynamical interplay, namely, the historical role the masses played in the successful cultural and political expression of the talents of a leading minority; the absence of such active engagement was, according to Ortega, another form of particularism that undercuts the exercise of nationalizing force and contributes to the national decay and disunity. The essay on Einstein begins

³⁸ Gracia emphasizes Ortega's opportunistic campaigns to build an intellectual reputation; Gracia, 2014.

precisely with a statement of the historical conditions of Einstein's success in similar terms. For Ortega, the theory of relativity was a building that has resulted from collaboration among the best with the enabling new direction taken by the spirits of the age (Ortega y Gasset, 2004-5, III, 642).

The historical meaning Ortega aimed to elucidate extended to four philosophical aspects of the theory that structure the essay: (1) absolutism, (2) perspectivalism, (3) anti-rationalism, or anti-utopianism, and (4) finitism. I will consider them briefly.

1-Absolutism. For Ortega, Einstein's theory marked a historical shift in the role absolutism played in the scientific image of the world. Galileo and Newton's assumption of the reality of absolute space, time and motion rendered their physics of apparent distances, intervals and motions relative. What results is relative knowledge of an absolute reality. This was consistent with the modern absolutism he identified in "modern" rationalism (since Descartes).

In the new physics, by contrast, relativity, or perspective, was the very structure of reality. As a consequence, Ortega declared, 'in Einstein's physics, our knowledge is absolute; it is reality that is relative.' ("Para la física de Einstein, nuestro conocimiento es absoluto; la realidad es la relativa." Ortega y Gasset, 2004-5, III, 644). This reading rescued Einstein's theory from the a priori subjectivism in the German Kantian readings (Ortega y Gasset, 2004-5, III, 611-15). In *El Tema de nuestro tiempo* Ortega made similar remarks in terms of the perspectival structure of reality and the distinction between relative and absolute perspectives. Ortega was, however, unable to distinguish between the absolute truth of invariant laws (the principle of relativity) and the absolute truth of perspectival, relative, determinations.

2-Perspectivalism. Ortega continued the epistemic reading combining terms introduced in the earlier chapter on perspectivalism and in *España Invertebrada*, about multiplicity of territorial differences. His example of the absolutist perspective (at least in the same sense he introduces in his discussion of absolutism) was the provincial spirit. He called this form of particularism provincialism. The provincial(ist) perspective led to an optical and geometrical error: occupying an eccentric location but thinking himself in a central one. His opinions, stemming from his vision (perspective), are equally flawed. The city person makes no such mistake, but from the provincial standpoint, he's a skeptic. From Einstein's more urban perspective, classical

Jordi Cat

mechanics and geometry are, then, examples of provincialism. Ortega called Euclidean geometry “provincial geometry”, echoing the result that from the viewpoint of non-Euclidean geometries such as Riemann’s, Euclidean geometry was just a local approximation, adequate only on the neighborhood of a point. Still, rather than Kantian subjective contributions, space and time were objective elements of the multiplicity of physical perspectives.

In *España Invertebrada*, the solution to the problem of unity and multiplicity, nationalization and dispersion, was purposive harmonious collaboration. Now Ortega concluded the section in similar terms: ‘Einstein’s theory is a marvelous justification of the harmonious multiplicity of all viewpoints.’ (“La teoría de Einstein es una maravillosa justificación de la multiplicidad armónica de todos los puntos de vista.” Ortega y Gasset, 2004-5, III, 647). The physical idea, he added, could be extended to the moral and aesthetic domains in order to understand life and history; and he introduced the notion and examples of cultural perspectives. Europeanism ran the risk of being a form of western-centrism, that is, in the earlier terminology, a form of particularism. Instead, he concluded that the Chinese perspective was as justified as the Western one (Ortega y Gasset, 2004-5, III, 648). For Ortega, the political and cultural readings played no role advancing the epistemological and metaphysical readings of the theory. They served his additional interest in their political and cultural applications. This becomes even clearer in the next section.

3-Anti-utopianism or anti-irrationalism. The territorial and political perspectives extended to their application to the reading of Einstein’s theory in his earlier criticism of utopianism, in chapter 3 of the *El Tema* and in *España Invertebrada*. There he focused on the absolutist character of the modern tradition of Cartesian intellectualism, which he called modern rationalism; unlike Ors has done, he was reserving the term “new” for the novel century, times and generation, rather than “modern.” In the appendix essay he repeated that utopianism didn’t just fail to solve scientific problems or build from pure reason an ideal scientific cosmos; it also aimed to address political problems and build a political cosmos (Ortega y Gasset, 2004-5, III, 648).

Methodologically speaking, problems were sacrificed to the preservation of old methods and rationality; yet, Einstein’s theory illustrated the opposite approach, reason yielded to observation, geometry to physics. Ortega’s

political reading continued with an additional analogy. In *España Invertebrada* he described utopianism as the sacrifice of princes to principles; now he associate the alternative to Einstein's new attitude with the sacrifice of nations to principles. This, he said of pure reason and geometry on the verge of General Primo de Rivera's September coup, was dictatorship. Instead, on Ortega's political reading, Einstein's lesson was to find principles in order to save nations. Reason, he stated, must be an instrument, not a dictator. Only then history would pick from all possible cultures for our historical existence the most adequate.

4-*Finitism*. The essay concluded by taking the discussion in a different direction, reminiscent of Ors' emphasis on finitism in the classicist context of Noucentisme. In Einstein's conception, a closed universe was finite, and so were the physical velocities allowed. Both the new physics –Einstein's– and mathematics –Brouwer and Weyl's (intuitionism)–, Ortega noted, showed 'a marked preference for the finite and a great disaffection towards the infinite', with 'a clear will to limit, a serene neatness, antipathy towards vague superlatives, of anti-romanticism.' ("una marcada preferencia por lo finito y un gran desamor a lo infinito" and "una clara voluntad de limitación, de pulcritud serena, de antipatía a los vagos superlativos, de antirromanticismo." Ortega y Gasset, 2004-5, III, 652). This was the universe of the Greeks, he added, with a horror of infinity and an emphasis on measure.

But if Ortega's words recall the conclusion of Ors' dissertation, they were not an endorsement of Ors' historical interpretation or his project. History, Ortega stated, developed by leaving its fixed, absolute past behind. The culture of infinity, unknown to the Greeks, could not be dismissed or else contained, amputated. Accordingly, Ortega rejected any form of neoclassicism as an authentic horizon. From this philosophy of history, of historical reason, an anti-Eleatic, Heraclitean doctrine would follow, in precisely these terms, in the essay "Philosophy and History," in 1935.

This was a veiled criticism of Ors' Noucentisme in the same plane of its defense by Ors' appeal in 1913 to an Eleatic, Parmenidean reading of relativity, intellectualized in a *glosa* of that year (Ortega y Gasset, 2004-5, III, 652). Ten years earlier, in the wake of his successful dissertation defense and failed professorship application, when Ors was still living mainly in Barcelona and publishing his *Glosari* in Catalan, Ortega had introduced him in Madrid as a

brother in arms in the moral battle to modernize, that is, Europeanize, Spain. Now Ortega published a hostile criticism of Ors' statements on culture and history in an article that appeared the following year ("El Sentido Histórico" (1923), Ortega y Gasset, 2004-5, III, 695-98). By now, Ors had been living in Madrid and publishing since 1921 a *New Glosario* in Spanish. It was the same year Ors published his early Eleatic reading of relativity theory on a belated consideration of Einstein's visit, only now stripped of its earlier cultural connotations—that is, *Noucentisme*.

The historical meaning Ortega attributes to relativity theory lost specific political and territorial valence in the midst of the Second Republic (1931-1939). He had been elected to the Spanish Parliament as a member of a small republican party (Cacho Viu, 2000; Zamora Bonilla 2002; and Gracia 2014). Although references to Einstein appear again in 1935, in the above-mentioned essay "Philosophy and History," they did so in the de-territorialized context of his philosophy of history and, in particular, his defense of a historicist analysis of the notion of vital reason.³⁹ There Ortega pitted his post-Cartesian notion of historical reason explicitly against Parmenidean Eleatism (including Zeno's) and Cartesian physical reason, and also against what Ortega considers their opposite, Bergson's vitalism, which for Ortega reduces human life also to a process of becoming. Against rationalism and vitalism, Ortega defended the roles of a narrative notion of historical rationality and self-construction. Einstein's theory appeared as an example of science facing its historical truth and reality, addressing face on its current problems instead of making promises and suggesting historical utopias. This was also Ortega's moment of historical truth, unaware of the coming civil war.

In post-war Germany, Husserl, as well as Spengler, had been pointing to the specter of irrationalism, sounding alarms of a European crisis. What was at stake for them was the scientific ideal Husserl identified at the very heart of the philosophical foundation of modern Europe. Ortega joined in the archeological project to salvage and reactivate the essence of modern civilization in a series of university lectures in 1933; there he issued the pronouncement that 'the constitutive principles of the Modern Age find themselves today in

³⁹ "Philosophy and history" was originally published in Oxford in 1935 in English translation and in 1941, after the Spanish war, in Spanish under the title "Historia como sistema" (1941); Ortega y Gasset, 2004-5, VII, 45-82.

a grave crisis' and looks to another figure for this historical job, Galileo ("los principios constitutivos de la Edad Moderna se encuentran hoy en una grave crisis." Ortega y Gasset, 1967, 14).⁴⁰ In 1935 Husserl and Heidegger followed suit, and so did Cassirer next, in 1937.⁴¹

Conclusion

I have argued that both Ors and Ortega offered evolving readings of Einstein's work and intellectual significance and at their heart were considerations of unity and territory. They reflect different circumstances and perspectives surrounding an internationalist project of national reform they were engaged in. Their particular solution, in philosophical terms, relied on a key role for modern science as European culture. And from this radically historical perspective, Einstein's theory stood not just for the value of science, but also of modernity and radical change. It was a projection, at different levels, of de-territorialization and re-territorialization of Catalan and Spanish societies in relation to (northern) Europe as well as philosophy in relation to science. But, at the same time, the historical circumstances that connected Ors and Ortega exhibit differences as well, especially in their understanding of the territorial and political problem of the unity of Spain and Europe and the place of Catalonia in them. In addition, both used their attention to Einstein and his theory to draw attention to personal situations and agendas of their own.

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⁴⁰ The 1933 lectures on Galileo were published in 1958 and in a corrected third edition in 1967.

⁴¹ On the crisis and attention to Galileo by Husserl, Heidegger and Cassirer, see Cahoon, 1986.

Jordi Cat

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Jordi Cat

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