THE FORTUNES OF ALEXANDER VON HUMBOLDT IN THE ITALIAN GEOGRAPHICAL CULTURE OF THE NINETEENTH CENTURY

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It is very difficult to summarise in a few pages the direct and indirect influence exerted on the Italian geographical culture of the nineteenth century[1] by the writings and personality of a scholar such as Alexander von Humboldt, explorer and scientist, and not by chance defined as the Aristotle of his time. He knew how to move between geographical disciplines and anatomy, botany, palaeontology, zoology, chemistry, physics, astronomy, demography, economics etc., which he brought together in a single "physics of the Earth" that embodied a view of the natural world as a unified reality. This made him a point of reference for the most important scholars of his time, beginning with Charles Darwin, whose success in Italy led to an increased interest in Humboldt's studies, for which Darwin always showed and expressed great esteem[2].

First of all, I think it is important to point out that Humboldt was interested in and curious about the Italian peninsula, and he made two major trips there, as reconstructed from a documented essay by Marie-Noëlle Bourget[3]. These trips, between July and November 1795 and between March and November 1805 respectively, a few months after his return from his famous trip to the Spanish territories of the New World (3rd August 1804), allowed him to develop contacts and knowledge that would certainly have left their (not always directly identifiable) marks and influence.

The first time it was as part of a mineralogical inspection tour that took him between summer and autumn through Savoy and Switzerland and on to northern Italy. His second trip to Italy, where his brother Wilhelm had been sent by the Prussian government at the end of 1802 as Ambassador to the Holy See, was completed in six months by Alexander together with a young Prussian of Irish origin, Franz August O'Etzel, and the famous chemist, Louis-Joseph Guy-Lussac. This can be reconstructed on the basis of a notebook found in the Staatsbibliothek in Berlin. Starting out from Lyon, he reached the Alps to make observations on terrestrial magnetism

[1] Of course, Humboldt's fame and fortune in nineteenth-century Italy extended well beyond the boundaries of geography and science, as shown by his correspondence with Alessandro Manzoni (see the letters that they exchanged between 3rd August 1844 and 14th August 1845, published by A. A. MICHIELI, *Alexander von Humboldt e i suoi viaggi,* Turin-Milan-Florence, 1930, pp. 279-285).

[2] For a convincing account of the role played by Humboldt in laying the groundwork for and developing modern geography, we refer in particular, also as a framework and reference point for the considerations that we will develop here, to the reflections of M.-N. BOURGUET, *La république des instruments: voyage, mesure et sciences de la nature chez Alexandre de Humboldt,* in *Les transferts culturels France-Allemagne et leur contexte européen, 1789-1914,* edited by E. François and others, Leipzig, 1998, pp. 405-435; and S. BRIFFAUT, *Le temps du paysage. Alexandre de Humboldt et la géohistoire du sentiment de la nature,* in *Géographies plurielles. Les sciences géographiques au moment de l'émergence des sciences humaines (1750-1850),* edited by H. Blas and I. Laboulais, Paris, 2006, pp. 275-301, as well as the bibliography noted in these contributions.

[3] M. -N. BOURGUET, *Le monde dans un carnet. Alexander Von Humboldt en Italie (1805),* Paris, 2017.

on the Moncenisio, and then stopped off in Turin, Alessandria and Genoa, after passing through the Bocchetta Pass. He then returned to Pavia and Milan, where he met Alessandro Volta, before continuing on to Parma, Bologna, Spoleto, Rimini and Rome, in whose libraries he could, among other things, consult Mexican manuscripts. He also went to visit the crater of Mount Vesuvius, establishing strong and fruitful relations with Neapolitan scholars before returning to Berlin on 16th November, entering Switzerland via the Gotthard Pass.

While Humboldt's two trips to Italy, as part of his education based on the then widespread model of the *Grand Tour,* show his curiosity about and interest in Italy, the starting point for considering the success he achieved in 19th century Italy can only be the impact that the original editions of his most important writings had, as demonstrated above all by their presence in several libraries[4]. The first of these was the monumental *Voyage aux Régions équinoxiales du Nouveau Continent fait en 1799, 1800, 1801, 1802, 1803 and 1804, avec un atlas géographique et physique*, a collection of the myriad notes taken during this long and adventurous journey with the very young French naturalist Aimé Bonpland. Their travels from the coast of Cumaná and then from Caracas to the Amazon River, along the Andean Cordillera from Bogotá to Lima, would take them to Cuba and the inland regions of Mexico and from there to the United States. This material, including data and facts relating to a new science, defined from time to time as the "Théorie de la terre","Physique du monde" or "Géographie physique", would be developed between 1805 and 1834, into 35 large-format volumes, containing not only personal considerations on the "pleasure of seeing up-close wild, majestic and varied nature in its productions" (I, p. 178), astronomical and barometric observations, the botany of the regions visited, an essay on the geography of plants, a collection of zoological and comparative anatomy observations, but also a political essay on New Spain and a description of the indigenous peoples who lived on the Andean Cordillera. The volumes were accompanied by a detailed set of illustrations by the best European artists, engravers and cartographers of the time and were edited in collaboration with the continent's most authoritative scientists.

This work provides us with a wealth of information on the greatest private journey in the history of exploration. The *Relation Historique* part, corresponding to volumes XXVIII-XXX which first appeared in 1814, 1819 and 1825, has the appearance of a "travel diary", allowing us to follow twenty years of Humboldt's work, and was published in three volumes in Italy between 1846 and 1854 (the fifth volume appeared posthumously in 1865), on the initiative of Carlo Turati, in the French edition edited by Henri Faye. Yet, as Fabienne O. Vallino pointed out in her excellent preface to the complete Italian anthology of Humboldt's original writings, with introduction by Hanno Beck (Rome, three volumes 1986), judging by the research carried out by the library service of the National Library in Rome, it seems that no Italian library has preserved the complete American corpus by Humboldt with all the works in the series. The only exception is the Braidense National Library in Milan, where all of the works in the corpus have been found,

[4] See the *Catalogo dei libri italiani dell'Ottocento (1801-1900),* Milan, III, 1991, p. 2371; especially the catalogue *Immagini di scienza, viaggi e arte. 150 anni dalla morte del naturalista tedesco Alexander von Humboldt (1769-1859). Guida alla Mostra Bibliografica, Biblioteca Universitaria di Pavia, 21-29 August 2009*, edited by A. Di Bartolo and A. Visconti, in which an interesting small volume printed in 1847 in Naples for the wedding of the member of parliament Giuseppe Calcagno with the noblewoman Maria Domenica di San Marzano is mentioned. It also contains an unpublished letter by Humboldt to Countess Teotochi Albrizzi.

albeit with some imperfections in the series and in the layout; instead none of the Roman libraries contain any substantial excerpts from the monumental edition, apart from some fragmentary works, which therefore appear to be completely disconnected from the integrated whole of the corpus[5].

On this basis, it is equally difficult to evaluate the influence on Italian culture of that period of the *Examen critique de l'Histoire de la géographie du Nouveau Continent*[6], another work of considerable importance, a sort of philosophical history of discoveries. It was designed and completed, albeit partially if we consider the four sections of the initial plan, in parallel with the revision and publication of all the scientific material collected during the journey to the New World between 1806 and 1836 (the last part of the *Relation historique* forms part of this text). Humboldt, as he points out in the preface, dedicated to it all his free time for thirty years "with extreme pleasure"[7] and it was published in five volumes in Paris between 1836 and 1839 at the Librairie de Gide. This was important historical research work on the "causes that prepared and led to the discovery of the New World" and was initially intended to complete the series of American publications as volume XVIII of the monumental edition, based on research materials that were then reused in the writing of *Kosmos.*

However, due to the considerations that we want to develop here, we are mainly interested in the nineteenth-century translations of his works in our language, Italian, as in the case of the *Viaggio al Messico, alla Nuova Granata ed al Perù, ossia Saggio politico sul Regno della Nuova Spagna (Journey to Mexico, the New Grenada and Peru, or a Political Essay on the Kingdom of New Spain*), translated by Prof. Gaetano Barbieri and published in seven volumes in Milan by Lorenzo Sonzogno between 1827 and 1829, and in nine volumes in Naples, paid for by the Nuovo Gabinetto Letterario, between 1832 and 1834[8]. The Italian edition of this work was described as "a very useful catalogue of vast and profound knowledge" because "only Humboldt knows how in a few lines, or in a few numbers, to portray the state of a Nation" according to an anonymous review which appeared in the *Annali universali di statistica, economia pubblica, storia, viaggi e commercio* (*Universal Annals of Statistics, Public Finances, History, Travel and Commerce*), which refers to one of its editions in the third collection of travel reports published by Lorenzo Sonzogno[9]. However, already on the occasion of the declaration of Mexican

[5] F. O. VALLINO, *Prefazione* a *Viaggio alle regioni equinoziali del nuovo continente fatto nel 1799, 1800, 1801, 1802, 1803 and 1804 da Alexander von Humboldt e Aimé Bonpland. Relazione storica,* Rome, 1986, I, pp. LXV-LXVI. A complete edition of the *Voyage* is available thanks to a facsimile reprint, still available but rather expensive.

[6] For the Italian language edition of the first two volumes of the French edition of this work, see A. VON HUMBOLDT, *L'invenzione del Nuovo Mondo. Critica della conoscenza geografica,* edited by C. Greppi, Florence, 1992.

[7] C. GREPPI, *Preface to* A. VON HUMBOLDT, *L'invenzione del Nuovo Mondo,* cit., p. 4. On this scholar see the considerations developed in *L'examen critique* in his *Alexander von Humboldt e l'"Invenzione del Nuovo Mondo",* in *Politica, scienze e cosmopolitismo. Alexander e Wilhelm von Humboldt,* edited by C. Malandrino, Milan, 1997, pp. 219-236.

[8] An anastatic edition of this text was published in Bari in 1992 by Edipuglia edited by Raffaele Giura Longo and Pasquale Rossi, who provided two contributions, respectively on *Alexander von Humboldt e la cultura europea dell'Ottocento fra illuminismo e colonialismo* (pp. 1-35) and *Alexander von Humboldt geografo* (pp. 37-41).

[9] See also the report in the *Biblioteca italiana: o sia giornale di letteratura, scienze ed arti,* vol. XLVIII, part two, pp. 435-436.

independence, Giuseppe R. Pagnozzi had published in a column of "moral and political sciences" of the fourth volume of 1821 of the Vieusseux's *Antologia*, a documented "political description of the different peoples who are vying to boast of having conquered a homeland on the great plain of Mexico"; he used "the political essay on New Spain, the work of the immortal Baron von Humboldt, which *is almost unknown in Italy"* as a "guidebook"[10].

The most relevant and long-lasting influences in Italy, however, would be exerted by the overall interpretation of the physical and natural world propounded by Humboldt in his later years in the four volumes of *Kosmos – Entwurf einer physischen Weltbeschreibung,* published between 1845 and 1859 in Stuttgart and Tubingen by Bernhard von Cotta[11] – a complex work of which the overall structure offers an important indication of the scholar's geographical philosophy[12]. It is no coincidence that it was immediately translated into many languages (English, French, Italian, Dutch, Swedish, Polish, Russian and Spanish) "not only due to the importance and originality of the contributions concerning the elements of climate, vegetation, geology, morphology, hydrography, cultural facts, etc., but above all due to the innovative methodological and scientific approach". The different subject areas are indeed "tackled and developed with a modern geographical vision, in the sense that the related phenomena are captured and interpreted not only by themselves and with respect to their environment, but also through the similarities and differences, homologies and contrasts with other phenomena of the same or different nature that occur in the same territorial context or in other parts of the planet, in order to be able to identify those laws of randomness, connection and interdependence that regulate their spatial distribution and coordination. Moreover, even though Humboldt favoured naturalistic aspects in his research, he did not fail to relate them with human aspects too: on the contrary, in his analysis of reciprocal correlations, he recognised the specificity of geography as an autonomous science"[13].

Italian scholars were able to use the editions published abroad and the first edition printed in Italy, but in French, between 1846 and 1861 by Turati with the subtitle *Essai d'une description physique du monde*. This was actually based on the first French edition edited by Henri Faye, assisted by Charles Galusky starting from the second volume, and published by Gide

[10] G.R.P., *Saggio politico sui popoli della Nuova Spagna*, in *Antologia*, IV, 1821, pp. 514-529 (the italics of the quotation from p. 514 are ours). We should bear in mind that in the sumptuous library of the Gabinetto Vieusseux there were many important foreign journals containing articles or extracts from essays written by Humboldt, which were thus made available to those who frequented this famous salon.

[11] This work was to be accompanied by a Physical Atlas, which was prepared, but was published separately from the text and indicated as Humboldt's work only in the second edition (Gotha, 1852, in two volumes).

[12] Although without being able to provide objective evidence, we may hypothesize that this work by Humboldt may have had an influence on the choice of the name to be attributed, precisely *Kosmos,* to an important journal with the subtitle "Comunicazioni sui progressi più recenti e notevoli della geografia e delle scienze affini" (*Communications on the most recent and remarkable progress in geography and related sciences*), carried out by Guido Cora (see G. DE FINIS, *Il "Cosmos" by Guido Cora,* in *La ricerca folklorica,* a monographic booklet entitled *A sud dell'occidente. Viaggi, missioni e coloni della vecchia Italia,* 18, October 1888, pp. 87-92), a unique geographer from Turin in the second half of the 19th century, the most open-minded and attentive to the geographical culture of the other side of the Alps (on this scholar see the extensive research developed by P. SERENO, Aperire terram gentibus. *Geografia e saperi territoriali nella Torino della seconda metà dell'Ottocento* in *Saperi per la nazione. Storia e geografia nella costruzione dell'Italia unita,* edited by P. Pressenda and P. Sereno, Florence, 2017, pp. 255-446), which in the *Introduction* to the first booklet recalls "the admired genius of the two Humboldts" and "comparative geography, founded by Alexander Humboldt" (pp. 4-5).

[13] P. ROSSI, *Alexander von Humboldt geografo,* cit. pp. 40-41.

in Paris in five volumes that appeared between 1845 and 1862 (the last posthumous volume was also published in Milan, but by Maisner, with the translation by Ernest Sergent-Marceau). Yet Italian scholars could also use the Italian translation of this French edition of *Kosmos*, edited by Giulio Vallini and Vincenzo Lazzari and published in Venice in 1846 in three volumes by Lorenzo Gattei and reprinted in 1860 by G. Grimaldo[14], as well as the one enhanced by Vincenzo degli Uberti with corrections and notes from the English edition by Lieutenant Colonel Edoardo Sabine, published in Naples between 1850 and 1853 by the Stamperia del Vaglio.

Among the first to understand and highlight the importance and originality of Humboldt's work in Italy was Carlo Cattaneo, whose extensive output was conditioned by his interest in travel, geography, memoirs and descriptions of distant places and different peoples: an indication, as Sandra Puccini pointed out, "of the importance he attributes to geographical surveys, to first-hand data on 'other' populations and on the transformations caused by the contacts between different civilizations" – all "stages through which the progress of scientific-philosophical knowledge develops and, as in a true experimental laboratory, the troubled history of civilisation is revealed in the present"[15]. These concepts and issues were also very familiar to Humboldt. Cattaneo dealt with *Kosmos*, immediately after its publication (in the same year in which he was writing his *Cosmologia*, in a long essay, which was published anonymously in *Politecnico*[16] but was attributed to him in the index of the magazine, comprising a commentary and not uncritical summary of the first volume of this famous work which he read in the German edition. Like Raffaele Giura Longo, we can point out in this regard that Cattaneo describes the main idea of Humboldt, who had observed the universe and the whole physical world not in its apparent fixity, but in its perennial and intrinsic movement, in its continuous renewal and dynamic change; this unreserved appreciation, however, reaches its limit in the assessment that Cattaneo expresses on the concept of equality among men, on which Humboldt instead insists a lot. For the German scientist, in fact, within human society, positions of privilege based on lineage or colour could not endure, because Humboldt saw the undeniable differences between humans and between peoples as having been determined by history and not by nature, by "civilisation" and certainly not by "character". This conclusion seemed exaggerated to Cattaneo, probably because of a political need that pushed him to place Italian history within an interpretation which fitted in with the objectives of the Risorgimento. In his opinion it was in no way possible to "dispute the right to a just pride for those nations which were ready and willing at the first impulse of civilisation and became also the benefactors of others of a more sluggish nature; nor are they relieved of the debt of gratitude they owe, if after thousands of years, the latter have finally almost been transformed from their inherited brutishness and become equals

[14] For these editions we refer to the essay by CH. MINGUET, *Alexandre de Humboldt, historien et géographe de l'Amérique espagnole, 1799-1804*, Paris, 1969, p. 17.

[15] See S. PUCCINI, *Esplorazioni geografiche e descrizione di popoli negli scritti di Carlo Cattaneo (1833-1863)*, in *La ricerca folklorica*, aforementioned monograph, 18, 1988, p. 83.

[16] *Kosmos, ecc. Il Cosmo, saggio d'una descrizione naturale dell'universo, d'Alessandro di Humboldt, vol. I, Stutgarda e Tubinga, presso Cotta, 1845*, in *Il Politecnico*, VII, 1845, dossier 42, pp. 583-629; also reprinted in *Risorgimento, Filos.*, I, pp. 107-156 and, in more recent times, in C. CATTANEO, *Scritti filosofici*, edited by N. Bobbio, vol. I. Saggi, Florence, 1960, pp. 171-227.

with the former, instead attributing their late and laborious efforts to the noble spontaneity of their own nature"[17].

As Marica Milanesi pointed out,[18] Humboldt's *Mémoire of* 1856, *Sulla produzione dell'oro e dell'argento considerata nelle sue fluttuazioni* (*On the production of gold and silver considered in its fluctuations*) (Turin, 1856)[19] was also translated into Italian during the nineteenth century. The report of the *Viaggio intorno al globo della fregata austriaca "Novara" negli anni 1857-1858-1859* (*Voyage around the globe of the Austrian frigate "Novara" in* the *years* 1857-1858-1859), printed in Italian in Vienna in 1862-1863 includes some of Humboldt's *Physical and Geognostic Memories;* a long excerpt from the report on electric eels presented in 1806 at the Institut de France by Luigi Figuier in the Italian edition of *Rettili, pesci e animali articolati* (Reptiles, fish and articulated animals) published by Treves in 1893; and, finally, a passage on the Northern Lights, taken from *Kosmos,* appeared in 1899 in the magazine *La cultura geografica* by Cesare Battisti and Renato Biasutti; while the *Ansichten der Natur* were published in French, with the title *Tableaux de la Nature,* in Milan by Turati in 1851. It should also be remembered that the Archive of the Fatebenefratelli Hospice in Milan contains several manuscripts, also relating to Humboldt's writings, concerning the translations of naturalistic works by Father Ottaviano Francesco Ferrario (1787-1867), Director of the Hospice from 1820 to 1848, who devoted himself for many decades to studies and research on chemistry, physics and natural sciences.[20]

The widespread effects of this vast and remarkable scientific output can be found in the encyclopaedic works and in the most important 19th century Italian geographical handbooks, of which the contents were influenced by Humboldt's scientific production[21], as in the case of the

[17] C. CATTANEO, cit., p. 221. This "interesting relationship" between Cattaneo and Humboldt, which in his view had not previously been identified by geographic historians, was studied by Massimo Quaini (*Fortuna* e *sfortuna di Cattaneo nel pensiero geografico italiano,* in *Nei cantieri della ricerca. Incontri con Lucio Gambi,* edited by P. Cazzola, Bologna, 1997, pp. 179-196). There he recalls, among other things (pp. 186-187) how, according to Pietro Redondi, who retraced the path from Enlightenment to Positivism in Italian culture, the philosophical part of the scientific vision of the *Politecnico* was based on Humboldt's thinking and in particular on the synthesis of these ideas in *Kosmos,* of which Cattaneo's closest collaborator, his father Ottavio Ferrario, had begun the translation. Redondi also recounts that for Cattaneo Humboldt was an intermediary for learning about the history of science from the general perspective of the history of dynamics in nature and the whole universe; the means by which Cattaneo "assimilated in his historical and philosophical vision of science and man the realistic conception of a progressive creativity in nature recognised by the sciences" (P. REDONDI, *Cultura e scienza dall'illuminismo al positivismo,* in *Annali Storia d'Italia. III. Scienza e tecnica,* Turin, 1980, pp. 685-811).

[18] A. VON HUMBOLDT, *La Geografia, i viaggi. Antologia degli scritti,* edited by M. Milanesi and A. Visconti Viansson, Milan, 1975, pp. 28-29, note 50.

[19] See *Biblioteca dell'economista*, second series, special treatises, vols. V and VI. *Moneta e suoi surrogati,* Turin, 1856.

[20] For a profile of this scholar, see A. GUADIANO, *Ferrario Ottaviano Francesco,* in *Dizionario biografico degli Italiani,* XLVI, 1996, pp. …

[21] In order to analyse in more depth the attention paid to Humboldt in nineteenth-century Italy by a more mainstream audience, it is interesting to count the number of articles in the main magazines of that period, about which we have limited ourselves only to a quick survey of *Antologia* and *Teatro universale,* finding in the first magazine 7 references to Humboldt in the period between 1824 and 1827, and 14 in the second for the period between 1835 and 1839. The same could also be said for the newspapers of that period, as, by way of example, in the case of the *Gazzetta Nazionale della Liguria,* which in the issue of 14th-15th September 1804 gave news of Humboldt's return to Europe, with a publication "of his travels and of the useful observations he made both on the Cordillera and on the plains of Quito" being expected shortly (p. 207).

Corso di Geografia sviluppato in cento lezioni e diviso in tre grandi parti (Geography Course in one hundred lessons and divided into three large sections) by Francesco Costantino Marmocchi, published in Turin between 1853 and 1854, and often referring to the great German geographer[22]. The aim, as claimed by the author, was to make up for the absence of Italian contributions to this branch of knowledge, by demonstrating the basic principles and revealing "the splendid horizons of a science, which is the most important and the most delightful of human knowledge, which is the *universal science*, because it includes all sciences and all arts, when considered from a broadly philosophical point of view and in a *truly encyclopaedic way"*[23].

Ferdinand Gregorovius travelled to Corsica in 1852 in search of a work about the island's geography kept at the house of Marmocchi, who was also author of a *Géographie de la Corse* (Bastia, 1852), and who, because of his sympathies for Mazzini for which he had ended up in prison, had already emigrated to Corsica after 1831. Gregorovius was surprised to find in his library a copy of *Kosmos* too, probably the French edition printed by Turati in Milan in 1849.[24]

The references to Humboldt's writings are even more specific and frequent in the *Compendio di geografia universale conforme alle ultime politiche transazioni e più recenti scoperte* (*Compendium of Universal Geography in accordance with the latest political transactions and discoveries*), compiled in 1817 by Adriano Balbi – a Venetian geographer who lived and worked for a long time in France, where this work, published several times, was praised and appreciated by Humboldt as an authentic geographical work. From the edition published in Turin by Pomba in 1840, we can cite as examples the passages relating to the characteristics of the Quito plateau and the details about some Toltec monuments compared by Humboldt to the Babylonian mausoleums; the great pyramid (*teocalli*) of Cholul; the military entrenchment of Xochicalco in Cuernevaca; the information about the cost of the road from Vera Cruz to Peru; the hypothesis that all the ravines and also the plains of Sinaloa could contain fragments of gold scattered in the alluvial soils; the description of a huge cypress tree in the village of Santa Maria del Tule, near Oaxaca; and that of a huge boulder of malleable iron and nickel near Durango that according to Humboldt was identical in its composition to the aerolite which fell in 1751 in Hraschina, Croatia[25], and so on....

A weighty mainstream treatise on Universal Geography was edited and largely compiled between 1883 and 1902 by Giovanni Marinelli, in collaboration with his students, and dedicated to the Italian Geographic Society. In the chapter on Central America by Giuseppe Pennesi, who defines Humboldt as "supreme" and "rightly declared the second discoverer of America", he writes that "among the works of the great explorer, who with his prodigious studies marked one of the most memorable epochs in the history of geography" particular mention should go to the *Essai*

[22] Speaking of the provinces of the ancient Mexican empire, Marmocchi celebrated "the vast knowledge and firm eloquence" that had allowed the Baron von Humboldt to shed "in the first decades of the present century such a clear light" (F. C. MARMOCCHI, *Corso di Geografia sviluppato in cento lezioni e diviso in tre grandi parti*, Turin, IV, 1854, p. 207).

[23] Ibidem, I, 1853, p. IX. We also point out that in 1834 he had published the *Quaderni della natura del barone Alessandro de Humboldt* in Siena, the first Italian edition "based on the best foreign editions of *Ansichten der Natur"*.

[24] C. GREPPI, *Incontro con la Geografia della Corsica. Francesco Marmocchi a Bastia (1849-1853),* in *Les itinéraires de Salvatore Viale,* Bastia, 1998, p. 67.

[25] A. BALBI, *Compendio di Geografia compilato su di un nuovo disegno conforme agli ultimi trattati di pace e alle più recenti scoperte,* Turin, 1840, II, pp. 557-594.

politique sur le royaume de la Nouvelle-Espagne and the "world-famous report" of the *Voyage*; these two works are defined as "truly fundamental works for the geography of Latin America and from which we will therefore draw extensively in the course of our work"; in the chapter dedicated to China and Manchuria, Cosimo Bertacchi maintained that "the essential elements of Chinese orography, especially after Richtofen's works, can still be partly found in Humboldt's theoretical ideas"[26].

In order to break free from the bounds of the old statistical geography, exhausted in the encyclopaedic miscellanies which were then prevalent in Italy, in 1866 Gerolamo Boccardo wrote a history of geography drawing on the best of European and American geography established by Humboldt and beautifully encapsulated in *Kosmos*. Boccardo taught geography at the University of Genoa, and emphasised, in his history of geography and trade[27] that thanks to Humboldt and other scholars (Sommerville, Captain Maury, Herschel, Gaspari, Ritter, Klaproth, Remusat and Marsh) geography had been transformed "into a large and compact body of doctrine, of which the principles take from mathematics the rigour and severity of geometrical theorems, while its ultimate deductions offer a practical and social aid to navigation, commerce and social sciences".

The Swedish consul in Italy, Graberg de Hemsö, also devoted his attention to Humboldt's more typically geographical output in the context of a report on the *Ultimi progressi della Geografia per gli anni 1842-43* (Latest Progress of Geography for the years 1842-43), which he presented in September 1843 to the Geology, Mineralogy and Geography section of the Scientific Congress in Lucca.[28] Here he focused on the three-volume essay on Central Asia, the result of Humboldt's travels in that area, pointing out that it "clarifies the question of the Ural Mountains, the supposed elevation of the so-called Tataria Plateau, the depression of the Caspian Sea, the Aral Lake, the steppes at the foot of the Altai, the Thien-Scian and the Urals, as well as on the alleged communication in ancient times between the Pontus Euxinus, the Caspian, the Aral, the lakes of Kyrgyzstan and the Arctic Ocean" (p. 243).

Piero Gribaudi did the same in an extensive review in *La geografia nel Secolo XIX, specialmente in Italia* (Geography of the nineteenth century, especially in Italy), published at the end of the century in the *Rivista di Fisica, Matematica e Scienze Naturali of* Pavia.[29] In the initial part, after recalling how Kant had been able to "transform Geography into a perfect scientific organism, defining its limits and showing its relations with other natural and anthropological sciences", he states that this path would be mapped out "with a sure footing" by Alexander von Humboldt, who wrote his first essay on scientific geography describing nature as a whole, especially focusing on the place occupied by every being; this is because Humboldt was able to combine "his extremely solid scientific education with genius, which is a characteristic shared by the overwhelming majority of that pleiad of scientists, who at the beginning of the 19th century

[26] *La Terra. Trattato popolare di Geografia universale per G. MARINELLI e altri scienziati italiani,* Milan, s.d. (but late nineteenth century), V, p. 637 and VII, p. 202.
[27] We refer to the manual by G. BOCCARDO, *La terra e la sua progressiva conquista. Storia della geografia e del commercio in 21 lezioni*, Turin, 1866, for which we refer to O. RAGGIO-M. QUAINI-F. SURDICH, cit., pp. 86 and 175.
[28] Speech published in *Il Politecnico,* XXXVIII, 1844, pp. 121-138; XXXIX, 1844, pp. 241 et seq. On this scholarly encyclopedic, see R. H. RAINERO, *Il Mediterraneo e l'Italia nell'Ottocento nelle opere di Jacopo Graberg di Hemsö (1776-1847),* Rome, 2015.
[29] This review was included in the collection of essays in 1955 by P. GRIBAUDI, *Scritti di varia geografia*, Turin, 1955, pp. 197-229.

honoured Germany and imparted a new dynamic of progress in various scientific fields" (p. 199). According to Gribaudi, of the whole range of Humboldt's output, the most significant work in which "the greatness of his genius appears more clearly" can only be *Kosmos*, presented in great detail, where in the most minute and precise analyses of the phenomena, Humboldt "never lost sight of the links that these phenomena could have had with others, and so he could then achieve a sublime synthesis, which in turn shed a new light on analytical research" (p. 199).

In addition to these geographers, we should also mention other authoritative exponents of this discipline, such as Filippo Porena, Giuseppe Dalla Vedova, and Guido Cora[30], who, to differing degrees and in different ways, all shared and applied to their studies and methodological reflections the Humboldtian concept of interrelation and interdependence of natural phenomena in order thus to reconstitute the material unity of the Earth, shattered by the multiplying and setting free of the individual sciences[31]. Yet Carlo Vidua deserves to be mentioned in his own right as a unique Italian intellectual who was not limited to a specific discipline[32]. In order to escape from an oppressive family and from a politically and culturally repressive Piedmont, inspired by democratic and libertarian tensions and aspirations, he moved to Paris in 1814. Between 1818 and 1830 he made three important journeys recounted in numerous letters collected in three volumes in 1834 by Cesare Balbo: the first from June 1818 to June 1821 to northern Europe (Denmark, Sweden, Lapland and Finland), Russia, Turkey, Egypt, Palestine, Syria, Lebanon and Greece; the second, between 25th February 1825 and the beginning of 1827, to the United States, attracted by the appeal of the new American democracy celebrated in those years by Alexis de Tocqueville, and Mexico, about whose war of independence he planned to write a historical reconstruction[33]; the third, between July 1827 and December 1830, to India, Singapore, Macao, the Philippines, Java, New Guinea, the Moluccas and Celebes[34].

[30] See the review by I. LUZZANA CARACI, *La geografia italiana tra '800 e '900 (dall'Unità a Olinto Marinelli)*, Genoa, 1982.

[31] For some of these theoretical considerations, which also examined geographical research and methodological reflections on the role of Humboldt's Geography, we refer to G. DALLA VEDOVA, *Il concetto popolare e scientifico delle Geografia, in Bollettino della Società Geografica Italiana*, VII, 1880, pp. 5-27; G. CORA, *Cenni intorno all'attuale indirizzo degli studi geografici*, Turin, 1881; F. PORENA, *La scienza geografica secondo le più recenti dottrine*, in *Nuova Antologia*, 1 September 1885, pp. 61-94; IDEM, *La geografia qual è oggi in se stessa e nei suoi contatti con le altre scienze fisiche e sociali*, in *Rivista geografica italiana*, III, 1886, pp. 188-199 and 259-281; G. MARINELLI, *Concetti e limiti delle Geografia*, Rome, 1893.

[32] This type of traveller could somehow be approached by Giuseppe Compagnoni, author of a *Storia d'America* in 29 volumes published in Milan between 1821 and 1823, in which there are many references to Humboldt reported by A. GERBI, *La disputa del nuovo mondo. Storia di una polemica, 1750-1900*, Milan-Naples, 1983 (new edition edited by S. Gerbi), pp. 857 et seq.

[33] This project that he was unable to carry out because of his tragic death was examined by L. A. DE LA GARZA, *Carlo Vidua*. *Un viajero per la libertad*, Mexico City, 2014, who recalls that for this purpose Vidua had acquired a significant quantity of leaflets, articles, pamphlets in Mexico, that take up more than twenty volumes of miscellany currently kept in the Academy of Sciences of Turin, together with a considerable bibliography, newspaper archive and a series of notebooks containing notes on Mexico and interviews with the protagonists of those events (p. 139).

[34] About the six volcanoes of this island, Humboldt would later remember in *Kosmos* that "near them there are bright sulphurous springs, in one of which, found along the road that leads from Sonder to Zamovang, a tireless Piedmontese traveller, free observer of nature, *Count Carlo Vidua my friend*, fell and perished from his burns" (A. HUMBOLDT, *Kosmos*, Venice, 1860, pp. 336-337: the italics are ours).

From these pilgrimage-like experiences, in addition to the numerous letters, we still have the accounts in the travel journals full of notes preserved at the Academy of Sciences in Turin and the Historical Archives of Casale Monferrato, which document, among other things, the relationship of mutual esteem and friendship between Humboldt and Vidua. They first met in 1825 in Paris, when the Piedmontese intellectual was about to travel to the United States and the German scientist, who in *Kosmos* calls Vidua "ein viel gewanderter und frei beobachtender Reisender" (a well-travelled and free-thinking researcher) provided him with several letters of recommendation addressed to eminent figures in the United States, Mexico and other South American countries; gave him several tips on itineraries to follow; and told him about things to see and books to consult,' as can be gathered from two notebooks with notes from Vidua from the Municipal Archive of Casale Monferrato entitled *Estratti da Humboldt* (*Extracts from Humboldt*), only *Humboldt* and *Istruzioni del Bar. Humboldt* (*Instructions from the Bar. Humboldt*)[35].

More evidence of Humboldt's esteem for Vidua can be found in the *Memorie estratte dal Giornale de' Viaggi del conte Sclopis* (*Memoir extracts from the Travel Journal of Count Sclopis*). There, in the pages about his stay in Paris during 1835, we can read that Sclopis had met Humboldt in the library in Paris and spoken about Vidua's travels, "qu'il a personellement connu et dont il parait faire beacoup de cas", adding to think "que l'idée dominante dans Vidua était celle de la politique, et qu'il dirigeait ses vues particulièrment de se côté dans tous ses voyages" and that "il avait fait une étude approfondie du système des gouvernements d'Amerique"[36].

Humboldt, who, as we have just seen, built his scientific reputation (but also his great worldly success) on the results of his famous voyage and by constantly going on scientific travels as a way of developing all the Earth-related sciences, from astronomy to mineralogy, from the sky to the subsoil, understood and realised the increasingly urgent need for scientists to leave their studios and laboratories, look first-hand at the objects they were studying and discover them *in loco*[37]. This approach naturally exerted its (not immediately apparent) influence on travellers, and in particular on scientist-travellers with all kinds of backgrounds and specialisations (mathematicians, physicists, doctors, mining engineers, topographers, geologists, military, astronomers, etc.), and even more so traveller-naturalists, who in turn implicitly or explicitly acted as a sounding board for Humboldt's thinking, methods and work. There is a long list of Italians, but we shall limit ourselves to mentioning Domenico Viviani, Giuseppe Raddi, Giovanni Casaretto, present in Paris from November 1836 to September 1837, Gaetano Osculati, Bartolomeo Bossi, Giovanni Capellini, Antonio Raimondi, Arturo Issel, an eclectic and versatile scholar, Enrico Hillyer Giglioli, Filippo De Filippi, Odoardo Beccari, and Stephen Sommier; and

[35] On these notebooks L. A. DE LA GARZA, op. cit., pp. 131 et seq., in a documented paragraph entitled "Intenciones y preparativo para un viaje" of the third chapter of his essay on Vidua the traveller.

[36] Testimony provided by *Carattere e religiosità a proposito di alcune memorie intime del conte Federigo Sclopis. Notizie, documenti, osservazioni di Antonio Manno colla giunta di Memorie estratte dal Giornale di Viaggio del conte Sclopis*, Turin, 1880, pp. 76-77 and reproduced in R. COALOA, *Carlo Vidua un romantico atipico Scritti di Carlo*, first volume (accompanied by an extensive bibliography on Vidua) of the *Scritti di Carlo Vidua*, edited by Roberto Coaloa and Andrea Testa, Casale Monferrato, 2003, p. 82.

[37] In this regard we refer to the reflections of M. QUAINI, *Tra Sette e Ottocento: il viaggio e il nuovo paradigma della geografia*, in *Alla fine del viaggio*, edited by L. Rossi and D. Papotti, Reggio Emilia, 2016, pp. 32-46.

focus only on three of the most representative figures for references to Humboldt – Domenico Viviani, Agostino Codazzi and Filippo Parlatore[38].

The first, a physician by training and a professor of natural history and then of botany at the University of Genoa, was the author of *Voyage dans les Apennins de la Ligurie* (Travel in the Ligurian Appenines), (Genoa, 1807). We know, thanks to Massimo Quaini, that in his notebooks, kept in the University Library of Genoa, he used to read and comment on Humboldt′s writings, in particular the methodological essay on constructing the *Tableau physique des régions équinoxiales* (*Physical table of the equinoctial regions),* based on the observations made on the ground during his American journey[39].

Agostino Codazzi, a military engineer from Lugo di Romagna, a respected topographer, chorographer and cartographer, put his skills and expertise, commended by the Academy of Sciences in Paris[40], to the service of the Republic of Venezuela, working in different territories, which were part of what was called the Kingdom of New Granada. These had been visited and described by Humboldt, who was an assiduous visitor to Codazzi's Parisian house between 1840 and 1842, discussing at length with him the project to found an emigrant colony (the Tovar Colony) in Venezuela[41] and expressing his admiration for the *Atlas Fisico y Politico de la República de Venezuela,* the *Resumen de la Geografía de Venezuela* and the *Catecismo de la Geografía de Venezuela precedido de unas breves nociones de Geografia General y de Cosmografía,* printed in Paris in 1841: "The geographical works that you have carried out – he wrote in a letter dated 20th June 1841 – cover such a large area and include such precise topographical observations and surveys, as well as altitude measurements to demonstrate the distribution of climates, *that they will leave their mark on the history of science.* I am pleased to have lived long enough to see the conclusion of an enterprise which, while honouring the name of Colonel Codazzi, contributes to the glory of the Government which had the foresight to sponsor this work"[42]. In turn, Agostino Codazzi found in Humboldt's writings, sharing his "democratic" spirit, a very useful form of guidance for his scientific activity and found reading the *Voyage*

[38] For these travellers please refer to F. RODOLICO, *Naturalisti esploratori dell'Ottocento italiano,* Florence, 1967; and T. ISENBURG, *Viaggiatori naturalisti italiani in Brasile nell'Ottocento*, Milan, 1989.

[39] See University Library of Genoa, ms. E I 58, quoted by M. QUAINI, *La geografia. Una disciplina all'incrocio delle scienze naturali e umane, incrocio delle scienze naturali e umane,* in O. RAGGIO-M. QUAINI-F. SURDICH. *Tra storia e geografia. Ricerca e didattica a Genova tra XIX e XX secolo,* Genova, 2004, p. 58, contribution published also in *Tra i palazzi di via Balbi. Storia della facoltà di Lettere e Filosofia dell'Università degli Studi di Genova*, edited by G. Assereto, Genoa, 2003, a monographic booklet of the *Atti della Società Ligure di Storia Patria, n. s., XLIII (CXVII), p. 236.* For an exhaustive biography of this scholar, see V. ZATTERA, *Domenico Viviani. Primo Naturalista Ligure,* La Spezia, 1994.

[40] See G. BOGLIOLO BRUNA – A. MIROGLIO, *I resoconti dell'Accademia delle Scienze di Parigi sull'attività di Agostino Codazzi* in *Venezuela,* in *Miscellanea di Storia delle esplorazioni,* XX, 1995, pp. 235-265: in these reports Humboldt was defined as Codazzi's "illustrious predecessor", as proof of his influence on the Italian traveller.

[41] See *Mal d'America. Le opere e i giorni di Agostino Codazzi, 1793-1859.* Catalogue of the Exhibition organized in Lugo, Pescherie della Rocca from 12 November to 10 December 1994, edited by G. Antei, Lugo, 1993-1994, p. 23.

[42] Letter published in *Geografia statistica di Venezuela di Agostino Codazzi,* Florence, 1862 (the italics in the quotation are ours).

highly stimulating, a work which he used in many instances for drafting the *Resumen*[43], but also for his other writings[44].

The influence exerted by Humboldt on Filippo Parlatore can be considered even more substantial and direct. Parlatore was a Sicilian botanist whom he met and associated with in Paris in 1841, where he was studying as part of an internship, and again in Paris and Berlin, where he went on an educational trip after the failure of some extracontinental exploration projects in 1844 and 1851. This is how Parlatore remembers this second meeting, which took place in May[45]: "I found the author of *Kosmos* always young and fecund in mind, so that despite his graceful ageing, the readiness of wits and the ease of writing have not diminished in him, treasuring the new discoveries as a way to understand all the knowledge of the ancient and modern centuries. Even though he is so high-up in science and enjoys universal esteem and the friendship of King Frederick William of Prussia, the most liberal Prince, lover and protector of the sciences and scientists, it is not beneath him to welcome young naturalists in a happy and friendly way; on the contrary, he helps them and encourages them along the difficult path they have set out upon".[46]

In fact, Humboldt steered him towards the study of phytogeography and later recommended him to the Grand Duke of Tuscany Leopold II for appointment as Professor of Botany and Physiology at the Museum of Natural History and as Director of the Central Herbarium in Florence. In 1851 Humboldt also encouraged him to travel to the northern regions of Europe (Sweden, Norway and Lapland) to study the flora of those territories and urged the King of Prussia to award him the Order of the Red Eagle, the kingdom's second most important honour.

Little wonder that when Humboldt passed away (6 May 1859), Parlatore dedicated a long eulogy to him, overflowing with unconditional admiration and accompanied by an extensive bibliography of his main writings. Read on 7th December 1859 as an inaugural lecture for his Botany lessons at the Museum of Physics and Natural History of Florence, the eulogy was bursting with rhetorical flourishes, and concluded with an exclamation: "Your name, O great observer of nature will live on in the great works of nature as long as the Earth, illustrated by you, revolves around the sun and there is a corner in it for civilisation and knowledge."[47]

The Sicilian naturalist celebrated every aspect of Humboldt´s scientific and cultural activity, his personality, recalled his character and behaviour and also outlined his physical

[43] See P. VILA, *Codazzi Humboldt Caldas, precursores de la geografia moderna,* Caeracas, 1960, p. 44.
[44] Of the vast bibliography relating to this cartographer, we recall in particular the biographies of F. ZUCCA, *Agostino Codazzi. Cartografo-geografo ed esploratore (1793-1859),* Florence, 1989, and G. ANTEI, *L'orizzonte in fuga. Viaggi e vicende di Agostino Codazzi da Lugo,* Florence, 2012, who also recounts (pp. 165-169) that during his exploration of the Chocò (1853), a region in northern Colombia, Codazzi used notes from a description of the Chocò that once belonged to Humboldt, to which he also referred in order to find out about the isthmus of Panama and how useful it would be to open it up (pp. 201-206), as pointed out by G. MORO, *Vantaggi di una comunicazione oceanica nell'Istmo Americano pel territorio di Tehuantepec,* in *Museo Scientifico,* IX, fasc. 10, 1847, p. 217.
[45] Parlatore talks about it in F. PARLATORE, *Mie memorie,* edited by A. Visconti, Palermo, 1992, pp. 117-122.
[46] F. PARLATORE, *Viaggio per le parti settentrionali* di *Europa fatto nel 1851,* edited by A. Di Bartolo, Como-Pavia, 2012, pp. 49-50.

[47] F. PARLATORE, *Elogio di Alessandro Humboldt,* Florence, 1860, p. 45.

characteristics. "Alessandro Humboldt", he could safely proclaim on that occasion, "was the most illustrious traveller of our times, as much and perhaps more than the Venetian Marco Polo in the Middle Ages; the most learned geographer who elevated physical geography to that high science that is the basis of almost all the knowledge derived from the study of our planet, surpassing Strabo himself, who was a learned writer of ancient geographical things; Humboldt was the founder of natural literature, if I may call it that, combining in his admirable descriptions of nature the elegance of style and the beauty of the poetic forms of Camoens, Bernardin de Saint-Pierre and Chateaubriand with the severity of science of Palla and De Saussure; the descriptor of everything created by the distant nebulous stars to the lowest lichen that lives in the dark and deep places of the mines, excelling with his *Kosmos,* notwithstanding the present difficulties of science, Pliny's famous work on natural history. Humboldt was also a chemist, physicist, astronomer, botanist, zoologist, philosopher, historian, statesman, philologist and I will also say a poet, because his prose with its lively images is much better poetry than many non-poetic verses"[48].

Moreover, whilst he reiterated that *Kosmos* must be considered "the greatest work conceived by the greatest mind of this century, the most splendid monument that man has been able to raise to the science of the present times", Parlatore did not fail to point out, however, that in his opinion this work was not lacking in defects, "because often the abundance of facts obscures the clarity of the subject even though the facts have been carefully studied and not infrequently due to the author's own observations, and because the clarity of the exposition is often damaged by a hint of *metaphysical Germanness* of which Humboldt himself did not know or was unable to get rid of, even though he was by nature more inclined to observe created things than to metaphysical abstractions".[49]

Ten years after this eulogy-celebration by Filippo Parlatore, the figure and activity of Humboldt would have been reintroduced to Italian readers[50] with the same admiration and the same enthusiasm by way of the translation of Ottone Ule's monograph, edited by L. Lasaneo and published in 1869 on the occasion of the centenary of the scientist's birth, defined as "not only the glory of his homeland (...) but of the whole earthly globe"[51] and presented by the publishers "To the benevolent readers" as "one of those very special scientists, who due to his elevated mind, the vastness and extension of the most solid and varied knowledge, for the generosity of the soul and for the ardent eagerness to benefit his fellow men, belongs and belonged to all civilised peoples".

In the *Preamble* to his biography, Ule, after having defined Humboldt as "the central point of all knowledge about nature of past times; the starting point of new sciences for the fruitful centuries", developed this detailed and unconditional celebration that would have made Humboldt a subject of admiration for Italians, proclaiming without reservation:

"He was a world reformer, who opened up whole regions to scientific investigation, and not only that, with his influence, he transformed the fundamental tenets of research, and not only

[48] F. PARLATORE, op. cit., pp. 4-5.
[49] F. PARLATORE, op. cit. p. 37.
[50] This is also attested to by the entries dedicated to Humboldt in the most popular encyclopaedias, such as the *Nuova Enciclopedia Popolare Italiana, ovvero Dizionario generale di Scienze, Lettere, Arti, Storia, Geografia, etc.* Turin, 1860, pp. 99-105; the *Nuova Enciclopedia Popolare Italiana ovvero Dizionario generale di Scienze, Industrie, etc.* Turin, 1880, pp. 1247-1254; the *Dizionario Universale di Geografia, Storia e Biografia*, Milan, 1880, pp. 487-488.
[51] O. Ule, *Alessandro di Humboldt,* Milan-Naples, 1869, p. 3.

that, but also penetrated with his powerful intellect, and transformed the way humanity perceived the world. What he did for the greatness of science, how he explored everything that belongs to nature, the depths of the seas, the endless spaces of the sky, how he ordered and coordinated the immense chaos of the particular experiences of his predecessors and contemporaries, revealed the collective life of the world and pushed modern science along new, unknown paths; just as he founded an overall science of nature on the solid basis of facts and experience, which was barely dreamt of by the Greek naturalist philosophers in the immense vastness of their ideas; all this is recorded in the annals of science" (p. 4).

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