Inequality (Un)perceived: The Emergence of a Discourse on Economic Inequality from the Middle Ages to the Age of Revolution

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ABSTRACT

Recent research suggests that inequality increased almost continuously from the Middle Ages until the Industrial Revolution. In this article we explore whether this reflects a change in how an unequal distribution of property/income was perceived. Using large databases of manuscripts and printed editions covering ca. 1100-1830, we measure the occurrences over time of keywords bearing on the notions of equality/inequality. We then analyze key texts in depth to discover how and when these keywords acquired an economic meaning. Lastly, we relate changes in meaning to changes in levels of economic inequality. We demonstrate that the notions of equality/inequality acquired economic meanings only over a long span of time. This process intensified in the decades preceding the French Revolution, suggesting that changes in inequality levels helped to brew political upheaval in the Age of Revolution.

Long-term developments in economic inequality are attracting growing attention from economic historians worldwide. Whereas past investigation focused on the impact of the Industrial Revolution on general levels of inequality – to test a hypothesis originally put forward by Simon Kuznets,[1] who theorized that inequality was fairly low in preindustrial societies, then entered a rising phase triggered by industrialization, eventually to be followed by a de-

[1] Simon Kuznets, "Economic Growth and Income Inequality", in *The American Economic Review*, XLV, 1, 1955, 1-28.

clining phase – in the last few years research has turned increasingly to the preindustrial period. For some parts of the world, researchers seeking to provide an overview of long-term developments in inequality have had to write a "history without evidence",[2] but by and large, and surely in the case of Europe, scholars have been producing a stream of new information by means of intense archival research. If until recently the only truly data-based work on long-term trends in economic inequality was Van Zanden's study of Holland,[3] we now have information for other parts of Europe, including the Low Countries,[4] Italy,[5] and Spain.[6] Although the map is still mostly blank, progress has definitely been made.

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[2] Jeffrey Gale Williamson, *History without Evidence: Latin American Inequality since 1491*, NBER Working Paper n. w14766.

[3] Jan Luiten Van Zanden, "Tracing the Beginning of the Kuznets Curve: Western Europe during the Early Modern Period", in *Economic History Review*, XLVIII, 1995, 643-64; Lee Soltow and Jan Luiten Van Zanden, *Income and Wealth Inequality in the Netherlands, 16th-20th Centuries*, Amsterdam, 1998.

[4] Wouter Ryckbosch, "Vroegmoderne economische ontwikkeling en sociale repercussies in de Zuidelijke Nederlanden. Nijvel in de achttiende eeuw", in *Tijdschrift voor Sociale en Economische Geschiedenis*, VII, 2010, 26-55; idem, *A Consumer Revolution under Strain. Consumption, Wealth and Status in Eighteenth-Century Aalst (Southern Netherlands)*, Univ. of Antwerp & Ghent Univ. Ph.D. thesis, 2012; Jord Hanus, "Real Inequality in the Early Modern Low Countries: the city of 's-Hertogenbosch, 1500-1660", in *Economic History Review*, LXVI, 2013, 733-56; Guido Alfani and Wouter Ryckbosch, "Growing apart in early modern Europe? A comparison of inequality trends in Italy and the Low Countries, 1500-1800", in *Explorations in Economic History*, 2016, http://dx.doi.org/10.1016/j.eeh.2016.07.003, forthcoming.

[5] Guido Alfani, "Wealth Inequalities and Population Dynamics in Northern Italy during the Early Modern Period", in *Journal of Interdisciplinary History*, XL, 2010, 513-49; idem, "The Effects of Plague on the Distribution of Property: Ivrea, Northern Italy 1630", in *Population Studies*, LXIV, 2010, 61-75; idem, "Economic Inequality in Northwestern Italy: a Long-term View (Fourteenth to Eighteenth Centuries)", in *Journal of Economic History*, 75(4), 2015, 1058-1096; Guido Alfani and Francesco Ammannati, *Economic Inequality and Poverty in the Very Long Run: the Case of the Florentine State (Late Thirteenth-Early Nineteenth Centuries)*, Dondena Working Paper No. 70, 2014; Guido Alfani and Matteo Di Tullio, *Dinamiche di lungo periodo della disuguaglianza in Italia settentrionale: una nota di ricerca*, Dondena Working Paper No. 70, 2015; Guido Alfani and Michela Barbot, *Ricchezza, valore, proprietà in età preindustriale. 1400-1850*, Venice, 2009.

[6] Carlos Santiago-Caballero, "Income Inequality in Central Spain, 1690-1800", in *Explorations in Economic History*, XLVIII, 2011, 83-96; Santiago-Caballero and Eva Fernández, *Inequality in Madrid, 1500-1850*, paper given at the Economic History Society Annual Conference, York, U.K., 5-7 April.

This article, however, does not aim to provide new quantitative data about general inequality levels. It takes a different tack, exploring a closely related topic of growing relevance in the light of recent findings about long-term trends in inequality and the current debate on whether income and wealth are distributed "fairly". Regarding the long-term trends, although much of the accessible data are still provisional and must be treated with caution, it seems that in Europe, at least, levels of economic inequality (especially of wealth) were already quite high in preindustrial times and tended to increase almost continuously from the late Middle Ages to the eve of the Industrial Revolution. Concerning equity, whereas contemporary western societies plainly consider it legitimate to at least question whether high levels of inequality are fair,[7] for preindustrial times it has been suggested that economic inequality was perceived quite differently (or, as this article's title suggests, was unperceived as such). In fact, preindustrial Europeans (from the Middle Ages to the end of the early modern period if not beyond) were well aware that their economies and societies were highly unequal, but they usually viewed this situation as acceptable, "natural", and inherent, given God's plans.[8]

The notion of inequality, then, needs to be contextualized and understood in the light of the cultural and other characteristics of preindustrial societies; otherwise, we risk making very wrong assumptions about what an uneven distribution of wealth and income meant for those societies. This article will focus on the cultural side of this story. It will trace the emergence of equality/inequality and

[7] See for example Lars Osberg and Timothy Smeeding , "'Fair' Inequality? Attitudes toward Pay Differentials: The United States in Comparative Perspective", in *American Sociological Review*, LXXI, 2006, 450-4.

[8] Charles de La Roncière, "Pauvres et pauvreté à Florence au XIV^{e} siècle", in Michel Mollat (ed.), *Etudes sur l'histoire de la pauvreté (Moyen âge- XVI siècle)*, Paris, 1974, II, 661-745; Giovanni Levi, "Aequitas vs Fairness. Reciprocità ed equità fra età moderna ed età contemporanea", in *Rivista di storia economica*, II, 2003, 195-204; Guido Alfani, "Proprietà, ricchezza e disuguaglianza economica", in Alfani and Barbot (eds.), *Ricchezza, valore, proprietà*, 11-22.

related terms as keywords used by those reflecting on economic matters, and it will show that these words acquired an "economic" meaning in fairly recent times. It will also relate long-term changes in the use of these terms, which we take as indicative of a change in how an unequal distribution of property and income was perceived, to the above-mentioned recent hypotheses about changes in inequality levels. In other words, if (as we demonstrate) the word "inequality" slowly became charged with an economic meaning, and if this change in scholarly discourse on economic matters (high culture) reflected a broader cultural change and a transformation in how a very unequal distribution of wealth and income was perceived, can this change in culture and perception be linked to one in the overall levels of inequality? By exploring this and related questions, this article provides a useful frame of reference for current and future endeavors to measure inequality over time.

Section I discusses the databases of manuscripts and treatises we used and the keywords we considered, and clarifies the methods of analysis applied. Section II provides a quantitative, descriptive analysis of the findings. Sections III and IV offer a deeper interpretation, showing that certain keywords of current economics had their origins in far-removed fields like mathematics, music, and medicine, and analyze the "textual paths" that led them gradually to acquire a similar meaning to the current one. Section V proposes a tentative linkage between change in culture and economic discourse on the one side and long-term trends in inequality on the other. It also suggests that inter-linked changes in inequality levels and in perception of inequality may well have contributed to stoking political upheaval, particularly the French Revolution of 1789.

I. Sources and methods

Specific words, especially those related to abstract concepts, have had different meanings in different eras, but this well-known fact is easily forgotten. For example, we tend to ascribe to the word

"inequality" its current meaning, which is laden with economic significance. A second possible error is to think that a state of pronounced economic inequality, which today would be considered to warrant reflection per se, was also significant to those who pondered economic matters in the Middle Ages or the early modern period. When we read a medieval text, in order to interpret it correctly we need both to understand how a seemingly familiar term was used at the time and to grasp the social and economic situation to which its use was connected.[9]

This is not to say that it is futile to study past occurrences of terms that are significant for the current debate on economic issues. On the contrary, we think that very relevant questions can be asked: When did so currently relevant a keyword as "inequality" begin to crop up in scholarly discourse, and when and why did it acquire an economic meaning, given that, as we will demonstrate, its origins lie in very different fields from those associated with economics? When did economic inequality begin to be perceived as such? In other words, when did a highly uneven distribution of wealth and income begin to be perceived as a problem? With this approach, while we are indeed proposing a research question closely related to current language and culture (and inevitably, to the current social and economic situation), we are not imposing that culture and those linguistic uses on the ancient texts we study.

This article focuses on the word "inequality" and on its opposite, "equality", but it also considers other words and other languages besides English. Our first step was to translate the key concepts of equality/inequality into the pair of Latin words *aequalitas*/*inaequalitas*, to which we added an entire family of related terms. In fact, we could not investigate the meaning of inequality in the medieval or early modern period without considering more generally the cul-

[9] La Roncière, "Pauvres et pauvreté"; Jean-Claude Maire Vigueur, "Le rivolte cittadine contro i 'tiranni'", in Monique Bourin, Giovanni Cherubini and Giuliano Pinto (eds.), *Rivolte urbane e rivolte contadine nell'Europa del Trecento. Un confronto*, Florence, 2008, 351-80.

tural context in which the concept was set. From this point of view, semantics is a powerful tool for historical research, generating a methodological debate on the "history of concepts".[10] As Anthony Black has demonstrated, during the Middle Ages different languages developed with their own concepts, prose styles, methods of argument, criteria of judgment, typology of texts, and authorities of reference. These languages were open, that is to say that even if they had distinctive characteristics (each had its own "grammar"), they interacted continually. Economic reflection, for example, referred to a dense lexicon deriving from the ethical-theological language, the Aristotelian and the juridical languages, and the language concerning poverty.[11]

During the Middle Ages, the notions of economic *aequalitas/inaequalitas* do not appear to have had an autonomous tradition. Instead, they recur in the broader philosophical-theological and ethical-political debate on the cohabitation of individuals within the civitas (city) and on inclusion in, or exclusion from, the civitas. In this sense, *aequalitas* becomes a keyword for a wider semantic context. Its meaning cannot be separated from that of *aequitas* (equity) and is also closely tied to that of civitas as a body, of the virtue *liberalitas/largitio* (generosity), and of the vice *avaritia* (avarice) and virtuous opposite, *prudentia* (prudence). In this perspective, some notions, like those of social utility/common good, honor/citizenship, and distribution of wealth/poverty, take on vital importance in legitimating economic actors and economic behaviors.[12] Accord-

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[10] Sandro Chignola, "Storia dei concetti e storiografia del discorso politico", in *Filosofia politica*, I, 1997, 99-122; Jacques Guilhaumou, "De l'histoire des concepts à l'histoire linguistique des usages conceptuels", in *Genèses*, XXXVIII, 2000, 105-18; Melvin Richter, *The History of Political and Social Concepts. A Critical Introduction*, New York-Oxford, 1995; Reinhart Koselleck, *Future Past. On the Semantics of Historical Time*, trans. K. Tribe, Cambridge, Mass. and London, 1985.

[11] Anthony Black, "Political Languages in Later Medieval Europe", in Diana Wood (ed.), *The Church and Sovereignty c. 590-1918. Essays in Honour of Michael Wilks*, Oxford, 1991, 313-28.

[12] Giacomo Todeschini, *Il prezzo della salvezza. Lessici medievali del pensiero economico*, Rome, 1994; idem, *I Mercanti e il Tempio. La società cristiana e il circolo virtuoso della ric-*

ingly, the words we identified as essential references for our inquiry are: aequalitas/inaequalitas; aequitas (the juridical translation of the notion of equality); utilitas (an essential keyword for the medieval tradition of political writing, which developed around the notion of *bonum commune*, or common good); and *distributio* (a term that evokes actual economic activity).[13]

After selecting the keywords, we measured their occurrence in the scholarly and literary output of the Old Regime. In particular, we concentrated on the titles of manuscripts and printed books, using them as a privileged observatory of the cultural trends of different epochs. This method needed some refinement for manuscripts lacking an "identity" based on a specific author and a title. The *traditio*, or transmission, of a medieval text from one manuscript to another is tied to the *incipit*, the first words transcribed by the copyist. However, textual incipit are useful material and the inclusion of many historical catalogues of important European libraries in digital databases enabled us to use them in the same way as we referred to titles for later works.

We considered our keywords in different variants, to obtain the most exhaustive results possible. In particular, and especially referring to the characteristics of Latin, 1) we considered the forms with or without diphthong, to take into account the writing practices of the Middle Ages, when readings were not frozen in exemplary forms

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chezza fra medioevo ed età moderna, Bologna, 2002; Giovanni Ceccarelli, "'Whatever Economics': Economic Thought in Quodlibeta", in Christopher Schabel (ed.), *Theological Quodlibeta in the Middle Ages: the Thirteenth Century*, Leiden, 2006, 475-505; Sylvain Piron, "L'apparition du resicum en Méditerranée occidentale, XII^{e}-XIII^{e} siècles", in Emmanuelle Collas-Heddeland et al. (eds.), *Pour une histoire culturelle du risque. Genèse, évolution, actualité du concept dans les sociétés occidentales*, Strasbourg, 2004, 59-76.

[13] Cary J. Nederman, "Nature, Sin and the Origins of Society: the Ciceronian Tradition in Medieval Political Thought", in *Journal of the History of Ideas*, XLIX, 1988, 3-26; Odd Langholm, *Economics in the Medieval Schools. Wealth, Exchange, Value, Money and Usury according to the Paris Theological Tradition 1200-1350*, Leiden, 1992; Matthew S. Kempshall, *The Common Good in Late Medieval Political Thought*, Oxford, 1999; Pietro Costa, *Civitas. Storia della cittadinanza in Europa*, Rome-Bari, 1999, I, *Dalla civiltà comunale al Settecento*; Paolo Grossi, "La proprietà nel sistema privatistico della Seconda Scolastica", in idem (ed.), *La Seconda Scolastica nella formazione del diritto privato moderno*, Milan, 1972.

(*aequalitas*/*equalitas*); 2) we searched for the nominative form and, when the database permitted, the truncated form (*equalit**), so as also to identify the declensions of the term; 3) for each keyword, we also considered the possible vernacular variants (*egual*/*egal*); and 4) we proceeded in similar fashion for fully vernacular forms in selected languages, namely English, Italian, and French (*equality*/*uguaglianza*/*égalité*).

An important theoretical premise of our inquiry is that we consider written documents an expression, albeit "indirect",[14] of the culture of the time.[15] The language used in written texts expresses a specific set of ideas; consequently, it is appropriate to use those texts in order to gauge how common it was to actually reflect on the topic of equality/inequality, and also to discover the meanings associated with those terms in different periods. This is not a standard procedure among economic and social historians, but it seems to offer rich opportunities for supplementing more frequently trodden paths, as recent publications suggest.[16] Given the long span of time covered (1100-1830), our research also had to take account of different practices of cultural transmission, distinguishing between manuscripts and printed books. Consequently, the databases we used cover both.

This is a fairly new method of inquiry, making use of instruments – the databases of titles, incipit, or whole texts – that only recently have been made freely available on the web or otherwise by libraries or cultural institutions. These tools have become increasingly accessible as a result of a broader push to digitize ancient books

[14] As the English sociologist Richard Hoggart has observed, the connection between production of books and culture in a given period cannot be understood in terms of simple mirroring but, rather, fits the pattern of "oblique attention". See Hoggart, *The Uses of Literacy: Aspects of Working-class Life with Special Reference to Publications and Entertainments*, London, 1957; see also Roger Chartier, *Les origines culturelles de la Révolution française*, Paris, 1990, 104.

[15] On the notion of "culture", see Peter Burke, *What is Cultural History?*, Cambridge, 2004.

[16] For example, Keith D.M. Snell, "Belonging and Community: Understandings of 'Home' and 'Friends' among the English Poor, 1750-1850", in *Economic History Review*, LXV, 2012, 1-25.

and documents and to make the information they contain more available via open access web strategies. The current situation, where a significant volume of new material is available that has rarely been used, calls for experimental inquires like our own. The databases seldom provide "final" data, as they are continually being expanded and renewed, so those who use them need to state the date of consultation – in our case, August 2014.

We selected our databases on the basis of reliability, completeness, and accessibility. We give a more detailed description of each database in the Appendix; an overview will suffice here. For printed books, we chose databases that allowed us to cover the longest timespan while also considering the different kinds of editorial products prevalent in each epoch (*incunabula*, *cinquecentine*, and ancient books in general, up to 1830). Accordingly we selected three databases: Incunabula Short Title Catalogue (ISTC), Edit16, and SBN Ancient Books. As with the other databases mentioned, Table 1 details their size and the time period they cover.

Exploring manuscripts proved to be more complex, both because in this case the creation of digital databases is more recent and be-

Table 1
Databases of manuscripts and printed editions

Databases	Type of sources	Period covered	Number of works included
In Principio	Manuscripts	1100-1800	4,388
Manuscipta Mediaevalia	Manuscripts	n.a.	n.a.
Manus on Line	Manuscripts	1100-1830	39,855
Digital Scriptorium	Manuscripts	1100-1830	8,161
Nuova Biblioteca Manoscritta	Manuscripts	1100-1830	39,885
Quodlibase	Manuscripts	1230-1350	124
British Catalogue	Manuscripts	1100-1600	2,701
Incunabula Short Title	Printed editions	1452/53-1499	30,375
Edit16	Printed editions	1500-1599	64,734
SBN Ancient Books	Printed editions	1600-1830	727,388

Note: Databases accessed in August 2014. We only analyzed the titles of the listed books, plus (for the databases *In Principio* and *Quodlibase*) the incipit.

cause there is a plethora of projects for specific areas or linked to individual institutions that work independently on their own collections without contributing their catalogues to shared databases. We selected the six latest, most up-to-date and complete online public access catalogues (OPACs) available, namely: Manus Online (MOL); Nuova Biblioteca Manoscritta (NBM); In Principio. Incipit Index of Latin Texts; The Digital Scriptorium (DS); Manuscripta Mediaevalia; and the British Library Catalogue, Archives and Manuscripts.

To these databases of manuscripts we added Quodlibase, which has different and very distinctive characteristics. It does not focus on the presence of a given codex in the collection of a given library or institution, but instead documents a typology of texts: the incipit of manuscripts belonging to a literary genre, the *quodlibetales* questions – that is, the thirteenth- and fourteenth-century public disputes organized twice a year, during Advent and Lent, at the University of Paris. With its concentration on a specific type of source, this database allowed us to follow a chain of texts and to analyze in depth the changing uses of our keywords.

The geographical area covered by our databases consists mainly of Italy, which occupied a central position in European culture during the Middle Ages and the early modern period. However, our investigation of vernacular variants allowed us also to consider the occurrence of our keywords in vernacular forms not only in Italy, but also in France and England. This choice was made on etymological grounds, as from the Latin *aequalitas* derive: 1) the Italian vernacular form eguaglianza in its many variants;[17] 2) the middle French word *egalité*, in the forms *igaleté*, *ivelté*, *équalité*; and 3) from the middle French derives the middle English word *equalite*, also in the variants *equalyte*, *eqwalyte*, which during the fifteenth century became *æqualitie* and in the sixteenth *æquality* (from the middle French *équalité*). As with the work on titles, we again referred to the

[17] Eguagliança, eguaglianza, eguaiança, egualança, egualance, eguallanza, guagliancça, guaglianza, ‘gualança, ‘guallança, iguaglianza, iguallianza, inguaranza, oguagliança, ogualança, uguagiança, uguaglianza, ugualiança, ugualianza.

most recent databases of lexicons, glossaries, and historical vocabularies.[18]

During the Middle Ages, Latin's unchallenged position as the common language of high culture resulted in the production of manuscripts having a supra-regional character,[19] somewhat independent from geography, whereas for the printed books that spread across Europe from the mid-fifteenth century on (Gutenberg's Bible, printed with movable type, dates from 1455), both the place and the language of the edition are fundamental. Nevertheless the survival of Latin in printed works through the seventeenth and the eighteenth centuries is helpful for understanding which meanings of our keywords remained linked to the "high" academic tradition.

II. Long-term trends in the occurrence of inequality-related words

A quantitative analysis of the data on the occurrence in time of our keywords is useful to delineate long-term trends and is essential to investigating the changing meaning of the keywords. Of course, the actual number of citations in titles or in *incipit* depends on the number of works considered per year (a piece of information that few databases provide) and on the emergence of new literary genres; a particularly important threshold is the spread of printed editions. The quantitative information we collected, then, should be considered indicative, but it does suggest clear trends and points to the existence of threshold events, in particular the French Revolution. The data are summarized in Table 2, where they are arranged by century except for the most recent period, for which 1789 is the dividing line.

The data presented in the table show a long-term increase in the

[18] In particular, for Latin, the *Latin Dictionaries* (DLD); for Italian, the *Tesoro della Lingua Italiana delle Origini* (TLIO); for French, the database *Analyse et traitement informatique de la langue française* (ATILF); for English, the *Oxford English Dictionary* (OED).
[19] Burke, "'Heu Domine, adsunt Turcae': a Sketch for a Social History of Postmedieval Latin", in *The Art of Conversation*, Cambridge, 1993, 34-65.

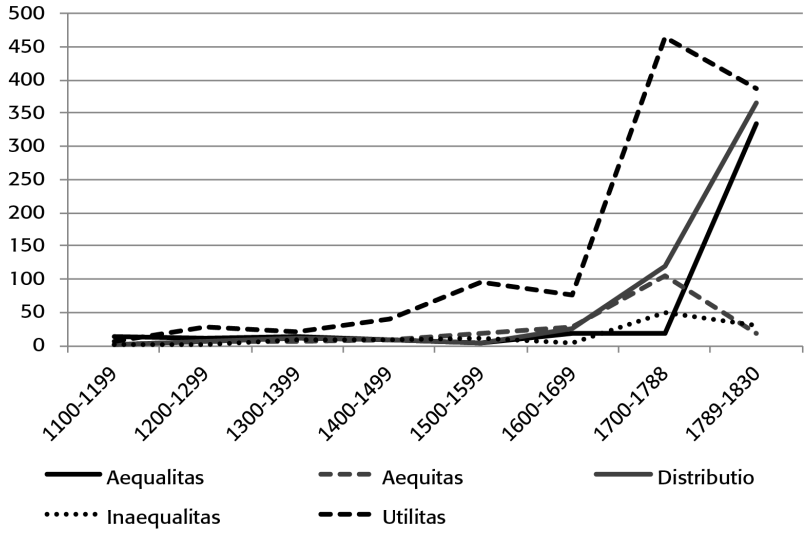
TABLE 2
Diffusion of keywords related to the notion of inequality in titles of manuscripts or printed editions, 1100-1830

Period	Aequalitas		Aequitas		Distributio		Inaequalitas		Utilitas	
	M.*	P.**	M.	P.	M.	P.	M.	P.	M.	P.
1100-1199	13	-	2	-	1	-	2	-	7	-
1200-1299	12	-	7	-	7	-	2	-	27	-
1300-1399	14	-	7	-	12	-	8	-	20	-
1400-1499	8	1	8	0	8	0	8	0	30	11
1500-1599	0	3	5	14	2	2	0	10	0	95
1600-1699	0	19	0	29	1	25	0	3	1	76
1700-1788	1	17	3	101	0	120	0	50	4	459
1789-1830	0	334	0	19	0	366	0	31	0	387

* M. = Manuscripts ** = Printed editions
Notes: The table covers books included in all databases listed in Table 1. No printed editions are found before the fifteenth century (Gutenberg introduced movable-type printing around 1455). Absolute numbers, not frequencies, are shown, because the databases of manuscripts do not reveal the total number of books indexed for each sub-period but only the overall number of books included, as per Table 1).

occurrence of all of our keywords, notably for *utilitas*, *aequitas*, and *aequalitas*. Overall, *inaequalitas* shows up quite rarely compared with others at the end of the period we considered (1830), but it is interesting to see that its occurrence intensifies noticeably from the beginning of the eighteenth century (50 occurrences in the period 1700-1788, compared with a total of 33 in the six preceding centuries). More generally, all of our keywords, with the exception of *aequalitas*, show a very marked increase in the pre-revolutionary part of the eighteenth century. The stability in the use of *aequalitas* is all the more striking, as it was on this keyword that the French Revolution had the most dramatic impact (334 occurrences in 1789-1830 compared with just 17 in 1700-1788). This should come as no surprise, for the French Revolution made equality one of its signature ideals (*liberté*, *fraternité*, *égalité*); indeed, the Revolution almost "invented" it as a keyword capable of orienting public discourse. All these trends appear even more clearly in graphic representation (see Figure 1, where manuscripts and printed editions are merged). Notice that we are

Figure 1
Diffusion of keywords related to the notion of inequality in titles of manuscripts and printed books, 1100-1830



discussing absolute numbers of occurrences; the shape of the trend could also be influenced by changes in the size of the population, but we can rule out this hypothesis at least for the early modern period, when the main changes occur (see below, discussion of frequencies).

Examining the relative trends of *aequitas* and *aequalitas* during the eighteenth century, we find that they mirror each other. While the occurrence of aequitas intensified during the pre-revolutionary decades, that of *aequalitas* remained stable. After the Revolution, however, *aequalitas* (*égalité*) boomed while aequitas declined. This raises the hypothesis that the abstract concept of equity was replaced by a keyword describing a matter-of-fact "equity" in the distribution of rights (equality) and possibly also in access to resources. We will return to this hypothesis after discussing the changes in meaning of our keywords through time (next section). What is certain is that the French Revolution spread a new use for the word and concept of equality across Europe. For example, in Italy, most of which was conquered by Napoleon and directly or indirectly controlled by France

Table 3
Occurrences of equality/inequality, 1701-1830, in Latin and other European languages in printed editions available in Italian libraries

SBN	Aequalitas	Égalité	Eguaglianza	Equality	Inaequalitas	Inégalité	Dis-eguaglianza	Inequality	
Period									Total
1701-1710	1	0	0	0	0	0	1	0	19199
1711-1720	2	0	1	0	0	0	1	0	21917
1721-1730	1	1	0	0	1	0	3	0	25658
1731-1740	1	0	0	0	1	0	0	0	29884
1741-1750	0	0	1	0	3	0	0	0	32093
1751-1760	1	0	1	0	3	10	0	0	38587
1761-1770	1	0	0	0	1	4	0	1	41678
1771-1780	0	0	0	0	0	3	11	0	45858
1781-1790	0	1	3	0	0	5	1	0	53834
1791-1800	1	85	233	3	0	9	7	0	54937
1801-1810	0	1	16	0	0	1	8	0	48302
1811-1820	0	0	1	0	0	0	0	0	54221
1821-1830	0	3	0	1	0	4	0	0	87393

for many years, we find a parallel increase of the presence in national libraries of works whose titles include égalité or the Italian equivalent, *eguaglianza*. The same is not true, however, of inequality (*inegalité/ineguaglianza*), as shown in Table 3.

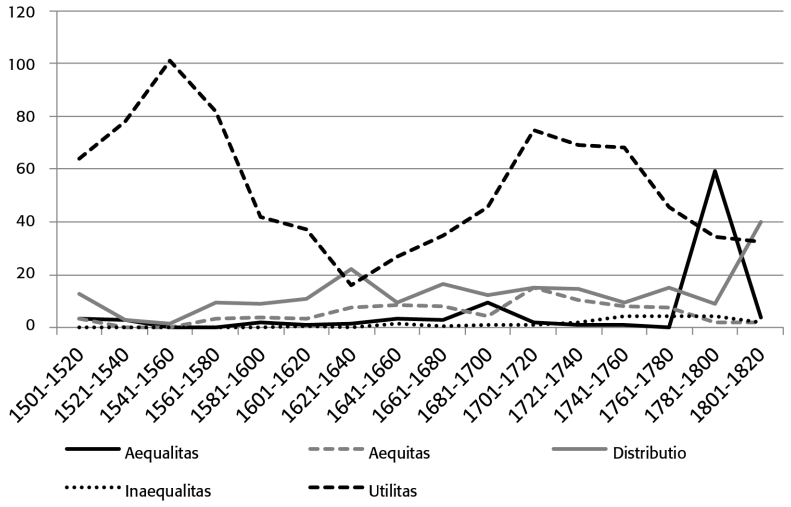
The data in Table 3 come from *Servizio Bibliotecario Nazionale* (SBN) and show the occurrences of the keywords in printed editions physically present in Italian libraries only, so this information is not directly comparable with that presented in Table 2. Italy, however, is an exemplary case of how French revolutionary ideas influenced culture in much of continental Europe. The data also confirm the findings from the inquiry conducted on the full set of databases. In general, we can conclude that the French Revolution spread the ideal of equality but did not spread the idea of inequality as a condition worthy of specific attention. Interest in the concept of inequality had

gradually been growing before the Revolution and did not intensify immediately after it, although the Revolution surely affected it, as we will argue later. These developments were not limited to continental Europe. A search of the British Library catalogue (which lists books physically present at the library) allowed us to detect a trend entirely analogous to (though possibly somewhat weaker than) the one described above. For example, in the period 1701-88 we found records of 32 published works containing the word "equality", versus 85 in the period 1789-1830.

Up to now our data refer to absolute numbers of publications. Relative numbers (frequencies) would obviously be preferable, to dispel any doubt that the changes in absolute numbers might only reflect changes in the number of yearly publications, but most of our databases do not give the number of publications indexed per period; this goes particularly for the databases of manuscripts. However, in the case of printed editions, both SBN and Edit16 allowed us to extract information about publications per period and thus to calculate frequencies from the sixteenth century onwards. What is more, they allowed us to work on shorter spans and consequently to get a more precise picture of change in the course of time. Table 3 provides part of this information, while Figure 2 summarizes all the available information.

Comparing Figures 1 and 2, it is easy to conclude that from the sixteenth century onwards keyword frequencies and absolute numbers follow the same trend. Consequently, it is reasonable to assume that this also holds for the earlier centuries, for which frequencies could not be calculated. However, even relying on frequencies we could still wonder whether changes in the occurrence of keywords that have a "secular" character, like *inaequalitas*, might not reflect a general increase in publication about secular as opposed to theological subjects. As a test, we collected information about the occurrence of the keyword *agricultura*, which has an eminently secular meaning and is also phonetically very similar across neo-Latin languages, and about the keyword *tractatus*, which is used in titles of both secular and theological works and consequently is expected to be fairly con-

FIGURE 2
Frequency of keywords related to the notion of inequality in titles of printed books, 1501-1820

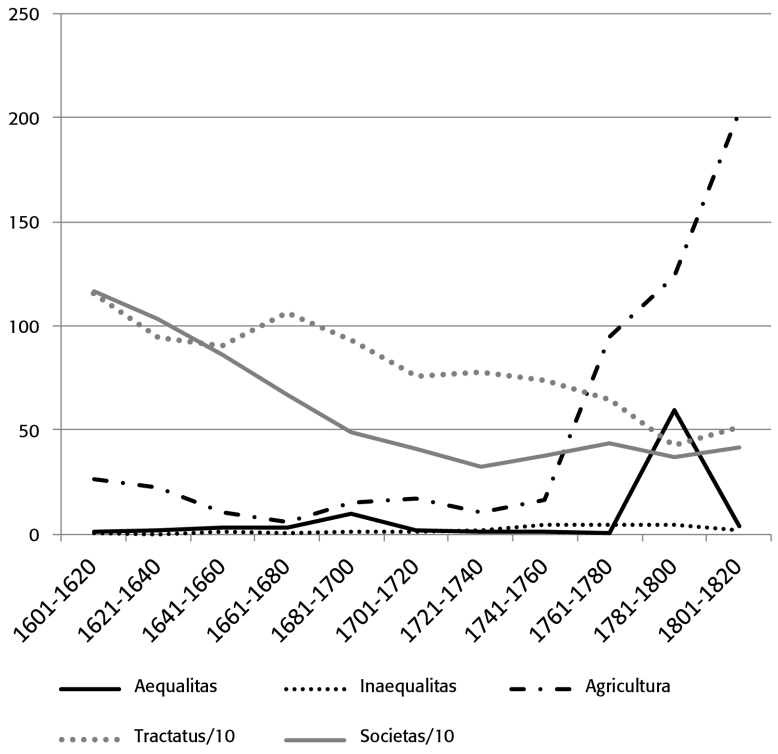


Note: Frequencies in 10,000s.

stant over time. Finally we added the keyword *societas* for further tests (see below). Figure 3 compares the frequencies of these new keywords with those of the couple *aequalitas/inaequalitas*. Given that *tractatus* and *societas* are particularly frequent keywords, the related frequencies have been divided by 10 to facilitate comparison.

The occurrences of *tractatus* are fairly constant, as expected, and this is further proof that the dynamics which we described for the other keywords reflect real changes in culture and perception. The trend in frequencies of *agricultura* possibly reflects an overall rise in secular publications from the eighteenth century onwards. This is especially apparent from the period 1761-80, and the French Revolution does not seem to have affected the process, as no threshold is to be found in the 1780s, a circumstance that sharply differentiates *agricultura* from *aequalitas*. While the latter is a theological as well as a secular keyword, *inaequalitas* has a purely secular character. But its trend, too, also differs markedly from *agricultura*, and, more generally, we found no evidence that its pattern can be explained as part

Figure 3
Frequency of secular and inequality-related keywords in titles of printed books, 1601-1820



Note: Frequencies in 10,000s.

of a trend common to all secular keywords. This probably reflects the fact that *inaequalitas* had extremely narrow meanings at the time. So before any further discussion of hypotheses about the determinants of the patterns we have described, it is important to look more closely at the original meanings of this word and at how it changed between the Middle Ages and the subsequent periods (Sections III and IV).

Another question is whether the increasing occurrence of *aequalitas* during the eighteenth century might not simply reflect the emergence of a discourse about "society" in its many dimensions.

However, the frequency of the keyword *societas* declines steadily from the beginning of the seventeenth century, bottoming out around the middle of the eighteenth century and remaining stable afterwards. Consequently we can reject the hypothesis that the trend in use of the keywords related to equality/inequality was shaped by the development of a general discourse about society. On the contrary, it reflected the emergence of an interest in the condition of equality among human beings, which mostly took place during the eighteenth century but which cannot be understood without taking earlier developments into account.

III. The meaning of *Aequalitas* and *Inaequalitas* in the Middle Ages

Having reconstructed the occurrences in time of our keywords, we analyzed their exact meanings in the context of the full titles. This allowed us to subdivide the works in which they were used into a number of semantic groups and to identify certain patterns of change within the main semantic groups. In particular, we explored the evolution in meaning of the couple equality/inequality.

As stated earlier, in this article we are considering "culture" as a "tradition" (*traditio*), that is, a process of production of texts by means of earlier texts, a continuous creation of texts genetically or functionally connected to others.[20] Especially in the case of the medieval manuscript tradition, the redaction of a text was closely tied to the pre-existing *traditio* and to the great auctoritates (authorities) that were continuously recalled. This interaction must be borne in mind in order to understand how the semantic fields of our inquiry are characterized by the close connection between the meaning of *aequalitas* in a given period and the group of ancient authorities from

[20] Costa, "Civitas, respublica, corpus. Immagini dell'ordine e dell'appartenenza fra 'antico' e 'moderno'", in Gennaro Carillo (ed.), *Unità e disunione della polis*, Avellino, 2007, 565.

which different meanings originated and were passed on. The meaning of *aequalitas/inaequalitas* during the Middle Ages was part of a theoretical system built upon ideas that traversed the centuries through the works of authoritative writers. Within this theoretical system, we do find references to the political and economic fields, but until the eighteenth century there are absolutely no works specifically dedicated to *aequalitas/inaequalitas* as keywords for such fields.

The concept of *aequalitas* did not orient the medieval and early modern ethical-economic reflection. Our research on titles shows that *aequalitas* was historically connected to other semantic fields, which only gradually contributed to infusing it with an economic meaning. Identifying these fields implies reconstructing the set of interconnected meanings attributed in the past to *aequalitas/inaequalitas*, a necessary step to understanding what "inequality" really signified during the Old Regime. Of course, equality and inequality were well-known words, but they were used differently. *Aequalitas*, for example, was used in connection with certain Aristotelian categories, with the persons of the Trinity, or with the physiological components of the human body, but it was never used to describe human beings as part of a collectivity of "equals". In the last sense, *aequalitas* was a condition that human beings enjoyed only in the Garden of Eden (discussed below).

During the Middle Ages, *aequalitas* was not considered a normative concept, i.e. an ideal that should orient political action or a condition that should be realized. On the other hand, *inaequalitas* was not used in contexts related to a condition that gave rise to claims, or that was unfair and had to be changed. In medieval times, both terms were politically neutral (see discussion in Section V). In fact, medieval texts propose an ideal of social "order" in which inequality between individuals must be preserved – to an extent – in order to ensure the good functioning of the city, metaphorically represented as a "body".[21] This metaphor conveys an idea of the unity of a

[21] Nederman and Kate Langdon Forman, *Medieval Political Theory. A Reader: the Quest for the Body Politic. 1100-1400*, London-New York, 1993.

human group (a community) that is intrinsically unequal, insofar as that unity results from the solidarity of different bodily parts cooperating to give life to the whole. At the same time, the natural disposition of the bodily parts implies that they are ordered according to a specific hierarchy. More generally, the medieval universe is an ordered universe *because* it is composed of hierarchically ordered parts.[22] From Augustine of Hippo (354-430) to Thomas Aquinas (1225-1274), order is meant as ordering of inequalities. "Order", we read in *De civitate Dei*, "is the disposition of equal and unequal things in such a way as to give to each its proper place".[23]

Inequality is an element that nature and the wisdom of Creation reveal at every degree of being: even angels are hierarchically ordered and even *in statu innocentiae* ("in a state of innocence") the link between inequality and dominion is apparent, as Thomas Aquinas demonstrates in *Quaestio* 96 (a. 3: "Whether Men were equal in the State of Innocence?") of his *Summa Theologica*.[24] The entire political system and its representations were grounded in an axiom that was the opposite of the "egalitarian" one with which we are familiar, and which would develop only from the end of the early modern period. Inequality was not only a rule according to which the parts of a whole were distributed, but it conditioned how the individual was

[22] Costa, *Civitas. Storia della cittadinanza in Europa*, I, 6-12.

[23] Augustine of Hippo, *De civitate Dei*, eds. Bernhard Dombart, Alfons Kalb, Corpus Christianorum Series Latina, XLVIII, XIX, 13.

[24] Before original sin, in fact, there was no condition of servitude, but dominion existed with the meaning of an individual "who has the office of governing and directing free men" (Thomas Aquinas, *Summa Theologica*, I, q. 96, a. 4). Thomas Aquinas developed his doctrine referring to two auctoritates: Augustine (from whom he took the notion of order) and Aristotle (from whom came the concepts of dominion and common good). According to Augustine, all things coming from God are ordered, and this implies that they are unequal. In the same way, human beings, even before the Fall, were not all equals but differed due to gender, age, qualities of the soul, and qualities of the body. As they were, according to Aristotle, naturally sociable, human beings tended to aggregate but, due to their original differences, those who showed the greatest capacities tended spontaneously to exert a dominion over the others (freemen and not slaves) directing them towards the common good (for more about this see Costa, *Civitas, respublica*, 572).

perceived; in fact, an individual was not equal to all others, but was defined by the unequal relationships to which he or she belonged.[25]

This theoretical context is essential to understanding the results of our inquiry. In particular, focusing on the manuscript tradition from the twelfth to the fifteenth century, we can enumerate five main semantic fields with which the keyword *aequalitas* was associated and a corresponding specific system of authoritative authors:

1. The *quadrivium* arts (music, arithmetic, astronomy, and geometry), which from the end of Antiquity were considered propaedeutic to the study of theology. Here the *auctoritas* of reference was Boethius (475-525). In this field, *aequalitas* concerned the quantitative/numerical dimension.[26]
2. Theology. Theological thought referred to the mathematical meanings of *aequality* when discussing religious tenets. Here Augustine of Hippo and Boethius were the *auctoritates* for a tradition that used the word *aequalitas* in different ways, all re-elaborated in the *Sentences* of Petrus Lombardus (ca. 1100-1162), a pivotal compendium in medieval academic learning. In actual application, *aequalitas* referred mainly to the doctrine of the Trinity. Augustine had already posed the question of how the relationships between the three persons of the Trinity were to be understood, concluding that the distinction between the persons of the Trinity was the only one that did not imply inequality.[27] As Lombardus

[25] Costa, *Civitas. Storia della cittadinanza in Europa*, I, 37; Daniela Frigo, "La 'civile proportione': ceti, principi e composizione degli interessi nella letteratura politica d'antico regime", in C. Mozzarelli (ed.), *Economia e corporazioni. Il governo degli interessi nella storia d'Italia dal medioevo all'età contemporanea*, Milano, 1988.

[26] These terms became part of the so-called "languages of analysis" of the late Middle Ages. See John Emery Murdoch, "From social into intellectual factors: an aspect of the unitary character of late medieval learning", in Murdoch and Edith Dudley Sylla (eds.), *The Cultural Context of Medieval Learning*, Boston, 1975, 280. These languages were typical of the studies of natural philosophy developed n the Oxford "school"; see Sylla, "Medieval concepts of the latitude of forms: the Oxford Calculators", in *Archives d'Histoire Doctrinale et Littéraire du Moyen Age*, XLVIII, 1973, 223-83; Murdoch, "The Analytic Character of Late Medieval Learning: Natural Philosophy without Nature", in Lawrence D. Roberts (ed.), *Approaches to Nature in the Middle Ages*, New York, 1982, 171-213.

clarified, the equality of the persons of the Trinity lay in the fact that none exceeded the others regarding eternity, greatness, or power (*aeternitas*, *magnitudo*, or *potestas*).[28] A second theological use of aequalitas had to do with the doctrine of original sin, according to which Eve "*voluit usurpare divinitatis aequalitatem*" ("wanted to usurp an equality of divinity").[29] Her sin consisted in having aspired to "have the similitude of God with a certain equality, thinking, that that which the Devil said was true".[30] *Aequalitas* was used in similar ways in connection with Lucifer, who sinned because he intended "*Deo se aequare*" ("equate himself to God").[31] Finally, the word was associated with the doctrine of angels and with that of the Creation.[32] All these issues became central to theological discussion within the universities, as reflected in two literary genres: the Commentaries to the *Sentences* of Petrus Lombardus, and the *Quaestiones quodlibetales* (see Section I). It is in the *incipit* of such texts that *aequalitas/inaequalitas* appears with the greatest frequency.

3. Medicine/Alchemy. A fair number of *incipit* refer to Hippocrates' theory of the *complexio* ("constitution") of the four bodily fluids or humours. In a healthy individual, temperance was associated with the perfect equilibrium, or equality, of the four humours. Instead, a state of inequality determined a specific character (wrathful, melancholic, …) depending on the prevailing humour.[33]

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[27] Augustine of Hippo, *De Trinitate*, eds. William John Mountain, Françoise Glorie, Corpus Christianorum Series Latina, L, VII, 6, 11-12.
[28] Peter Lombard, *Sententiarum quatuor libri*, ed. Quaracchi, Spicilegium Bonaventurianum, IV b, I. 19. 1.
[29] Ibid., II. 22. 4.
[30] Ibid., II. 22. 2.
[31] Ibid., II. 6. 1.
[32] This range of meanings is confirmed by an inquiry we conducted using the browser of the website Augustinus (http://www.augustinus.it/), which collects the complete works of Augustine of Hippo. Considering the complete texts and not just the titles, the word aequalitas appears 52 times: 4 in the *De musica*, 20 with regard to the relationship between Father and Son, and 6 referring to angels.
[33] Per-Gunnar Ottosson, *Scholastic Medicine and Philosophy: A Study of Commentaries on*

4. Ethics and politics. These fields made use of *aequalitas/inaequalitas* in discoursing on virtues, notably from the thirteenth century onward, when these terms became recurrent throughout Europe in Latin translations and commentaries on the works of Aristotle, particularly the *Nichomachean Ethics* and the *Politics*. In these texts, the word *aequalitas* is often associated with the topic of justice and equity (*aequitas*); sometimes it is connected with reflections on *oeconomica* ("economic matters"),[34] in which the keywords *publica utilitas* and *distributio* frequently appear.[35]
5. Law. *Aequalitas* was used in juridical writings.[36] Following the re-discovery of Roman law during the twelfth century, the term was associated with or used as a synonym of *aequitas*.[37]

Galen's Tegni, ca. 1300-1450, Naples, 1984, 130-50; Chiara Crisciani, "Aspetti del dibattito sull'umido radicale nella cultura del tardo medioevo", in Josep Perarnau (ed.), *Actes de la II Trobada Internacional d'Estudis sobre Arnau de Vilanova*, Barcelona, 2005, 333-80; Crisciani and Michela Pereira, "Black Death and Golden Remedies. Some Remarks on Alchemy and the Plague", in Agostino Paravicini Bagliani, Francesco Santi (eds.), *The Regulation of Evil. Social and Cultural Attitudes to Epidemics in the Late Middle Ages*, Florence, 1998, 7-39.

[34] From an inquiry into the database Aristoteles Latinus Online (http://brepolis.net, collecting all translations from Greek to Latin of Aristotle's works), we counted 103 occurrences of the word *aequalitas* and 45 of *inaequalitas*. Many of these refer to Book V of *Nicomachean Ethics*, where *aequalitas* is a keyword used while developing the theory of "commutative justice" (Joel Kaye, E*conomy and nature in the fourteenth century. Money, market and the exchange, and the emergency of scientific thought*, Cambridge, 1998; Germano Maifreda, *From oikonomia to political economy. Constructing economic knowledge from the Renaissance to the Scientific Revolutio*n, Farnham-Burlington VT, 2012. These words are also frequent in Book II of *Politics*, in which *aequalitas* is a fundamental keyword used to present the theory of Phaleas of Chalcedon, who advocated equality of property among all citizens of a given community. Equality also pertains to ethics (*aequalitas* is a necessary condition of friendship), logics (*aequalitas* and *inaequalitas* are keywords in the theory of contrariety), and physics (*aequalitas/inaequalitas* are synonymous with *sanitas/alteritas corporis*).

[35] These terms appear not only in treatises but also in documentary sources, as remarked by Andrea Gamberini, "Aequalitas, fidelitas, amicitia. Dibattiti sulla fiscalità nel dominio visconteo", in Gamberini, Jean-Philippe Genet, Andrea Zorzi (eds.), *The Languages of Political Society. Western Europe, 14th-17th Centuries*, Rome, 2011, 429-60.

[36] Claudia Storti Storchi, "'Aequalitas est servanda in iudiciis'. Il principio dell'uguaglianza delle parti nel processo del diritto comune classico", in *Rivista internazionale dei diritti dell'uomo*, II, 1991, 377-99.

[37] For more on the notion of *aequalitas* as the juridical expression of *aequitas*, see Paolo

This whole range of meanings was associated with *aequalitas* and *inaequalitas* across the centuries, but it is possible to identify certain general asymmetries in the semantic evolution of the two words. We have already observed that *inaequal** was used less frequently than *aequal**. We now add that, from a qualitative point of view, the two terms were more regularly associated with different semantic fields. *Inaequalitas* was more commonly used in connection with music and arithmetic, as well as in medical texts. Consequently, it carries a concrete meaning, usually being associated with the names of "things" like sounds, numbers, and figures. *Aequalitas*, instead, was more often used in theology and was likely to be associated with a similitude between "persons," not "things"; in this sense, the term describes most perfectly the relationship between the persons of the Trinity, connected to one another by a relationship unlike the "quantifiable" one corresponding to the similitude between specific creatures and beings. This kind of equality is unattainable for human beings, who cannot become the equals of God. More generally, during the Middle Ages, "equality" did not describe the relationship between human beings – and would not do so for a long time to come.

Some final remarks are necessary regarding our other keywords. As already noted, in the manuscript tradition aequitas had a mostly ethical-theological significance and appeared in reflections on justice, which also involved biblical exegesis. *Utilitas* was used with a wider range of meanings, appearing more frequently in writings on politics, where it was often coupled with the adjective *publica* ("public utility"). It also is found in theological writings, where it referred to circumcision or the crucifixion, and in astronomical-mathematical texts. Finally, *distributio* was primarily a word of rhetoric and logic; a secondary use concerned the administration of the clergy, partic-

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Prodi, *Una storia della giustizia: dal pluralismo dei fori al moderno dualismo tra coscienza e diritto*, Bologna, 2000; Mario Sbriccoli, *Ordo iuris. Storia e forme dell'esperienza giuridica*, Milan, 2003; and Diego Quaglioni, *La giustizia nel medioevo e nella prima età moderna*, Bologna, 2004. This notion is essential to understanding the idea of justice not only during the Middle Ages, but throughout the Old Regime (Giorgia Alessi, "Giustizia pubblica, private vendette: riflessioni intorno alla stagione dell'infragiustizia", in *Storica*, XXXIX, 2007, 91-118).

ularly the practice of assigning benefices, tithes, and alms. Appendix 2 gives some additional examples of the uses of our keywords in different contexts.

IV. Changes in meaning: the Early Modern Period

The first books printed with movable type (*incunabula* and *cinquecentine*) concerned traditional topics, in which *aequalitas* was mostly associated with the arts of the *quadrivium*. The word's strong ties with the medieval tradition were confirmed in 1459, when it became the title of a printed edition, the *De aequalitate* of Nicholaus of Kues (1401-1464). Kues' work, in fact, referred to Augustine's *De Trinitate* and applied the tools of arithmetic to the study of the persons of the Trinity.

Only from the sixteenth century do we find the first occasional instances of the use of the term in works published in vernacular (Italian), regarding the practical field of the distribution of the estimo, that is, the distribution of taxes, and tax collection ("egualanza"). Through the seventeenth century, the word "equality" remained rooted in its traditional meanings, which were perpetuated in publications produced by or addressed to academia: prolusions or treatises in which it was a keyword for consideration of astronomical and theological matters. In the same century, however, there arose a school of thought that used *aequalitas* in ethical-juridical discussion, suggesting that equality was a characteristic of human beings in the so-called state of nature. This use signalled the spread of a new paradigm – jusnaturalism – whose deeply innovative vision of the political order broke with the medieval political tradition. Reflecting on the state of nature, jusnaturalism aimed to discover the characteristics of human beings per se, before and independently of the ties and relationships that simultaneously made them part of a community and dependent on it. The individual imagined by such thinkers as Hugo Grotius (1583-1645), Thomas Hobbes (1588-1679), and John Locke (1632-1704) has two essential

qualities: freedom and equality. Each individual is free, inasmuch as he is not the subject of any other who can exert power or influence over him; each individual is equal to every other, inasmuch as all individuals are equally free from a higher power that can command them.

With this hypothetical state of nature, the main coordinates of medieval discourse on citizenship – the metaphor of the body and the idea of hierarchical order – are abandoned. Order is not a timeless "natural" structure and human beings do not gather spontaneously into an unequal body. In the new jusnaturalist paradigm, hierarchical ties, which for Thomas Aquinas had been intrinsic in human beings even in their uncorrupted state before the Fall, relate instead to a subsequent phase, to something to be realized.[38] However, already in the second half of the sixteenth century thinkers belonging to the "Second Scholasticism",[39] e.g. Francisco de Vitoria (1483/1486-1546), Domingo de Soto (1494-1560), and Francisco Suarez (1548-1617), had considered equality a distinctive characteristic of the state of nature preceding the Fall, a condition in which no individual had power over others.[40] On the basis of this principle, they had argued that human beings were equal according to natural law. For these sixteenth- and early-seventeenth-century authors, *aequalitas* was a condition closely connected to the juridical concept of *aequitas*.[41]

For the keyword *aequalitas*, over the centuries we find a gradual semantic shift from an attribute of divine relationships to an essential characteristic of the nature of human beings and of their "polit-

[38] Costa, *Civitas, respublica*, 574-5.
[39] Second Scholasticism was a cultural movement based in Spain and Italy that between the late fifteenth and early seventeenth century revived typical topics of medieval debate, particularly those developed by Thomas Aquinas.
[40] Eduardo Andujar and Carlos Bazán, "Aequitas, Aequalitas et Auctoritas chez les maîtres de l'École espagnole du XVI^{e} siécle", in Daniel Letocha (ed.), *Aequitas, Aequalitas, Auctoritas. Raison théorique et légitimation de l'autorité dans le XVI^{e} siècle européen*, Paris, 1992, 172-85.
[41] Grossi, *La proprietà nel sistema privatistico della Seconda Scolastica*.

ical" coexistence. In this regard, several French inquiries into the lexical uses and the discourse connected with the vernacular French *égalité* between the eighteenth and twentieth centuries show that its political and philosophical meaning emerged fairly late, not before the eighteenth century: "in the first half of the eighteenth century the morphological family of *égal* seems to concern things more than people. When it does appear in connection with people, the sphere in which it is used is that of law. The words *égal/égaux* and *égalité* are used, in the meaning that is of interest to us – that is, a relationship of similarity between persons – only in two specific fields: religion and antiquity".[42] It is also significant that *égal* tends to be devoid of political meaning in eighteenth-century dictionaries and lexicons, as if their compilers chose to avoid a difficult subject. The entries concerning equality offer vague and a-temporal definitions that usually focus on the use of the term in relation to things (conformity, parity, relationship between equal things), not to people.[43] An important exception is the famous *Encyclopédie*. The entry *égalité* by Louis de Jaucourt (1755) includes a sub-entry on *égalité naturelle*, which opens thus: "That which exists among all men due to their natural constitution. This equality is the origin and the foundation of freedom."[44] So it comes as no surprise that this sub-entry follows all those that relate to the word's "main" meanings, i.e. logical, astronomical, geometric, and arithmetic.

Turning to the word *inégalité*, even the entry in the *Encyclopédie* has no philosophical-political meaning. The only meaning found in the entry by Jean-Baptiste le Rond d'Alembert (1765) is the astronomical one: "Word much used in Astronomy, to describe many ir-

[42] Marie-France Piguet, "La famille d'égal au 18e siècle. L'exemple de Boulainviliiers et celui de la pensée économique", in *In/égalité/s. Usages lexicaux et variations discursives (18e-20e siècles*, Paris, 1999, 28-9, our translation.
[43] Gérald Antoine, *Liberté Égalité Fraternité ou les fluctuations d'une devise*, Paris, 1981.
[44] *Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers*, etc., eds. Denis Diderot and Jean le Rond d'Alembert, Paris, 1751-1772, V, 414, our translation from University of Chicago: *ARTFL Encyclopédie Project*, Spring 2013 Edition, Robert Morrissey (ed.), http://encyclopedie.uchicago.edu/.

regularities that are observed in the movement of the planets."[45] However, ten years earlier Jean-Jacques Rousseau (1712-1778) had made this concept the cornerstone of a book, *Le discours sur l'origine et les fondements de l'inégalité parmi les hommes*, which would orient the ethical and political debate on inequality up to the nineteenth century, leading to a significant increase in the number of works dedicated to it: "It was Jean-Jacques Rousseau […] who turned the philosophical reflection on itself, incorporating into it the subjective dimension of a claim and inverting the terms of the problem, replacing the traditional reflection on the conditions necessary to realize equality with a more fundamental question about the concrete causes of inequality."[46] It was around the middle of the eighteenth century, then, that a philosophical-political discourse in which the couple *equality/inequality* took on new and complex meanings began to develop. Alongside a descriptive use of these terms, a prescriptive use appeared in political texts, which began to make subtle distinctions between a natural equality to be claimed and a chimerical one, and between an acceptable inequality and one to be overcome: "Since then, a red thread has connected the words '(in)equality', scholarship and historical events: from the revolutionary period to the contemporary epoch, from Babeuf proclaiming 'real equality or death' to the recent movements promoting gender equality within institutions, or the recognition of equal social rights for migrants, for the jobless, for the clandestine sans-papiers, passing through [a variety of] utopian projects…"[47] Our research confirms this tendency: the keywords, especially in the vernacular forms (*uguaglianza/égalité/equality*; *disuguaglianza/inégalité/inequality*), became more recurrent in titles during the eighteenth century (see Table 3), while the Latin forms waned, surviving only in academia and used mostly in works on philosophy and theology. This is strikingly clear in the case of *ae-*

[45] Ibid., VIII, 695, our translation.
[46] Pierre Fiala, "Les termes de l'égalité et de l'inégalité: flux et reflux", in *In/égalité/s.*, 8, our translation.
[47] Ibid., 9, our translation.

qualitas, which from the middle of the eighteenth century, and especially after the French Revolution, appeared in a great abundance of titles in vernacular and was used mostly in pragmatic-political contexts or in the philosophical-political discourse elaborating the new ideas and debates of the eighteenth century. Even in the rare Latin occurrences the term tended to be associated with the new meanings (particularly with the theory of the state of nature, notably at the beginning of the century), while the link with the arts of the *quadrivium* was broken for good. By contrast, for *inaequalitas* that link survived up to the nineteenth century. In fact, analysis of the word's occurrence in printed editions reveals a clear preference for the use of the Latin form, associated with science (especially astronomy) and medicine, with continuity in frequency from the sixteenth century until around 1760. The vernacular forms of the term, instead, were used mostly in philosophical-political works printed after the middle of the century and usually in connection with the debates generated by Rousseau (see Appendix 2 for additional examples). As mentioned earlier, this peculiarity in the use of inequality was reflected in the *Encyclopédie*, which as late as 1765 testified to the long-standing "astronomical" use of the term only. There is a similar finding for another of our keywords, distribution, which throughout the period maintained the traditional tie to the practice of distributing alms, tithes, and ecclesiastical benefices. Then, during the eighteenth century, a new use of the word arose, especially in vernacular, connecting distribution to a state of economic inequality. The most interesting occurrence is probably the work of the physiocrat Anne-Robert-Jacques Turgot (1727-1781), *Réflexions sur la formation et la distribution des richesses* (1766).

V. Were changes in meaning connected to changes in economic structure?

So far we have provided a long-term reconstruction of the changes in the frequency with which a set of keywords related to

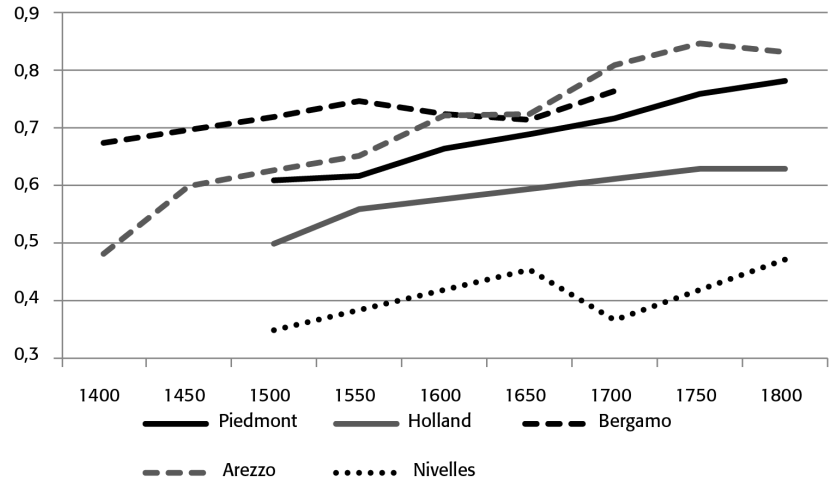
the idea of inequality were used and have connected these trends to changes in the meaning of the keywords. We now examine whether these processes reflected, or were reflected by, long-term changes in economic structures. As noted, inequality levels in preindustrial times (especially from the late Middle Ages or the sixteenth century onward) are attracting an increasing amount of research. Until recently, the only area of the world that had been studied systematically for a long period of time was the province of Holland in the Dutch Republic, but this is now changing.

For Holland, Van Zanden suggested that from the sixteenth through the eighteenth century there was a slow but continuous growth in economic inequality. This was presumably associated with a long period of economic growth: a preindustrial phase of increasing inequality followed directly by a phase of further increase triggered by the onset of industrialization in the late eighteenth/early nineteenth century. Economic inequality would not begin to decline before the twentieth century or the late nineteenth century at the earliest. For Holland, the traditional picture of the inverted-U curve, the so-called "Kuznets curve", supposedly associated only with the era of industrial revolution, should be replaced by a "super-Kuznets curve", whose rising left side spans at least four centuries.[48] More recent studies support the view that there was also a long-term rise in inequality in other parts of Europe, both in the North (Low Countries) and in the South, where Italy is the area that has been investigated most thoroughly.[49] The first completed case studies, especially those covering the larger areas (like Piedmont or Tuscany) and longer time periods, convey a picture of general levels of economic inequality – as measured, for example, by Gini indexes of wealth distribution – rising almost continuously from the Middle Ages to the nineteenth century. In Figure 4, trends in economic inequality in

[48] Van Zanden, *Tracing the Beginning*; Soltow and Van Zanden, *Income and Wealth*.
[49] Alfani, *Wealth Inequalities*; Alfani, *Economic Inequality in Northwestern Italy*; Alfani and Ammannati, *Economic Inequality and Poverty*; Alfani and Di Tullio, *Dinamiche di lungo periodo della disuguaglianza*; Alfani and Barbot, *Ricchezza, valore*.

Holland and Piedmont, as well as in selected communities of north-eastern and central Italy (Bergamo and Arezzo) and the Low Countries (Nivelles) are compared. (Changes in sources between the areas considered make direct comparisons of Gini absolute values problematic, so attention should focus on the trends rather than the levels of inequality).

Figure 4
Long-term trends in economic inequality across Europe: Italy and Low Countries, 1450-1800 (Gini indexes)



Sources: Based on data published in Alfani, *Economic Inequality in Northwestern Italy*, for Piedmont; Alfani and Ammannati, *Economic Inequality and Poverty*, for Arezzo; Alfani and Di Tullio, *Dinamiche di lungo periodo della disuguaglianza*, for Bergamo; Van Zanden, *Tracing the Beginning*, for Holland; Ryckbosch, *Vroegmoderne economische*, for Nivelles.

According to Van Zanden,[50] a long-term increase in economic inequality could be the consequence of preindustrial economic growth. This view is called into question by the fact that a secular increase in inequality is also found in areas affected by economic decline, such as the Italian city of Ivrea and its surroundings, whose economy stagnated from the sixteenth century onward. As sug-

[50] Van Zanden, *Tracing the Beginning*.

gested by Alfani,[51] demographic factors could be responsible for a long-term increase in economic inequality even in the absence of economic growth. What is more, current research suggests that the trend toward rising economic inequality from the late Middle Ages to the nineteenth century was pan-European. While this finding still needs to be confirmed, there are certainly open questions about the history of economic inequality that can be answered only by considering the general, supra-local and even supra-national picture. Let us also note that increases in economic inequality are, in the long run, consistent with the idea that more advanced economies can "extract" more inequality.[52]

It is not our aim here to offer any new explanations for the factors that fuelled rising economic inequality across preindustrial Europe. However, our reconstruction of the change in the meaning of equality and inequality raises new questions of general interest for that debate. We have shown that the words equality/inequality did not have an economic meaning, or even a "political" one of equality of rights between human beings, until fairly recent times. This began to change in the late sixteenth/early seventeenth century, with the Second Scholasticism and especially with the spread of jusnaturalism. Was the change in meaning of our keywords connected with a change in economic structures? On this issue it is difficult, if not impossible, to reach any final conclusion. Yet, we are convinced that there was indeed a connection. From the late Middle Ages, European societies had grown steadily more unequal, especially in terms of wealth distribution. This is evident in the available time series of quantitative inequality indicators, but the process is also described – albeit a bit indirectly – by scholars who have studied changes in economic thought and economic culture.

Throughout the Old Regime, European societies were socially,

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[51] Alfani, *Wealth Inequalities*; Alfani, *The Effects of Plague*.

[52] Branko Milanovic, Peter H. Lindert, and Jeffrey G. Williamson, "Pre-industrial Inequality", in *The Economic Journal*, CXXI, 2011, 255-72; Alfani, *Economic inequality in Northwestern Italy*; Alfani and Rickbosch, "Growing apart in early modern Europe?".

legally, and economically highly unequal, but they were not arbitrary or dominated by abuse, nor were they characterized by the systematic exclusion of the poor from access to resources (no such society would be able to last long). Economic and social differences were accepted as "natural" and were reinforced by Christian (Catholic) doctrine;[53] in our own reconstruction, this is readily apparent, for example, in the tradition related to Augustine's *De civitate Dei*. While egalitarian ideologies rooted in Christianity did exist in medieval Europe, recalling the egalitarianism of early Christian communities never became the basis of a program of social reform or of rebellion.

This crucial point requires some further discussion. In a sense, medieval social theory protected structural inequality through the idea of the existence of different social "orders", and any reference to "equality" had a moral and religious meaning, not a social-economic one.[54] Although it was plainly recognized that, in reality, the rich (*dives*) and the poor (*pauperes*) experienced deeply different social conditions, this was never considered socially or economically unjust. For example, in the sermons of the English bishop Thomas Brinton, who preached in the same county and in the same years of the peasants' revolt led by John Ball (1381), the contradiction between the "equality" of humans beings (all children of God) and the "inequality" between rich and poor was solved in a theoretical context that justified a disparity in condition as the fruit of godly Providence, intended to foster cooperation: the rich will provide alms for the poor, who in turn will pray for the rich.[55] As Anthony Black has rightly observed, other ideals were central to the dominant medieval ideology: common good, peace, law, rights, freedom, unity and harmony. These were the main "political keywords", the "slogans

[53] La Roncière, *Pauvres et pauvreté*; Levi, *Aequitas vs Fairness*; Alfani, *Proprietà, ricchezza*.
[54] Dominique Iogna-Prat, "Ordre(s)", in Jacques Le Goff, Jean-Claude Schmitt (dir.), *Dictionnaire raisonnée de l'Occident médiéval*, Paris, 1999, 853-6.
[55] Richard Barrie Dobson, *The Peasants' Revolt of 1381*, London-New-York, 1970; Mary Aquinas Devlin, *The Sermons of Thomas Brinton, Bishop of Rochester, 1373-1389*, I, London, 1954.

recorded in the publications on revolts in European regions".[56] Recent research on Flemish rebellions shows that it was the ideology of the common good that guided the revolt against the patricians: "This common good was expressed in concrete demands: fair wages, a fair use of taxes, no new taxation without citizen consultation, no criminal disturbances in the town and accountability of the aldermen. Equality among all citizens was never an issue. The Flemish urban rebels never questioned the fundamentally unequal feudal order".[57] With the exception of radical groups, "medieval rebels cannot really be deemed 'revolutionary' in the sense of having a genuine programme to overthrow the existing political order and system of property relations."[58] Samuel K. Cohn's work on the spread of "political" rebellions across medieval Europe confirms that demands made in the name of "freedom" did not explicitly include greater "equality". At most, this was somehow implicit in a new notion of freedom.[59]

Yet, the huge differences in individual wealth and income had to be managed somehow, especially when new social groups started accumulating enormous patrimonies, forming an economic elite whose entitlement to own and manage a large share of the total assets and resources was increasingly questioned by theologians and others. By the fifteenth and sixteenth centuries, the medieval ideal of wealth as something that could have a "good" use contrasted with a reality of merchants and other economic actors animated by "greed". Whereupon greed itself was proposed as a virtue, and for

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[56] Antony Black, *Guilds and Civil Society in European Political Thought from the Twelfth century to the Present*, London, 1984, 69-70.

[57] Jan Dumolyn, Jelle Haemers, "'A bad chicken was brooding': subversive speech in late medieval Flanders", in *Past and Present*, CCXIV, 2012, 74.

[58] Dumolyn, Haemers, "Patterns of urban rebellion in medieval Flanders", in *Journal of Medieval History*, XXXI, 2015, 387.

[59] "After the [1348-50] plague, not only did the presence of the word liberty increase vertiginously to describe and explain popular revolts; its meaning began to shift as well, from the privileges of a few or of a special community toward an implicit sense of equality". Samuel Kline Cohn, *Lust for Liberty: the Politics of Social Revolt in Medieval Europe, 1200-1425*, Cambridge, MA, 2006, 239.

some authors the greedy became those who saved to the benefit of the entire community, as Giacomo Todeschini has shown.[60]

Scholars like Todeschini offer many arguments that can be used to trace changes in economic culture back to changes in economic structures, particularly in the distribution of wealth and income. From our methodological perspective, cultural changes are reflected in the frequency with which specific keywords are used. This process should not be considered mono-directional, as cultural change also *allowed* for further structural changes, for example by providing a different and less negative concept of greed, and attributing to the super-rich an "acceptable" role to play within the community. Our own research, however, is innovative in focusing on the very long term, and in providing proof of a continuous change in the perception of equality/inequality, which became words increasingly detached from theology and increasingly connected to the material conditions of human beings.

Our work on titles suggests that the crucial turning point was the eighteenth century, when the occurrences of words like "equity" and "inequality" mounted in the decades immediately preceding the French Revolution, and the Revolution itself made equality or *égalité* one of its signature ideals. The Revolution's impact on the spread of some of our keywords in the following years is clear (Figures 1-2). We could ponder whether the Revolution itself, like the cultural and theoretical change that had cast increasing attention on the condition of actual disparity between human beings, was somehow connected to a long-term process of rising inequality, whose levels might have exceeded a threshold beyond which the society became unstable (also consistent with the economic theory of revolts).[61] However, only a few of the scholars who have studied the

[60] Todeschini, *I Mercanti*.

[61] According to the economic theory of revolts (Alberto Alesina and Roberto Perotti, "Income Distribution, Political Instability, and Investment", in *European Economic Review*, XL, 1996, 1203-28; Robert McCulloch, "The Taste for Revolt", in *Economic Letters*, LXXIX, 2003, 7-13), there is a positive correlation between inequality and the tendency to rebel. A condition of extreme inequality would not be compatible with a stable society.

French Revolution have focused on its economic aspects.[62] More commonly, economic factors have been subordinated to analysis of the social-political roots of the revolutionary process. In fact, students of the French Revolution have long been divided by a heated debate between a social interpretation (applying the Marxist category of "class struggle")[63] and a revisionist interpretation that argued for a political explanation of the origins of the Revolution, rejecting the simplistic view of the Old Regime as a society torn by the struggle between a capitalistic bourgeoisie and the feudal nobility.[64] Recent research has amended the revisionist views, analyzing the "languages" contemporary with the Revolution and looking for possible connections between social and political factors.[65] Our own research suggests that there is room for a fuller consideration of economic factors, and notably of the change in general levels of economic inequality, in any attempt to forge an overall explanation of this fundamental event in European history.

VI. Conclusions

Our reconstruction of the change in the use and the meaning of

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[62] William Doyle, *The Origins of the French Revolution*, Oxford, 1980; Florin Aftalion, *The French Revolution: an Economic Interpretation*, Cambridge, 1990.

[63] Georges Lefebvre, *La révolution française*, Paris, 1951.

[64] Alfred Cobban, *The Social Interpretation of the French Revolution*, Cambridge, 1964; George V. Taylor, "Noncapitalist Wealth and the Origins of the French Revolution", in *American Historical Review*, LXXII, 1967, 469-96; François Furet, *Penser la Révolution Française*, Paris, 1978.

[65] The languages of luxury (Sarah Maza, "Luxury, Morality, and Social Change: why there was no Middle Class Consciousness in Prerevolutionary France", in *The Journal of Modern History*, LXIX, 1997, 199-229), of patriotism (Jay M. Smith, "Social Categories, the Language of Patriotism, and the Origins of the French Revolution: the Debate over noblesse commerçante", in *The Journal of Modern History*, LXXII, 2000, 339-74), of political economy (John Shovlin, *The Political Economy of Virtue: Luxury, Patriotism, and the Origins of the French Revolution*, Ithaca, NY, 2006), of public debt (Michael Sonenscher, *Before the Deluge: Public Debt, Inequality, and the Intellectual Origins of the French Revolution*, Princeton, 2007), and of sociability (Daniel Gordon, *Citizens without Sovereignity. Equality and Sociability in French Thought, 1670-1789*, Princeton, 1994) have all been explored.

a set of keywords bearing on the notion of equality/inequality demonstrates that during the Middle Ages and for most of the early modern period economic inequality went largely unperceived or, more precisely, did not give rise per se to any demand for social change. From Augustine to Thomas Aquinas and the late medieval theologians and philosophers, an ordered society was thought to be intrinsically unequal.

The crucial point here is that in medieval European societies an uneven distribution of wealth, indeed even extreme disparity, was not automatically considered unjust, as long as actual access to essential resources was guaranteed to all. Only from the seventeenth century, and more distinctly from the eighteenth century, did "political" equality enter the debate: first in reflections about the state of nature, and later in a claim of equality of rights, a claim that culminated in the French Revolution enshrining *égalité* as one of the chief aims of political action and establishing it as an essential keyword of Western culture.

During the Middle Ages and the early modern period, the slow shift in meaning of equality/inequality proceeded in parallel with a continuous increase in actual economic inequality. Recent research suggests that this was probably a pan-European process, one which, we have argued, interacted in complex ways with cultural change. In other words, as societies grew more unequal, inequality became first a matter of interest and then a matter of concern. From the late Middle Ages, concentration of wealth led to a more positive consideration of the sin of "greed". Later, further increases in inequality were probably reflected in the new way in which jusnaturalists began to compare a theoretical state of nature with the actual situation of the time, a change in perception of unequal conditions that from the mid-eighteenth century gave rise to entirely new political claims. By 1830, when our inquiry ends, the meaning of the word "equality" had changed almost entirely compared to its medieval meanings relating to theology, astronomy, music, and medicine. For "inequality", the process of change was slower and delayed. Indeed, even in the early decades of the nineteenth century the economic meaning of inequality,

today probably the dominant one (a cultural condition that the current economic crisis seems to be reinforcing), was still fairly marginal.

Some reconstructions of very long-term changes in levels of economic inequality have suggested that those levels continued to increase from the early modern period to the nineteenth century. Chronologically, the moment when inequality finally acquired an economic meaning probably coincided with European industrialization, the rising phase of the Kuznets curve. This period still requires careful research, but we nevertheless conclude by venturing a hypothesis: it was only when actual levels of economic inequality reached a multi-century peak that a highly unequal distribution of access to material resources began to be considered incompatible with truly equal political rights, and that the word "inequality" finally acquired a similar meaning to the one it now has.

Appendix 1 - Databases used

This Appendix provides additional information about the databases used in this article (see also Table 1).

Databases of Manuscripts

1. Manus Online (MOL)

Comprises the description and digitization of manuscripts preserved by 273 Italian public, ecclesiastic, and private libraries, mostly in Lombardy. The database, initiated in the early 1980s by the Istituto Centrale per il Catalogo Unico (Rome), aims to identify and catalogue manuscripts in Latin produced from the Middle Ages to the contemporary period, including collections of letters. Recently, MOL acquired the data produced by Codex, a database focused on Tuscan libraries. MOL is a national (Italian) project that captures information from a number of regional OPACs and single catalogues which consequently are not listed here – with the exception of NBM (see below).

http://manus.iccu.sbn.it/

2. Nuova Biblioteca Manoscritta (NBM)

An independent project that intends to catalogue the patrimony of manuscripts of Veneto, initiated in 2003 by the Veneto Region together with the Department of Humanities at Università Ca' Foscari (Venice). NBM includes information about many libraries from Veneto (only four libraries from Veneto participate in MOL). The period covered is, again, from the Middle Ages to the twentieth century.

http://www.nuovabibliotecamanoscritta.it/

3. In Principio. Incipit Index of Latin Texts

Comprises the incipit of manuscripts preserved at Institut de Recherche et d'Histoire des Textes – Section Latine (Paris), Hill Museum & Manuscript Library (Collegeville, Minnesota, U.S.A.), Bibliothèque Nationale de France – Département des Manuscrits (Paris). Chronologically, the database comprises Latin works surviving in manuscript form from the origin of Latin literature until ca. 1600.

http://apps.brepolis.net/BrepolisPortal/default.aspx/

4. The Digital Scriptorium (DS)

Includes illuminated manuscripts dated or datable from the Middle Ages and the Renaissance. The project was started in 1996 by the Bancroft Library at University of California (Berkeley) and by the Rare Book and Manuscript Library of Columbia University (New York City). The aim is to create a large collective catalogue of medieval and early modern books preserved by the founding libraries, as well as by other participating U.S. libraries, including Union Theological Seminary (New York City) and De Bellis Collection (San Francisco).

http://bancroft.berkeley.edu/digitalscriptorium/

5. Manuscripta Mediaevalia

Comprises information on manuscripts and fragments of manuscripts preserved by German libraries. The database was started by the State Library Berlin, German Documentation Centre for the History of Arts (Marburg), and State Library Munich.

http://www.manuscripta-mediaevalia.de/

6. British Library Catalogue, Archives and Manuscripts

The new "Search our Catalogue Archives and Manuscript" service of British Library (London, U.K.). This online catalogue incorporates information from collections catalogued since 2009, as well as from the pre-existing archive and manuscript catalogues including, in particular, the Western Manuscripts collection.

http://searcharchives.bl.uk/

7. Quodlibase

Includes the theological quodlibet (1230-1350), i.e. the extraordinary sessions of questiones disputatae ("disputed questions") organized twice a year by the University of Paris, during Advent and Lent. The quodlibet allowed a larger public to question the masters, who agreed to participate in the event, on any topic. Consequently, this documentation is very helpful in capturing the vitality of medieval intellectual debates. Quodlibase comprises the repertories by Palémon Glorieux (dated 1925 and 1935), amended and updated on the basis of earlier research. The 124 manuscripts included are not dated, but all of them relate to quodlibet and involve scholars active between the mid-thirteenth and mid-fourteenth centuries.

http://quodlibase.ehess.fr/

Databases of Printed Editions

1. Incunabula Short Title Catalogue (ISTC)

Comprises printed works published during the fifteenth century ("incunabula"). The database has been developed at the British Library since 1980, with the support of Bayerische Staatsbibliothek (Munich), Biblioteca Nazionale Centrale (Rome), Bibliographical Society of America (New York City), Koninklijke Bibliotheek (The Hague), and Bibliothèque Royal Albert Ier (Brussels). The database records almost every book printed with movable type before 1501 (not including fully-xylographic editions).

http://www.bl.uk/catalogues/istc/index.html

2. Edit16

Records all books printed in Italy, plus works in Italian published outside Italy, from 1501 to 1600, including contemporary and later forgeries. The database is managed by the Laboratorio per la bibliografia retrospettiva of Istituto Centrale per il Catalogo Unico (Rome).

http://edit16.iccu.sbn.it/web_iccu/ihome.htm

3. SBN Libro Antico

Comprises all monographic works published from the fifteenth century to 1830 (the year that marks the transition from the 'ancient' to the 'modern' book). The SBN catalogue (OPAC SBN) allows consultation with all libraries participating in the Servizio Bibliotecario Nazionale (SBN): some 4,900 libraries, including those of national and local public institutions, university libraries, and libraries of other public and private institutions active in various scholarly fields. The catalogue contains records for all books acquired by the participating libraries since 1990 and all books listed in the pre-existing paper catalogues for the period preceding 1990.

http://www.sbn.it/opacsbn/opac/iccu/antico.jsp

Appendix 2 - Further examples of the use of the keywords equality and inequality

Although, in principle, the study of titles or incipit could misrepresent the actual content of books, the analysis that we conducted on a sub-set of manuscripts and printed editions (including the works cited in the main text and those mentioned below) confirmed the validity of our reconstruction of the different meanings of *aequalitas* and *inaequalitas*. Here we offer some additional examples taken from two databases that allowed us to carry out this in-depth control in a relatively easy way: In Principio for manuscripts and SBN Ancient Books for printed editions. All translations are ours.

Aequalitas

1. The largest number of inequality-related incipit in the In Principio database refers to Boethius' doctrine, according to which: "each inequality derives from equality". This is the *incipit* of the so called *Rithmomachy*[1] (in Latin, *Liber de pugna numerorum*), a board game, also known as the "battle of numbers" or "game of the philosophers", which was in circulation from the middle of the eleventh to the beginning of the seventeenth century. The game was played on a chessboard, on which numbered pieces were moved according to the system of proportions of Boethian arithmetic. Different types of inequality were essential for the game, whose aim was to create a certain "harmony" – based on the Boethian doctrine – on the opponent's side of the board. The earliest evidence of the game dates back to a series of manuals written in the eleventh century in the cathedral schools of the Germanic area (the first author was Asilo, a monk of Würzburg, ca. 1030). The spread of the game is linked to the teaching of Boethian arithmetic, and more generally to the disciplines of the *Quadrivium* (music, arithmetic, geometry and astronomy), the foundation of the medieval educational system, first taught in ecclesiastical schools and later in universities (Paris and Oxford were the main centers of diffusion).

2. Regarding printed editions, the first time that *aequalitas* appears in the SBN Ancient Books database is in a work by Sigismondo de Polcastro (1384-1473), printed in Venice in 1506. This is a collection of *quaestiones* on medical topics, in which aequalitas refers to the theory of health as a condition of equilibrium among the elements composing the "constitution" (*complexio*) of human bodies. Polcastro, a

[1] Menso Folkerts, "La rithmomachie et le manuscrit Avranches 235", in *Science antique, Science médiévale (autour d'Avranches 235)*, Actes du Colloque International, Mont-Saint-Michel, 4-7 septembre 1998, eds. Louis Callebat - Olivier Desbordes, Paderborn-Munich-Vienna-Zürich, 2000; Menso Folkerts, "'Rithmomachia', a Mathematical Game from the Middle Ages", in Idem (ed.), *Essays on Early Medieval Mathematics. The Latin Tradition*, Aldershot-Burlington, VT, 2003; Ann E. Moyer, *The Philosophers' Game. Rithmomachia in Medieval and Renaissance Europe*, with an Edition of Ralph Lever and William Fulke, *The Most Noble, Auncient, and Learned Playe (1563)*, Ann Arbor, MI, 2001.

native of Vicenza who was a doctor and professor of medicine in Padua, builds upon theories and arguments which are typical of the medical discourse since the Middle Ages, asking which behaviour – melancholic or moderate – comes closer to attaining a condition of "equality" among the elements of the human constitution.[2]

3. The first occurrence of aequalitas in vernacular found in the SBN Ancient Books database brings us closer to an economic meaning, but not yet to a discussion of the state of socio-economic inequality among human beings. It appears in the edict *Grida et bando sopra la nuova riforma et egualanza di tutto l'estimo del nuovo compartito* ["Proclamation and edict on the new reform and equalization[3] of all the valuations of the new property register"] printed in Padua in 1598. "Equality" here refers to the distribution of taxation in a way directly proportional to the value of the real estate owned by each taxpayer, not to equality of wealth among those taxpayers.

4. From 1790, i.e. immediately after the French Revolution, we find a boom in the use in printed editions of the word "equality", often used together with "freedom". In SBN Ancient Books, the first example is Michele Francesco Augusti, *Della libertà ed eguaglianza degli uomini nell'ordine naturale e civile* [On the freedom and equality of men in the natural and civil order], published in 1790.[4] However, in this book, written by a friar, the ideal of "total equality among men in all their rights and in their condition" is described as a "monstrous colossus" (Chapter II, IV, p. 26), a "theoretical monster as ruinous as it is abhorrent". Augusti wrote in reaction to "a surprising number of books full of lies … which flooded Europe … screaming Freedom, Equality" (*ibid.*, pp. 5, 3).

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[2] "Questio de appropinquatione ad equalitatem ponderalem qua queritur: vtrum melancolicus plus appropinquet equalitati ponderis quam temperatus de secundo modo equalitatis?"

[3] The word "egualanza", translated here as "equalization", would be literally translated as "equality".

[4] Presumed place of publication: Rome, 1790. This book is attributed to Augusti by Gaetano Melzi, *Dizionario di opere anonime e pseudonime di scrittori italiani*, Milan, 1848-1859, II, 127.

The post-1789 peak in the occurrence of the keywords equality/inequality in printed editions is the outcome of the polarization of reflection around these concepts. In fact, when they become associated with a discussion about the condition of human beings, they also become relative and connotated either positively or negatively. Moreover, these concepts/keywords are increasingly used in association with adjectives that specify which kind of equality or inequality is being discussed: "perfect", "absolute", or "real".

Inaequalitas

1. For *inaequalitas* as well, the relative majority of titles and incipit refer to Boethius' *Rithmomachy* (see above). The second most frequent occurrence relates to medicine and has to do with the notion of *inaequalitas aeris*, that is, a state of corruption of the air that can cause widespread disease. Beginning in the ninth century this expression was used as a synonym for calamity,[5] and later it would be used to refer to the presumed "cause" of the plague.

2. In the database SBN Ancient Books, the first examples of the use of *inaequalitas* in titles of printed books date to the middle of the seventeenth century and have to do with astronomy (for example: Giovanni Domenico Cassini, *Specimen obseruationum Bononiensium, quae nouissime in D. Petronij templo ad astronomiae nouae constitutionem haberi caepere… Motusque solis realis inaequalitas*, 1656; Gabriel Mouton, *Brevis dissertatio de dierum naturalium inæqualitate*, 1670). Almost all of the earlier instances in which *inaequalitas* appears in titles of printed editions concern astronomy (see, for example, Ruggiero Giuseppe Boscovich, *De inaequalitatibus quas Saturnus et Jupiter sibi mutuo videntur inducere*, 1756). As noted in the main text, even the French *Encyclopédie* contains only an astronomy-related entry for this word.

3. The word "inequality" in relation to human beings, with a

[5] "De hoc si evenerit fames, clades, pestilentia, inaequalitas aeris vel alia qualiscumque tribulatio, ut non expectetur edictum nostrum, sed statim deprecetur dei misericordia"). *Capitulare missorum in Theodonis villa* (805), in MGH, *Capitularia Regum Francorum*, I, 44.

similar meaning to the current one, began to spread only after the publication in 1754 of Rousseau's treaty, *Discours sur l'origine & les fondements de l'inegalitè parmi les hommes* (see discussion in the main text). In SBN Ancient Books we find many examples of books inspired by Roussau, like Francescantonio Grimaldi's 1779 *Riflessioni sopra l'ineguaglianza tra gli uomini* ["Reflections on the Inequality among Men"]. Rousseau's reflections on the condition of moral inequality among human beings are followed by the social-economic investigation of Condillac, *Le Commerce et le Gouvernement considérés relativement l'un à l'autre* [Commerce and Government Considered in their Mutual Relationship] (1776), for whom a condition of perfect equality (*égalité parfaite*) would kill off talent: "When everything is ordered, all occupations are useful. True, they distribute riches unequally: but this is done according to justice".

4. After the French Revolution, these ideas were further developed in a philosophical perspective by Jacques Necker (*Réflexions philosophiques sur l'égalité*, 1793) according to whom "'Inequalities in a condition of harmony, here is the word of the universe". In addition, broad-ranging social and political analyses began to appear, like that developed by Condorcet in his *Esquisse d'un tableau historique des progrès de l'esprit humain* ["Sketch for a Historical Picture of the Progress of the Human Spirit"] (1794-95). In this work, the wishful description of a process of social progress points to the need to fight – but not to entirely eliminate – inequalities of "wealth, status, education" (*richesses, état, education*) in order to attain a real equality.[6] However, this is far cry from the ideal of "perfect" equality that would be asserted, shortly after the publication of Condorcet's work, by the radical thinker Sylvain Maréchal in the *Manifeste des Egaux* ["Manifesto of the Equals", 1796).

[6] "Il faudra donc montrer que ces trois espèces d'inégalité réelle doivent diminuer continuellement, sans pourtant s'anéantir ; car elles ont des causes naturelles et nécessaires, qu'il serait absurde et dangereux de vouloir détruire ; et l'on ne pourrait même tenter d'en faire disparaître entièrement les effets, sans ouvrir des sources d'inégalité plus fécondes, sans porter aux droits des hommes des atteintes plus directes et plus funestes".

As a matter of fact, in the second half of the eighteenth century all 22 occurrences in vernacular of *inaequalitas* found in the database SBN Ancient Books relate to inequality among human beings. This is a radically different situation from what had gone before, when the word "inequality" was used almost exclusively in treatises on astronomy. An in-depth analysis of full texts confirms that the publication of Rousseau's 1754 treaty was really a threshold event that set off a progressive change in the meaning of the word "inequality" (see detailed discussion in the main text).