Vico and the conspiracy of the sciences

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Abstract

On 18 October 1708, Giambattista Vico (1668–1744) gave his seventh inaugural oration, *De nostri temporis studiorum ratione (De ratione)* at the University of Naples. There, he used the term *conspirare* to propose collaboration among the sciences. An initial study of the historical context, specifically the scholar's involvement with the Conspiracy of the Prince of Macchia (1701) and the debates on university reform, made it possible to formulate a hypothesis regarding Vico's intent and word choice that enriches the understanding of the preserved text. On a personal level, the Neapolitan professor was looking for a modicum of protection from the new authorities, especially the recently named viceroy in audience that day, Cardinal Vicenzo Grimani. On the political plane, along with a surreptitious argument against tyranny, Vico sought to dissuade the new governors from ascribing to the divisive approach embodied in the university policy of the Cartesian and Bourbonic reformers. Direct analysis of the text of *De ratione* enabled theoretical scrutiny of the frame from which Vico called for more than

mere encyclopaedic knowledge. He was setting forth a vision for a conspiratorial project among the sciences based on a broad understanding of rhetoric. His original proposal for inter- and transdisciplinarity can inform current debates on the same topic.

Keywords

Conspiracy of the Prince of Macchia, *De ratione*, interdisciplinarity, rhetoric, Giambattista Vico

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The seed of 1708

On 18 October 1708, Giambattista Vico (1668–1744), Chair of Rhetoric at the University of Naples, approached the dais to deliver the most important speech of his life. He had given the *orazione inaugurale*, the inaugural address that opened the academic year nearly every year during the Feast of St. Luke, from the time he was awarded the position in 1699. Though one of the lowest-paid faculty members, this honour fell to Vico as docent of the subject that gave meaning to all the others. The room was brimming with people and chatter as young students and powerful governors talked amongst themselves. Clergymen and academics looked on, among whom he counted many friends and more than a few rivals.[1]

This year was unusual. The inaugural oration that day marked the official re-opening of the university following the Austrian conquest of the Kingdom of Naples. It was delivered in Latin and published shortly after under the title *De nostri temporis studiorum ratione* [On the Order of the Scholarly Disciplines of Our Times] (Vico, 2012[1709]).[2] Vico recalled decades later how an idea had been stirring in his soul since his first *orazione*. He sensed its innovative significance even then, but the moment 'to unite in one principle all knowledge human and divine' had not presented itself (Vico, 1975[1731]: 146). Now, encouraged by the added prospect of publication, he seized the opportunity to activate his vision in hope of contributing 'some new and profitable discovery to the world of letters' (ibid.).

About half-way through his lecture, Vico employed the crucial analogy that has inspired the title of this work:

> In the past, all arts and disciplines were interconnected and rested in the lap of philosophy; subsequently, they were sundered apart. Those responsible for this separation can be compared to a tyrannical ruler who, having seized mastery of a great, populous, and opulent city, should, in order to secure his own safety, destroy the city and scatter its inhabitants into a number of widely strewn villages. As a consequence, it is impossible for the townsmen to feel inspired, through the bold pride awakened by the sight of the splendor and wealth of their city and by the awareness of their number, to band together and conspire (*conspirare*) against him, lending one another help in their fight against the common oppressor. (Vico, 1990a[1709]: 47, X; see also: Vico, 2012[1709]: 28, X)

Two contextual elements should be noted here, to assist our understanding of the moment. First, the Venetian Cardinal Vicenzo Grimani (1655–1710), newly appointed viceroy and a former conspirator against the Bourbons, is known to have presided over the inaugural ceremony. Second, the Austrian rulers had abolished an important reform of the University of Naples, which had been approved by the previous government in 1703. From these details several questions arise: What did Vico intend by this direct use of the word *conspirare* in Grimani's presence?[3] Why does he construe it as a beneficial action? Who is he referring to when he asserts that 'those responsible for this separation can be compared to a tyrannical ruler'? And finally, why does Vico introduce such a delicate analogy in this politically sensitive environment?

In seeking answers for this first set of questions, the oration should be approached in connection with Vico's first major work, *Coniuratio principum Neapolitanorum* [The Conspiracy of the Neapolitan Princes, also known as the Conspiracy of Macchia] (Vico, 2013[c. 1704]), written a few years earlier, and the intense debates concerning university reform in Naples.

In Vico's analogy, the sciences themselves ('all arts and disciplines') are the subjects being 'sundered apart' and 'scattered'. He casts them as 'townsmen' *(cives)* of the once 'great, populous, and opulent city', whose imposed separation has deprived them of the ability to 'band together and conspire against the common oppressor.' Seen in this way, the project of reconstructing the city of knowledge at the heart of Vico's proposal, in what was possibly his most famous oration, can subsequently be understood and interpreted as *the conspiracy of the sciences*.

A second set of questions arises from this reading of the preserved text, which is addressed in the corresponding section of the present work: How does Vico develop this

collaborative *conspiracy* of the sciences? Is this more than a pluridisciplinary proposal? Does rhetoric have a unifying role, as philosophy once did?

A final question frames the last section of the present work: Why is this study of *De ratione* important in the 21st century? This is discussed in light of the ever-louder demands for an inter- and transdisciplinary approaches to the major challenges of our time, as reflected in Anthropocene studies, among others (Frodeman, Klein, and Pacheco, 2017; Toivanen *et al.*, 2017). These disciplinary concepts, so important to our work, can be understood in the following way:

> [Interdisciplinary] goes further than simply juxtaposing different disciplinary viewpoints [as pluridisciplinarity does, it] involves a collaborative and integrative approach by disciplines to a common object, in the joint production of knowledge (…) it can be a matter of transferring or borrowing concepts or methods from another scientific field, of hybridization or crossing mechanisms between disciplines, or even of creating new fields of research by combining two or more disciplines (…) [T]rans-disciplinarity is a process of knowing that transcends disciplinary boundaries, and entails a major reconfiguring of disciplinary divisions within a systemic, global and integrated perspective. [It also] can be thought of as a method of research that brings political, social and economic actors, as well as ordinary citizens, into the research process itself, in a 'problem-solving' perspective. (Darbellay, 2015: 165-66; see also: Nicolescu, 1996: 25-9)

Some authors from Interdisciplinary Studies consider that historical research of previous attempts to harmonize the sciences could assist this task (Trompf, 2011: 113) and the importance of Vico in this endeavour is acknowledge:

> Giambattista Vico claimed that the ascendancy of science and mathematics had led to the neglect of a broad education in favour of specialist knowledge (...) Vico's advocacy of interdisciplinary study (...) forms part of his critique of the new knowledge hierarchies that asserted the superiority of the sciences over the humanities disciplines. (Moran, 2010: 6–7; see also: Trompf, 2011: 119; Repko, Szostak, and Buchberger, 2019: 33-4)

In his 1708 speech, Vico pioneered the distinction between the natural and human sciences, overturned the assumed superiority of the former and, at once, set foundations for collaboration between them. This unresolved issue leads us to two final questions: What can the Vichian project offer us today in the push for collaboration among the sciences? How might it enable us to reasonably endure this century?

If, as we now know, the seeds of a date palm can germinate after 2,000 years (Sallon *et al.*, 2020), it might also be possible for a defeated theory to remain dormant in the soil of centuries before re-emerging in the field of ideas (Benjamin, 2006[1940]: 395, XV). For *De ratione*, that moment has arrived.

Conspirare in context

The text of *De ratione* was originally a lecture – an event in its own right – intended for a specific audience and specific purpose. Some of this might still be discernible today, if only hypothetically, to enrich our understanding of what was said. Along the lines of what Quentin

Skinner argued, we cannot recreate what was in the mind of an author who died almost 300 years ago. The best we can do through this type of study is approach an understanding of what he sought to accomplish with his speech and establish a well-grounded hypothesis (Skinner, 2002a: chapters 4, 5 and 6; Skinner and Bocardo, 2007: 50–2). To construct such a hypothesis, Vico must first be situated in his historical moment, as the base from which to explore the first set of questions posed above.

What did Vico mean by *conspirare* when he addressed his audience that day?

In the summer of 1707, during the War of Spanish Succession, the troops of Archduke Charles of Austria (1685–1740) took the Kingdom of Naples from those loyal to the Bourbon king, Philip V of Spain (1683–1746). Times were difficult in the capital, the third largest city in Europe after Paris and London (Stone, 1997: 132–55). A year later, instability was still very palpable in the alleys, *piazze*, churches and great halls of Naples. It would not be out of place to assume that this pervasive uncertainty extended to the university environment as well.

Before Vico approached the lectern in 1708, people knew that the address would be dedicated to Charles III of Spain, now king of Naples, in public and solemn session. Grimani presided over the event, accompanied by other city officials. In this decisive moment for his career, Vico was in the right place at the right time, albeit somewhat precariously. His recent and direct involvement with Bourbon political powers could stigmatise him, or far worse, in the new political environment.

Seven years earlier, in September 1701, a handful of nobles loyal to the Austrian Habsburgs had led a failed conspiracy against the Spanish viceroy, Luis Francisco de la Cerda, Duke of Medinaceli. The following year, Vico was commissioned to compose a panegyric for Philip V on the occasion of his first visit to Naples (Vico, 2016a[1702]: 71–86). He was also asked to write a report on the anti-Bourbon uprising, which proved a much more delicate undertaking.

Gaetano Gambacorta, the Prince of Macchia, lent his name to a conspiracy that Vico had interpreted as a collective enterprise (Naddeo, 2011: 26–8). He wrote as a witness to the events and scoured the city to interview people from every station in life (Pinton, 2013: 146–9, 161). Assuming that the authorities wanted the rebel leaders portrayed in the traditional way, they appear in his report as ambitious, cunning, and conspicuously ungrateful to the viceroy they had planned to assassinate. As to their motive, Vico explained, 'they say it was for profound avidity that the conspirators shamefully sold the peace of the fatherland to the Germans' (Vico, 2013[c. 1704]: 39 [11.5]). The professor also asserted that Giuseppe Capece, one of the main schemers, had apparently been born to infamy (*facinus*) (ibid.: 38 [11.5]). Then about another ringleader, he wrote 'Grimani was the instigator of the conspiracy (*Coniurationis fax Grimanus*). A Venetian noble, energetic, with a wealth of power, task oriented, Grimani became dear to the Emperor for a regular exchange of favors' (ibid.: 52–3 [13.3]).

Vico also included in his report how Grimani had handled every detail of the plot and preparations to transfer the kingdom to the House of Austria (Vico, 2013[c. 1704]: 53 [13.3]). He revealed how the scheme specifically anticipated that the Cardinal 'should cover the function of Viceroy' once the city had been taken, 'until Charles would be able to come' (ibid.: 67 [13.29]) and that 'the violent insurrection was decided' at Grimani's house in Rome (ibid.: 59 [13.14]). The Cardinal appeared again at the end of Vico's unpublished report as a possible author of another plot, posterior to the Conspiracy of Macchia (ibid.: 119–21 [22.70–79]; see also: Stone, 1997: 139–44; Pinton, 2013: 281–2).[4]

This same Grimani now presided over the 1708 inaugural address as the all-powerful Austrian viceroy. In his report four years earlier, Vico had used the word *coniurationis* and its derivatives nearly 50 times in the most straightforward sense of 'insidious machination[s]' (Vico, 2013[c. 1704]: 28–9 [6]). Why would he now risk using the related word *conspirare*?

Given the gravity of the situation, I am inclined to assume that no word was used thoughtlessly by the master of rhetoric that day. From his involvement with the *Coniuratio*, one can reasonably infer that Vico's intention was to protect himself with *De ratione*, and even ingratiate himself with the new rulers. He must have known that this word would be very present in the minds of his listeners, but rather than avoid it, he masterfully activated it in the seemingly non-political arena of the *sciences*. Vico now deployed the word in the more benign – but by no means inoffensive – sense of joining together to work against tyranny. Considering his fondness of etymology, he may plausibly have also made recourse to the strength of its most elemental meaning: *con-spiràre*, to breathe together. If so, it would constitute a perfect example of the rhetorical re-description that Skinner, based on Quintilian (1997–2001: IV.II, 75–82; VIII.VI, 36), addresses in his works (2002a: 181–7; 2002b: 264–85). Through this technique, a maligned concept can acquire a new moral light that exalts it, or the inverse.

To support this first hypothesis, that Vico rhetorically re-defined the word *conspirare*, activated it and applied it to the sciences in his lecture, we must briefly return to the fate of his earlier report on the Conspiracy of Macchia. In describing the contradicting interests and social divisions of Naples, Vico extolled the importance of the people in defeating the rebels. In doing so, he inevitably downgraded the heroic role of the municipal authorities and the nobles who remained loyal to Philip V (Vico, 2013[c. 1704]: 79 [18.8–9], 82–3 [18.22]). His professional loyalty as a historian must have annoyed those who commissioned the work, the Bourbon viceroyalty authorities which are believed to have rejected its publication in the end. Paradoxically, the decision saved Vico from greater difficulties when the Habsburgs assumed power (Marshall, 2010: 59; Naddeo, 2011: 22–3; see also: Pinton, 2013: 180, 225).

In October 1707, at the behest of Field Marshal Count Wirich Philipp von Daun (1669–1741), the then Austrian viceroy, Vico had provided funerary inscriptions to honour the two Macchia conspirators he had denigrated in his report: Capece, who died fighting in the

insurrection, and Carlo di Sangro, who was tortured and beheaded by the Bourbons (Vico, 2004[1707]: 14–35). In early 1708, he also published 'the account of the funeral ceremonies' celebrated that February in which the conspirators once driven by greed were now described as having been compelled to action by their 'devotion to the prince of Austria and the right of the House of Austria' (Vico, 1975[1731]: 175; Vico, 2016b[1708]: 89; see also: Pinton, 2013: 221–7).[5]

It would not be surprising, then, that Vico re-framed the term *conspiracy* as a fair 'fight against the common oppressor' in his October 1708 address before Viceroy Cardinal Grimani, the instigator of Macchia's 'insidious machination.' From his autobiography, we know that Vico was mindful of the cardinal's presence as he chose his words (Vico, 1975[1731]: 146; Stone, 1997: 167). Everything seems to indicate that he was seeking to protect himself from the new political authorities. However, Pinton argues that his intent fell short of the mark: 'his narration of the conspiracy had already taken on a life of its own, and remained as the major obstacle to his career throughout the three decades of the Austrian Kingdom of Naples' (Pinton, 2013: 147).

The hypothesis is in any case incomplete. Vico's redescription of *conspirare* in the discourse may have included a bid for personal protection, but it also carried implicit political and theoretical messages for the new polity.

The choice of the subject for his 1708 *orazione* reflects Vico's involvement in the public discussion concerning the course of the *Reame* university policy. Here we find another connection to the *Coniuratio*. Carlo Maiello, the author of the official published version of the Prince Macchia conspiracy, had in the summer of 1708 been publicly embroiled in a controversy concerning ecclesiastical revenues that set the new Viceroy Grimani against Pope Clement XI (1649–1721). Maiello, who was opposed to the taxation of ecclesiastical revenues by the new Neapolitan powers, defended the strict separation of church and state. As a noted

supporter of the Cartesians, one of his most powerful arguments was that that this division was in keeping with the strict separation that should exist between the disciplines. For his efforts, he was called to Rome the following year, where he embarked upon a distinguished career at the Vatican (Stone, 1997: 144–52, 167–8; Pinton, 2013: 235–8).

This contextual detail brings us back to the intense debates concerning the reform of the University of Naples. Against this backdrop of new Austrian power and the dispute over ecclesiastic revenues, an opportunity arose for renovating the institutional architecture in ways that would make the university the protagonist of social change from an ever more firmly established civic *ethos* (Vescio, 2017: 715–46). In understanding this context, we can better explore the third question of this section: To whom does Vico refer when he says that 'those responsible for this separation [of the disciplines] can be compared to a tyrannical ruler'?

The Pragmatic Sanction of '*De regimine studiorum Neapolis*' had been signed in February 1703 by the *gallispano* viceroy, Juan Manuel Fernández Pacheco, Marquis of Villena (1650–1725). This reform divided the existing chairs into as many as eight departments (Villena, 1772[1703]: 368–71; Cortese, 1924: 270). Vico lamented in his autobiography how the flourishing of literary studies under Medinaceli in Naples had been cast 'down in a very short time' after he was replaced by the Marquis of Villena (Vico, 1975[1731]): 137). Retrospectively, Vico conceded that with the reform, those who had previously sought to seclude metaphysics in cloisters were now studying it. But instead of turning to the works of Plato or Plotinus, they held fast to Descartes, who 'disapproves [of] the study of languages, orators, historians and poets, (...) setting up only his metaphysics, physics and mathematics' (ibid.: 137-8).

The new university statute of 1703 sought to break the immobility of the scholastic disciplinary order, because since the end of the *Seicento* young people had begun to seek the latest knowledge outside university classrooms through private education, which was gaining

strength. The University of Naples had been the responsibility of the Crown since its foundation. The latter appointed its prefect (the *Capellano Maggiore*) and intervened directly in its governance through the viceroy and the Regents of the Collateral Council. With the turn of the century, conflicts between these institutions intensified as the Collateral Council sought to expand its competencies at the expense of the Aragonese chaplain Diego Vicencio de Vidania (1644–1732). The selection of faculty was another frequent area of contention, with Jesuit and other ecclesiastical interests added in. The reform attempted to improve the credibility of the university by introducing genuine competition for posts and drastically reducing the intervention of the religious orders in a rigorous hiring process (Ascione, 1997: 23–7, 49–69; Galera, 2003: 134–8; Robertson, 2005: 101–2).

Roberto Mazzola points out (1998: 232) how this political battle for control of the university was reflected in *De ratione*. Early in his address, Vico announced his intent to engage Naples in the ongoing pan-European 'quarrel of the Ancients and the Moderns': '[This is] the theme of the present discourse: Which study method is finer and better, ours or that of the Ancients? In developing this topic I shall illustrate by examples the advantages and drawbacks of the respective methods' (Vico, 1990a[1709]: 5, I).

In his youth, Vico had been close to the *Accademia degli Investiganti* and the atomists (Verene, 1981: 160–2). He matured intellectually under the mentorship of Giuseppe Valletta and others who desired to reconcile Plato with the atomist Democritus as a solution to the quarrel between the two great and confronted minds of Aristotle and Descartes (Levine, 1991: 60–3). Accordingly, Vico had no qualms about extolling the advantages of modern advances while also pointing out the drawbacks he perceived in relation to the current division of the sciences.

How would the Bourbon reform of 1703 affect this division? In his pioneering study on the subject, Nino Cortese (1924: 429) argued that the new direction of studies led by the

‘Cartesian Marquis of Villena’ essentially suppressed the chair of philosophy and divided it into a school composed of four areas: physics, metaphysics, logic and the foremost area of ethics, politics and economy. It was, in Cortese’s opinion, the first real reform of 17th-century rationalism (ibid: 270–1; see also: Ascione, 1997: 77ff.).

The reform was abolished soon after the Austrian conquest of 1707, making university politics extraordinarily sensitive to a discourse such as the one Vico had in mind in 1708. John D. Schaeffer broadens the timeframe of the reforms that gave context to the learned doctor’s oration:

> The proposed reforms indicate the influence of Cartesianism on the university. The reforms of 1703 substituted a disciplinary rationale for the rhetorical methodology that had united the faculty. The reforms of 1732 shifted away from Roman law to a rationalistic view of law (…) The final shift to the disciplinary organization occurred in 1742, when chairs were founded in botany, chemistry, anatomy, experimental physics, astronomy, church history, Hebrew, and municipal law (…).
>
> The struggle by which rationalistic and scientific method replaced rhetoric in the university curriculum was a long one. Vico played a role in that struggle, but there is no agreement about the extent of his influence. (1990: 39–40)

De ratione signified Vico’s amendment to the entire body of Cartesian thought (Damiani, 2000). Descartes had sought to unify knowledge by universalizing his method and establishing mathematical certainty as a reference, supporting the truth and necessity of the physical with his metaphysical principles, rooted in a reasoned knowledge of the laws of nature,

causality and the existence of God (Descartes, 1982[1644]: xxiv-xxvii; Spallanzani, 2019: 13–17). The resulting project exalted a kind of analytical fever for an entirely new way of thinking:

> [A] basic component of Descartes's method is reductionism: breaking up nature, including the human body, into its component parts and considering them separately, a kind of mechanization of the world which sees it as a well-oiled machine. This kind of reductionism partly explains the proliferation of disciplines in the scientific revolution of the sixteenth and seventeenth centuries, as different subjects were given responsibility for exploring separate aspects of nature. (Moran, 2010: 137)

Vico described how the Cartesian ordering of studies attempted 'to exalt its own philosophy and mathematics and degrade all the other studies (...), in respect of the unity of its parts the philosophy of Descartes is not at all a consistent system' (Vico, 1975[1731]: 113, 130; see also: Vico, 1998[1729]: 51–2). He observed that the Cartesians, with their yearning for certainty, were not so different to the scholastics they sought to contradict (Vico, 1990b[1737]: 87).

As Cartesianism waned under the House of Austria (Stone, 1997: 167), Vico saw a window of opportunity for his political and theoretical message to find an audience. The Neapolitan professor knew – and expressed in his *orazione* – that the division of the sciences had developed over centuries to now reflect the multiplication and accumulation of knowledge in the modern world. Nonetheless, an examination of the university context in Naples renders it plausible that when he likened 'those responsible for this separation' to a 'tyrannical ruler', he was implicitly accusing the earlier alliance between Cartesians and Bourbons of intensifying the separation to the detriment of the city.

The complete hypothesis can therefore be constructed as follows: Giambattista Vico applied rhetorical re-description to associate the term *conspirare* with mutual assistance against tyrants and transfer the sphere of action to the sciences. He used this metaphor to shape the personal, political and theoretical message he sought to convey on that historic occasion.

On a personal level, as the author of the compromising report on the Prince of Macchia conspiracy, Vico was protecting himself from the person he had exposed as the true leader of that conspiracy, the newly appointed viceroy Cardinal Vicenzo Grimani. Politically, amidst the instability ensuing from the recent conquest of Naples by the House of Austria, it allowed him to qualify tyranny as unthinkable. By locating it in the sciences, he could apply pressure to dissuade the new governors from following the divisive approach of the Cartesian and Bourbon reformers in deciding university policy. Finally, on the theoretical plane, it allowed him to voice both a pioneering critique of the Cartesian project and an original, all-encompassing proposal for what we call today inter- and transdisciplinarity. The latter stemmed from his particular understanding of rhetoric, which we will examine in detail in the following section.

A text for the 21st century

In moments of crisis and perplexity, past authors can provide valuable insights concerning persistent issues that may have been addressed with greater clarity in their day (Strauss and Cropsey, 1987[1963]). Such texts acquire greater meaning over the centuries (Ricoeur, 1973) and Vico especially has been recognized as 'a thinker who supplies answers to problems that are still ours' (Patella, 2019: 26; my translation).

From this perennialist approach, I will explore how Vico explained *conspiracy* as collaboration among the sciences in the preserved text of *De ratione*. Firstly, I would like to determine whether we can speak of it beyond a pluridisciplinary pedagogical proposal. Secondly I will discuss how Vico, assigning an epistemological role to rhetoric in his lecture,

facilitates an interdisciplinary transfer of core knowledge to the other sciences and a global and integrative transdisciplinary perspective for a new order of disciplines. What this reading brings to our time will be discussed in the final section.

Conspiracy beyond pluridisciplinarity

How, then, can the sciences be made to 'band together and conspire' against the tyranny that would keep them apart? Vico begins with the most obvious condition: *the conspirators* must know each other. Rather than wasting away in the solitude of a single subject, they must enter into all the richness that a university offers, becoming aware of its wondrous role in preserving the city. Pluridisciplinarity, we would say today, is seen as an initial step to go further.

During the university inaugural address, it fell precisely to the teacher of rhetoric to remind his audience of this encyclopaedic study:

> Our ancestors, the founders of this University, dearly showed, by assigning the professor of eloquence the task of delivering every year a speech exhorting our students to the study of the principles of various sciences and arts, that they felt he should be well versed in all fields of knowledge. (Vico, 1990a[1709]: 78, XV)

Yet Vico also understood how very human it is to lose oneself in specialization:

> It is a common experience to see an individual who has concentrated all of his efforts on a single branch of study, and who has spent all his life on it, think that this field is, by far, more important than all others, and to see him inclined to make application of its specialty to matters wholly foreign to it. This may be

> due to the weakness of our nature, which prompts us to take an inordinate delight in ourselves and in our own pursuits. (ibid.: 80, XV)

The problem is aggravated when studies are organized into hierarchies without considering their role in the political community. Vico found it regrettable that 'we pay an excessive amount of attention to the natural sciences (*naturalibus doctrinis*) and not enough to ethics' (Vico, 1990a[1709]: 33, VII; 2012[1709]: 22, VII), though giving up the natural sciences was not the solution. He lucidly described new hybrid fields – between chemistry and physics, for example – and welcomed their assistance in the technological advances of a new era. But Vico, who had composed a political-historical document on the Conspiracy of Macchia and witnessed the end of two centuries of Spanish dominion through a bloody dynastic war, could not help noticing how in the treatment and organization of the sciences, 'a noble and important branch of studies, i.e., the science of politics (*republica doctrina*), lies almost abandoned and untended' (ibid.).

He attributed this to a tragic misunderstanding. The natural sciences were considered the sphere of objective research about things, which could provide us with eternal truths about the world. Political science, however, dealt with uncertain human affairs; a pursuit based on the fickle human condition and defined by fortune, desire and freedom. Discouraged, 'we disregard that part of ethics which treats of human character (*humani animi ingenio*), of its dispositions, its passions, and of the manner of adjusting these factors to public life and eloquence' (Vico, 1990a[1709]: 33, VII; 2012[1709]: 22, VII). In neglecting this, Vico argued, we understand ourselves ever more poorly and behave worse collectively as a result: 'our young men (...) are unable to engage in the life of the community [and] to conduct themselves with sufficient wisdom and prudence' (ibid.). This could be remedied, beyond

pluridisciplinarity, by an interdisciplinary collaboration between ethics, political science and the natural sciences in pursuit of a common goal – the cultivation of the good life in the city.

The Neapolitan academic held these convictions throughout his life. Decades later, in his autobiography, he returned to the main topic he had worked to develop in *De ratione*: the conspiratorial metaphor for the sciences and the image of the sciences lending each other a hand: 'All divine and human wisdom should everywhere reign with one spirit and cohere in all its parts, so that the sciences lend each other a helping hand and none is a hindrance to any other' (Vico, 1975[1731]: 146).

Soon after, in 1732, in what would be his last *orazione inaugurale* at the University of Naples, Vico presented the same idea again:

> It is absolutely clear that from these your preceptors you are to master all the branches of knowledge. Crippled and tottering–such is the education of those who throw all their weight into the study of just one particular and specialized discipline. The various disciplines are of the same nature as the virtues. Socrates used to maintain in his teachings that the virtues and the disciplines were one and the same, and totally denied that any one of them was ever genuine unless all the others were present also. So? A look of trouble on your faces? (Vico, 1976[1732]: 891; see also: Vico, 1990b[1737): 86)

Vico understood the effort he was requiring of the students who were listening to him. As with the virtues, where honesty is worthless without courage, the human sciences must embrace the presence of the natural sciences if they are to be truly genuine, and vice versa. They must clasp hands, assist each other, *conspire*. In studying more of other sciences, the

learner must humbly accept that their own specialty or particular life pursuit is insufficient to explain even their own field of research, let alone the entire world.

The scope of Vico's proposal for university reform extended beyond simply underscoring the imperative of broad study or balancing the weight of certain subjects. Although he insisted on academic effort, he knew that a simplistic demand for complete knowledge of all sciences was not realistic in the modern world. 'In Greece, a single philosopher synthesized in himself a whole university', he explained in the penultimate chapter of his dissertation, which was dedicated to the universities (Vico, 1990a[1709]: 74, XIV). In that earlier time, philosophy had been primordial, 'the mother, midwife, and nursling of all sciences and arts.' Students needed only the philosopher to learn 'whatever it was necessary for them to know in the field of public affairs' (ibid.: 75, XIV).

In modern times, however, Vico affirmed that 'our need for universities is considerably greater' (Vico, 1990a[1709]: 75, XIV). Not only must we know the theories of the Greeks, Vico continued, but those of the Latins and the Arabs, as well as the Scriptures, Oriental languages, and Roman and feudal law, to name but a few of the subjects accumulated over the centuries. Added to this was the irrevocable plurality of philosophical views by which a student 'may be trained in the art of discourse by an Aristotelian, taught physics by an Epicurean, metaphysics by a Cartesian' (ibid.: 77, XIV). Then, there was the danger of forgeries, plagiarisms, and unskilful interventions that confuse 'the author's true meaning (..) Therefore the attainment of any science or art has become so difficult for us, that at the present time no person can master even a single subject. This has made the establishment of universities necessary' (ibid.: 76, XIV).

Universities were to Vico the 'antidote' to the inevitable fracturing of modern knowledge that they also represented (Patella, 1997: 108). However, he lamented again how 'arts and sciences, all of which in the past were embraced by philosophy and animated by it

with a unitary spirit, are, in our day, unnaturally separated and disjointed (…) [the students'] culture on the whole (and the whole [*summa*] is really the flower of wisdom) is incoherent' (Vico, 1990a[1709]: 76-7, XIV; Vico, 2012[1709]: 41, XIV). From this stemmed the need – and here we find an allusion to a direct university reform – 'to coordinate all disciplines into a single system' in the form of a public institution (ibid.).

But how would this system be coordinated? Does rhetoric in the Vichian proposal play the unifying role that philosophy once did?

The inter- and transdisciplinarity role of epistemic rhetoric

Vico began his discourse in 1708 by acknowledging Bacon as someone who was unveiling 'a new cosmos of sciences' (Vico, 1990a[1709]: 32, VI). The Englishman and the Neapolitan agreed on a central epistemological objective, 'the question of the "integration" of human knowledge', though they differed about how it should be accomplished (Fattori, 2021: 11). In *De ratione*, Vico defended Baconian and Galilean experimentalism rather than the unquestionable truths that emerged from Cartesian deduction (Vico, 1990a[1709]: 32, VI; see also: Gisondi, 2020: 107-8), but was quick to extricate himself from the vast ambitions of the former Lord Chancellor of England. He described Bacon as someone chasing the infinite, intent on 'paving the seas with stones, mastering mountains with sail, and other vain exploits forbidden by nature' (Vico, 1990a[1709]: 4, I). Such desires mistakenly reach beyond what the human condition can offer.

In the first note of his dissertation Vico is playing on an authentic manifesto against Baconian omnipotence that envisions knowledge and power as 'a pair of twins' (Bacon, 2000[1620]: 24, *The Plan of the Work*). Today we recognize the shared interest of Bacon and Descartes in becoming 'masters and possessors of nature' as a hallmark of modernity (Descartes, 2003[1637]: 41, VI; see also: Bacon, 2000[1620]: 100, 221 [I.129, II.52]). For

those willing to hear it, Vico was declaring his firm and fundamental resistance to an omnipotence he understood even then to be dangerous and far removed from the *ethos* he sought to advance in his project. Instead, the Neapolitan found that rhetoric conformed better to the finite, limited and contingent human condition without succumbing to hubris (Gisondi, 2020: 104; Vico, 1990a[1709]: 4, I; 2010[1710]: 26–27; Voegelin, 1998: 95).

Rhetoric was therefore epistemologically central to this discourse:

> *De ratione* represents the strongest Vichian attempt to defend and reaffirm the synchronous unity of all the sciences, arts and disciplines (...) it envisions an encyclopaedic synthesis of knowledge constituted around the methodological unity of topical-rhetorical discourse. (Patella, 1997: 103; my translation)

In the Vichian attempt to integrate the critique lauded by the Cartesians with the rhetorical *inventio* of the topic, Giuseppe Patella acknowledged 'the aim of recomposing the epistemological discord between the various disciplines' (Patella, 1997: 103; my translation). But this was not a combining of equals: rhetoric was enthroned by Vico as 'the Queen of the Sciences (...), the only one capable of guiding the learning of all other disciplines' (ibid.: 109; my translation).

How would this be accomplished?

Vico incorporated nuances relevant to the basic concepts of classical and humanist rhetoric into *De ratione*. He covered the topic itself along with the concepts of verisimilitude and common sense. In the process, he outlined the principle of *verum factum* to assist in distinguishing between the natural and human sciences and understanding how they work together.

Vico developed *ars topica* outside its usual oratorial functions. Thus, the search for appropriate topics and arguments could be applied innovatively to study all the relevant aspects that make something singular. This explains why decades later he qualified it as the 'art of regulating well the primary operation of our mind' (Vico, 1948[1744]: 497; see also Vico, 1998[1729]: 49). Its findings would always precede critique, since 'the invention of arguments is by nature prior to the judgment of their validity' (Vico, 1990a[1709]: 14, III; see also: Grassi, (1969[1968]). This confronts us with the first inventive and experiential task of any observer of the human and natural world. Vico understood it as an art that must be cultivated in all disciplines (Marshall, 2010: 85–6, 90, 96–9; Miner, 1998: 59).

The Neapolitan professor was responding, firstly, to the Cartesians, who considered '*nova Critica*' the only valid instrument for the sciences (Vico, 2012[1709]: 13, I). Cartesian philosophy had begun with the problem of truth (Grassi, 2014[1940]); in pursuing truth, people became detached from plural human experience in the world. Vico asserted that the sole application of the Cartesian method by students 'benumbs their imagination and stupefies their memory' (Vico, 1990a[1709]: 42, VIII). With everyone looking for their own exclusive advantage from the solitude of their own offices, oblivious to any beneficial conspiracy, the city – and the scientific community – would become a jungle of warring tribes. Vico foresaw this result from *New Science,* calling it the *barbarie della riflessione* [the barbarism of reflection] (Vico: 1948[1744]: 1,106). However, he did not propose abolishing *critique*. Revealing once more the integrating nature of his proposal, during his address he argued that the topic alone would cause us to 'fall in with falsehood' (Vico, 1990a[1709]: 19, III). The main problem with critique, however, was its inability to accept *verisimilia* (Vico, 2012[1709]: 17, III), which constituted a prerequisite if it was going to help us to be exact.

What does Vico mean by *accepting* the verisimilar? Understanding this requires a closer look at how he begins to develop the principle of *verum esse ipsum factum* ['the true' is itself

something made] in *De ratione*: '*Geometrica demonstramus, quia facimus: si physica demonstrare possemus, faceremus*' [We are able to demonstrate geometrical propositions because we create them; were it possible for us to supply demonstrations of propositions of physics, we would be capable of creating them (*ex nihilo*) as well] (Vico, 2012[1709], 18, IV; Vico, 1990[1709], 23, IV). Two years later, he developed the statement further: 'things in physics will be true for me once you have made them, just as in geometry the reason things are true for men is that they make them' (Vico, 2010[1710]:122–125 see also: ibid.: 16–29).

Two major branches of study arise from this principle: those occupied with the natural, the truth of which is reserved for the divine omnipotence of God as creator; and those dedicated to human creations, which can therefore be known: history, politics... geometry or mathematics. Although it may appear that with *verum factum* Vico resigns himself to not knowing the natural world, the contrary may also be true (Bermudo, 1990; Ephraim, 2018: 74; Marshall, 2010: 117). The conclusion of *De antiquissima* can assist our understanding:

> Here you have (…) a metaphysics which is the handmaid to experimental physics, the cultivation of which today has been so abundantly fruitful for mankind inasmuch as by it, we take something to be true in nature when it is *similar* to something we make through experiments. (Vico, 2010[1710]: 135; emphasis added).

Though we cannot create something natural *ex nihilo*, as God does in Christian doctrine, we can manipulate and compose physical objects that already exist to discover their properties or potential. This is how we arrive at the experiment, understood as the copy or reconstruction of a phenomenon, a way of interrogating the natural world based on hypothesis (Bermudo, 1990: 96–103; Marshall, 2010: 114, 118; Verene, 1981: 39–40; Vico, 2010[1710]: 18–19, 26–

7, 110–11, 134–5). When Vico stated in *De antiquissima* that 'not the geometrical method, but geometrical demonstration should be imported to physics', he was referring to experiments as synthesis (Vico, 2010[1710]: 120–3). Such demonstrations are useful in the natural sciences, although less precise than those which remain fixed in our minds through mathematics (Marshall, 2010: 117-19; see also: Bermudo, 1994: 20–2).

From this understanding of *verum factum*, the Vichian vision of the verisimilar and its utility for the conspiracy of the sciences become clearer. Vico expanded this rhetorical notion and its usefulness to physics by first positioning it independently between truth and falsehood (Vico, 2012[1709]: 15, III). Rather than a progression between two poles, the verisimilar occupies its own plane (Grassi, 2014[1940]: 187) of specific prior knowledge adapted to the human (Bermudo, 1994: 18). For this reason, just before outlining *verum factum*, Vico introduced something that ran completely contrary to his time. He asserted that the principles of physics, which through the geometric method present themselves as truths, are only verisimilar: *nonnisi verisimilia sunt* (Vico, 2012[1709]: 18, IV). It was tantamount to throwing a bucket of cold water on the contemporary spirit.

In doing so, Vico conveyed several messages. First, he implied that the natural sciences depend on the human mode of questioning (Grassi, 2014[1940]: 190).[6] This was noted earlier in his recommendation to bring demonstration – experiments – into physics rather than the Cartesian method. There, in the encounter with something beyond ourselves, '*natura enim incerta est*' [nature is full of incertitude] (Vico, 2012[1709]: 16, III). Soon after, he exhorted his audience not to behave with certainty in the uncertainty of nature (ibid.: 18, IV). While we can progress along the path of science, we must start with only a copy: the veri-similar.

This rhetorical concept offers protection against omnipotence. As Max Fisch had already specified, 'Vico's *verum* means the true, not the truth, and its plural *vera* means not the truths but the trues or intelligibles' (1969: 408). This can be applied to all sciences, in the

human or natural world. 'We must correspondingly distinguish our *verum* from His [God's], our *scientia* from His' (ibid.: 407). Laura Ephraim (2018: 75) probed further: 'how can we know that our knowledge of a man-made experimental phenomenon is a reliable guide to an original made by God and intelligible only to [God]?'

The difficulties of knowing the natural world stand in contrast to the ease of confronting the human world. In 1708, Vico harnessed *verum factum* as the starting point for applying his original and influential understanding of human science to the study of history. He exemplified this in Section XI of the *orazione*, with what Elio Gianturco (1990: xxviii) referred to as 'the earliest manifesto of juridical historicism'. In this realm, reading and interpreting texts from the past constituted the equivalent of experiments, placing deeper comprehension of our own human condition and social relationships within our reach. Vico's new science considered the human mind as a historical product, a collective enterprise that was deployed through language and other signs in our institutions (Viana, 2017).

In affirming that the principles of physics were verisimilar, Vico did not belittle the verisimilar as Descartes had done. Intriguingly, the Neapolitan introduced this matter by crucially affirming that common sense, *sensus communis*, emerges from the verisimilar (Vico, 1990a[1709]: 13, III; Vico, 2012[1709]: 15, III).

Dealing with the verisimilar, the probable, allows us to deploy ingenuity (*ingenium*) to find similarities between diverse and dissimilar things. Metaphorical and creative thought, assisted by imagination, begins to name and place shared memories and feelings about the world. This weaves a stable fabric of *senso commune*: not only among a people group but among all human beings, as Vico later wrote in *Scienza nuova* (Vico, 1948[1744]: 142). Shared judgments without reflection and a shared faculty for perceiving together (Marshall, 2010: 92–3) help us assign meaning to the human and natural world. In meeting with plurality, each

person constructs a reality everyone can recognize. For this reason, Vico considered *sensus communis* to be the root of all science (Ephraim, 2018: 84).

Vico was not using 'common' to mean vulgar, as in the Cartesian *bon sens* that would endure in the rationalist tradition (Grassi, 1976: 559–75; Schaeffer, 1990: 68–79). Rather, he explained in his *orazione* that *senso comune* must be the guiding principle for prudence and eloquence, which must always accompany science (Vico, 1990a[1709]: 13, III). All knowledge that remains mindful of contingency and practical judgment (*prudentiae*) and requires eloquence to validate itself in its community must first cultivate common sense if it is to guide and be understood. From here stems his famous warning against the '*docti vero imprudente*' [learned but imprudent] who, despite all their theoretical and abstract knowledge, stumble at every twist and turn in life (Vico, 2012[1709]: 22, VII).

The verisimilar and *senso comune* contrast with the atomizing spirit of the Cartesian project. Neither concept is science on its own, but both are essential for thinking scientifically in a fully human way and rhetorically forging the conspiracy of the sciences:

> I think young men should be taught the totality of sciences and arts, and their intellectual powers should be developed to the full; thus they will become familiar with the art of argument, drawn from the *ars topica*. At the very outset, their common sense should be strengthened so that they can grow in prudence and eloquence. Let their imagination and memory be fortified so that they may be effective in those arts in which fantasy and the mnemonic faculty are predominant. At a later stage let them learn criticism, so that they can apply the fullness of their personal judgment to what they have been taught. (Vico, 1990a[1709]: 19, III)

By emphasising the importance of cultivating the three faculties of memory, ingenuity and *phantasia* in the task of understanding, by perceiving and gathering what nature presents to us from all angles, it is possible *to construct* the world through human language. This transpires under a general mantle of shared sensitivity – *senso comune* – of knowing how to leave space for silence, alterity and embodiment, something far removed from Cartesian mind/body dualism.[7]

For Vico, when we fail to comprehend something or lack the elements to name what appears in our world, we transfer meanings (*metapherein*) from some words to others. This is the problem that science had to face in the 20th century, especially quantum theory, with its leaps, waves, or entanglements (Heisenberg, 1958: 167–86). Even in sciences such as physics, we become poet creators by naming, said Vico in his discourse (1990a[1709]: 43–4, VIII). Indeed, the first people used fantasy and words to cope with the wonder and fear produced by natural phenomena such as thunder and lightning. Years later, after outlining in *New Science* how these also served to establish the first laws and human institutions, Vico argued that poets were the true founders of cities and nations. He contended that poetry was therefore 'the master key of this Science' (Vico, 1948[1744]: 34; see also: ibid.: 6–7, 365, 377–84).

Vico's use of rhetoric was not opposed to science or subordinate to it in serving to better explain its advances. Nor was it restricted to human science based on historical study, which he founded by describing it in his *oratio*. Biaggio De Giovanni understood that 'the goal for Vico, midway through *De ratione*, was seemingly to define a new path that offered a meeting point between the sciences and the humanities' (1968: 175; my translation). Rhetoric was that path, and could be transferred to the sciences through interdisciplinary collaboration to provide coordinated assistance, attention to ethics and a common *ars* as a starting point for thinking humanly and scientifically. It would act as the instigator, the mind behind the munificent

Vichian conspiracy of the sciences. It would become the touchstone of his proposal for the plural and transdisciplinary reordering of the scholarly disciplines of his time.

Discussion

De nostri temporis studiorum ratione, the inaugural address given by Vico in 1708, was a decisive discourse for Modernity, or rather, for what could have been Modernity but ultimately did not come to fruition. Besides critiquing Cartesianism, it presents us with an alternative path that was not embraced going forward. Much of its significance has been attributed to how it addressed the separation between the natural and human sciences (Berlin, 1974: 38; Smith, 2007: 131–2). We can also argue that the central issue for that Neapolitan scholar was to enable a conspiracy of the sciences through a broad understanding of rhetoric. Guided by the question of the relevance of studying the Vichian proposal today, this final discussion will be framed within 21st century debates around the increasingly demanded and much-proclaimed qualities of pluri-, inter- and even transdisciplinarity in the sciences, as specialties continue to multiply.

So, in the current panorama, what does Vico's proposal offer us?

The separation between the natural and human sciences continued to be a controversial topic in the development of university curricula, especially during the 19th century, which provided the framework for the confrontation of the *two cultures* during the 20th century (Moran, 2010: 9–13).[8] What Vico outlined in 1708 persisted in the background of that debate: the human sciences approached their common object of study, *people*, differently to how the natural sciences approached the *things* of nature. However, the predominant scientific positivism and isolation of individual fields over the last century tell of his theoretical defeat.

Vico had argued, by delving deeper into self-knowledge, that we can incorporate *phantasia* as another way of thinking in the study of people and their creations. It opens the door to empathy, not only towards our fellow citizens but towards those who lived in other

periods, to better understand the values and 'conceptions of life of entire societies' (Berlin, 1974: 37). When studied from this perspective, history becomes a *human science*. Today, appeals to the importance of the arts and humanities for democracy often underscore how they help us to cultivate better understanding of ourselves and others (Nussbaum, 2010: 95–120).

We have also seen how Vico incorporated *phantasia* and other faculties into the study of nature in his core proposal of a conspiracy among the sciences. While Europe was waving the flag of objective, aseptic and universal knowledge, from the south Vico expressed his disconformity. He argued that whatever knowledge of *the natural* we may possess ultimately remains human. Here, we observe a potential application of Vichian thought to one of the main aspects of transdisciplinarity: the emphasis on the primordial role of ethics and politics in organising the sciences to serve the community and, consequently, to open them to civic participation.

As we have seen, Vico's epistemological commitment went beyond a mere pluridisciplinary exhortation to study all areas of knowledge exhaustively. Informed by his Neapolitan context and experience, in *De ratione* he called for an interdisciplinary transfer to reach an integrative and civic transdisciplinary project: a rhetorical path for all sciences that offered a complex and rich understanding of the human condition, one that could be adapted to diverse methods, times and societies.[9]

Today the calls for collaboration among the sciences 'have become more urgent than ever' (Renn, 2020: 7). In our bewildered struggle to grasp the consequences of an obsolete worldview largely still based on a classic (and cartesian) scientific model that has theoretically collapsed, the fragmented public space is inundated with *fake news*, which trammels any possible acknowledgement of a shared reality. Meanwhile, in the wake of what may have been the first of many great pandemics to come, specific climate and nuclear threats risk imperil our immediate future and technological advances confront us daily with dizzying new dilemmas.

As an answer to these challenges, Earth System Science has already successfully established itself in the field of the natural sciences (Lenton, 2019), while an open call to integrate 'the social sciences and the humanities' has gone out to attend to global warming (Palsson *et al*., 2013). Political science cannot fully function today without the latest input from physics, evolutionary biology, neuroscience or geology. And while these fields update our understanding of humans, the humanities are still needed to inquire into the mystery of human experience (Damasio, 2018: 16; Kandel, 2012: xiii–xviii; Rovelli, 2016[2014]: 125).

Amidst the emerging disciplines and alliances, and beyond the recurrent appeals to be well-versed in all sciences and their applications, specific theoretical proposals with a certain Vichian flavour persistently appear in Interdisciplinary Studies.

Ronald Barnett recently advanced an ecological curriculum 'of discovery (...) characterized by paths of possibility … calling for imaginative, emotional, bodily and cognitive responses.' In times marked by uncertainty, Barnett proposes a curriculum open to investigating the unfamiliar; one that draws from deep knowledge of specific disciplines to adapt to challenging new landscapes. Designed to help us 'handle disparateness', such curricula would adapt to each place and stimulate intense 'concern for the world' as the hybridization of knowledges increases awareness of our radical relationality within the environment (Barnett, 2018: 78–80, 114–21).

At the end of the last century, Stefan Collini described the relations between the natural and human sciences in this way:

> The role of imagination, of metaphor and analogy, of category-transforming speculation and off-beat intuitions has come to the fore much more. As a result, more now tends to be heard about the similarity rather than the difference of

> mental operations across the science–humanities divide. (Collini, 2012[1993]: xlviii)

The Vichian conspiracy of the sciences was a pioneering defence of this kind of curricula and common mental operations. In pondering Vico's use of *conspirare* in *De ratione* before an audience presided over by Grimani, I have hypothesised that the Neapolitan scholar was trying to protect himself while also leaving us a message with implications beyond the university reform he envisioned for Naples. He invites us to look into all the sciences and establish a dialogue of plurality among them so they can assist each other meaningfully in protecting the city. The epistemic, inter- and transdisciplinary role he assigned to rhetoric in science enriches the enterprise.

Vico attempted to overcome the lack of communication between the natural sciences and the humanities at its roots, when its distinction was taking shape. He opened the door for the subject in science, pushing out onto the terrain of the classical frontier between nature and culture (Luft, 2003: 3, 113). However, the dualism remained and gained momentum in Modernity with the expansion of the Baconian idea of dominion over nature and the Cartesian externalisation of it as a separate object (Haila, 2000: 159, 164, 170). Today, we are tragically confirming that destroying nature requires abstraction and the absence of direct experience on the part of those destroying it (Vetlesen, 2015).

By stepping away from that duality, albeit unintentionally, Vico placed himself outside the founding principles of the triumphant thought of his time. This has intensified current interest in his work. As Rosi Braidotti (2013: 145-6) writes, questioning the nature/culture distinction…

> … places the issue of the relationship between the two cultures at the centre of the agenda again … Today, environmental, evolutionary, cognitive, bio-genetic and digital trans-disciplinary discursive fronts are emerging around the edges of the classical Humanities and across the disciplines.

Vico argued that natural reality was essentially outside the scope of human comprehension: *beyond physics*. But he did not wash his hands of it or seek an idealistic retirement that allowed him to deny the possibility of a common reality. His recourse to God the Creator freed his ideas from anthropocentric omnipotence. Vico formulated the principle of *verum factum* as the beginning of a constructivist alternative to the philosophical problem of what is real (Rockmore, 1999–2000).

As Mark B. Brown explains in this case:

> A constructivist conception of science is thus fully compatible with the realist conviction that the world has an independent existence that precedes human efforts to understand and shape it (...) Acknowledging that science and politics, humans and non-humans, inevitably shape each other does not entail an entirely artificial world of human mastery, devoid of the sense of otherness and wonder often associated with non-human nature (...) Seen in this light, environmental politics arguably becomes most democratic when it invokes diverse kinds of knowledge and experience. (Brown, 2016: 492–3)

This epistemological pluralism was at the heart of Vico's rhetorical proposal, as it is at the heart of the contemporary inter- and transdisciplinary 'new thought style' (Darbellay, 2015: 171-2). Scientific practices that begin with a topical mental operation immediately diverge into

separate paths. Testing observations and experimenting on everything related to the environment in the natural world requires a different approach than developing, for example, the Greek concept of law. Neither is it the same to explain and interpret the meanings of environmental statements about the climate as it is to evaluate the human actions that have led to global warming (Arias-Maldonado, 2020: 104–5). The Anthropocene, and the end of the distinction between nature and culture, reveals that objects of study once considered exclusively natural – the sky, the oceans or the forests– are also shaped by human action, and vice versa. The human sciences must collaborate with other fields in establishing narratives, shaping ethical debates about environmental statements, and imagining alternatives (Vetlesen, 2015: 7). On this point, the *conspiracy* must ultimately involve the entire city in a transdisciplinary way. Vico's work invites us to expand the scope of scientific consensus on climate to the entire political community, to build a common democratic future from everyday felt and shared experience (Ephraim, 2018: 143–9).

This is how the Vichian conspiracy can enable us to reasonably endure this century. The strangeness, connections and anomalies of our era, menaced by huge existential risks, can be better understood through inter- and transdisciplinary lenses. The seed that Vico planted on 18 October 1708, when he carefully re-described the term *conspirare*, offers an ethical, non-omnipotent way forward, rooted in theories and practices that may be of enormous assistance in facing the immense challenges of the 21st century.

Notes

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1. Though the documents only indicate that the inaugural speech was given *In Regia Regni Neap. Academia*, we can deduce that it took place in the San Domenico Maggiore complex because the seat of the University of Naples was moved there after the Conspiracy of the Prince of Macchia, in 1701, and remained there until 1736. The university had only five rooms on the ground floor of the atrium, all dimly lit. Three rooms across from the church were slightly bigger (Schipa, 1924: 435-7; see also: Bull, 2013: 9; Stone, 1997: 115). One of these rooms must have hosted Vico's *orazione*. My thanks to Imma Ascione for providing this information.
2. *De nostri temporis studiorum ratione* is commonly referred to as *De ratione*. The idea of *ratione* in the title does not really denote *system* or even *method*, as some translations suggest (Verene, 1990: xii). Rather, it expresses orientation, order or intent for the general plan of study. Robert Miner (1998: 63) also reminds us that for Vico (2010[1710]: 16–17), *ratio* originally referred 'to the sum of elements gathered together in arithmetic.'
3. We assume that Vico's text faithfully reflects what he said in his speech, at least in relation to the term *conspirare*. If there were differences, the same Austrian authorities were in power when it was published, so the implications would have been very similar.
4. Today we know that the Venetian Grimani, unsupported by Vienna and part of the local patriciate, had also maneuvered at that time against General von Daun, the previous

viceroy. Lists belonging to Grimani have been found that noted the political affiliations of his subordinates (Quirós, 2017: 78–9, 106–7, 376–7).

5. This commission from von Daun appears in his autobiography (Vico, 1975[1731]: 175). However, there is no reference to the Macchia report.

6. When Werner Heisenberg (1958: 58) says that 'what we observe is not nature in itself, but nature exposed to our method of questioning', he is actually paraphrasing Vico's idea.

7. In *Scienza nuova*, Vico presented a rather dubitable etymology, distinguishing between *mythos* and *mutus* [mute], to draw attention to the fantastical meditation that precedes and often exceeds speech (Vico, 1948[1744]: 401). In the same work, he used the idea of *topica sensibile* [sensory topics] to describe how the founders of humanity progressed from depictions of specific experience to the poetic genres (ibid.: 495). This constituted a recognition of sensibility as a way of thinking (Patella, 2019: 21–4; Sanna, 2017: 438, 440; Verene, 1981: 170, 175–7; Viana, 2017) and permitted an understanding of *con-sensus* as 'the common sensuality that the audience shares' (Schaeffer, 1990: 76).

8. For the debate about the *two cultures*, see Snow (2012[1959, 1963]) and Leavis (2013[1962, 1966]).

9. As Nancy Struever reminds us (2009[2003]: 81), 'rhetoric's pragmatism, in Vichian work (...), cannot propose systematic solutions; it corrects the theoretical hubris of final solutions.'

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