DRAFT: PLEASE DO NOT CITE

Levels of dissent in the age of confessions

Ian Maclean, All Souls College, Oxford

I am setting out here to sketch a rather general map of late Renaissance dissent, and its relationship to institutions and conceptual schemes embodying authority in a broad intellectual field that includes theology, natural philosophy and medicine. This is not an altogether straightforward enterprise, as a consideration of the Calvinist Théodore Turquet de Mayerne's only medical publication, his *Apologia in qua videre est, inviolatis Hippocratis et Galeni legibus, remedia Chymice praeparata tuto usurpari posse* (La Rochelle, 1603) makes clear. This work was written in response to an attack on his colleague and coreligionary Joseph du Chesne by the powerful Faculty of Medicine of Paris, whose members were staunch defenders of the Roman Catholic Church and of the authority of Galen in medical matters. In his title, Mayerne invites us to see him not as a dissident, but as a doctor working within a hallowed framework of authorities whose 'laws' [*leges*] he claims not to have been infringed by chemical medicine. These 'laws' could be construed as precepts, or methods, or logic, or any combination of the three. What Mayerne announces in his title is a quite complex strategy (among a number of possible strategies, as we shall see) for dealing with the relationship of revisionist views to an existing conceptual structure. It consists of the dual claim that these views constitute, in a humanist spirit, the restitution of the true doctrine of the *prisci philosophi,* by being underpinned by a correct interpretation of the relevant Galenic and Hippocratic texts; and that correct reasoning and empirical evidence – the hallmarks of rational Galenic medicine - will support what is being alleged by him. His suggestion that the incorporation of new material will not radically alter Hippocratic and Galenic (or more precisely, Hippocratic) doctrine is characteristic of all those seeking to reform one aspect of a

doctrine or social practice: they disregard, knowingly or unknowingly, the fact that the introduction of even limited reform will change the whole structure into which it is being introduced.[1]

His defence evoked an immediate reply, the *Ad famosam Turqueti Apologiam responsio*, attributed to Jean Riolan the Elder. The pamphlet sets out to defend the traditional interpretation of Galenic medicine, which according to the author of the pamphlet excludes the possibility that it could be compatible with chemical medicine. Riolan himself published many works in his lifetime: in one of them, he claimed that 'it is stupid to oppose rational arguments against the senses and reason out of respect for the ancients', and this would appear to make him even more radical than Mayerne in his attitude to the ancients; in another, he made the profoundly different and somewhat shocking statement that 'he would prefer to err with the Church than to be right with philosophers [who oppose it].'[2] Among such opponents, he would certainly have counted du Chesne and Mayerne, as well as all those whose interpretation of an authoritative text did not coincide with his own and that of his institution, the Medical Faculty of the University of Paris.

---

[1] *Apologia*, La Rochelle, 1603, p. 3: 'Absit ut Hippocratis leges abrogem, vel ut tantillum ab iis recedam, et summi dictatoris infamis desertor, ad novissimum quemque levissime deficiam: plus apud me potest illius authoritas.' There are earlier examples of this strategy: see Johannes Albertus Wimpimaeus, *De concordia Hippocraticorum et Paraceslistarum*, Munich, 1568 and Claude Aubéry, *De concordia medicorum*, Lausanne, 1585.

[2] Jean Riolan the Elder, *Ad librum Fernelii de procreatione hominis commentarius*, Paris, 1578, fol. 17v: 'stultum [est] ratione pugnare contra sensum et experientiam pro antiquitate reverentia'; Riolan , *Opera omnia*, Paris, 1610, pp. 134-5: 'faverem peripateticis, nisi religioni christianae Platonicarum doctrina ex parte magis consentiret: malim errare cum ecclesia, quam cum philosophis bene sentire.' An equivalent sentiment is found in the sentence in which Maximilian Herberger, *Dogmatik: zur Geschichte von Begriff und Methode in Medizin und Jurisprudenz*, Frankfurt, 1981, p.283 records Joseph Du Chesne as claiming that Riolan wanted as the inscription above the portal of the Faculty of Medicine of Paris: 'medicorum titulo indigni iudicuntur quicunqui Hippocratem et Galenum quamvis probabiliter contradicunt.' The locus classicus is in Cicero, *Disputationes Tusculanae*, i.17.77: 'errare mehercule malo cum Platone... quam cum istis vera sentire.' Other doctors use the same locus: e.g. Donato Antonio Altomare, *Omnia, quae hucusque in lucem prodierunt opera*, Venice, 1574, sig.*2r: '[hoc opus] si qui pertinacia adducti aut malevolentia potius suffusi audeant contradicere sciant non mihi sed Galeno se contradicturos, quocum errasse malo, quam ad aliorum mentem recte sapere.'

I have juxtaposed these quotations in a somewhat perverse spirit, to expose the difficulty of dealing with the difference between traditional thought and dissent in early modern medicine. Do we have to see Mayerne – an energetic proponent of chemical medicine - as a traditionalist because of his respect for the 'leges Galenicae', and Riolan as a radical because he believes that reason and empiricism should trump any respect we might have for the ancient medical authorities? That would make nonsense of the categories of 'traditionalist' and 'dissident', and I do not want to suggest that this is the conclusion to be drawn from the example I have given. I take the following propositions about dissenters to be indubitable and not subject to the ratio to which I have made allusion (I am referring here to dissenters in a quite narrow sense: the organisers of this conference have taken a broader view, and included non-conformists, innovators and 'modernes').

(1) Early modern dissenters felt, or were made to feel, that they were dissenters, and in a conflictual situation, and those of them that wrote about their views reacted to this using a variety of defensive and offensive rhetorical strategies.

(2) Traditionalists felt as though they were defending a valuable body of traditional knowledge, often if not always vested in a powerful institution such as a College of Physicians or Medical Faculty, and they used what powers they had to impose what they saw as orthodoxy. In Kuhnian terms, we might speak of a paradigm: a conceptual system consciously embraced by thinkers who agree on an axiomatic base through which to engage in problem-solving.[3] In all three fields on which I am touching here - theology, natural philosophy and medicine - there is an early modern institution that defines dissent from this base: the various confessional churches, the universities and their faculties, and the colleges of physicians. These last might have entrance examinations through which they enforced the

[3] Thomas S. Kuhn, *The structure of scientific revolutions*, 2nd ed., Chicago and London, 1970.

doctrines they espoused: in London, Robert Fludd was twice refused entry to the College in the first decade of the seventeenth century on the grounds that he was not fully committed to Galenism, and there are many more examples in Paris of intolerance of chemical and Paracelsian views, to one of which I have already referred.[4] Innovative teaching methods, such as those of Petrus Ramus, were also proscribed, as in Wittenberg, for example. Universities could moreover prescribe Aristotelian natural philosophy, as did the same German university, and determine whether or not Aristotelian metaphysics should be taught (a matter of concern to Lutherans who believed that it fostered an alternative view of truth to that of theology). Of all institutions, Churches had the greatest power, as they could, and did, claim the right to determine what was correct teaching in the whole university curriculum; moreover, by invoking local political powers in declaring individuals to be heretics, they could brutally repress them. In the case of the Catholic Europe, medical dissenters had also to deal with the Church's Index of forbidden books that linked Paracelsian medical thinking and Ramist pedagogical approaches with heresy. Such religious interference is found also in protestant lands: Ramism, for example, was banned or rigorously opposed in various Lutheran and Anglican institutions.[5]

(3) A verbal commitment to empiricism and reason - *ratio et experientia* – is not sufficient in itself to define a radical medical thinker; we should otherwise have to categorise the Galenist

Riolan, who rejected the new anatomical discoveries of Vesalius and others, as a radical. This rejection on his part, which in modern eyes flies in the face of his publicly stated

[4] William H. Huffmann, *Robert Fludd and the end of the Renaissance*, London and New York, 1988.
[5] Walter Friedensburg, *Geschichte der Universität Wittenberg*, Halle 1917, pp. 344-5; Marcus Friedrich, *Die Grenzen der Vernunft: Theologie, Philosophie und gelehrte Konflikte am Beispiel des Helmstedter Hofmannstreits und seiner Wirkungen auf das Luthertum um 1600*, Munich: Vandenhoeck und Ruprecht, 2004; Howard Hotson, *Commonplace learning: Ramism and its German ramifications*, Oxford, 2007.

devotion to reason and empiricism, may remind us of the anecdote in Sanctorius Sanctorius's *Methodi vitandorum errorum* of 1603, in which an Aristotelian onlooker is present at an anatomical dissection which shows by ocular demonstration that nerves originate in the brain and not (as Aristotle had claimed) in the heart. The onlooker then confesses to the anatomist that he had made him see the matter so palpably and plainly that if Aristotle's text were not contrary to the demonstration he had just witnessed, and did not state plainly that nerves originate in the heart, he would have been forced to admit that what he was seen was true. Sanctorius's friend Galileo later repeated the same anecdote to support the virtues of autopsy over written accounts in natural philosophy.[6]

(4) Any assertion of dissent or traditionalism in a discipline which is in part text-based necessarily entails that the interpretation of that text is a component part of what will count as orthodox or heterodox; and given the nature of interpretation, there cannot be a supratemporal indubitable interpretation of any text.

(5) Moreover, all sides in a debate will claim that truth is their ultimate yardstick: or nearly all. Riolan's preference to err with an authority than to be right with his detractors is a powerful reminder of the force of authoritative texts (or the argument from authority) when allied with real power structures in any society. One of the most powerful of such power structures throughout the Middle Ages was the Roman Church. Under the threat of Aristotleinspired versions of natural philosophy that contradicted received Catholic doctrine, the Bishop of Paris Etienne Tempier famously declared in 1277 that there was only one truth, that of theology, and that anyone claiming that there was a separate truth of philosophy – the theory of *duplex veritas* – was heretical. This produced a dilemma for philosophers, most

[6] Sanctorius Sanctorius, *Methodi vitandorum errorum*, Venice, 1603, iii.15; Galileo Galilei, *Dialogo sopra i due massimi sistemi del mondo*, ed. Ottavio Besomi and Mario Helbing, Padua, 1998, pp. 116-7.

notably those who studied nature. Albert the Great's doctrine 'de naturalibus naturaliter' provided a way out of this dilemma. By declaring that their findings were no more than opinions, and that they accepted the unicity of theological truth, philosophers were able to operate freely in a relatively untrammelled field of investigation.[7]

The same issue arose at the end of the fifteenth century, when the interpretation of Aristotle's theory of soul as materialist by Alexander of Aphrodisias led to the renewed suppression of certain lines of enquiry, as the Pomponazzi affair of 1515-18 revealed.[8] This left Galenist doctors in a quandary, which they solved by the now venerable Albertine method. The Paduan professor of medicine Giambattista da Monte expressed this in a very clear way in his lectures when speaking about the relationship of body and soul and the generation of mixed bodies: 'to this question, theologians, philosophers and physicians respond in different ways. I shall now say a few things on this subject, and shall speak as a philosopher and physician. For if I should want to speak about it theologically, I might perhaps say the exact opposite. For nothing is worse in philosophy than to mix it with theology.'[9] Da Monte's belligerent expression of Albertine independence and even adherence to the disqualified view of *duplex veritas* suggests that there may have been an element in the mental *habitus* (the cast of mind) of all Paduan-trained physicians that predisposed them to dissident views. Their mentor Pietro Pomponazzi suggested this in a

[7] Voir J.F. Wippel, 'The condemnations of 1270 and 1277 at Paris', *Journal of Medieval and Renaissance Studies*, 7 (1977), 169-201; James A. Weisheipl, (ed.), *Albertus Magnus and the sciences: commemorative essays*, Toronto, 1980.

[8] Martin L. Pine, *Pietro Pomponazzi, radical philosopher of the Renaissance*, Padua, 1986.

[9] Giovanni Battista da Monte, *In nonum librum Rhasis…expositio*, Venice, 1554, p. 31: 'in qua quidem generatione aliter respondent theologi, aliter philosophi, aliter medici. Ego brevissime de hac questione aliqua dicam, sed quaecunque dicam, dicam ut peripateticus, et ut medicus. Nam quando theologice de ea loqui voluero, totum forte oppositum dicam. Nihil autem existimo deterius in philosophia posse contingere quam cum ea theologiam commiscere.'

different way when he said in a lecture that 'it is important for anyone in pursuit of truth to be a heretic in philosophy'.[10]

A general question which should be raised here is this: is one a dissenter by a special sort of *habitus* (a mental predisposition that Molière called 'l'esprit contrariant' in his comedy *Le Misanthrope*)? And is this *habitus* limited to one field, or is it a general disposition of mind? Dissident opinions are occasionally justified by recourse to a competing authority (a preference for Plato over Aristotle, for instance), but much more commonly to reason, or empirical evidence. As learned medicine is explicitly a discipline that operates under the joint banner of *ratio* and *experientia*, it is particularly well placed to be the site of dissent. One might be tempted to argue that this medical predisposition to dissent is a transferable disposition. In 2006, I edited with John Brooke a collection of papers that set out to test this proposition, with mixed results.[11] It does however find some support in the modern collection of studies on heterodox religious figures known as the *Bibliotheca dissidentium*. The theological dissidents so far investigated include the doctors Jacob Suter, Johann Hasler, Simone Simoni, Michael Servetus, and Marcello Squarcialupi. Three of these physicians produced dissident works in medicine as well as holding heterodox theological views: Servetus (on the circulation of the blood, about which we shall hear), Hasler (who developed a theory of quantification) and Simoni (on plague and putrefaction: he was a man, by the way, who provoked such revulsion in another radical doctor, Squarcialupi, that he wrote a pamphlet about him entitled *Simonis Simoni Lucensis primum Romani, tum Calviniani, deinde Lutherani, denuo Romani, semper autem Athei, summa religio* Cracow, 1586).

[10] 'Oportet enim in philosophia haereticum esse, qui veritatem invenire cupit': cited by Cesare Oliva, 'Note sull'insegnamento di Pietro Pomponazzi', *Giornale critico della filosofia italiana*, 7 (1926), 274.
[11] John H. Brooke and Ian Maclean, *Heterodoxy in early modern science and religion*, Oxford, 2006.

These figures have been identified by modern scholars as notoriously dissident in theological matters; there are other doctors who could also qualify as dissident from the standpoint of other Churches (the Lutheran Nicolaus Taurellus, for example, who espoused a discredited Melanchtonian approach to natural philosophy after the publication of the Formula of Concord in 1580[12]), and yet others who qualify as dissenters in respect of their medical views alone, and were branded as heterodox in their own day. The first of these was the radical physician and religious thinker Theophrast von Hohenheim known as Paracelsus (1493?-1541), who gloomily records in the *Opus paragranum* (1529-30) that he was described as the Luther of medicine; soon after, Andreas Thurinus (1473-1543) in Florence, Jeremias Thriverus (1504-54) in Louvain, and Andrea Camuzio (1510?-78) in Pavia use the epithets 'Lutheran' or 'heretic' to describe deviant thought in the sphere of medicine to denounce respectively Matteo Corti, the author himself, and Girolamo Cardano.[13] I have already mentioned the figure of Turquet de Mayerne, who was known to be an adherent of reformed religion: it is very likely that the staunchly Catholic and Galenist Medical Faculty of Paris who deplored Mayerne's adherence to Protestantism, saw his support of chemical medicine as homologous to his heretical religious beliefs. His *Apologia* helped make this connection in their mind by being first published in the Calvinist city of La Rochelle, known otherwise only for its polemical religious literature.

---

[12] See Ian Maclean, 'The reception of medieval practical medicine in the sixteenth century: the case of Arnau de Vilanova', in *Learning and the market place: essays in the history of the early modern book*, Leiden and Boston, 2009, pp. 99-105.

[13] See Paracelsus, *Sämtliche Werke von Theophrast von Hohenheim genannt Paracelsus: 1. Abteilung, Medizinische naturwissenschaftliche und philosophische Schriften*, ed.Karl Sudhoff , Munich, 1922-33, viii.625; Andreas Thurinus, *Ad Matthaeum Curtium de vena in curatione pleuritidos incidenda*, Bologna, 1533, f. 24^{r}; Jeremias Thriverus, *Paradoxa de vento, aere, aqua et igni*, Antwerp,1542, sig. A6; Andrea Camuzio, *Disputationes, quibus Hieronymi Cardani magni nominis viri conclusiones infirmantur, Galenus ab eiusdem iniuria vindicatur, Hippocratis praeterea aliquot loca diligentius multo, quam unquam alias, explicantur*, Pavia, 1563, cited by Nancy G. Siraisi, *The Clock and the mirror: Girolamo Cardano and Reniassance medicine*, Princeton, 1997, pp. 68, 145.

Yet some of the figures I have just mentioned, who might have accepted that they were heretics in terms of medical doctrine, proclaimed themselves wholly orthodox in terms of Catholic theology, so both possibilities exist. Those working in areas of natural philosophy such as the relationship of soul and body and to matter, whether in Catholic or other environments, often fell under the suspicion of free-thinking as we have already heard, and others such as Simoni were publicly denounced as such in protestant circles. Even Cardano, with his many protestations to the contrary, became accused of this after his death by the Jesuit polemicist Martin del Rio.[14]

Revisions of old doctrine is one thing: but what about new knowledge - for example, new botanical knowledge from America, Africa and the Far East, and new anatomical discoveries? The debate about the nature of the Great Pox from the turn of the sixteenth century onwards is an example of the difficulties posed by the need to incorporate new empirical knowledge, or aberrant versions of nature, into old conceptual structures[15]; there are many other such examples one could cite in the course of the sixteenth century, including the nature of contagion, diseases of the whole substance, and plant taxonomy, which according to most readings of Aristotle, *Metaphysics*, vii.12, has to conform to definition by genus and ultimate differentia. This however did not allow the insertion of all new plants into the existing taxonomy, for which multiple differentiae had to be invoked. In order to justify this inside an Aristotelian natural philosophy, Andrea Cesalpino argues that Aristotle did not intend the relevant passage as a 'true conclusion from true premisses' but rather as 'an absurd consequence of a flawed mode of definition.'[1617] Cesalpino produces thereby a novel

[14] *Disquisitiones magicae*, Cologne, 1633, p. 229.
[15] See Jon Arrizabalaga, John Henderson and R.K. French, *The great pox: the French disease in Renaissance Europe*, New Haven and London, 1997.
[16] Kristian Jensen, 'Description, division, definition – Caesalpinus and the study of plants as an independent discipline', in *Renaissance readings of the Corpus Aristotelicum*, ed. Marianne Pade, Copenhagen, 2000, pp.
[17] -206.

interpretation of Aristotle, and demonstrates the lengths to which scholars of his generation were prepared to go to save the coherence of peripatetic doctrine by the conciliation of texts. Seen from this point of view, he is a sort of retrograde dissenter, or a somewhat hypocritical restorer of the true sense of an ancient text. Although there are no examples of such a thinker being studied in the conference, it is clearly a possible category, and some can still be found in the modern world: for example, the flat earth society, and even perhaps certain versions of biblical fundamentalism. The boundaries between the natural, the preternatural, and the supernatural also come under pressure at this time.[18]

In sum, all revisionist opinions need to make one of four claims: the first is internalist, and consists in the assertion (as in the cases of Mayerne and Cesalpino) that they are not revisionist, but correct interpreters of texts; the second, also internalist, consists in an attack the existing authority by exposing inconsistencies or lapses in logic; the third is externalist, and brings to bear external evidence drawn from experiential data on the authority in question; the fourth, which is mostly encountered in theology, invokes a competing authority. This does not exhaust the possibilities of expressing dissent. One of these is the refusal of polemical engagement by remaining discreetly silent about the relevant issues, and there is some evidence that this was a position adopted by Iberian physicians after 1558, and by Jewish doctors, although it should be said that in their public statements the latter most often declare themselves to be rational i.e. Galenists, with a strong interest in practical medicine in which Jewish physicians had been long recognized as adept.[19]

[18] Ian Maclean, *Logic, signs and nature in the Renaissance: the case of learned medicine*, Cambridge, 2001, pp. 234-275.
[19] Ian Maclean, 'Lusitani periti: Portuguese medical authors, national identity and bibliography in the late Renaissance', in *Learning and the market place*, pp. 375-90.

Another approach also distinct from explicit dissent but with much of the same effect is through the exercise of reconciling competing authorities. In this case, logical analysis and empirical data could be used as a means of dealing with problems of clashes between authoritative texts with a view to preserving their authority. In theology, all confessions produce works reconciling apparent contradictions in the biblical text, and the work of conciliation is extended in the latter part of the century to the discrepancies between the Fathers, the ecumenical Councils and Holy Writ, between the theology of Thomas Aquinas and Duns Scotus, and between Calvinists and Lutherans on the sacraments. The term 'harmonia' is frequently found to express the discrepancies which pertain particularly to the four synoptic gospels.[20] In the broad field of philosophy, there is a genre of works reconciling Plato and Aristotle, of which the best known contributions are by Symphorien Champier, George Trapezuntius, Jacques Charpentier, Gabriele Buratelli and Jacopo Mazzoni.[20] In philosophy and medicine, an early influential work in this genre is that of Pietro d'Abano, the *Conciliator differentiarum quae inter philosophos et medicos versantur*, written around 1310, and printed fourteen times between 1472 and 1565. By taking apparently opposed propositions drawn from Aristotle, Galen, and Arabic commentators, Pietro seeks to achieve a reconciliation which on the surface preserves the status of all parties as authorities. Pietro's work does not in fact always reconcile his authors: he is capable of coming down on one side or the other, although he rarely makes this very explicit.[21] Dissent could thus express itself in a discreet way through the genre of conciliation. In some of the questions Pietro discusses,

---

[20] E.g. Andreas Osiander, *De harmonia evangelicae libri III*, Basel, 137; Jean Calvin, *Harmonia ex tribus evangelistis composita*, [Geneva}, 1555; Jean du Buisson, *Historia ac harmonia evangelica*, Rome, 1575. [20] Champier, *Symphonia Platonis cum Aristotele et Galeni cum Hippocrate*, Paris, 1516; Trapezuntius, *Comparationes phylosophorum Aristotelis et Platonis*, Venice, 1523 ; Charpentier, *Platonis cum Aristotele in universa philosophia comparatio*, Paris, 1573 ; Buratelli, *Praecipuarum controversiarum Aristotelis et Platonis conciliatio*, Venice, 1573 ; Mazzoni, *In universam Platonis et Aristotelis philosophiam praeludia, sive de comparatione Platonis et Aristotelis*, Venice, 1597.

[21] Romana Martorelli Vico, 'Tra medicina e filosofia: il Conciliator di Pietro d'Abano sulla dottrina aristotelica della generazione', in *Parva naturalia: saperi medievali, natura e vita*, ed. C. Crisciani, R. Lambertini, and R. Martorelli, Pisa, 2004, pp. 73-81.

his work does not even settle the matter, and there is continuing conflict, as over the issue of the latitude of health, in which two competing interpretations of the opening section of Galen's *Ars parva* – those of Torrigiano and Gentile da Forligno – are juxtaposed and their differences made visible in diagrammatic form in the fourteenth and fifteenth centuries. Proponents of both views could, and did, pronounce themselves orthodox Galenists.[22] In this, the discipline of medicine differs from that of theology, which (as we have heard) subscribes to the view that there is only one truth on any dogmatic issue.

Fields other than medicine have conciliators: for example, the civil lawyer Jean Mercier wrote a *Conciliator sive ars conciliandorum eorum quae in iure contraria videntur* of 1587[23], and in 1609, Rudolphus Goclenius had published in Kassel a work entitled *Conciliator philosophicus*. He lays down thirty-two precepts for achieving conciliation, which is based on logical distinctions applied to propositions or reasoning, under five conditions (the propositions must have the same subject and predicate, in the same mode, in relation to the same thing, in the same respect, and at the same time). These all pertain to the scholastic logical law of identity (one of the three classical logical laws, with noncontradiction and the excluded middle). The practice of resolving philosophical differences in this way died out in all disciplines other than theology in the first half of the seventeenth century.[24] The *Conciliator philosophicus* is the work of an Aristotelian struggling to maintain the philosopher's authority in the face of competing interpretations of it. Long before its appearance, medical writers began to treat authorities with much less deference, as does Girolamo Cardano's *Contradicentia medica* of 1545, in which the author is willing to

[22] Ian Maclean, 'Diagrams in defence of Galen: medical uses of tables, squares, wheels and latitudes, 14801574', in *Transmitting knowledge: words, images and instruments in early modern Europe*, ed. S. Kusukawa and I. Maclean, Oxford, 2006, pp. 135-64

[23] Both Everardus Bronchorst and Julius Pacius produced extensions to Mercier's work entitled *Enantiophana*, in 1597 and 1605 respectively.

[24] See e.g. Menasseh ben Israel's *Conciliator, sive de convenientia locorum S. Scripturae quae pugnare inter se videntur*, [Amsterdam], 1633.

treat the propositions of authorities as simply erroneous by the use of empirical data and logic. Even when physicians refer to conciliation, those of independent mind have moved beyond it by the end of the sixteenth century: Gregor Horst's adaptation of Pietro d'Abano entitled *Conciliator enucleatus, seu differentiarum philosopharum et medicarum Petri Apponensis compendium* (Giessen, 1615) in fact resolves all differences by determining either rationally or empirically one or the other proposition (or neither) to be correct.

I have mentioned the possibility that authorities could be pitted against each other, as in the case of Pietro d'Abano: in theology, recourse to conciliation between them was not an option, so the various churches devised hierarchies of authority. It was the Conciliarist discussions at Constance and elsewhere and the Wycliffe and Hussite heresies of the fifteenth century that provoked a number of attempts in the Catholic Church to establish formally such a hierarchy. These were reiterated in the period of the Reformation. A decree of the fourth session of the Council of Trent of May 1546 made the Vulgate the only correct version of Scripture, and the Church itself, including its unwritten traditions, the determining authority of its sense, which was to be confirmed by the 'unanimous consensus of the Church Fathers' – a formula obviously requiring further specification (who were the Church Fathers?) which it has yet to receive.[25] A number of Spanish theologians took this discussion further; thereafter, the most cited work on the subject was that of Melchior Cano, whose frequently reprinted *De locis theologicis* was first published posthumously in 1562. This treatise on the *sedes argumentorum* gives a list of ten *loci* for the purpose of arriving at theological judgments.[26] The most certain and authoritative of these is Holy Writ; the least authoritative are the trio Natural Reason, the opinions of Philosophers, and Human History, which embraces the whole field of *historia*, including natural history. This is relevant to the present conference as most of the papers investigate physicians who rely precisely on these sources of information. This marks the great divide between theology on the one hand, in which error

and doubt are inadmissible, and natural philosophy and medicine on the other, where it is conceded that absolute certainty may not be obtainable.

Another possibility which emerges at the end of our period is philosophical eclecticism under the banner of truth: Daniel Sennert's *De chymicorum cum Aristotelicis et Galenicis consensu et dissensu liber* of 1619 provides us with an example of this. This is closely related to conciliation, but different insofar as no attempt is made to preserve the authority of the philosophers in question. Sennert is far from the first to have said that 'truth depends not on the authority of name of a man but on the clear proof provided by the thing itself' ('non enim ab hominis auctoritate et nomine, sed rei evidentia veritas pendet'); nor is he unique in asserting in his preface to the reader that he has no axe to grind and no commitment to any side, but his way of dealing with these claims seems to me to be novel. He explicitly deplores sects: in speaking of Paracelsians, he notes with regret that Petrus

[25] H. Denzinger, *Enchiridion symbolorum*, ed. A. Schönmetzer, Barcelona, Freiburg in Breisgau, and Rome, 1976, no. 1507.

[26] Sacred Scripture is at the top, followed by the Tradition of Christ and the Apostles, the Authority of the Catholic Church, General Church Councils, the Authority of the Roman Church, the Saints, Scholastic Theologians, Natural Reason, the Authority of Philosophers, and finally Human History. See also Ian Maclean, 'The other philology: resolving doubts about textual meaning in early modern law and theology', in *The marriage of philology and scepticism: uncertainty and conjecture in early modern scholarship and thought*, ed. Gian Mario Cao, Anthony Grafton and Jill Kraye, forthcoming .

Severinus, who tried to organize Paracelisan doctrine into a formal art, has now acquired his own followers who should perhaps be called 'Severinians'.[25] He argues that both Galenists and Chymists have their strong points, but that to make progress one group will have to accept novelty, and the other banish the manifest absurdities of Paracelsus; the guiding principles of medicine are *ratio* and *experientia*. This makes him a rational eclectic; but it also reduces the 'authorities' to which he refers to collections of propositions all of which are subject to testing. His title might sound like an act of conciliation, but the work is far from

[25] Daniel Sennert, *De chymicorum cum Aristotelicis et Galenicis consensu et dissensu liber*, Wittenberg, 1619, p. 58.

being that. It is worth remembering that Sennert was a professor at Wittenberg, probably the largest medical faculty in Europe in his day, and one which was explicitly traditional in its approach to Galenism.[26] If he was able to displace Galenic medicine this far, it rather suggests that the notion of dissent is not very appropriate to medical faculties in the 1620s.

It is worth briefly mentioning at this point the most obvious field in which to look for the Latin term *dissidens* in the sixteenth century, namely theology, for it is there that the term took on substance.[27] 'Dissidere' and words related to it are not very common in ancient and patristic literature. Their meaning can be conveyed in many other ways ('sententiae alienae', 'repugnantia', 'contraria', 'contradictiones', etc.). As an adjective or adjectival noun, 'dissidens' can relate either to opinions or to persons in classical and post-classical Latin.[28] It comes to have the implication that a position vis-à-vis an authoritative text or doctrine has been taken, but that the element of dissent is not necessarily to be treated as anti-orthodox; it could be a corrective, or a revision of a position that eventually comes to be orthodox. After Luther's very public declaration of theological dissent in 1517-1518, it refers to passages of Scripture or interpretations of them that are in opposition to each other, or apparently so ['in speciem inter se pugnantia']. In Kaspar Schatzger's text of 1522 entitled *Scrutinium divinae scripturae pro conciliatione dissidentium dogmatum*, the designation implies valueneutrality: there are several views on major doctrinal issues, which can be reconciled by patient examination of the relevant scriptural evidence. An influential text of 1527 that brought together competing patristic interpretations on major doctrinal issues is the *Unio dissidentium* by an author describing himself as 'Hermann Bodius'. The term 'nonconformist' may in part

[26] Walter Friedensburg, *Geschichte der Universität Wittenberg*, Halle ,1917, pp. 276-8.
[27] Early usages can be found also in Canon Law (Ulrich Zasius's tract of 1508 entitled *Quaestiones de parvulis Iudeorum baptistandis a communi doctorum assertione dissidentes*).
[28] In the *Patrologia latina* of Migne, there are 163 occurrences of the adjective or adjuectival noun, referring to both persons and propositions ('sententiae').

translate this usage of 'dissidens': it implies that there are positions that can be allowed to continue to exist alongside the prevailing orthodoxy. Once, however, clearly defined opposing versions of theological doctrine emerge, it became clear that such differences could not be resolved by reconciliation, as the next publications from the Catholic side of the debate made explicit: witness Josse Clichtove's title *Improbatio quorundam articulorum Martini Lutheri a veritate catholica dissidentium* of 1536. Here the yardstick of truth is located not in an act of reconciliation, but explicitly and firmly on one side of the debate.[29] Thereafter the term is used to describe either disagreeing parties in the protestant camp (or their opinions) by protestants seeking one orthodoxy (mainly Luther's: see Joachim Westphal's and Johannes Timann's attacks on the 'sacramentarii' of the 1550s[30]), or by Catholics exposing disagreements between protestants for polemical purposes, notably on the issue of the Eucharist, and *dissidentes* came more often to designate the persons holding opinions diverging from a given confession, which, through a number of meetings and synods between 1530 and 1580, were provided with solid doctrinal foundations.[31] Every church proclaimed the unicity of its own truth, and reinforced this with catalogues of heresies. For reasons both of internal and external disputes, Lutherans were particularly

[29] In the same year, the Strasbourg Reformer Martin Bucer published in his native town his *Metaphrases et enarrationes perpetuae Epistolarum D. Pauli Apostoli locorum [...] dissidentium in speciem locorum Scripturae, et primarum hodie in religionis doctrina controversiarum conciliationes et decisiones XLII. ... Tomus primus.*

[30] Westphal, *Farrago confusanearum et inter se dissidentium opinionum de coena domini, ex sacramentariorum libris congesta*, Magdeburg, 1552; Timann, *Farrago sententiarum consentientium in vera et catholica doctrina, de coena domini, quam firma assensione, et uno spiritu, juxta divinam vocem, ecclesiae Augustanae confessionis amplexae sunt, sonant et profitentur: ex apostolicis scriptis: praeterea ex orthodoxorum tam veterum, quam recentium perspicuis testimoniis, contra sacramentariorum dissidentes inter se opiniones, diligenter et bona fide collecta*, Frankfurt, 1553.

[31] At various councils and meetings from the 1530s onwards, Christian denominations produced their own versions of orthodoxy. The Lutherans did this first, in Augsburg in 1530, then again in 1540-2 (the 'confessio variata', which set out to accommodate the views of other reformed groups), and finally in 1577 (the gnesiolutheran 'Formula of Concord'). The Roman Catholics (excluding the Gallican Church) did this at the Council of Trent, between 1545 and 1563; elsewhere in Europe, other agreed confessions were formulated (the Gallican in 1559, the Belgic in 1561, the Helvetic in 1561-2). The Synod of Dort (1618-9) represents in one sense a culmination of the later declarations of doctrine which were for the most part of Calvinist inspiration. The Church of England meanwhile had enacted its thirty-nine articles by 1571.

active in this domain; one of their number produced the most extensive of all heresiologies, the *Catalogus Haereticorum* by Conrad Schlüsselburg in 13 volumes, produced in 1597 at the expense (ironically) of a Reformed publishing House in Frankfurt (Nicolas Bassée), thereby demonstrating the victory of commercial over religious interests and motives. Polemical attacks on rivals in natural philosophy and medicine certainly took place, but not on this systematic level.

I turn now to the levels or degrees of dissidence: at the level of language and reference; at the level of empirical evidence; at the level of logic; at the level of doctrine. This represents an ascending order of dissent. The lowest level is quite often humanist and philological in inspiration, and concerned with the recovery of the early Byzantine medical handbooks of Oribasius, Alexander of Tralles, Aetius of Amida and Paul of Aegina. But there is also textual criticism in the form of historical or linguistic correction, as in the case of Leoniceno's *De Plinii et aliorum in medicina erroribus* of 1492. In this is found a clear attribution of error to an ancient authority by demonstrating mistakes in the referential function of words, and in this sense this is not an act of humanist restitution of the text of Pliny, but there does not seem to me to be an attack on the discipline of medicine itself. After all, even the medieval *Articella* which was a standard teaching text implicitly showed caution on semantic issues by producing more than one translation of Hippocratic and Galenic texts; the practice in herbals of listing all the various linguistic terms to describe a plant is a similar verificatory procedure, and another example of this can be found in one of Manardo's letters.[32] Another symptom of a perceived inadequacy of the ancient authorities in medicine is found in the widespread support for the advances in practical medicine made in the medieval

[32] Manardo, *Epistolarum medicinalium tomus secundus*, Lyon, 1532, vii.2 ('de nominibus exteriorum morborum'), pp. 35-101.

period. Michel de la Chapelle from Tournai (d. c. 1545) did more than anyone else to see medieval authors of practica through the presses of Lyon publishers: they include Arnau, Avicenna, Nicolaus Praepositus, Gilbert the Englishman, Bertrucci, Jean de Tournemire, Marsilio de Santasofia and Gianmatteo Ferrari de Gradi.[33] In 1538, the Strasbourg physician and reformer Otto Brunfels avers that 'it is beyond all controversy that in the composition of pharmacological remedies, recent doctors -- that is how I refer to Constantine the African, Montagnana, Bertrucci, Savonarola, Arcolani , Guaineri, Ferrari de Gradi, Arnau, Gatinaria and the rest -- have in many ways surpassed the diligence of all the ancient doctors.'[34]

One could produce many declarations by Renaissance doctors that their use of language is secondary to their grasp of referents; in this sense, they are prefer *res* to *verba* and accept the latter to be no more than conventional referents to things.[35] Where it might be possible to see an act of dissent at the level of nomination is in botany and nosology. In both cases, the discovery of previously unknown elements of the field led to the need to take a stance on the use of language in natural philosophy. A late indication of this is found in William Harvey's complex and shrewd introduction to his *Exercitationes de generatione animalium* of 1651. He looks back at various strategies adopted by physicians to overcome the dual pitfalls of using neologisms (which would not be understood) and employing an existing vocabulary (which would retain unwanted connotations). He mentions his erstwhile tutor Fabricius ab Aquapendente's use of images ('tabulae') as one strategy by which this dilemma might be solved, but goes on himself to use old terms for which he provides

[33] Henri-Louis Baudrier, *Bibliographie lyonnaise*, Paris, 1964-5, viii.409ff. ; Giralt, *Arnau de Vilanova en la imprenta renaixentista*, Manresa, 2002, pp. 27-35.

[34] Otto Brunfels, *Neotericorum aliquot medicorum in medicam practicam introductiones*, Strasbourg, 1533, *5v-6r: 'extra omnem controversiam est, in Pharmiacorum compositione, neotericos (sic enim appello Constantinum, Bartholomeum de Montagnana, Betrutium, M. Savanorolam, Herculanum, Guanerium, Matthaeum de Grado, Arnoldum, N. [sic] Gatinariam, etc. multis partibus , veterum Medicorum omnium industriam vicisse.'

[35] Maclean, *Logic, signs and nature*, pp. 105-8.

modified definitions which he places in the context of Aristotelian linguistics and logic.[36] This could be seen as an example of discreet or even silent dissent.

It is pertinent next to consider the level of empiricism. Botany is one area where empirical evidence has a direct effect on the content of teaching and practice; anatomy is another. Here, the rediscovery of ancient learning can be invoked to disguise dissent from ancient authority, as was initially the case of the Parisians who reacted to the publication of Galen's *De anatomicis administrationibus*. With Vesalius came the confidence to oppose openly Galenic teaching, and in this sense he, Fallopia, Columbo, Valverde and others are clearly dissenters.[37] In the empirical field, new practices also emerged that were recognized as such: one may think especially of the genre of observations, which were seen as something innovative after the publication of Antonio Benivieni's little work on case histories entitled *Libellus de abditis nonnullis ac mirandis morborum et sanationum causis* of 1507. [38]

With the level of logic, we move closer to the pedagogical aspect of the discipline of medicine. The arts course is the propedeutic for learned medicine, and it is through the employment of Aristotelian logic that the errors of the competitors of university-trained physicians – empirics, charlatans, Paracelsians – are defined in polemical tracts. The logic of empirics is characterised as epilogism as opposed to analogism: epilogism allows you to say that something is so from its effect; ('quod ita sit ab effectu'); but analogism can answer the question why it is causally so ('cur ita sit a causis').[39] Epilogism is associated with three

---

[36] Ibid., pp. 108-10.

[37] Andrew Cunningham, *The anatomical Renaissance*, Aldershot, 1997.

[38] Gianna Pomata., 'A Word of the Empirics. The ancient concept of observation and its recovery in early modern medicine', *Annals of Science*, 68 (2011),. 1-27; ead., 'Sharing Cases: the *Observationes* in Early Modern Medicine', *Early Science and Medicine*, 15, (2010), 193-236.

[39] Girolamo Cardano, *In Hippocratis Coi Prognostica commentarii*, Basel, 1568:18 (i.10) citing inter alia Galen, *In Hippocratis de victu in acutis*, xliv, K 15.508-10; *De sectis*, v, K 1.75-9. Giambattista da Monte, *Medicina universa*, Frankfurt, 1587, pp.6-7, 233: >relatio quaedam particularis ad universale et concludit particulare, et fit demonstratio a signo= which >ab universali particularia concludit ita, ut maior sit universalis, individuum vero minoris subjectum. Epilogismus comparatio est similis ad simile, estque empiricorum proprius ut medicorum analogismus=; Sanctorius Sanctorius, *Methodi vitandorum errorum*, Geneva, 1630, pp. 726-32

common fallacies: the fallacy of the consequent (if all A is B, then all B is A) and the fallacy of induction (if A, B and C in a given logical field are of a nature, then D will be so also); a third is the fallacy of the accident (which is to take an accidental feature of something to be a defining characteristic: e.g. to take the blackness of crows to define the nature of a crow). Dissent from this approach to the rational treatment of empirical evidence is expressed silently in popular do-it-yourself medicine, once encapsulated in the *Secreta secretorum* tradition with its accumulation of recipes, lore and advice, which was succeeded in around 1555 by a new vernacular secrets literature emerge in the shape of the *Secreti* of Alessio Piemontese Leonardo Fioravanti and others.[40] Dissent from even the logic of rational doctors is expressed polemically by Cardano, who in his *Dialectica* of 1562 sets out an alternative logic for medicine derived from Hippocrates and not Galen, whose theory of demonstration he describes as ridiculous.[41]

We come finally to the level of medical doctrine and theory. It is not uncommon to find Renaissance doctors proclaiming that the precepts they apply to their art are infallible: Jacques Houllier of Paris claims that medicine is an art, and that 'art is the understanding or doctrine drawn from true, certain, universal and mutually consistent precepts directed to a single and François Valleriola claims that 'the precepts of the medical art are of the order of eternal and necessary truth'.[4243] But the precepts borrowed from natural philosophy in the form of the concept of nature and the theory of krasis mean that the truths involved are not

(xi.2): 'ostenditur ex Aristotele et Galeno in methodo per solam indicationem perquiri posse remedia et nequaquam per experientiam et analogismum.=

[40] William Eamon, *Science and the secrets of nature: books of secrets in medieval and early modern culture*, Princeton: Princeton University Press, 1994.

[41] Cardano, *Dialectica*, in *Opera omnia*, ed. Charles Spon, Lyon, 1666, i. 293-308 (302-4).

[42] Jacques Houllier, *In Aphorismos Hippocratis commentarii septem*, Paris, 1582, fol. 3r : 'ars est compraehensio seu doctrina ex praeceptionibus veris, certis, universalibus, consentientibus inter se et ad unum finem.' ; François Valleriola, *Commentarii in librum Galeni De constitutione artis medicae*, Lyon, 1577, p.

[43] 8: 'praecepta medicae artis sunt perpetuae et necessariae veritatis.'

apodictic. I have described elsewhere how the concept of nature is indeterminate in a number of crucial ways: there is no clear agreement about the relationship of sublunary and superlunary nature; it is not clear whether sublunary nature is subject to a higher force (necessity, or matter, or chance, or the stars, or the divine plan); nature has both residues (in the form of features which are not encompassed by the operative concept) and redundancy (in the form of non-functional elements within the operative concept), and although it is characterised by invariant laws or at the very least regularities in a limited zone, there is a penumbra of exceptions and rare events which escape determination by these laws or regularities (what Francis Bacon called 'nature erring'). There are things according to nature and against nature; but those which are against nature are in some sense or other within nature. Very rare events in nature can be confused with miracles; any account of nature has to be able to distinguish between the natural and the supernatural, as a number of Renaissance thinkers point out. Whether nature has intentions (that is, final causes) or merely tendencies is open to question. Late Renaissance thinkers come to stress the importance of material and efficient causes over formal and final ones. Human nature is described in terms of its complexion (its combination of humours); the theory of idiosyncrasy means that every individual has a unique combination of humours which can vary over time. So in respect of the mental instruments used to understand them, nature and human nature are subject to indeterminacy, and this means that they are not able to be subjected to apodictic demonstration.[44]

It is clear that many of Galen's precepts were attacked by a variety of physicians in this period, and that they were not thought by all to be infallible. It is relevant here to distinguish between medical theorica and practica. In the latter area, it had already been conceded that Galen and other ancient authorities had been superseded by medieval writers;

[44] Ian Maclean, *Le monde et les hommes selon les médecins de la Renaissance*, Paris, 2006.

there were also areas of theorica (notably anatomy and physiology) in which dissent is widespread. Galenism was to persist as a university phenomenon into the eighteenth century, but it seems to me (and to Temkin) to have become qualified in so many ways that it provided more of a yardstick than an affirmation of authority.[45]

* * *

I hope to have shown that there is indeed a culture of dissent in natural philosophy and medicine which is different from that of theology, in that it has a different view of truth and a different subject matter. I hope also to have shown that empiricism itself is clearly a motor of change, but it is not the sole motor of change. There are in all these fields authorities and institutions to be dissented from, and these are endowed with real powers. But the specifics of Galenic medicine make it possible to absorb dissent in a number of different ways, in the same way the Herbert Marcuse argued in the 1960s that bourgeois culture could survive the attacks of its most severe critics by assimilating, absorbing and hence neutralising them[46]: among such acts of absorbion are the humanist appeal to the prisca philosophia and the varieties of conciliation, eclecticism, and more or less radical revisionism (notably that of Severinus and Sennert). It might be asked from this perspective whether it is more in the spirit not just of medical science but of the whole age to contest authorities, or whether the dominant mode of proceeding is less confrontational, and seeks to accommodate them to the new in a broader framework. That framework at its broadest is Aristotelian; and the emerging new science cannot by the end of the seventeenth century do anything other than exercise the most radical of revisions, that of total rejection. The state of affairs was well represented by Galileo and others in an architectural simile with which I shall finish this paper. In a very famous passage of the *Dialogo sopra i due massimi sistemi del mondo*, the

[45] OsweiTemkin, *Galenism : rise and decline of a medical philosophy*, Ithaca and London, 1973.
[46] Marcuse, *One dimensional man*, Beacon Press, 1964, chapter 3: 'the absorbent power of society depletes the artistic dimension by assimilating its antagonistic contents.'

voice of Sagredo describes the predicament of Aristotelians like his interlocutor Simplicio (who at one point asks plaintively: 'if Aristotle is to be abandoned, whom shall we have as a guide in philosophy?'):

I can put myself in Simplicio's place and see that he is deeply moved by the overwhelming force of these conclusive arguments. But seeing on the other hand the great authority that Aristotle has gained universally; considering the number of famous interpreters who have toiled to explain his meanings; and observing that the other sciences, so useful and necessary to mankind, base a large part of their value and reputation upon Aristotle's credit; Simplicio is confused and perplexed, and I seem to hear him say, "Who would there be to settle our controversies if Aristotle were to be deposed? What other author should we follow in the schools, the academies, the universities? What philosopher has written the whole of natural philosophy, so well arranged, without omitting a single conclusion? Ought we to desert that structure under which so many travelers have recuperated? Should we destroy that haven, that Prytaneum where so many scholars have taken refuge so comfortably; where, without exposing themselves to the inclemencies of the air, they can acquire a complete knowledge of the universe by merely turning over a few pages? Should that fort be levelled where one may abide in safety against all enemy assaults?"

I pity him no less than I should some fine gentleman who, having built a magnificent palace at great trouble and expense, employing hundreds and hundreds of artisans, and then beholding it threatened with ruin because of poor foundations, should attempt, in order to avoid the grief of seeing the walls destroyed, adorned as they are with so many lovely murals; or the columns fall, which sustain the superb galleries, or the gilded beams; or the doors

spoiled, or the pediments and the marble cornices, brought in at so much cost — should attempt, I say, to prevent the collapse with chains, props, iron bars, buttresses, and shores.[47]

Simplicio's position is beyond dissidence: he, unlike Mayerne, does not consider the recovery of past general schemes (as conveyed through, for example, Hippocratic laws) as necessary. There can be no more tinkering at the level of interpretation; instead, we have come to something like a paradigm shift, and this Kuhnian theory is useful in identifying the point at which a new orthodoxy emerges which profits from the dissents of a past system, and sets up the framework in which an entirely new generation of dissenters will be able to operate.

[47] Galileo *Dialogo sopra i due massimi sistemi del mondo*, in *Opere*, ed. F. Flora, Milan and Naples, 953, 1.4123 [Simplicio's questions, according to Sagredo]: '"e a chi si ha da ricorrere per definire le nostre controversie, levato che fusse di seggio Aristotile? qual altro autore si ha a seguitare nelle scuole, nelle accademie, nelli studi ? qual filosofo ha scritto tutte le parti della natural filosofia, e tanto ordinatamente, senza lasciar indietro pur una particolar conclusione? Adunque si deve desolar quella fabbrica, sotto la quale si ricuoprono tanti viatori? Si deve estrugger quell'asilo, quel Pritaneo, dove tanto agiatamente si ricoverano tanti studiosi, dove, senza espori all'inguirie dell'aria, col solo rivoltar poche carte, si acquistano tutto le cognizioni della natura ? si ha da spiantar quel propugnacolo, dove contro ad ogni nimico assalto in sicurezza si dimora ? " Io gli compatisco, non meno che a quel signore che, con gran tempo, con spesa immensa, con l'opera di cento e cento artefici, fabbricò nobilissimo palazzo, e poi le vegga, per esser stato mal fondato, minacciar rovina, e che, per non vedere con tanto cordoglio disfatte le mura di tante vaghe pitture adornate, cadute le colonne sostegni delle superbe logge, caduti i palchi dorati, rovinati gli stipiti, i frontespizi e le cornici marmoree con tanta spesa condotte, cerchi con catene, puntelli, contrafforti, barbacani e sorgozzoni di riparae alla rovina.'