Introduction

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As a term, 'holism' is a fairly recent arrival in the English language and in other modern languages that have taken over various forms of it from the English.¹ The contemporary use of the label began with the South African statesman and thinker Jan Christian Smuts, who adopted it in his wide-ranging 1926 *Holism and Evolution*, an exposition of what he saw as the 'synthetic tendency in the universe ... the principle for the origin and progress of wholes in the universe', bringing together fields of inquiry as disparate as biology, politics, evolution and psychology.²

The book was perhaps not very influential in itself, but 'holism' became widely used in a variety of contexts and senses.³ What the new term served to indicate, an approach to natural and human phenomena directed at the understanding and valorization of whole systems rather than particulars, was not in itself obviously novel at all. The new label became embedded within a longer history, whose modern intellectual phases are notably associated with Enlightenment vitalism.⁴ The wider dialogue or opposition between a focus on the part(ial) or part(icular) and a notion of the whole or general, however, is a constant presence at various stages and levels in the history of Western thought, perhaps more than in other traditions. This broad opposition is widely disseminated in ancient science and philosophy (which reflected in various ways on cosmology, anthropology, psychology and metaphysics⁵), in

- 1 A glance at the classical languages already makes a semantic disjuncture evident, since the Greek for 'whole', ὅλος, can be only partially superimposed on Latin *universum* or *totus*. *Universum* conveys extension and replicability more than completeness, compactness and internal coherence, while *totus* suggests entirety as a merely quantitative and relative datum.
- 2 This work, with its environmental, psychological and biological scope, can be understood as background for Smuts' own political activity as a defender of human rights and ecological activist, based on a belief in natural law as the basis of civil law: see Anker (2001) 41–75 on the politics of Smuts' environmentalism in the context of 'paternalist ecology' (238–44).
- 3 Two years later the term was inserted into the *Encyclopedia Britannica*, described as 'a viewpoint additional and complementary to that of science.'
- 4 Harrington (1999) well describes the discontent with mechanicism and the demand for a 'reenchanted science' in German culture at the end of the nineteenth century.
- 5 See the treatment of the topic in Chiaradonna and Galluzzo (2013); the overview in D'Anna et al. (2019a); and the individual studies in D'Anna et al. (2019) on the topic of 'parts' and 'wholes' in modern thought after Montaigne.

political theory from the Renaissance onwards,⁶ and in the more recent history of the social sciences,⁷ in which the term 'holism' finally established itself and its own brand of discussion of particulars and universals.

Today the terms 'holism' and 'holistic' evoke many varied associations. Some are technical: professional medical ideals,⁸ lamenting disregard for the ill individual as 'whole' being and the interruption of the dialogue of information and negotiation between scientist-doctor and patient in modern medical practice (the 'disappearance of the sick man', in Jewson's formula⁹); biological theories; psychological and social doctrines.¹⁰ Others involve 'complementary' (or 'alternative' or 'integrated') medicine, for which 'holism' implies a critique of mainstream bio-medicine as reductionist through reliance on an alternative system. There are also aspects of popular culture inspired by medical trends (anti-establishment postures, forms of anti-Western cultural critique, environmental and ecological concerns, popular trends).¹¹ Alongside these are negative paradigms of favoring the general at the expense of the individual: totalitarian conformity, the denial of idiosyncratic ambitions and individual rights, and a romantic reverence for an awe-inspiring, annihilating superior order with touches of the irrational, which in the early decades of the twentieth century found elements of complicity with Nazi ideology.¹² Academically, methodological forms of holism have been advocated mostly in social-historical or anthropological quarters, but there are important applications to aspects of the life sciences, as Sober makes clear by comparing methodological holism in sociology and in the discussion of group vs. individual selection in evolutionary biology.¹³ How can such a multifarious category assist rigorous reflection on

6 In Guicciardini's famous formula, the contrast between *universale* and *particulare*, immutable nature vs. the uniqueness of the individual case; see Ginzburg (2018) 29–30 for an assessment of the tension between universal and individual in Machiavelli (and throughout the history of political theory), and the tradition of its 'contextualist' and 'universalist' interpretations.

7 See Gellner (1968) for an illustrative discussion, and 267–68 for reasonable assessment of methodological individualism vs. methodological holism in sociology and (social) history; the chapters in Brodbeck (1968) 239–336.

8 For surveys of these, see Rosenberg (1998); Laurence and Weisz (1998) 2–18; Poynton (1989).

9 Jewson (1976).

10 See Sober (1980); Weir (1985); Tennant (1986).

11 Various sub-cultural worlds, New Age and others, come into play here; see also Laurence and Weisz (1998) 6–8, 18.

12 See Laurence and Weisz (1998) 8–9; Harrington (1999), esp. 34–71, although with a balanced reevaluation of the traditional co-implications of vitalistic-holistic ideas and totalitarianism.

13 Sober (1980); Laurence and Weisz (1998) 5–6; Rosenberg (1985) 338–39.

the heritage of ancient thought and culture, and especially scientific thought and culture, or historical inquiry more widely?

Ancient medicine and philosophy, along with culture more generally, visibly thematized the concepts of 'part' and 'whole' in their theoretical reflections about nature, whether cosmologically or biologically. A famous Greek narrative about the origin of the world opens as follows: 'First of all, Chaos came into being.' Thus the beginning of the genealogy in Hesiod's *Theogony*¹⁴ on the antecedent of all differentiations and plurality in the world: in the beginning was an opening, a *chaos*, a gaping ensemble of undistinguished being. Further down the genealogical line, the progressive division and individuation (between sexes, among classes of human beings, separating mortals and immortals) that are preconditions to the existence of the world we know are always brought about by conflict, a process of unavoidable deterioration and toil that culminates in the separation of the human race from the community of the gods. This story describes the fracturing of an original unity in both a cosmological and a cultural sense, a process we can locate within a Greek mythical pre-historic era, but which also works as archetypal 'pre-history' in an ideal sense. The marker of the premodern, for the anthropologist, is its inescapable 'monism': 'the native is a logical hoarder ... he is forever tying the threads, unceasingly turning over all the aspects of reality, whether physical, social or mental.'¹⁵

We easily recognize here the weight of wholeness (whether material, *chaos*; socio-historical, the community of human and divine; or biological, the original lack of sexual differentiation) as the perfect primeval state that characterizes most Western philosophical and metaphysical traditions. In ancient philosophy, this fundamental anteriority/superiority of the 'whole' assumes the shape of a competition between a monistic view of the *arche* (the fundamental substance/origin) of reality, which will ultimately prevail, and its pluralistic, and especially dualistic alternatives.¹⁶ The contrasting pluralist

14 Hesiod, *Theogony* 116 ἦτοι μὲν πρώτιστα Χάος γένετ'.

15 Lévi-Strauss (1962/1966, 267), quoted by Latour (1993) 42. According to Latour in this work qualified actions of 'translation' (by which he meant the blending of concepts and cultural activities, creating forms of hybridism) are seminally opposed to those of 'purification' (by which he meant separation, distinction, specialisation) in defining pre-modernity and modernity, respectively. The psychological correlative to a 'native' (or premodern) exigency to reconstitute a unity, cosmological or ontological, is De Martino's concept of a 'crisis of presence' in ethnographic accounts, the 'risk of disintegration of the person's unitary being' (De Martino 1948/2007, 158–59, discussed by Chiaradonna and Marraffa 2018, 49–51).

16 The term 'monism' (like all such -isms of philosophical historiography) is also modern – allegedly first used by the eighteenth-century German philosopher Christian von Wolff in

view considers experienced reality fundamentally divided, whether through an opposition between mind and matter, body and soul, or mundane and divine (*dualism*), or as composed of a plurality of things of equal ontological weight (*pluralism*). The influence exerted by such oppositional 'one' vs. 'many' schemes – the problem of explaining plurality in the world and identifying mortality, materiality, imperfection and derivativeness with the ontological category of the plural – runs through many cosmological, biological, ethical and religious themes that require no more than a mention here: the various *archai* identified by pre-Socratic naturalist philosophy; Heraclitus' reference to a 'common account' of reality opposed to the 'own thinking' that people erroneously think they possess (D2); Eleatic monism and Parmenides' philosophy of the 'one';¹⁷ the Pythagoreans' numerical representation of the world; Plato's identification of a sole source of Good and Being, to which the Ideas and everything that exists must refer (most evident in the *Republic*);¹⁸ Aristotle's mission to accommodate the irreducible variety of the natural world; and the complexities of subsequent cosmologies in their attempts to account for the nature of the world on a materialistic basis, most influentially those of the Epicureans and Stoics.¹⁹ The philosophical concept of the cosmos (κόσμος) as positive, as an expression (with various differences) of order, structure and design also belongs to this discussion.²⁰ Moreover, the idea of the universe as a purposeful whole obeying a comprehensive plan is fundamental in another influential ancient concept in the history of philosophy, that of a 'soul of the world' or *anima mundi*, originating in Plato's cosmology in the *Timaeus*. The *anima mundi* will be elaborated in important ways by Neoplatonic interpreters and beyond.²¹ All these can be read on the premises of the seminal opposition between singularity and plurality, 'parts' and 'wholes',²² with consequences

his *Logic* (1728). On the philosophical history, see Schaffer (2007/2018); Weir (2012a); and the entire volume (Weir 2012) for a cultural history of modern monism.

17 See Harriman (2019) 13–16 on Eleatic monism.

18 See Harte (2002) on the discussions about the relationship between parts and wholes in Plato's *oeuvre*.

19 See Gill (2006a) 209–22 for a discussion of these two systems; Holmes (2019) for the contacts between cosmology and biology in the Stoic notion of *sympathy*; Holmes and Coughlin in this volume.

20 See chapters in Hornky (2019), with Hornky (2019a), (2019b).

21 See Helmig (2020), (2020a); Miklós (2010) 1–8, and throughout for the legacy in German philosophy; Zachhuber (2020) for the possible combination with Aristotelian elements in the subsequent history of philosophy up to the eighteenth century.

22 The fundamental overview of mereology in ancient philosophy is offered by Barnes (1988/2011).

beyond cosmology.²³ Ancient religious traditions embodied the same tensions and existential uncertainties by depicting a polytheistic world of multiple divine entities overarched by a sovereign autocratic force, be it fate, eros or Zeus in abstract form.

Ancient ways of conceiving the human body and soul are model and matrix to these larger cosmological and ontological ideologies, as reflected by the core medical alternative between understanding the body as an ensemble of (co-working) parts to be independently analysed, or as a whole to be deciphered only as such.²⁴ Likewise, non-centripetal models of self can be reconstructed from ancient literature and philosophy, most evidently in archaic and tragic psychology.²⁵ Most notably, the question of the relationship between body and soul, psyche and matter, and their relations as parts of an assumed whole is variously approached by philosophers and doctors: the Platonic representation of the soul and its long heritage;²⁶ Aristotle's hylomorphic account of the soul;²⁷ the Stoic and Epicurean views of man as versions of psychosomatic unity;²⁸ the Galenic elaboration of the tripartite Platonic soul in its relationship with the body, especially in *De Placitis Hippocratis et Platonis*; even the various discussions in Christian theology about the nature of the divine trinity as unity or composition, as merely arithmetic plurality or as multiple

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- 23 See Polito (2006) 286–90, nailing down through Galen's words (*De Nat.Fac.* 2.27–29) the fundamental schism in ancient philosophical history between 'those who posit that matter is a *continuum* and a *unity*' and 'advocate *intentionality* and *rationality* both at the level of nature and as a standard of human *knowledge* and *conduct*', and 'those who posit void and *particles*, and who explain life and *intelligence* in terms of the mechanical processes that inert matter undergoes, thus, in Galen's view, *abolishing human responsibility*' (my italics). This passage locates the opposition between unity and plurality at the core of ancient philosophy, and explicitly formulates the epistemological and ethical implications of the cosmological claim; on these, with a perspective on their heritage, see also Barnes (1988/2011a) 431–32.
- 24 See Gundert (1992) on the Hippocratics, and Lonie (1984) 137–40 on holistic images of the body in some Hippocratic texts; Von Staden on Celsus (2010) for discussion of what he sees as different 'stages' of medical thinking in this respect; Frey (2006) on the debate on the Aristotelian conception of the human living body vis-à-vis its matter and components; Gill (2006) on forms of 'mind-body holism' in Epicurean and Stoic thought.
- 25 See notably (if only representatively) the discussion of ancient 'selfhood' and modern individualism by Gill (1996); Remes and Sihvola (2008) and Chiaradonna and Maraffa (2018) 33–35 for the *status quaestionis*; n. 39 above.
- 26 On these, see Chiaradonna and Maraffa (2018), reading ancient and modern philosophical contributions vis-à-vis a 'unitary' self (or soul), especially 33–34; 36–41 on Plato; 45–46 on Plotinus.
- 27 See Frey (2006).
- 28 See Barnes (1990/2011b) 490–509; Gill (2006) 3–26 on Hellenistic and Roman philosophy, and Gill (2006a); (2010) 85–167 on psychology, and 229–43 on 'psychic parts and wholes.'

essence, and so on, is to an important extent articulated in the terms set by mereology in antecedent philosophy.²⁹

The contact between natural philosophies and the reflections of medicine remains tangential, since the two domains of ancient science were always fundamentally distinct in purpose and practice, despite points of dialogue between them, and despite Galen famously boasting that ‘the best doctor’ – like himself – ‘is also a philosopher.’³⁰ The history of monism in ancient cosmology as briefly sketched out above, and versions of ‘holism’ as a concept of medical interest, are thus comparable only in part, although the rich history of ‘part’ and ‘whole’ as metaphors outside medical discussions bears testimony to a common territory.³¹ The authors of the *Corpus Hippocraticum* put forth a set of primarily non-anatomical, non-taxonomic models of health and pathology (often in competition with one another), holistic as such although not necessarily alternative to or competitive with any existing localized model. The therapeutic approaches in these classical sources, their etiological accounts and their reflections on patient cases follow similarly pragmatic lines, which holistic representations of the body in its active life serve better than theoretical abstractions do.³² Examples of such delocalized, holistic themes are

29 Cf. Ramelli (2012) on this topic, with a focus on the concept of *hyposthesis*; Perilli (forthcoming) on *synarithmesis* in Galen and its echoes in the debate concerning the Trinity in early Christianity. It is also noteworthy that Galen’s most explicit praise of nature and its ‘demiurge’ (*UP* 17.1, 446 3–7 Helmreich = IV.358 κ.), evident in the teleological order shaping, for him, the animal bodies is offered at the end of his *De Usu Partium* (*On the Usefulness of Parts*). In this work the perfect adaptation of body parts to function and purpose, and to the qualities of the animal possessing them is expressed in terms of their being instrumental to the ‘whole’: ‘the usefulness of them all (*scil.* the parts) is in relation to the soul’ (χρεία δ’ αὐτῶν πάντων ἐστὶ τῇ ψυχῇ, *UP* 1.1, 1.13 Helmreich = III.1 κ.).

30 On the territorial claims of philosophy and medicine in antiquity, see Levin (2014) on Plato; Polito (2016); Gill (2010).

31 For a confirmation of the antiquity and pervasiveness of this net of imagery, simply consider the principle of balance between elements and correct interaction between parts attested as early as Alcmaeon’s doctrine on *isonomia tōn dunameōn*, ‘balance of forces’ (on which see Koulountas 2014). This image becomes highly influential as a bodily-medical metaphor in Graeco-Roman political theory – the ‘whole’ as ideal balance between parts in the correct state vs. the pathological predominance of one part or element, on which Coughlin (239–43) and Korobili and Stefou (201–3) in this volume have additional comments (see Brock 2000, 2006, and especially 2013, 69–70 on anatomical parts and wholes in Greek political imagery). Needless to say, balance as an ideal of well-being is widespread in medical systems, most often in association with humoral theories or fluid concepts of physiology; see the comparative discussion by Horden (2013) 3–7, as well as the individual chapters in that collection (Horden and Hsu 2013).

32 Gundert (1992); Pitman (2006); see Nutton (2013) 130–39 on the relatively late – Hellenistic – rise of anatomy.

the humours and their flux and balance, and the different individual ‘constitutions’ they determine in human beings, as Galen asserts in his *On Mixtures*; and the importance of respiration³³ or of the processes of air circulation and suffocation, especially (but not exclusively) in gynecological contexts,³⁴ as evident in the Hippocratic *On Breaths*. In addition, there is the devising of diffuse bodily features and physiological processes to account for vital functions, such as the elusive *poroi*, ‘channels’, mentioned in the Hippocratic *De Victu*, through which sensation is said to occur, or the *pēgai*, ‘sources’; both reflect a ‘composite’ and delocalized, pluralistic conception of mental life comparable to the one most conspicuous in poetic accounts. Finally, one might mention the attention to non-localised indicators of well-being such as posture, movement and ‘felt sense’ of self, and the almost complete lack of literature on *loci* in this earlier phase of medicine.³⁵ All these features point towards a representation of the human body in which processes and fluid forces are at work, and holistic, non-localised explanatory models are resorted to, most famously represented by the image of the circle found at the beginning of *Places in Man*: ‘there is no beginning in the body; but everything is alike beginning and end. For when a circle has been drawn, its beginning is not to be found.’³⁶ The so-called ‘environmentalism’ of classical medicine (perhaps less of a thematized doctrine than it is sometimes thought to be) echoes a similarly holistic representation of the refractions and influences between individual human beings and *milieu*. The complex theories of the effect of one’s surroundings on bodily health (*Airs, Waters, Places* is the telling title of the main early source in this regard) extend to geographic settings, as well as to elements of weather and seasonal variation that permeate a number of clinical accounts. The so called ‘constitutions’ (*katastaseis*) described in Books 1 and 3 of the *Epidemics* are medical profiles, or accounts of predispositions to health-states directly

33 See Debru (1996) on respiration in Galen; Horden and Hsu (2013), with Horden’s introduction on holistic paradigms; Horstmanshoff, King and Zittel (2012); Totelin (2016) on milk and flux in gynecology.

34 See King (1998) 80–84; Thumiger (2017) 103–8.

35 The principle is made eloquently explicit at *Places in Man* 1.1–4 (36 Craik = VI.276 L.): ‘the beginning of ailments comes from the entire body alike ... each part of the body at once transmits illness one to the other, whenever it arises in one place or another ... The body is homogeneous (αὐτὸ ἑωυτῷ τωὐτόν ἐστι) and is composed of the same things, though not in uniform disposition, in its small parts and in its large; in parts above and parts below’ (trans. Craik).

36 *Places in Man* 1 (36 Craik = VI.276 L.); see also *Regimen* 1.19 (138.27–9 Joly-Byl = VI.492–94 L.); *Nutr.* 23 (IX.106 L.). Lonie (1984) 139–40 analyses these and their philosophical parallels as examples of a combination of mechanicism and vitalism in Hippocratic medicine.

influenced by context.³⁷ The strongest expressions of environmental principles are found in the Hippocratics. But if we extend – as we should – the concept of environment to the chronological dimension and to seasonality (also important in classical medicine), other senses of a holistic sensibility emerge. As Coughlin shows,³⁸ the Pneumatists in particular elaborated the topic of the influence of seasons and weather on human health, and Galen as well, in his commentary on the Hippocratic *Airs, Waters, Places*, suggestively described the effect of the stability of seasons or lack thereof on human health as that between the correct tuning of the strings of an instrument and the harmony they can produce:

When the mixture merges seasons with one another and the winter becomes warm and the summer cold, the effect of this goes counter to our nature; and because of these alterations, our nature is damaged and becomes weak. The strings [of a musical instrument] are an example of this: for when they are fitted as their working order requires, they produce a sound the listener enjoys. If one of the strings, the one called *hypatē* (the string touched by the index finger) is in the place of the string called *neatē* (that is, the string touched by the little finger), its tone has no harmony or sweetness. This is an example that explains the seasons and the health of our bodies in them.³⁹

Holistic strategies, and above all else holistic questions, clearly continued to flourish in ancient medicine after the time of Hippocrates, due in part to the inspiration of natural philosophy, of biology and ethics. This happened in

37 See Nutton (2013) 75–86 on this aspect; but note already Vegetti (1965) 44 for accurate criticism of an ideal of Hippocratic doctrine as ‘cosmically holistic’, with an Eastern influence.

38 Coughlin (in preparation).

39 Commentary on 10,5, p. 48, 13–18 Diller, translated by G. Strohmaier, whom I thank for letting me use his forthcoming edition and translation into German (*Galenī in Hippocratis De Aere Aquis Locis Commentariorum Versionem Arabicam Primum Edidit, In Linguam Germanicam Vertit, Commentatus Est Gotthard Strohmaier*, CMG Suppl. Orientale V): ‘Wenn die Mischung der Jahreszeiten gegeneinander versetzt und der Winter warm und der Sommer kalt wird, widerstreiten sie damit unseren Naturen, und diese nehmen durch diese Vorgänge Schaden und werden dabei geschwächt. Ein Beispiel dafür sind die Saiten. Denn wenn sie aufgezogen sind, wie es ihre Ordnung erfordert, kommt von ihnen ein Ton, an dem sich der Zuhörer erfreut. Wenn eine der Saiten an dem Platz einer anderen ist, also die Saite, die *hypatē* heißt – das ist die des Zeigefingers – an der Stelle der Saite, die *neatē* heißt – das ist die des kleinen Fingers – hat ihr Ton keinen Wohlklang und keine Süße. Das ist ein Beispiel, das die Jahreszeiten und die Gesundheit unserer Körper in ihnen veranschaulicht’.

concomitance with the development of the two most powerful tools of organization of knowledge in the Western medical tradition: anatomical studies, from the Alexandrian era onwards, and the rise of the great nosological categories, in the Imperial era.⁴⁰ Semi-metaphysical entities such as *pneuma*, a concept of Aristotelian origin with important medical currency;⁴¹ the study of bodily connectives such as the nerves, the great development of the (post)-Hellenistic era;⁴² theories regarding blood;⁴³ the reframing of humoural theories to account for states of disease in new, more articulated ways (Galen's theory of temperaments, *krasis*; the complexity of his physiology of respiration, treated by Debru⁴⁴); a new holistic understanding of human mental health, combining the traditional materialism of Hippocratic medicine with the 'softer' psychological approach inspired by Hellenistic philosophies of the self, with the devising of a philosophical psycho-therapeutic medicine;⁴⁵ the principle of *sympatheia*⁴⁶ – all these complicate and strengthen the holistic element in the medicine of the Imperial age, posing questions and problems, and proposing solutions that return again and again in modern medical cultures. It is within this frame, for instance, that we can understand Soranus' discussion of pathology subdividing the kinds of affection (πάθος) which are against nature (like fever) into 'general and innate' (τὸ μὲν ὡς καθόλου καὶ γενικόν) and 'partial and secondary/acquired' (τὸ δὲ μερικὸν καὶ ὑποβεβηχός) – like what he treats as constriction and the disease *phrenitis* (or *lethargy*), respectively.⁴⁷ This clear distinction, absent from classical medicine, presupposes a notion of holism that is both organic (a *pathos* involving the whole body, not only a part) and transcends the individual case (a *pathos* innate to a category of human beings, as opposed to a state acquired by the living being).

40 Von Staden speaks of his passage as one from a 'Greek body' to a 'Roman body' (Von Staden 2010); see Roselli (2018) on nosology in ancient medicine.

41 See Lewis (2016) 215–310, and now the studies in Coughlin, Leith and Lewis (2020), 7–16 for the introduction; the classic study by Verbecke (1945).

42 See Rocca (2003) on Galen; Von Staden (2004) 155–61 on Herophilus.

43 See Lewis (2016) 215–310 on Praxagoras of Cos and the development of theories regarding blood vessels in Greek medicine; Boylan (2015) on the history of blood and blood circulation in ancient science.

44 Debru (1996).

45 For a survey, see Thumiger (2018); Gill (2018).

46 On which, see Holmes (2013), (2014), (2019).

47 Sor. *Gyn.* 3.1.2 (94,10–15 Ilberg), 'πάθος δὲ λέγεται τὸ μὲν κατὰ φύσιν (οἷον τὸ συλλαμβάνειν καὶ ἀποτίκτειν καὶ γάλα ποιεῖν), τὸ δὲ παρὰ φύσιν (οἷον πυρέττειν) καὶ τοῦ παρὰ φύσιν τὸ μὲν ὡς καθόλου καὶ γενικόν (οἷον τὸ στεγνόν), τὸ δὲ μερικόν καὶ ὑποβεβηχός (οἷον τὸ φρενιτικόν ἢ ληθαργικόν).

Despite its evident importance, the weight and influence of 'holistic' engagement in the ancient beginnings of the history of science and its reception⁴⁸ have not been thematised in modern scholarship on ancient medicine, despite being common topics for historians of science generally.⁴⁹ Even when not declaring this openly, and while practicing historical and anthropological caution otherwise, the history of ancient science has most often focused on the developments and discoveries of the Graeco-Roman physicians through the demands and expectations of contemporary bio-medicine, i.e. of nosological taxonomy (the study of important 'diseases')⁵⁰ and of anatomical inquiry (the understanding of the ancient body with its parts, structures and functional 'seats' of this or that faculty). As a consequence, nosological entities, *loci affecti* and individual pathological data have tended to be isolated, if not in the ancient reality under reconstruction, then at least in the gaze and language of the historian working on ancient doctrines. The key tension between *localization* and *connectivity*, a fundamental one in the history of health, as neurology eloquently shows,⁵¹ has seen localization prevail as the privileged frame of interpretation.⁵² We should not ignore individual studies that examine non-localised features such as fluids and notably the humours⁵³ and interrogate ancient medical ideas from a variety of cultural-historical perspectives, posing larger philosophical questions that reestablish the deep intellectual affinities between modern and ancient science. But most scholarship on ancient medical doctrines has looked at parts, organs and diseases, or at authors, texts and medical schools. Ancient views about the overarching forces that superintend life and the systemic structures that shape the living body have been touched on only episodically.

48 Exceptions in a comparative spirit to this trend are Pitman (2006); Horstmanshoff, King and Zittel (2012); Horden and Hsu (2013).

49 But see now Holmes (forthcoming) on the Greek foundations in the discussions of vitalism in the history of biology, focusing on Canguilhem. See also Lawrence and Weisz (1998) for an introduction to holism in interwar medicine, 6–9 on its affiliations to vitalism; Harrington (1999) 1–30 on vitalism and holism in German culture.

50 Such as gynecological diseases, malaria, melancholy and mania; see the discussion of (ancient) nosology in Thumiger/Singer (2018) 2–15, with a focus on the psychiatric sphere.

51 See Günther (2017) on the 'break with the localization project' at the roots of both modern neurology and psychoanalysis (7); Harrington (1999) 72–102; Huneman (2008a).

52 Salmón (2017) aims to redress a similar unbalance with reference to Medieval medicine in his exploration of the brain as actor within a 'holistic system' in Medieval medicine.

53 See again Horden and Hsu (2013), with the introduction; Horstmanshoff, King and Zittel (2012), with the discussion of the history of physiology by King (1–12); Debru (1996) on physiology.

On a parallel path, strands of the so-called ‘alternative medicines’ have chosen to reconnect their practices to (their version of)⁵⁴ the medical principles and practices of ancient Greece through reliance on a continuity within traditional Western medical systems seen as running alongside official and institutional medicine. Such readers have often established connections with non-Western traditions, as Pitman does in her analysis of Hippocratic medicine as ‘holistic.’⁵⁵ This is not only a narrative of enrichment. Alongside the perceived debts of a more natural, ‘human’ approach to ancient approaches to health, an historian can only note the ancient roots of our own constraints and limitations: the normativity and politics of certain holisms also have ancient champions.⁵⁶ The holistic ideal of the healthy, handsome (young, male) body that is so significant in our tradition as to have become inconspicuous is also rooted in ancient aesthetic and medical understandings of the human. Only in recent years have disability studies and feminist scholarship begun to invent means to correct this hegemonic outlook and to explore alternative paths.⁵⁷

Finally, there is a methodological holism that has long given form to the tradition of personalized forms of authority – a catalogue of influential figures, whose *corpora* of works are fetishized at the expense of more fluid epistemological histories. This tradition becomes coterminous with the published and transmitted doctrines of elite cultures, at the expense of popular bodies of knowledge that intersected with them and gave them flesh and blood, even if they were officially relegated to their margins or openly opposed.⁵⁸ The culmination of this tradition is its current, unchallenged status as ultimate ‘scientific truth’, which invests Western biomedicine with the merit and responsibility of deciphering and rescuing the ‘health of the world’ as a whole, inevitably

54 See King in this volume for a critical assessment of this attitude in contemporary popular culture; in an anthropological frame of discussion, see the critique by Zimmermann (1995), e.g. 145, of the ‘artificial universalism’ of the supporters of ‘alternative medicines’ (my translation).

55 Pitman (2006), with a detailed parallel to Āyurvedic medicine; Di Stefano (2006) for an example of discussion of ‘complementary medicine’ and the holistic ideal; Pitman (2014) 36–37 on holism and herbal medicine, 29–32 on holism traced back to ancient Greek medicine via complementary medicines; Griggs (1997), e.g. 14, for Hippocrates’ ‘emphasis on a balanced, wholistic approach to doctoring’; see also Lopez (2004) for reflection on philosophical aspects of Hippocratic doctrines in terms of ‘pensiero olistico.’

56 See again Wohl (2019).

57 See Adams (2017) for a theoretically minded discussion; the explorations in Laes (2017), with (2017a); (2018) 1–22.

58 For recent discussion of the stratified nature of ‘medical cultures’ vis-a-vis the ancient world, see Oberhelman (2013); Harris (2016a).

surpassing any alternative tradition. This exclusivism is also a part, not always desirable, of the legacy of ancient medicine and its reception.

This volume cannot entirely escape the modes of scholarly discussion that characterise our field, and must accordingly focus on one particular set of ancient sources and themes within the ancient life sciences and their cultural parallels. The realms of politics, economy, sociology and social history, and linguistic and literary studies, all potentially relevant, are mostly ignored. The contributors tackle the topic of 'parts', 'wholes' and 'holism' as concept and topic from a variety of perspectives. They all concentrate on central questions in the history of science, in some cases choosing key authors or medical schools, in others a theme or element of debate. In a few cases, they explore the parallels and itineraries of reception beyond ancient Graeco-Roman cultures.

The chapters are accordingly organised in three sections: the first more theoretical and methodological; the second focusing on Graeco-Roman medicine and culture; and the third broadening the field to reception and cross-cultural considerations.

The first section, 'Holism: Methodological and Theoretical Perspectives', opens with a general study of 'Holism, parts, wholes', in which I attempt to trace the different senses in which holism, although an irreducibly elusive concept, has been central in a variety of fields of knowledge in European intellectual history, including medicine, science, philosophy and politics, but also in pillars of modernity such as psychology and psychoanalysis, reflections about gender, and ecology. Academically, it poses central questions about our own way of relating to the 'classical' past. The topic of our volume is of course much more narrowly defined. But it is fundamentally important to bear in mind the suggestive and complex histories of this term and theoretical instrument as we look for instances of it in the past from a modern standpoint. I distinguish here between a methodological holism (a holistic approach to the study of history and culture, in the first instance) and an ontological one (the active belief in the holistic nature of things), while highlighting the point of contact between the two. Most of the chapters will in fact adopt a composite attitude by probing the holistic features of aspects of ancient scientific thought, while at the same time engaging with it as project and value.

The other two chapters in this more theoretical section are examples of these two typologies. In 'Holism, Sympathy, and the Living Being in Ancient Greek Medicine and Philosophy', Brooke Holmes focuses on the concept and philosophical standing of 'sympathy' in human nature in a variety of elaborations from Plato to Galen, and along two different typologies or 'axes'. At the same time, she takes the opportunity to interrogate 'ancient holism' as an

instance of modern reception of ancient Greek medicine and science, as well as of Greece as 'pure, unified form of life'. William Short, on the other hand, considers the emotions as a historical object of inquiry in a methodologically holistic perspective informed by embodied cognitivism. Short offers an instructive survey of recent historical approaches to this fundamental aspect of human psychology, currently a rich field of study in the broader field of classics ("Holism" in *Cognitive Approaches to the Ancient Emotions*), while showing the sense in which the claim of a fundamental mind-body holism holds as central to an understanding of human emotions as embodied and closely dependent on our interactions with the environment.

The second section poses more concretely and textually the question that informs the volume in a historical sense: 'Is Graeco-Roman Medicine Holistic?' These chapters, organised in part chronologically and in part thematically, share a focus on key figures, schools or intellectual approaches in ancient medical-biological thought. They discuss ancient responses to the question of wholes and parts in the nature of things and the human way of approaching them, beginning with the Hippocratic texts and proceeding to their philosophical contemporaries and heirs. Chapters 4 to 6 explore the history of ancient medicine from the Hippocratics to Galen in the broadest perspective. Hynek Bartoš delves into the fundamental example of the Hippocratic *De Victu*, a fascinating work that contains holistic views of the human body and its health in relation to a cosmic context ('Hippocratic Holisms'). This text, whose at times obscure and hermetic style has made access difficult for non-specialists, deserves to be better known and studied outside the restricted circles of ancient medical historians as a central contribution to ancient philosophy. David Leith offers a thorough discussion of the ancient school most readily associated with a holistic approach, the Methodists ('Holism and the Methodists'), a group of medical thinkers whose works survive to a large extent indirectly. Leith offers a rich selection of passages and comments on them vis-a-vis holism. On the one hand, he clarifies and nuances received narratives about Methodist approaches to localisation and therapy in medical practice, while on the other he places these thinkers in dialogue with other figures in the Greek medical tradition. P. N. Singer concentrates on Galen ('Is Graeco-Roman Medicine Holistic? Galen and Ancient Medical-Philosophical Debates'), reflecting on the meaning of the concept holism in the context of Imperial-age medicine and placing holistic themes and concerns in Galen in dialogue with other, less studied authors, both medical and philosophical, while framing it within Greek intellectual history from as early as Plato. The next two chapters are located earlier chronologically, considering sources outside medicine in the classical era – tragedy and

Plato, respectively. Elizabeth Craik's 'Holism of Body and Mind in Hippocratic Medicine and Greek Tragedy' brings to light the deep holistic interconnections between medical and poetic representations in Greek tragedy, while 'Plato's *Charmides* on Philosophy as Holistic Medical Practice' by Giouli Korobili and Konstantinos Stefou turns to a major philosophical source, Plato, and explores his reflections on medicine in a famous and intriguing passage in the *Charmides* where attention to 'parts' and 'wholes' serves as the kernel of a debate between different medical approaches.

Chapters 9–11, again primarily medical, share a concern for the materiality of human physiology in ancient thought. In this sense, physiological fluids occupy a central position in Hippocratic gynecology, as is shown by Laurence Totelin in her study of 'liquid' expressions of life in gynecological ideas (medical and non-medical), 'A Woman in Flux: Fluidity in Hippocratic Gynaecology.' Sean Coughlin takes the discussion to philosophical authors who had an important influence on the ancient medical debate, and sets out to reconstruct a key 'holistic' principle found in Greek thought from early natural philosophy to Aristotle and the Stoics: that of the 'cohesive cause' that holds a body's parts together, providing the condition for their forming a 'whole.' This chapter offers a careful survey of a set of underexplored sources in this respect (Empedocles, Anaximenes, Diogenes of Apollonia and others) and then assesses the Aristotelian position in dialogue with them and with Plato ('Cohesive Causes in Ancient Greek Philosophy and Medicine'). Julius Rocca, finally, offers a rich discussion of *pneuma*, a fundamental concept and physiological substance in Galen's thought (as well as earlier traditions). Rocca focusses on Galen's view of *pneuma* as a holistic concept and broadens his scope to explore the afterlife of the concept ('Pneuma as a Holistic Concept in Galen').

As I argue in more detail in Chapter 1, this project not only concedes the deep co-implications of modern and ancient, Western and non-Western approaches to holism, but also argues positively for the enduring relevance of such discussions to modern debates, while exposing the flaws of simplistic images of affiliation. In this spirit, the final section (Chapters 12–17), 'Medical Holism beyond the Graeco-Roman World', opens the floor to the heritage and reception of ancient discussions in later science and medicine, and to comparative material and non-Western perspectives. In 'Humoralism in Āyurvedic Medicine', Francis Zimmermann probes the commonalities between Indian and Greek medical systems in terms of doctrinal principles, representations of the functioning of the human body and even intellectual strategies, uncovering parallels between Hippocratic and Galenic positions (for example vis-a-vis humoralism and dietetics) and Sanskrit medical writings. John Z.

Wee explores in great detail evidence from the ancient Near East ('A Systemic Etiology of Sicknesses from Ancient Iraq: Organ Systems and the Functional Holism of the Babylonian Body') and the different kinds of 'holism' (bodily, environmental, cosmological) they embed in their medical systems, mindful of the role played by the modern scholarly gaze in interpreting the ancient data as homogenous antecedents to medical principles familiar to us. Vivian Nutton undertakes the interpretation of a fundamental feature of Greek medicine, and a delocalised one, the humours, as an expression of a specific disposition to health (a person's individual *krasis*) in opposition to environmental and thus collective patterns of epidemiology. Within this framework, Nutton addresses the conundrum of the ancients' lack of a thematised interest in the concept of infection, on the one hand, and of 'disease of specific groups' of the kind found in early modern medicine, on the other, placing the evidence in a historical perspective that takes us from the Hippocratics to the Renaissance ('Epidemic disease in a Humoral Environment; from *Airs, Waters and Places* to the Renaissance'). The compartmentalization we wished to avoid in this collection counts not only non-Western productions among its victims, but also expressions of human culture less shaped by narratives of scientific progress. Counterbalancing such tendency, Claire Trener's study explores the legacy of ancient holism and Graeco-Roman medical doctrines more generally in Medieval spiritual approaches to human health. Through a variety of fascinating examples from English miracle texts, she illustrates how the 'materialistic', holistic basis of Hippocratic and Galenic medicine, inherited by Medieval intellectuals through Syriac, Arabic and Latin translations, was combined with religious ideas of insanity in the actions of celebrated saints and healers in western Christendom ('Mind-Body Interaction: The Influence of Ancient Ideas in Twelfth-Century England'). This section, along with the volume as a whole, concludes with a unique study that questions more radically the scope and legitimacy of a project such as ours: Helen King opens the door to a world rarely touched by scholarly attention, that of popular and lay reception of ancient medicine, especially in on-line communities ('"Treating the Patient, not just the Disease": Reading Ancient Medicine in Modern Holistic Medicine').

Holism emerges from this discussion not only as a project, a methodology and an interpretation of reality, but as a complex set of questions and strategies deeply imbedded in embodied human life and as a consequence in human culture and epistemology generally. These questions may change shape, take contradictory forms, reject ancient solutions or suggest new ones, while never permanently solving them. They may engender very different, even opposed intellectual and scholarly strategies for approaching other cultural traditions,

whether ancient or modern. But the problem of embodied human existence, balanced between individuality and generality, animal and environment, ‘parts’ and ‘wholes’, is set to remain at the centre of medical, biological and philosophical reflection – indeed, of our entire experience as living beings.⁵⁹

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59 See Laurence and Weisz (1998) 16 on holism as an enduring ‘barometer’ in the history of the life sciences.

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