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Between Nature and Culture:

The Integrated Ecology of Renaissance Climate Theories[*]

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1. Introduction

Clarence Glacken's monumental overview of environmental ideas from Antiquity to the Enlightenment, published in 1967 but still an essential reference in the field, includes several chapters on what are often called 'climate theories' (*théories des climats*, *Klimatheorien*, *teorie dei climi*), i.e. doctrines centered on the idea that place and climate shape the body, mind, and character of human beings, influencing moreover the organization and development of human societies.[1] In his book, Glacken explores several moments in the long tradition of climate theories, including their origins in ancient Greece (with authors such as Hippocrates and Aristotle), their medieval reception, and their presence in the early modern period, often thought to have represented their 'golden age'.[2] Between the sixteenth and eighteenth centuries, Glacken shows, climate theories reached an unprecedented level of visibility (they were somewhat ubiquitous) and complexity (they were put to many uses). While acknowledging their historical

[*] All translations in this chapter are mine unless otherwise noted.
[1] Glacken, *Traces on the Rhodian Shore.* On climate theories, see also Zacharasiewicz, *Die Klimatheorie in der englischen Literatur und Literaturkritik* and Pinna, *La teoria dei climi*.
[2] Lestringant, 'Europe et théorie des climats.'

importance, however, Glacken claims that early modern climate theories represented a dead end on the path of intellectual development: 'It would be useless to claim that [these theories] contributed anything to understanding the relation of human cultures and their natural environment'.[3] Because, in his words, these theories 'could by no conceivable means lead to science,' Glacken considers them to be of only limited interest today. At best, he suggests, they have the negative merit of revealing 'the inability of two millennia of accumulated lore to be of any real help in explanation'.[4]

The present chapter takes a rather different approach. Instead of asking whether these theories were more or less 'scientific' or whether they could, in Glacken's words, lead in any way to science as we presently conceive it, I shall look at climate theories as meaningful indicators of the ways in which people in the early modern period understood their place within the natural world. Renaissance climate theories, I argue, show us a worldview in which our own established divides between nature and culture did not necessarily operate, or operated in different ways than they do nowadays. This is why such theories, 'pseudo-scientific' as they may seem today, may provide us with an unexpected resource for rethinking the problems that haunt our own relationship to the so-called natural world.

If it is true that the fundamental challenge of our time is to generate an integrated 'ecology of relationships' that would allow us to overcome the modern divide between man and nature, then it seems to me that Renaissance climate theories have much to offer contemporary debates.[5]

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[3] Glacken, *Traces on the Rhodian Shore*, 460.
[4] Ibid., 446.
[5] The notion of an 'ecology of relationships' is taken from Descola, *The Ecology of Others*, 5; Catherine Larrère similarly calls for an 'integrated ecology' (*écologie intégrative*) that views man not an entity 'external to nature' and standing in a relation of 'domination or opposition' to it, but as 'a geographical agent' whose action 'does not interrupt natural processes, but rather inscribes itself within them' ('Montesquieu et l'espace', 154). A classic (but not uncontroversial)

Building primarily on French examples, I will suggest that while these theories did not deny the existence of a nature/culture divide, they framed it in terms of a complex, porous, and mutually enriching relationship that has none of the rigid dualism so prevalent in Western modernity. In this sense, early modern climate theories will prove a helpful travel companion for rethinking the question recently raised by the French anthropologist Philippe Descola: how can we 'recompose nature and society, humans and non-humans, individuals and collectives, in a new assemblage in which they would no longer present themselves as distributed between substances, processes, and representations, but as the instituted expression of relationships between multiple entities whose ontological status and capacity for action vary according to the positions they occupy in relation to one another'?[6] While Descola certainly did not have Renaissance climate theories in mind when he wrote these words (which he intended as a roadmap for a possible future), I hope to show in this chapter that it would be difficult to capture the essence of climate theory more effectively than do these lines.

Granted, this is not climate theory as we are used to seeing it described in scholarship. Climate theory is most often presented as a rigid system of environmental causality, coextensive and in fact even synonymous with the various forms of geographic determinism that would crop up in the nineteenth and twentieth centuries and that were often put in the service of dubious ideologies and pursuits.[7] In the last few years, however, this view has come under close scrutiny, most recently by Jean-Patrice Courtois in his compelling reappraisal of eighteenth-century

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account of the modern construction of the nature-culture divide can be found in Bruno Latour's *We Have Never Been Modern.* A comparable, though largely different, narrative is in Michel Serres's *The Natural Contract.*

[6] Descola, *The Ecology of Others*, 5.

[7] See Staszak, 'Nature et culture: des origines du "déterminisme géographique"' and Hulme, 'Reducing the Future to Climate'.

theories of climates (notably those of Montesquieu, Hume, and Voltaire).[8] Enlightenment climate theories, Courtois shows, are fundamentally about relationships and correlations, rather than about causality and effects; about probability, rather than about determinism; about transactions between mankind and nature, rather than about nature's crushing power on mankind. As I hope to demonstrate in this chapter, Courtois's remarks about Enlightenment climate theories apply equally well to Renaissance climate theories, if not to all climate theories in general.

In what follows, I focus on three significant representatives of climate theory in sixteenth- and early-seventeenth-century France, namely the humanist Loys Le Roy (c. 1510-1577), who taught Greek at the Collège royal; the jurist and political writer Jean Bodin (c. 1529-1596), best known for his influential theory of sovereignty; and the physician Nicolas Abraham de la Framboisière (1560-1636), who taught medicine at Reims and also served as personal physician to King Henry IV. While different in many respects, the climate theories developed by these authors partake of a common anti-deterministic impulse, as they all envisage multiple ways in which humans can shield themselves from climatic influence, including diet, music, and a liberal education. These authors also challenge the idea of a rigid dualism between mankind and nature by describing mankind as embedded in nature and nature as embodied in mankind, in a dynamic relationship that leaves ample room for the agency of both. If all of this is true, it seems necessary to abandon the traditional view of climate theory as a static system of geographic determinism grounded in a dualism between culture and nature. We should instead embrace a new view (derived from close reading of the texts themselves) of climate theory as a dynamic

[8] Courtois, 'The Climate of the *Philosophes* during the Enlightenment' and Courtois, 'Le Physique et le moral dans la théorie du climat chez Montesquieu'.

system of mutual correlations between multiple entities that are simultaneously natural and cultural, and that define each other's place in an interconnected universe.

2. The Cosmic Web: Humans and Nature in the Renaissance

When we think about mankind-nature connections in the Renaissance, we might want to set aside for a moment the term 'environment' which tends to come naturally to our modern mind. One of the problems with this word—aside from the fact that it did not exist (not, at least, in its current sense) in the period in question[9]—is that it encourages us to conceive of the mankind-nature relationship in terms of a dualism between two distinct entities, one of which (i.e. nature) surrounds the other (i.e. mankind) while the other (i.e. mankind) is being passively surrounded. In the Renaissance, however, it was much more common to see the human species as part of a natural continuum that descended from the celestial sphere of stars and planets into the so-called sublunary world, through various layers of reality that were all thought to share an essential ontological unity and to act reciprocally upon one another. In this view, humans are not *surrounded* by nature; they are part of nature, just as nature is part of them, making up their flesh, bones, humours, and vital heat through combinations of the same four elements that constitute all things in the sublunary world. In this sense, humans and nature are not distinct and opposing entities: humans are, quite literally, nature embodied; they are embedded in nature in a way that makes it impossible to distinguish neatly between the two.[10]

[9] Miglietti and Morgan, 'Introduction: Ruling "Climates" in the Early Modern World', 2.
[10] As Floyd-Wilson and Sullivan have noted, 'body and environment do not merely mirror each other' in early modern views of the mankind-nature relationship, 'they also interpenetrate' ('Introduction: Inhabiting the Body, Inhabiting the World'), 2.

This view of the universe as an organic and interconnected whole can be traced back to classical antiquity, when, in the words of one scholar, 'the demarcation between human and environment was only faintly drawn.'[11] A very similar view is reflected in many Renaissance texts, including Loys Le Roy's influential treatise *De la vicissitude ou variété des choses en l'univers* (1575), which was translated into Italian in 1585 and into English in 1594.[12] The enduring interest of this treatise lies less in its (rather limited) originality than in its ability to synthesize an entire worldview into twelve, neatly ordered books. In this work, Le Roy deals with many different topics—from the historical development of languages and arts to political institutions and military matters—in order to demonstrate the central idea (itself not especially original in the Renaissance) that the universe is 'temperé par changements alternatifs, et maintenu par contraires, demourant en son essence eternelle tousiours mesme et immuable' (tempered by alternative changes, and maintained by contraries, its eternal essence remaining always one and unchangeable).[13]

One part of the treatise is particularly pertinent here, namely a section in Book 1 in which Le Roy describes the structure of the universe, drawing liberally from a longstanding cosmological tradition that had found its most concise and influential expression in Johannes de Sacrobosco's *Tractatus de sphaera* (*Treatise on the Sphere*), composed in the first half of the thirteenth

[11] Floyd-Wilson, *English Ethnicity and Race in Early Modern Drama*, 29. Floyd-Wilson refers in particular to the Hippocratic treatise *Airs, Waters, Places* (5th century BC), a foundational text of classical climate theory.
[12] Le Roy, *De la vicissitude ou varieté des choses en l'univers*; and, *Of the Interchangeable Course, or Variety of Things in the Whole World*, trans. Ashley. The English translation may have influenced Francis Bacon's theory of vicissitude, as suggested by Weisinger, 'Louis Le Roy on Science and Progress'.
[13] Le Roy, *De la vicissitude ou varieté des choses en l'univers*, 1r; *Of the Interchangeable Course*, 1r. Here and elsewhere, translation modified.

century but still extremely widespread in the Renaissance.[14] Citing the views of 'most astrologers and physicians,' Le Roy explains that:

> de la partie superieure de l'univers descen[d] certaine vertu accompagnee de lumiere et chaleur qu'aucuns d'eux appellent l'esprit de l'univers, les autres nature, se meslant parmy la masse de son grand corps penetrant, vivifiant, nourrissant, moderant toutes choses sublunaires variables. Laquelle estant de telle efficace commence au feu et à l'air, lesquels agitez par mouvemens coelestes, esmeuvent apres l'eau et la terre, consequemment les natures composees de ces quatre elemens tant hommes, bestes, poissons, oyseaux, que germes, plantes, arbres, pierres et metaux.[15]
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> (From the superior part of the world there descends a certain virtue accompanied with light and heat, which some of them do call the spirit or soul of the world; others say it is nature, which mingles itself with the mass of this great body, penetrating, quickening, nourishing, and moderating all these variable things under the moon, which being of such efficacy, begins first with the fire and the air, which being moved by the celestial movings, do afterwards move the water, and the earth, and consequently the natures compounded of these lower elements, as well men, beasts, birds, and fishes, as plants, trees, herbs, and metals.)

[14] Thorndike, *The Sphere of Sacrobosco*; Gingerich, 'Sacrobosco as a Textbook'; Valleriani, 'The Tracts on the "Sphere"'.
[15] Le Roy, *De la vicissitude*, 1v; *Of the Interchangeable Course*, 1v.

Two things are especially worthy of note in this passage. On the one hand, Le Roy brings out the notion of a chain of being—a descending hierarchy of living forms, all of which are connected in some way to each other, and which fill up the order of nature completely through their plentiful variety.[16] On the other hand, Le Roy draws attention to the ontological unity of the sublunary world by stressing that everything that exists on Earth or in its immediate surroundings participates of the same essential nature, resulting as it does from different combinations of the same four elements (fire, earth, air, and water). These two aspects are brought together in the following pages, where Le Roy delves deeper into the idea that everything in the cosmos is tied together by a web of influences and interconnections.[17] Again, the thought itself is not especially original—it was, as Le Roy himself acknowledges, a rather commonplace idea among Renaissance astrologers and physicians, whose respective disciplines (much closer to each other in the pre-modern period than they would become later) dealt with the study of the various factors (such as stars, planets, air, and food) that were believed to exert an influence on human bodies and minds:

> [Les astrologiens et physiciens affirment] de là proceder diverses temperatures des corps, inclinations d'entendemens, moeurs des personnes, proprietez des nations, vices et vertus, santé et maladies, force et foiblesse, brieveté et longueur de vie, mortalité: richesse et pauvreté, prosperitez et adversitez. De là prendre commencement les estats et sectes,

[16] For a classic study on this notion of a chain of being, see Lovejoy, *The Great Chain of Being*. A brief discussion of Lovejoy's ideas can be found in Glacken, *Traces on the Rhodian Shore*, 5-6.
[17] See Severini, '*La vicissitudine o mutabile varietà delle cose*,' 140.

> leurs progrez, durees et ruines. Brief tout ce monde inferieur obeïr au superieur et par luy estre gouverné.[18]
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> ([the Astrologers and Philosophers affirm] that there hence do proceed diverse temperatures of bodies, inclinations of minds, manners of men, properties of nations, vices and virtues, health and sickness, force and feebleness; shortness and length of life, mortality, riches and poverty, prosperity and adversity. That there hence all estates and sects do take their beginnings, their course, continuance, and their ends: In brief, that all this inferior world does obey the superior, and is governed by it.)

What is interesting about Le Roy's stance is the decisiveness with which he affirms that the various external influences that condition the fate of individuals and communities do not, however, wield an absolute power over human beings:

> Non pas que tels effects adviennent necessairement et inviolablement par une loy fatale: ains qu'ils peuvent estre evitez par sagesse, ou destournez par prieres divines, ou augmentez et diminuez par prudence, ou moderez par nourriture, coustume, institution.[19]
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> (not that such effects do necessarily come to pass, and inviolably by a fatal law: but that they may be avoided by wisdom, or turned from us by divine prayers, or augmented or diminished, or moderated by nurture, custom, and instruction.)

[18] Le Roy, *De la vicissitude*, 1v; *Of the Interchangeable Course*, 1v-2r.
[19] Le Roy, *De la vicissitude*, 1v; *Of the Interchangeable Course*, 2r.

While Le Roy is far from being alone among his contemporaries in conceiving of celestial and elemental influences in non-deterministic terms (a favorite expression at the time was that such forces 'incline, but do not necessitate'), the care and precision that he displays in his choice of words is worthy of note. Le Roy lists a number of possible ways in which humans can cope with the various celestial and elemental influences acting upon them: these ways of coping range from evasive strategies aimed at avoiding environmental influences altogether (*evitez par sagesse*, *destournez par prieres divines*) to corrective practices (*nourriture*, *coustume*, *institution*) that allow man to 'moderate' or 'reduce' (*moderez*, *diminuez*) the effects of environmental influences—or even, in certain cases, to augment them artificially (*augmentez… par prudence*). Although Le Roy does not go into great detail to explain how each of these different strategies is expected to work in practice, his rich vocabulary of coping clearly testifies to the non-deterministic spirit of early modern climate theories. As we shall see in the next sections, the 'anxiety of influence' elicited by these theories was never such that it led people into fatalism or despair; to the contrary, it encouraged people to assert their autonomy even more strongly in the face of external forces, and to fashion themselves as self-determining moral subjects through a range of individual and collective practices.

3. 'Second nature': The Power of Corrective Discipline

This particular tension between influence and autonomy in early modern climate theories emerges with greatest clarity in the works of Jean Bodin, one of the most important climate theorists of all time. Bodin's *Methodus* (1566) and *République* (1576) are often described, with

good reason, as true *summae* on this topic, for in them Bodin draws up the most systematic overview of climate theory ever attempted since the time of Albertus Magnus (13th century), bringing together a wealth of ancient, medieval, and coeval sources (such as Leo Africanus' and Francisco Alvarez's descriptions of Africa), weighing discrepancies and contradictions between these sources, and striving to generate a coherent system out of them.[20] Bodin's survey is especially remarkable for its extensive coverage of different types of environmental influence: in studying the effects that climates and places have on human beings, Bodin considers aspects such as latitude and longitude ('at first we shall explain the nature of peoples who dwell to the north and to the south, then of those who live to the east and to the west') but also more specific features of the land and of its local climate ('next, we notice the characteristics of special places, that is, mountains, marshes, windy and placid regions'),[21] which enables him to form a more complete view of environmental influence than is the case with many of his contemporaries.[22]

Like Le Roy, Bodin is convinced that these external influences are powerful but not insurmountable: it is false, he writes in the *Methodus*, 'that the constitution of the air affects us inevitably […]. Regions and celestial bodies do not have so much power as to entail necessity (which it is a sin even to imagine)'.[23] He does however point out that fighting environmental influence requires a considerable amount of self-discipline and will-power. Similar to Le Roy,

[20] See, for instance, Glacken, *Traces on the Rhodian Shore*, 434; Lestringant, 'Europe et théorie des climats', 206.
[21] Bodin, *Methodus ad facilem historiarum cognitionem*, 5.3, 220; Bodin, *Method for the Easy Comprehension of History*, trans. Reynolds, 85. Latin: 'primum igitur explicabimus naturam populorum qui ad Septentriones et Austrum positi sunt: deinde eorum qui ad ortum et occasum: post etiam propria loca, montana scilicet, palustria, ventosa, quieta'.
[22] For the existence of different 'levels' (cosmological vs. chorological) in climate theory, see Miglietti, 'New Worlds, Ancient Theories: Reshaping Climate Theory in the Early Colonial Atlantic'.
[23] Bodin, *Methodus*, 5.4, 222; *Method*, 86.

who singles out prayer and education (*nourriture, coustume, institution*) as possible ways of coping with climate, Bodin thinks that the influence of environmental factors cannot be overcome 'except through divine aid or continued discipline' (*nisi ope divina, aut diuturna disciplina*).[24]

At first glance, Bodin's notion of corrective discipline may seem to point to a significant hiatus between nature and culture—more significant, it would seem, in Bodin's climate theory than in Le Roy's. Bodin himself tempts us into thinking that it was precisely this hiatus that attracted him towards climate theory in the first place. It is important to remember that much of Bodin's *Methodus* is concerned with the problem of how to reduce human history to order—how to find a rationality in the apparent chaos of human matters.[25] Several chapters in the treatise tackle this problem from a range of different perspectives: reading and note-taking strategies (Chapter 3); astrology (Chapter 5); numerology, vicissitudinal theory, and the comparative history of political institutions (Chapter 6); prophecy and sacred history (Chapter 7); chronology (Chapter 8); etymology and historical linguistics (Chapter 9); bibliography (Chapter 10). Some of these avenues (astrology, for instance) are assayed with a certain degree of skepticism; some are criticized and ultimately dismissed.[26] Climate theory, on the other hand, must have appeared to Bodin as a particularly promising route, seeing as he not only devotes an entire chapter of the *Methodus* (Chapter 5) to this topic, but he also returns to it ten years later in the *République* (Book 5, Chapter 1), where he modifies certain aspects but retains the gist of what he had

[24] Idem.
[25] See Couzinet, *Histoire et méthode à la Renaissance.*
[26] See, for instance, his criticism of the Protestant interpretation of the prophecy of the four monarchies in the Book of Daniel, studied by Suggi, 'Cronologia e storia universale nella *Methodus* di Jean Bodin'.

proposed in the earlier work, while also further developing his theory of climates in the direction of practical governmental applications.[27]

The reason why climate theory proves so helpful is spelled out at the outset of Chapter 5 in the *Methodus*, where Bodin explains that this theory allows us to identify 'characteristics drawn, not from the institutions of men, but from nature, which are stable and are never changed unless by great force or continued discipline, and even if they have been altered, nevertheless eventually they return to their pristine character'.[28] This passage establishes a series of dichotomies between nature (*natura*) and culture (*instituta*): nature is that which remains stable, culture is that which changes over time; nature is that which is given, culture is that which results from human artifice (*quae ducuntur ab hominum institutis*); nature is that which comes first in order of time and is therefore more powerful, culture is what comes second and is therefore less powerful and doomed to fight for its own existence. The passage also suggests that nature's dominating position over culture is the whole reason why climate theory can help us identify a hidden order in human matters: it is precisely because culture springs up in reaction (and therefore in relation) to nature that the study of natural circumstances can illuminate the study of cultural phenomena.

No wonder that this passage has been read as proof of Bodin's determinism: it does appear as though Bodin is pointing here to a radical divide between nature and culture, with nature taking over culture while culture is reduced to a secondary, and rather precarious, role. Yet this is not Bodin's ultimate word on the matter. Everything that follows in Chapter 5 of the *Methodus*, as

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[27] For differences between the *Methodus* and the *République* with particular respect to climate theory, see Staszak and Couzinet, 'À quoi sert la "théorie des climats"?' and Spavin, 'Jean Bodin and the Idea of Anachorism'. Spavin's analysis also takes into account one of Bodin's later works, the *Universae naturae theatrum*, published in 1596.

[28] Bodin, *Methodus*, 5.2, 220; *Method*, 85. Latin: 'illa quae non ab hominum institutis, sed a natura ducuntur, quaeque stabilia sunt, nec umquam nisi magna vi, aut diuturna disciplina mutantur; et mutata nihilominus ad pristinam redeunt naturam'.

well as Bodin's later discussion of the topic in the *République*, call into question both the dualism and the hierarchy that are seemingly established here. First of all, Bodin is keen to stress that the effects of corrective discipline, while fragile and precarious, are real and proven by famous historical examples: the Arcadians, who used music to overcome the negative influences of their mountainous environment;[29] the Germans, who were able to rise from barbarity to civility through self-discipline and education;[30] and the Carthaginians and the Arabs, 'soft' southern peoples who nevertheless managed to establish powerful empires thanks to tigorous military training.[31]

Furthermore, the primacy of nature over culture posited at the outset of *Methodus* 5 is explicitly reversed in the *République*, where Bodin states unequivocally that 'nurture is stronger than nature' (*nourriture passe nature*), referring once again to the Germans as a case in point.[32] While in the *République* as in the *Methodus* Bodin is careful to stress that the corrective effects of discipline only last if the discipline itself is rigorously practiced ('it is true that if the laws and customs are not well maintained, the people will soon return to its natural character'),[33] Bodin does seem to uphold a more optimistic view in the *République* than he did in the *Methodus* regarding our ability to withstand the influence of climate. This increasing optimism is further signalled by the introduction, in the second revised edition of the *Methodus* (1572), of a passage on the Scythian Anacharsis, a philosopher born and bred in a northern climate (an unlikely home

[29] Bodin, *Les Six livres de la République*, 5.1, 692.
[30] Bodin, *Methodus*, 5.180, 332-334; *Method*, 145.
[31] Bodin, *Methodus*, 5.181, 334; *Method*, 145.
[32] Bodin, *Les Six livres de la République*, 5.1, 695. French: 'Mais qui voudra voir combien la nourriture, les loix, les coustumes ont de puissance à changer la nature, il ne faut que voir les peuples d'Alemagne, qui n'avoient du temps de Tacite ny loix, ny religion, ny science, ny forme de Republique, et maintenant ils ne cedent point aux autres peuples en tout cela'.
[33] Ibid., 5.1, 695. French: 'vray est que si les loix et coustumes ne sont bien entretenuës, le peuple retournera bien tost à son naturel'.

for intellectuals, according to the Mediterranean-centered outlook of classical climate theory).[34] This passage, absent from the first edition of the *Methodus*, presents Anacharsis as 'proof that [air] has indeed great influence for changing character, yet does not entail necessity',[35] further evidence indeed of the non-deterministic spirit of Bodin's climate theory.

More radically still, the very dichotomy that opposes culture and nature apparently established at the outset of *Methodus* 5 is undone elsewhere in various ways. One particularly interesting case occurs later in the same chapter, where Bodin introduces a vegetal metaphor to reflect about the power of education:

> quemadmodum foecunda tellus nisi excolitur, magnam nocentium herbarum vim profert: et modice culta valde frugifera fit; sterilis vero neque salutares, neque noxias herbas, nec quicquam omnino nisi maximo labore parit: ita quoque de Australium ac Scytharum ingeniis iudico.[36]
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> (As the fecund earth produces a large supply of noxious weeds unless it is cultivated [*nisi excolitur*] and when worked [*culta*] in a proper manner becomes really fruitful; and sterile earth, on the other hand, produces neither healthful nor noxious weeds, nor anything at all except with the greatest effort; so also I judge to be the case with the talents of the southerners and of the Scythians.)

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[34] On this topic, see Floyd-Wilson, *English Ethnicity and Race*, esp. Chapter 1.
[35] Bodin, *Methodus*, 5.4, 222; Bodin, *Method*, 86. Latin: 'magnam quidem vim ad immutandos animos habere, necessitatem tamen non adferre argumento fuit Anacharsis Scytha'. Anacharsis was mentioned once in the first edition of the *Methodus*, in similar but much less explicit terms: 'nullos unquam a Scythia philosophos praeter Anacharsim; innumerabiles a Graecia fluxisse' (5.84, 272-274).
[36] Bodin, *Methodus*, 5.74, 268; Bodin, *Method*, 110.

Here, Bodin deliberately plays on the polysemous word 'nature'— which can indicate both the physical world (what some call 'environment' today)[37] and the fundamental constitution of a thing (its 'nature' or essence)[38]—in order to problematize the dichotomy between *natura* and *instituta* with which he had opened the chapter. The opposition sketched in this passage is not so much between nature (intended as environment) and culture (intended as the world of humans), but rather between a nature that can be improved by culture on the one hand, and a nature that is infertile, and therefore intractable to culture, on the other. By establishing this opposition, Bodin draws attention to the fact (already highlighted by Cicero in his *De natura deorum*) that most of the time the physical nature that humans experience is not a pristine wilderness but a 'second nature' already modified by culture (*culta*) in more or less visible ways.[39]

Bodin's use of the vegetal metaphor further challenges any rigid nature/culture dichotomy by suggesting that humans themselves do not belong exclusively in the realm of culture—they are also firmly anchored in the realm of nature: they *are*, in fact, nature, so long as culture does not intervene to complicate this identity. The point is made most clearly later in the chapter, where Bodin brings together Cicero's concept of 'second nature' with the Aristotelian notion of *hexis* or *habitus* (a stable disposition acquired through long habit), writing that 'such is the influence of custom and discipline in natural and human affairs that gradually they develop into into mores and take on the force of nature'.[40] In other words, culture itself can become nature by

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[37] See OED, 'Environment', 2d.
[38] See Williams, *Keywords: A Vocabulary of Culture and Society*, 220, on the polysemy of the word 'nature'.
[39] For a discussion of Cicero's concept of 'second nature' and its influence on early modern theories of the landscape, see Hunt, *Greater Perfections*.
[40] Bodin, *Methodus*, 5.183,334; Bodin, *Method*, 146. Latin: 'tanta consuetudinis ac disciplinae vis est in rebus naturalibus et humanis, ut paulatim abeat in mores, et naturae vim obtineat'.

means of constant repetition (*diuturna disciplina*). Like fertile lands, then, humans are for Bodin fundamentally in-between nature and culture: simultaneously exposed to environmental influences, and capable of mastering these influences to a certain extent through *cultura* ('culture'. but also 'cultivation'). It seems then that the ultimate goal of Bodin's climate theory is not to construct a hierarchical dichotomy that separates nature and culture, but rather to draw attention to the interstitial spaces *between* nature and culture, so as to illuminate their mutually-constitutive relationship.

4. A Balancing Diet: The Medical Economy of Climatic Influence

Bodin's corrective discipline, as we have seen, can take many forms: from religion and music to laws, military training, and an education in the liberal arts. However, one important dimension that is missing from Bodin's discussion is that of food and diet as countermeasures against climatic influence. While Bodin does speak at length about the relationship between food and climate in *Methodus* 5 (and to a lesser extent in *République* 5.1), he does not go into great detail to explain how diet fits in his picture of corrective discipline. Unsurprisingly, this aspect takes center stage in discussions of climate theory by professional physicians and dietitians. The idea of responding to the influence of climate through diet is not specific to the Renaissance: it dates back to ancient medical writers such as Hippocrates and Galen, as well as to other authors

(Plutarch, for instance) whose dietetic advice was steeped more in moral philosophy than in medicine proper.[41]

In the Renaissance, the field of dietetics or hygiene (the branch of medicine concerned with the preservation and restoration of health through a regulated manner of living) was still dominated by a Galenic template that postulated the existence of six 'non-natural' factors influencing human health: ambient air, food and drink, motion and rest, wake and sleep, excretion and retention, and the passions of the mind.[42] The correct administration of these six factors was deemed crucial for human wellbeing and formed the object of dietetics. Dietitians would typically advise their patients on what they should eat and how long they should sleep depending on the patient's gender, age, and individual constitution, but also taking into account other factors such as the season of the year or the nature of the local climate. Stressing the importance of 'good air' for the wellbeing of a person, they offered remedies for those who lived in places where the air was 'unduly warm or cold, dry or moist,'[43] and therefore dangerous for human health. They explained, for instance, how careful regulation of food intake and sleep patterns could work as a remedy against unfavorable climatic conditions. Diet—in this broader

[41] Jouanna, *Greek Medicine from Hippocrates to Galen*, Chapters 8 and 9; Mikkeli, *Hygiene in the Early Modern Medical Tradition*; Van Hoof, 'Plutarch's "Diet-Ethics"'.
[42] In general see Temkin, *Galenism*. More specifically on the persistence of Galenic dietetics in the Renaissance, see Siraisi, *Avicenna in Renaissance Italy* and Albala, *Eating Right in the Renaissance.*
[43] Galen, *Hygiene,* 1.4, 11.

sense of 'life regimen'—thus became a popular and relatively accessible way of coping with environmental influence, and such it remained throughout and beyond the Renaissance.[44]

The sixteenth and early seventeenth centuries witnessed the publication of a wealth of healthcare books reconnecting to this longstanding tradition: among other things, these works offered detailed advice on how to regulate one's diet and lifestyle in order to counterbalance the effects of air on one's temperament.[45] The framework adopted in these texts was still largely that of Galenic humoral theory, itself based in turn on ancient Greek elemental theory. The gist of it is simple: there exist four elements (fire, earth, air, water), four qualities (hot, cold, dry, wet), four humors (blood, phlegm, yellow bile or choler, black bile or melancholy), and four temperaments (sanguine, phlegmatic, choleric, melancholic); health consists in a good balance between these different components, and while it is perfectly normal for a healthy body to exceed slightly in one sense (that is to say, to have a slightly choleric or a slightly melancholic temperament), greater excesses can result in *diskrasia* (temperamental imbalance) and lead to serious illness. Behind this deceptive simplicity, however, lies great complexity. Temperamental theory was a rather loose and adaptive framework that could accommodate disagreements over points of detail: working within that structure, Renaissance physicians (but also thinkers without any formal medical training, such as Bodin) were able to develop highly idiosyncratic doctrines—sometimes as a result of different interpretations of the same authoritative texts—

[44] On the medieval tradition, see Mikkeli, *Hygiene in the Early Modern Medical Tradition*; Nicoud, *Les Régimes de santé au Moyen Âge*. For the early modern tradition, see Cavallo and Storey, *Healthy Living in Late Renaissance Italy*.
[45] On the popularity of healthcare books in the early modern period, see Slack, 'Mirrors of Health and Treasures of Poor Men.'

without however departing from the fundamental principles that were largely shared among their community.

The work of Nicolas Abraham de La Framboisière—court physician during the reign of Henry IV, and professor of medicine at Reims—is a good example of how consensus and disagreement could coexist in medical approaches to climate theory in the Renaissance. La Framboisière's case is in many ways representative of contemporary trends: for instance, his choice of devoting a whole book of his treatise on healthcare (*Le Gouvernement necessaire à chacun pour vivre longuement en santé*, 1600) to examining diet in relation to place and climate is shared by many other medical writers of the time;[46] the same can be said more generally of his ideas on the transformative powers of food (which, as we shall see, represent another interesting angle for thinking about the continuum between nature and culture in the Renaissance). Nevertheless, as soon as we move into a more detailed analysis of his ideas on climate, temperament, and diet, we start noticing significant discrepancies between La Framboisière's views and those of at least some of his contemporaries.

La Framboisière's *Gouvernement* is divided into eight books, each of which examines the question of regimen from a particular perspective. Having outlined general rules for the preservation of health (Book 1) and discussed how regimens must vary according to individual temperament (Book 2), gender (Book 3), and age (Book 4), in Book 5 La Framboisière turns to considering the relationship between regimen and place. After restating the classic Galenic view

[46] This includes La Framboisière's older colleague Joseph Duchesne (also known as Quercetanus, 1544-1609), who was also active at the court of Henry IV for a brief period at the closing of the sixteenth century. His treatise on healthcare, available in both French (*Le Pourtraict de la santé*, Paris: Claude Morel, 1606) and Latin (*Diaeteticon polyhistoricon*, Paris: Claude Morel, 1606), contained several sections on the relationship between food and climatic influence.

that climate shapes temperament, the royal physician calls attention to the necessity of following different lifestyles in different countries: 'il est besoin és regions chaudes de se gouverner autrement qu'és regions froides, et aux autres lieux humides autrement qu'aux lieux secs' (one must govern oneself differently in hot regions than in cold regions, and in humid places than in dry places.)[47] As he proceeds to offer some concrete examples of how such a climate-specific health regimen works in practice, La Framboisière takes a rather controversial stance by associating western peoples with a phlegmatic (i.e. cold and humid) temperament and eastern peoples with a choleric (i.e. dry and hot) temperament. This view contrasted with longstanding ethnic stereotypes that portrayed Asian peoples as soft and effeminate as opposed to the strong and manly European peoples, as we find for instance in the Hippocratic treatise *Of Airs, Waters, and Places* (5th century BC).[48] Inversely, for La Framboisière, easterners are 'harder, manlier, braver, and more courageous' than westerners on account of their choleric constitution. While this may seem like a positive assessment of their nature, La Framboisière immediately adds that the excess of bile in their body makes them subject to a range of hot diseases, which can only be avoided through an appropriate corrective regimen:

[47] La Framboisière, *Gouvernement*, 300.

[48] Ibid., 303-305. It is slightly paradoxical that La Framboisière should reach this anti-Hippocratic conclusion precisely through an excess of Hippocratism: his identification of western peoples as choleric and of eastern peoples as phlegmatic derives from the fact that, following Hippocrates against Aristotle, La Framboisière establishes a direct correlation between nature of the climate and nature of the people living in it ('puisque les personnes tiennent tousiours de la nature de leur pays, il ne faut point douter que les Orientaux ne soyent chauds et secs…', 303). Because he considers eastern climates to be drier and hotter than western climates due to the presence of the rising sun, he must also conclude that people living in the east have drier and hotter temperaments than people living in the west.

> Les Orientaux sont subiects aux maladies chaudes, provenantes d'humeurs bilieuses. Partant ont besoin d'user de viandes raffraichissantes, et de mettre force eau en leur vin, et feront mieux de vendre leurs espiceries aux autres nations, que de s'en servir. Les bains d'eau douce leur sont proffitables. L'exercice violent, la cholere, et toutes autres choses qui eschauffent et dessechent fort, leur sont nuisibles. Le dormir leur est bon, et le coïte souvent contraire.[49]
>
> ([Easterners] need to eat cooling foods and to put abundant water in their wine, and they would do better to sell their spices to other nations than consume them. Sweet-water baths are beneficial to them. Intense exercise, anger, and everything else that has a strong warming and drying effect are harmful to them. Sleep is good for them, and frequent intercourse bad.)

La Framboisière gives similar—but opposite—advice to the phlegmatic western peoples, who should instead 'user d'une manière de vivre chaude et sèche' (follow a hot and dry regimen) to compensate for their naturally cold and humid constitution: this includes long walks, intense physical exercise, and liberal consumption of strong wine, roasted meats (as opposed to boiled meats), spices and other hot condiments; on the other hand, foods such as fish, soups, fruits and salads should be avoided, and sexual appetites carefully managed.[50]

[49] Ibid., 304.
[50] Ibid., 305.

La Framboisière's prescriptions for southerners follow a similar course of reasoning, on the assumption that their nature should be hot like that of the climate in which they live.[51] But when it comes to northerners, La Framboisière surprisingly breaks the pattern. He claims that northerners, alone of all people, are not an exact mirror of their country: though cold on the outside, they are hot and humid on the inside 'due to the coldness of the region, which prevents the dissipation of spirits.'[52] This unexpected application of the Aristotelian (and later Galenic) principle of antiperistasis within a discussion of climatic influence largely inspired by Hippocrates is a good example of how the interplay of different sources could generate unusual, and sometimes puzzling, results within the context of an apparently static and repetitive tradition. It is also an indication of how difficult it was for Renaissance authors to challenge especially powerful ethnic stereotypes such as that of the sanguine, strong-bodied, resourceful northerner, which itself rested on the premise of a hot and humid northern constitution. While La Framboisière, as we have seen, does not hesitate to overturn other longstanding ethnic stereotypes in his work, the exception that he makes in the case of northern peoples might relate to the special place that the north occupies in his personal map of the world, which positions Europe in the northern quadrant and thus identifies France as a northern region (albeit the most temperate of all).[53]

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[51] Ibid., 306-308. Southerners must adopt a regimen close to that of easterners, though stricter than the latter on account of their hotter nature: thus consumption of wine is altogether discouraged, while a special word is said in favor of seasoning food with the juice of oranges, lemons, and pomegranates.

[52] Ibid., 309 ('Partant les Septentrionaux bien qu'ils tiennent de la complexion du pays, si ont ils neantmoins dans le corps abondance de chaleur naturelle et d'humeur radicale, à cause de la froidure de la region, qui empesche la dissipation des esprits'). There is an explicit mention of Galen's *De regimine sanitatis* a few lines above this passage.

[53] Ibid., 311 ('Toute la terre est divisée en quatre parties, l'Europe située du costé de Septentrion, l'Asie au levant, l'Afrique au Midy, et l'Amerique vers le Ponant. L'Europe […] contient-elle […] beaucoup de regions, dont la Gaule est la plus temperée de toutes […] d'autant qu'elle est

As this brief analysis has made clear, La Framboisière's discussion of climatic influence and corrective regimen features a heady mixture of traditional and unconventional ideas. While La Framboisière's views differ from those of his contemporaries in several important respects, the fundamental insight that inspires Book 5 of his *Gouvernement*—that the influence of ambient air can be counterbalanced through careful regulation of a person's diet and lifestyle—is one to which most, if not all, medical writers in the Renaissance readily subscribed.[54] In particular, his thoughts on the transformative effects of food belong in a much wider culture of thinking about the relationship between nature and nurture in dynamic and non-deterministic terms. From a humoral perspective, food itself is, in a sense, nature-turned-culture, as humans appropriate the fruits of the earth (and the non-human animals that live on it) not only to *sustain* themselves (a natural need that can be satisfied through instinct), but to *transform* themselves through autonomous acts of self-fashioning (a cultural gesture that connects the sphere of dietetics to that of ethics). The doctrine of corrective regimen highlights this cultural dimension of eating not only by calling for greater awareness when choosing one's diet, but also by stressing that the natural properties of foods can be artificially modified through different cooking methods (e.g. grilling vs. boiling) or the use of certain condiments (e.g. spices or lemon juice).[55] Furthermore, this food which is nature-turned-culture is itself reconverted into nature as soon as it is eaten, assimilated, and transformed into humors, flesh, and vital heat. Corrective regimens, as described

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iustement située au milieu des quatres pays notables qui l'environnent de tous costez', namely Italy, Spain, England, and Germany). Stereotypes relating to the north/south divide were in any case more powerful than those relating to the east/west divide; for instance, Bodin explicitly states that the former distinction is more relevant than the latter one (Bodin, *Les Six Livres de la Répblique*, 5.1, 690).

[54] For a rare counterexample, one can see Huarte's *Examen de ingenios para las ciencias,* which propounds a much less optimistic view of the powers of regimen.

[55] See Albala, *Eating Right*, for other examples.

in the works of La Framboisière and of innumerable medical writers from the Renaissance, are ultimately nothing else but the art of governing this open-ended relationship between nature and culture, with a view to turning human nature into a 'second nature' which is neither entirely nature nor entirely culture, but rather which inhabits the space in-between the two.

5. Conclusions

This essay has offered a reappraisal of Renaissance climate theories that shifts attention from notions of causality and determinism to notions of embeddedness, embodiment, and dynamic correlation, in order to highlight what Jean-Baptiste Fressoz has recently called the environmental 'reflexivity' of modern societies.[56] In social theory, 'reflexivity' designates a bidirectional relationship between causes and effects that mutually influence each other in an open-ended spiralling process. As Jean-Patrice Courtois and Catherine Larrère have shown for eighteenth-century France—and as this chapter has sought to demonstrate for an earlier period—climate theory is inherently reflexive in this specific sense, because it calls attention to the manifold 'transactions' that humans establish with the physical 'environments' in which they live.[57] In this perspective, climate theory consists not in *establishing*, but in *abolishing* any rigid dualism between nature and culture, and in thinking about the particular 'epistemic space' that is thus opened between these two dimensions.[58] Each from their own unique perspective, the three

[56] Fressoz, *L'Apocalypse joyeuse,* 13.
[57] Courtois, 'The Climate of the *Philosophes*'; Courtois, 'Le Physique et le moral'; Larrère, 'Montesquieu et l'espace'.
[58] Fressoz, *L'Apocalypse joyeuse*, 13. Georges Benrekassa has similarly spoken of the 'common space' (*espace commun*) that climate theory opens up between man and nature (*La Politique et sa mémoire*, 207).

authors discussed in this essay all testify to this dynamic, non-dualistic, and anti-deterministic spirit of early modern climate theory. Whether it is by reintegrating man within a cosmic process of vicissitude that binds the human and the natural together (Le Roy); or by putting forth the idea of a 'second nature' that would be the result of continued discipline against the influence of climate (Bodin); or by examining the transformative powers of food as part of an open-ended relationship between nature and culture (La Framboisière), each of the authors considered in this chapter frames the relationship between humans and their living environments in transactional terms, that is to say, as a complex set of mutual interactions, negotiations, and exchanges that constantly redefine the very subjects involved in this relationship. Contrasting strongly with the dualism and essentialism implicit in the modern idea of a clear divide between nature and culture, climate theories may thus provide us with a helpful starting point to rethink our connection to the natural world in the form of an 'integrated ecology' of human-nature relationships.[59]

[59] Latour, *We Have Never Been Modern*; Descola, *Beyond Nature and Culture*.

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