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Guido Giglioni
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Francis Bacon on Motion and Power

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Preface

This volume collects some of the papers delivered over the course of two colloquia on Francis Bacon held at the Warburg Institute in 2011 and 2013. The first colloquium, on 'Francis Bacon and the Materiality of the Appetites: Science, Medicine and Politics' (17–18 June 2011), gave participants an opportunity to engage in fruitful discussions on topics such as matter, desire and Stoicism in Bacon's philosophy. The second, on 'The Alphabet of Nature and the Idols of the Market: Bacon on Languages, Natural and Human' (14–15 June 2013), focused on the notion of language in a variety of Baconian contexts (e.g., natural history, magic, rhetoric and moral philosophy).

From different angles, *Francis Bacon on Motion and Power* revisits some of the most controversial issues in Bacon scholarship today (on topics such as matter, experimentation and the nature of political organizations). It looks at Bacon as a complex figure, but one who was able to move with a certain ease across the universes of sixteenth- and seventeenth-century literature, science and philosophy, and it does so on three levels: by exploring the relationship between metaphysics and experimental knowledge in Bacon's thought; by emphasizing the close intertwinement of the natural, moral and political aspects of his philosophy; and by highlighting his lifelong concern with the most pressing theological questions of the age (the status of natural theology, the possibility and the limits of a theologico-political order and the controversial value of pagan wisdom). Tying together these strands, *Francis Bacon on Motion and Power* ultimately highlights Bacon's particular focus on the appetitive nature of reality, shared by both humans and nature, and placed, as he understood it, between the opposing forces of life and death.

Both colloquia were an integral part of the activities related to the European Research Council project 'Medicine of the Mind and the Reconfiguration of Natural Philosophy: A New Interpretation of Francis Bacon'. This five-year research project

(2010–2014) was carried out by the editors of this volume in conjunction with the New Europe College (Colegiul Noua Europă) in Bucharest. We would like to thank the Warburg Institute and their staff for helping us to organize these colloquia, especially Catherine Charlton, Natalie Clarke, Jane Ferguson, Folake Ogundele and Anita Pollard.

Bucharest and London
September 2015

Sorana Corneanu
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Chapter 1
Introduction: Francis Bacon and the Theologico-political Reconfiguration of Desire in the Early Modern Period

Guido Giglioni

Abstract Bacon's ideas on motion rested on an appetitive and acquisitive consideration of life in which nature was identified with a tendency to preserve order, virtue with the unceasing effort to expand the boundaries of life, and government with the art of maintaining and balancing power (reason of state). A remarkable outcome of this view was the opinion that, in a universe ruled by the principle of self-preservation, life appeared to be constitutively vulnerable, being always exposed to episodes of aggression and violence that originated in its own environs. In the teleological framework of Aristotelian metaphysics, by contrast, life was an indication of perfection, for it signalled the fulfilment of potentialities brimming with energy and knowledge. To be alive, for both Plato and Aristotle, meant to attain a higher degree of ontological perfection. For Bacon, to be alive meant to counter a deeper and stronger tendency to rest. Compared to Aristotelian and Platonic ideals of life as self-fuelling *activity*, Bacon shifted the emphasis away from the notion of spontaneous self-organization towards that of *reactivity*. From this point of view, he rightfully belongs to the early modern history of *conatus*, understanding by *conatus* the struggle to remain in existence and expand the scope and power of one's being. By elaborating an original theory of conative motions, Bacon adopted and reinterpreted some of the most controversial issues of Renaissance philosophy concerning both nature and politics (above all from Bernardino Telesio and Niccolò Machiavelli), and bequeathed them to a number of seventeenth-century philosophers eager to explore new ways of addressing life's puzzling tangle of desires, power and knowledge.

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1.1 History, Medicine and Politics: The Disciplinary Coordinates of Early Modern *Conatus*

Why motion when everything could be eternally peaceful and immutable? If the paths of nature all drive inexorably to death, why indulge in seemingly superfluous detours? These are formidable questions which Bacon pondered throughout his career as both a philosopher and a politician with strong interests in medicine and history. In his philosophy, he laid bare a radically new view of motion, in which, departing significantly from the Aristotelian and scholastic approach, he explained motion not as a condition of partially unactualized potentiality, but as an actual tendency inbuilt in matter. Even more removed from Bacon's mind was any attempt to provide a mechanical and kinematic understanding of motion. He looked at motion as appetite, and this for him was the very essence of reality, its source of activity. His was a cosmos in which there was ceaseless motion and action, followed by knowledge and contemplation. This position was rather unconventional when compared to previous opinions. For Plato and Aristotle, for instance, motion was an accident, a reaction, a transitory state meant to end with either the full disclosure of intelligible reality (Plato) or the complete actualization of potential energy (Aristotle). Bacon, by contrast, thought that the dynamic and affective dimensions of reality were more original than the cognitive ones. Things first adjusted themselves to reality (all things, animate and inanimate, for everything, so Bacon assumed, was in the grip of desire); then they were able to contemplate reality (that is, if they ever reached the level of focus and the state of leisurely detachment required for contemplation).

In this respect, Bacon's ideas on motion rested on an appetitive and acquisitive consideration of life in which nature was identified with a tendency to preserve order, virtue with the unceasing effort to expand the boundaries of life, and government with the art of maintaining and balancing power (reason of state). A remarkable outcome of this view was the opinion that, in a universe ruled by the principle of self-preservation, life appeared to be constitutively vulnerable, being always exposed to episodes of aggression and violence that originated in its own environs. In the teleological framework of Aristotelian metaphysics, by contrast, life was an indication of perfection, for it signalled the fulfilment of potentialities brimming with energy and knowledge. To be alive, for both Plato and Aristotle, meant to attain a higher degree of ontological perfection. For Bacon, to be alive meant to counter a deeper and stronger tendency to rest. Compared to Aristotelian and Platonic ideals of life as self-fuelling *activity*, Bacon shifted the emphasis away from the notion of spontaneous self-organization towards that of *reactivity*. From this point of view, he rightfully belongs to the early modern history of *conatus*, understanding by *conatus* the struggle to remain in existence and expand the scope and power of one's being. By elaborating an original theory of conative motions, Bacon adopted and reinterpreted some of the most controversial issues of Renaissance philosophy concerning both nature and politics (above all from Bernardino Telesio and Niccolò Machiavelli), and bequeathed them to a number of seventeenth-century philoso-

phers eager to explore new ways of addressing life's puzzling tangle of desires, power and knowledge.

It is therefore important to make clear from the beginning that Bacon's new science of motion was not influenced by Aristotelian physics or the recovery of Archimedean mechanics, nor did it embrace in any way the mathematizing vision of nature that was taking shape at the time. Rather, his new science drew inspiration from the disciplines of history, medicine and politics, as is evident from his reinterpretation of both *conatus* and *conservatio*. Bacon was fully aware that the parcelling out of power, happening on many levels at the time, dovetailed with a view of life characterized by the atomizing of drives and interests. Crucially, in the self-preservative framework of natural organizations, embraced by authors as diverse as Machiavelli, Telesio and Bacon (and later Spinoza), the emphasis was on the 'self'. As a collective enterprise, the survival of the whole depended on myriad material selves adjusting to each other and discovering ways of coexisting together. 'Dionysian' (i.e., human) desire was confronted with the ravenous hunger of 'cupidinous' (non-human) desire, to use Bacon's categories of emblematic philosophy (see Chap. 7 in this volume). This was a momentous shift, both in metaphysical and theological terms: belief in an original unity of nature was being radically questioned, while the assumption that reality corresponded to one intelligible template of divine origin began to lose intellectual appeal once compared with a new world of economic expansion and political conflict. In this sense, as I argue in the rest of this introductory chapter, the self-preservative model of reality characteristic of Bacon's philosophy was of a distinctively theologico-political character.

1.2 The Power of the Idols

One of the most original and characteristic lines of inquiry that defines early modern philosophy, from Machiavelli to Spinoza, is the investigation of that unique constellation of reasons and conditions that make desire, power and language inextricably intertwined in human lives. Bacon came up with a particularly successful term to denote that entangled knot of imagination, appetite and manipulation: *idolum*, that is, a 'phantom' or a 'spectre', a distorted representation of reality induced by expectations and passions, and capable of crippling man's abilities to express and communicate his opinions and thoughts. As tokens of the lustful and idolatrous nature of human beings, *idola* signalled for Bacon the constitutively delusional character of desire. From the 'films' (εἴδωλα) of the ancient Atomists, endlessly released from all natural beings, to Calvin's effigies of blasphemous worship (Calvin's *Treatise on Relics* had been translated into English in 1561), *idolum* possessed a long, chequered history as a technical term in philosophy. *Idolum* was idol (of both amorous and religious devotion), figment of the imagination and object of unrestrained desire. Bacon appropriated the term to signify that the object which one might take for reality could in fact be an image of nature refracted through the prism of human desire. In a culture that, from Henry VIII to Elizabeth I, had witnessed official acts

of iconoclasm and popular attacks against images (from statues to paintings, from stained-glass windows to rituals, from ballads to plays), the 'idolatruos eye', to use Michael O'Connell's phrase, had become a pervasive concern, one that helps to explain specific attitudes and fears towards reality. It was a culture that was profoundly uneasy with *idola* because of their blasphemous, erotic and artistic implications. Religious iconoclasm, Petrarchism and the recovery of pagan imagination all helped create an atmosphere of anxiety fuelled by a perceived rift between appearance and reality (O'Connell 2000; Phillips 1973; Collinson 1986).

Against this background, it was the Democritean sense of *idola* which prevailed in the way Bacon developed his theory of idolatrous representation. Lucretius had insisted that the myriad phenomena in our lives impeached the credibility of the senses (*violare fidem quasi sensibus … quaerunt*), but he likewise blamed the projections superimposed by the mind onto reality (*opinatus animi quos addimus ipsi*, in *De rerum natura*, IV, 463–465). For Lucretius, as well as for Bacon, to desert sensory evidence and chase the dreams of the mind was tantamount to violating the primordial bond of trust between things (*violare fidem prima*, which Bacon rephrased as *commercium mentis et rerum*) and therefore to uprooting the very foundations of life and safety (*convellere tota | fundamenta quibus nixatur vita salusque*, IV, 505–506). Bacon adopted some characteristic themes from Lucretius, and devised an ontology of dynamic realism opposed to the fleeting constructions of deceiving appearances incessantly being fashioned by the human mind. He defined motions as real appetites constitutive of things, while rejecting idols as wish-fulfilling desires that were wholly incompatible with reality.

There is no doubt that *idolum* is a keyword in Bacon's philosophical language, both in Latin and in English. Depending on the context, it variously taps into the resources of mythology, emblematic literature, poetry and rhetoric. This is an aspect of Bacon's philosophizing that has often been undervalued, dismissed as 'literary' and not sufficiently 'philosophical', or worse, not 'scientific'. Due to a host of reasons (rhetorical, ideological and propagandistic), the normalization of Bacon's thought and vocabulary started very early in the seventeenth century (Giglioni 2013a, 2014b). Marialuisa Parise, in the final chapter of this volume, reports the significant testimony of Antoine de Lasalle (1754–1829), who in 1799 complained about Bacon's decision to use the word *idolum*. That word, in Lasalle's opinion, was an infelicitous choice, for it referred at once to mistakes, prejudices and delusions ('une *erreur*, un *préjugé* et un *fantôme* de l'esprit ou une idée fantastique, ne sont pas précisément la même chose', in Lasalle 1799–1800, IV, 103–104, and Parise in this volume). In fact, Bacon's *idolum* is a word that captures very well that most elusive combination of desire, imagination and language. *Idola* testify to the constant threat of delusional apprehensions of reality, imbued with lust and expectation. Above all, they bring to the fore the awareness that Bacon had of the power of language, as both a historical and a social artefact. It was precisely because of this intertwinement of desire, imagination and language that, according to Bacon, philosophy should become mythopoetic and explore the most ancient testimonies of the original productivity of nature. Not by coincidence, as we will see in the next section, philosophy was symbolized by Orpheus in Bacon's thought.

1.3 'Orpheus's Theatre', or What Bacon Meant by Philosophy

What is philosophy for Francis Bacon? Its primary meaning coincides with the experimental attempt to preserve the life of natural bodies, what in the *Sylva Sylvarum* he called the 'great secret of preservation of bodies from change'. In this work, the investigation was remorselessly experimental. Permanence of life could be achieved by denying access to air, by preventing a body from being assimilated by other bodies, and by restraining parts from moving within the same body (Bacon 1857–1874, II, 384). In *De sapientia veterum* (1609), the question of the preservation of life had already taken on metaphysical overtones: 'by far the most noble work of natural philosophy (*opus naturalis philosophiae longe nobilissimum*) is the very restoration and renewal of perishable things (*ipsa restitutio et instauratio rerum corruptibilium*)' (Bacon 1857–1874, VI, 647–648). Both works (*Sylva Sylvarum* and *De sapientia veterum*) and both approaches (the experimental and the mythographic) confirmed the theoretical and practical difficulties involved in the attempt (*experimentum*) to preserve life. Since Bacon recognized that this aim could not be achieved due to the rudimentary state of technology, in *De sapientia veterum* he introduced a secondary meaning of philosophy, related to the preservation of social bodies:

> this concern for public affairs (*rerum civilium cura*) takes place in due order after the attempt to renew the mortal body has been assiduously made and in the end it failed (*post experimentum corporis mortalis restituendi sedulo tentatum et ad extremum frustratum*, Bacon 1857–1874, VI, 648).

To provide a universal model of philosophy (*philosophiae universae imago*), Bacon referred here to the fable of Orpheus – 'an extraordinary man, of a truly divine nature, expert in all kinds of harmony, capable of attracting and winning over everything by using pleasant means'. And since Orpheus's labours represented the hard work of knowledge, they were even superior to Hercules's labours, traditionally taken as a symbol of virtue and fortitude. The story as recounted by Bacon is divided into two main parts: the first concerned Orpheus's ability to convince the infernal deities (*Manes*), through his singing and playing, to bring back to life his wife Eurydice; the second described the effects that his music had on natural beings:

> through the sweet sound of his lyre and his singing, he first drew to himself all kinds of wild animals, in such a way that they were sitting around him, as if in a theatre (*in more theatri*), all attentive to the harmonious sounds of his lyre, all behaving kindly and meekly with each other, having divested themselves of their previous nature, oblivious of their anger and ferocity, without being led to act precipitously by the urges and rage of inordinate desire (*stimuli et furores libidinis*) and no longer bothered to satiate their voraciousness or to chase after preys. And this wasn't all, for the force and the power of his music was so great that it moved even woods and stones, so that they too moved and arranged themselves in an orderly and proper fashion around him (Bacon 1857–1874, VI, 647).

By representing philosophy as Orpheus, Bacon highlighted the role that an accurate and patiently acquired knowledge of nature played in prolonging the effects of

life and postponing death (as signified by the bringing back of Eurydice to life). Knowledge of the innermost desires of nature (the motions of matter) and control of human desires (passions) were complementary plans of action in Bacon's philosophical programme:

> Orpheus's singing is of two kinds: one is directed to placate the infernal deities, the other to attract animals and woods. The former refers in the most apposite way to natural philosophy, the latter to moral and political philosophy. And the reason is that the most noble work of natural philosophy is by far the very restoration and renewal of perishable things, and – at a lower level – the preservation of bodies in their state (*corporum in statu suo conservatio*), and the delaying of dissolution and putrefaction (*dissolutionis et putredinis retardatio*). And if this goal can ever be achieved, certainly it can only be done by refining the temperaments of nature in the most appropriate way, as if through the harmony of the lyre and by following accurate rhythms and measures (Bacon 1857–1874, VI, 647–648).

This, however, was for Bacon the most difficult thing to achieve, especially because human beings were often overwhelmed by the urge to satisfy their material pleasures in an immediate way. For this reason, they directed their philosophical efforts away from nature and concentrated on the refinement of their culture:

> Being therefore unable to accomplish such a momentous task (*tantae rei fere impar*), and understandably sad for this reason, philosophy turns itself to human affairs (*vertit se ad res humanas*). By resorting to persuasion and eloquence, philosophy instils love for virtue, justice and peace into the soul of human beings. In doing so, it brings people together and sees to it that they accept the rule of the laws, submit to power and forget the untameable passions (*affectus indomiti*), while following and obeying precepts and disciplines. After that, buildings are built, cities are founded, fields and gardens are kept with trees, so much so that not without a reason stones and woods are said to be drawn and moved. And this care for civil matters (*rerum civilium cura*) takes place in due order after the attempt to renew the mortal body has been assiduously tried, in the end with no success; and since the unavoidable necessity of death appears increasingly more evident to the eyes of human beings, this encourages them to pursue eternity through their merits and the glory of their name (Bacon 1857–1874, VI, 647–648).

It is certainly possible to interpret the secondary meaning of philosophy for Bacon as a solution for political order. In fact, both the primary and the secondary meanings of philosophy are political. Bacon writes of philosophy like a Lord Chancellor, but *pace* William Harvey, who came up with this famous quip, we can now say that that remark loses its originally sarcastic tone, and we are ready to accept the idea of a chancellor-philosopher who held a political view of the universe (Aubrey 1958, 130). The two meanings of philosophy as the activity that aims at preserving the life of both natural and social bodies derive from the ontological core of Bacon's philosophy, that is, appetite or desire. As will be argued in many of the contributions to this volume, appetite is for Bacon natural and social at the same time. A passage from his early work *Valerius Terminus*, written around 1603, illustrates this point with flair and ingenuity: the universe, encompassing both the natural and the human worlds, is ordered according to four principal appetitive forces – the 'quaternion of good':

> if the moral philosophers that have spent such an infinite quantity of debate touching good and the highest good, had cast their eye abroad upon nature and beheld the appetite that is in all things to receive and to give; the one motion affecting conservation and the other

> multiplication; which appetites are most evidently seen in living creatures in the pleasure of nourishment and generation; and in man do make the aptest and most natural division of all his desires, being either of sense of pleasure or sense of power; and in the universal frame of the world are figured, the one in the beams of heaven which issue forth, and the other in the lap of the earth which takes in: and again if they had observed the motion of congruity or situation of the parts in respect of the whole, evident in so many particulars; and lastly if they had considered the motion (familiar in attraction of things) to approach to that which is higher in the same kind; when by these observations so easy and concurring in natural philosophy, they should have found out this quaternion of good, in enjoying or fruition, effecting or operation, consenting or proportion, and approach or assumption; they would have saved and abridged much of their long and wandering discourses of pleasure, virtue, duty, and religion (Bacon 1857–1874, III, 229–230; cf. Bacon 2000a, 135–53).

The 'appetite that is in all things to receive and to give', the motions through which individual things situate themselves within the whole system of the universe and, finally, the appetitive tendencies that keep the cosmos together according to the hierarchical divisions of being, all these motions form the structure which organizes the natural and social life of things. In essence, what Bacon is saying is that if moral philosophers concentrated more on natural appetites, they would have a better view of 'pleasure, virtue, duty and religion', which cover the domains of, respectively, the natural, moral, political and religious. If we also keep in mind that the four appetitive directions indicated by the 'quaternion of good' are 'fruition', 'operation', 'proportion' and 'assumption', a number of significant combinations can be extrapolated: fruition is to pleasure and nature, as operation is to virtue and ethics, as proportion is to duty and politics, as attraction is to 'assumption' (i.e., ascent to spiritual perfection) and religion. In Chap. 8, the reader will find a perceptive commentary on this important excerpt by Silvia Manzo.

The relationship between the 'quaternion of good' and the two levels of philosophical commitment (Plan A: preservation of natural life; Plan B: preservation of social life) also sheds light on Bacon's ideas about politics and the exercise of power. From what has already been noted about Orpheus's failure to control the appetites of life, it is apparent that Bacon had a rather disillusioned and pragmatic view of human mores. He certainly saw all efforts directed to the betterment of the human condition, including the enforcement of ethical codes and social norms, as an integral part of the mind's progress – although, in the end he fell back on the domain of ethics as a better solution, once his programme to reform natural philosophy encountered insurmountable obstacles (mainly of a technological nature, as already noted). Put otherwise, since the great instauration could not be fulfilled in the near future, and the task of finding a means to perpetuate material life indefinitely escaped man's power, human beings needed at least to aim at a life that was in accordance with standards of moral action and physical well-being, so as to promote health, freedom from danger and collaboration with fellow human beings.

Here is where Bacon reveals his knowledge of Machiavelli quite well. As I am going to show in the following two sections, two 'Machiavellis', as it were, can be traced in his works: a historical Machiavelli who in different ways, and depending on the contexts and the readers, was setting the terms of the contemporary political debate; and a symbolic Machiavelli who, starting already in the sixteenth century, was synonymous with an instrumental and opportunistic view of rationality. The

second kind of Machiavellism is still very popular today. The Oxford English Dictionary defines this meaning as pertaining to a behaviour that is 'unscrupulous, duplicitous, astute, cunning, scheming'. In primatology, the 'Machiavellian intelligence hypothesis' assumes that advanced cognitive processes depend on the complexities of social adaptations. Despite their differences, the two meanings of Machiavellism are somehow related, and can shed light on Bacon's twin notions of material desire and political ingenuity. Here I am conflating, of course, the historical and historiographical dimensions in the reception of Machiavelli's work, but I am doing so in order to elucidate the complexity of Bacon's idea of material desire, in both nature and society. Bacon certainly had no knowledge of primatology, but he read Machiavelli, and was clearly Machiavellian in thinking that the roundabout ways of desire were already at work in the most elementary components of nature, way before affecting the behaviour of apes.[1]

1.4 Matter and Desire

In his recent *Metamorphoses of the City*, Pierre Manent has underlined a few interesting parallels between the rise of the new science of motion in the early modern period and the ways in which Machiavelli and Hobbes redefined the meaning and scope of human action. For Machiavelli, according to Manent, motion itself (the 'irrepressible movement of human things'), and not some allegedly eternal paragon of justice and goodness, became the very norm of political action: 'what for the ancients was the limit of reason – namely, motion that eludes reason – becomes for Machiavelli, and after him for the moderns, the principal fact that a more ambitious or more resolute or daring reason must grasp' (Manent 2013 [2010], 205–206). As will become increasingly apparent in the course of this volume, Bacon shared with Machiavelli this view of motion, with the difference that, before Hobbes, Bacon felt the urge to theorize about natural motion in order to shed more light on the nature of political action, and, unlike Hobbes, he thought that knowledge of political motion – acquired both directly as a politician and indirectly through the study of history – could help humans understand the puzzling nature of physical motion. Manent suggests that early modern political philosophy was characterized by a consideration of 'power and freedom' as 'two aspects or expressions of motion' (Manent 2013 [2010], 206). This point, too, is particularly evident in Bacon's philosophy, where, as we will see, an irrepressible 'motion for freedom' (*motus libertatis*) is constantly reacting – in every corner of the universe, down to the smallest particle of matter – to all forms of external coercion, from the pressure that the atmosphere exerts over a bubble of air to the vexations that rulers impose on their people.

[1] On the 'Machiavellian intelligence hypothesis', see Byrne and Whiten 1988; Whiten and Byrne 1997. On the early reception of Machiavelli's works in the European culture, see Anglo 2005.

In the specific field of natural philosophy, Bacon looked at matter as an infinitely pliable substratum throbbing at all time with a finite number of structural motions. In a bold metaphysical move, he defined motion in terms of desire, while describing the natural world, down to its smallest constituents, as everywhere pervaded by ineradicable tendencies to act. As a result, motions were deemed to follow patterns of appetitive response: struggle for freedom, resistance to oppression, war against enemy forces, factions, alliances and reconciliations. This also meant that nature was everywhere political, since motion was a manifestation of desire. In Bacon's opinion, the mechanisms of self-control and self-sustenance that underlay all material aggregations in nature, from stones to human communities, were the result of complex adjustments among conflicting systems of motion. He thought that freedom, in particular, and the preservation of freedom in ways that were not self-destructive represented a crucial aspect of nature. Given these premises, Bacon showed no interest in a mechanical understanding of the universe, such that motion could be simply seen as an instance of local displacement, reducible to the set of spatial relations that bodies establish with their immediate surroundings. In Bacon's ontology, motions were real and they induced physical changes of state and place. Indeed, motions were forces and actions imparted by actual vital principles (Giglioni 2013a, 29–38).

Through its motions, matter displayed inner tendencies of contraction and expansion, of coercion and freedom, of fear and expectation. Bacon described the cosmos as shaped according to degrees of density and rarefaction which divided natural beings into 'two great families of things', organized according to dichotomous lines of development: 'sulphureous and mercurial', 'inflammable and not inflammable', 'mature and crude', 'oily and watery' (Bacon 1857–1874, II, 459–460; Bacon 2000b, 188–190; Rees 1975). This means that the various levels of consistency in matter depended on the intensity of its desires. In a universe always on the brink of disintegration, one of the most profound desires was the 'appetite of union':

> It is certain that in all bodies there is an appetite of union, and evitation of solution of continuity; and of this appetite there be many degrees; but the most remarkable, and fit to be distinguished, are three. The first in liquors; the second in hard bodies; and the third in bodies cleaving or tenacious (Bacon 1857–1874, II, 437).

Under the heading 'appetite of continuation in liquids', Bacon's description of a bubble of air in the *Sylva Sylvarum* is a feat of observational dexterity and experimental ingenuity. Why do bubbles of air in water rise to the surface and remain for a while in the form of hemispheres surrounded by a thin film of water? The answer is because air and water are caught in force fields created by their opposing desires: while water goes to great lengths to push the air away from its domain, air resists by curling up and taking on the best shape that is physically possible in those circumstances:

> Bubbles are in the form of an hemisphere; air within, and a little skin of water without: and it seemeth somewhat strange, that the air should rise so swiftly while it is in the water; and when it cometh to the top, should be stayed by so weak a cover as that of the bubble is. But as for the swift ascent of the air, while it is under the water, that is a motion of percussion from the water; which itself descending driveth up the air; and no motion of levity in the air.

> And this Democritus called *motus plagae*. In this common experiment, the cause of the inclosure of the bubble is, for that the appetite to resist separation or discontinuance (which in solid bodies is strong) is also in liquors, though fainter and weaker (Bacon 1857–1874, II, 346–347).[2]

Likewise, the 'sudden generation and perishing of sounds' reveal in the air 'a secret and hidden appetite of receiving the sound at the first', which its 'other gross and more materiate qualities' try then to suffocate (Bacon 1857–1874, II, 436). Furthermore, the appetite of union brings to the fore the various forces of attraction that pervade bodies, from specific preferences ('the touch of somewhat that is tangible') to utter 'indifference' ('a more indifferent appetite to follow another body'):

> all solid bodies are cleaving, more or less; and they love better the touch of somewhat that is tangible, than of air. For water, in small quantity, cleaveth to any thing that is solid; and so would metal too, if the weight drew it not off. And therefore gold foliate, or any metal foliate, cleaveth: but those bodies which are noted to be clammy and cleaving, are such as have a more indifferent appetite (at once) to follow another body, and to hold to themselves. And therefore they are commonly bodies ill mixed; and which take more pleasure in a foreign body, than in preserving their own consistence (Bacon 1857–1874 II, 438).[3]

Indeed, in some bodies the appetite of union is so strong that they are even ready to give up the identity of their own consistence. In passages like these, Bacon discloses a perception of reality that is intriguingly chemico-political. This aspect is even more evident when we examine those material appetites in which the tendency to union becomes so strong that cohesion is the result of forced annexation. Bacon was no doubt convinced that matter's desires testified to the predatory nature of life. The simplest phenomena revealed an aggressive attitude that stemmed from elementary tendencies to self-preservation embedded in matter. Bacon provided some experimental evidence of this behaviour in the *Sylva Sylvarum*: 'open air' is 'ever predatory' (Bacon 1857–1874, II, 446), and it 'preyeth upon water, and flame and fire upon oil' (377); spirits 'prey and consume the juice of the body' in which they reside (437); 'the spirits of the wine do prey upon the roscide juice of the body, and inter-common with the spirits of the body, and so deceive and rob them of their nourishment' (362); exercise 'maketh the spirits more hot and predatory' (440).

Given these premises, the possibility that the universe may end in complete anarchy is always present. Nature works as a force field where a general disposition to union battles complementary tendencies to disaggregation. Every time conflict, opposition or resistance breaks out, the 'government' of the spirits in a particular body is dissolved. As a result, 'every part returneth to his nature or homogeny', as 'in an anarchy' (Bacon 1857–1874, II, 452). Unsurprisingly, Bacon considered violent motion to be 'the most common' motion, so much so that matter as a whole was

[2] The sphere 'is the figure that saveth the body most from discontinuance: the same reason is of the roundnesse of the bubble, as well for the skin of water, as for the air within; for the air likewise avoideth discontinuance; and therefore casteth itself into a round figure'. See also Bacon 1857–1874, II, 378; Bacon 1996b, 142.

[3] For related motions, see Bacon 1857–1874, II, 847 (motion of consent); 355, 367 (within the human body); 356 (motion of attraction and sympathy).

like an animal which felt constantly hunted, 'upon pressure, searching all ways', and testing 'by way of proof' how to get out of countless situations of stress ('deliverance'). Violence in the deepest recesses of matter was not always visible, audible or felt, because, especially in solid bodies, it was very 'subtile':

> For whensoever a solid body (as wood, stone, metal, etc.) is pressed, there is an inward tumult in the parts thereof, seeking to deliver themselves from the compression. And this is the cause of all violent motion. Wherein it is strange in the highest degree, that this motion hath never been observed nor inquired; it being of all motions the most common, and the chief root of all mechanical operations. This motion worketh in round at first, by way of proof and search which way to deliver itself; and then worketh in progress, where it findeth the deliverance easiest (Bacon 1857–1874, II, 342).[4]

Bacon's lexicon relating to motion, both in Latin and in English, is particularly rich: *appetitus*, *conatus*, *desiderium*, *motus*, *nixus*. He approached appetite as a force diffracted in a plurality of motions capable of shaping matter and its innumerable parts in countless different ways. Considered as forces, motions were multiple and hierarchically different, some of them being more important than others. In this respect, one might say that, in his study of matter and motion, Bacon evolved from a morphological to a dynamic consideration of atomism, while unambiguously discarding the Aristotelian definition of motion as the actualization of a potentiality. He certainly never embraced any mechanical or kinematic explanation of motion.

Insofar as the Aristotelian concept of matter was concerned, Bacon confronted the ontologically elusive status of the material appetite in peripatetic metaphysics (the subject of Chap. 2 by D.C. Andersson). Scholastic philosophers had long maintained that matter, being constitutively devoid of qualification, was always striving for a form that could, from time to time, define its nature. For matter to acquire a form, however, was tantamount to eradicating its previous condition, a process which seemed to imply a fundamental tendency to self-destruction within matter itself. On the other hand, why should a form bring matter to perfection, when in fact forms appeared to be transient and matter eternally persistent in its function of ultimate substratum? Moreover, as some Renaissance authors had already pointed out (Giordano Bruno and Giulio Cesare Vanini, for instance), matter could have within itself all the forms it needed. These were lines of argument that Bacon put to the test in an attempt to overcome the principles of peripatetic cosmology. He thought that indefinite permanence was ontologically preferable to a process of actualization in which a given potential needed to be constantly fulfilled and perfected. Indeed, matter's desire for form could be interpreted – as in fact a later Baconian, Francis Glisson (1599?–1677), did – as a legitimate desire for change and a better ontological condition (Glisson 1672, 84–96). In other words, restless matter, agitated by motions and propensities of all kinds, contained the preconditions for an evolutionary understanding of life. In Bacon's opinion, matter was capable of sorting itself into forms, precarious as they might be, by unfolding its constitutive appetitive drives, rather than following pre-established lines of development. Unlike the

[4] See also Bacon 1857–1874, II, 391: 'the motion of the minute parts of any solid body (which is the principal cause of violent motion, though unobserved,) passeth without sound'.

immaterial and motionless patterns of Platonic and Aristotelian metaphysics, Bacon's forms were templates of activity through which the primal desires of matter adjusted to each other while enacting the fundamental laws of nature established by God at the moment of creation. Knowledge of the ultimate appetites of matter could therefore lead human beings to the transformation of matter and, through matter, they could change all aspects of reality (*materiae ipsius conversio et transformatio*, Bacon 1857–1874, III, 20).

Here it is worth mentioning that Bacon's account of material appetites was influenced by at least three important developments in the world of early modern philosophy: the recovery of Stoic thought, especially through the mediation of Justus Lipsius (1547–1606), the great editor of Seneca and Tacitus[5]; the philosophy of Bernardino Telesio (1509–1588), who, through his reading of Galen (in particular, *De placitis Hippocratis et Platonis*), had retrieved decisive elements of Stoic metaphysics[6]; and finally Lucretian Epicureanism. These were all authors and traditions which shared in a definition of life as driven by ingrained tendencies to self-preservation. In line with Stoic, Epicurean and Telesian assumptions, and in a way drawing eclectically on their different traditions, Bacon, too, explained motion as a form of desire, enlivening matter from within. One of the most dramatic consequences to result from his understanding of life in terms of appetitive motion – and, significantly, in a manner similar to Telesio, Stoicism and Epicureanism – was the elusive role left to the soul, in both the natural and human worlds.

First of all, as desire preceded knowledge in ontological terms, attractive and repulsive tendencies were thought to be more original than the cognitive basis of animal selfhood. Bacon presented the relationship between motion, life and soul as a real problem, 'infinitely materiall in Nature' (Bacon 1857–1874, II, 381), a problem which could not be dismissed as a merely verbal dispute.

Secondly, Bacon's insistence on appetite inevitably involved a complementary emphasis on the moment of satisfaction, seen as a possible end to the condition of strained unbalance affecting all the parts of matter. Paradoxically, as we will see in this Introduction and several chapters over the course of this volume, Bacon often looked at rest as the end result of an appetitive tension, while hinting at a pervasive fear of death in nature triggering a number of important vital reactions. This was a further element of originality with respect to Aristotle's material appetite, for Bacon took desire and its power in literal terms. In his hands, the metaphorical appetite for forms, which, according to the Aristotelians, could be used analogically to think about the ontological attributes of matter, became real hunger, signalling a condition of ontological deprivation at the very core of nature, a diffuse pressure which kept the universe in a constant state of quivering tension.[7] Precisely because Bacon's matter pulsated with the energy of desire, of all the various states of appetitive restlessness, anxiety and disquietude were the dominant conditions. As he argued in the *Novum organum*, the universe as a whole was trapped in a situation of 'eternal

[5] On Bacon's Tacitean Stoicism, see Giglioni 2012b.

[6] See Giglioni 2010.

[7] On Aristotle's desire, see Pearson 2012.

captivity', where immobility was perceived as preferable to any attempt to initiate new motions (Bacon 2004, 410–412).

In the list of original motions examined by Bacon in the second part of the *Novum organum*, Motion 19, the last in the series, is the paradoxical and oxymoronic motion through which nature aims at ending all motions (*motus exhorrentiae motus*); that is to say, the motion directed at recovering the original condition of rest (Bacon 2004, 394). Motion 19 can therefore be called the 'motion of death'. In Bacon's cosmology, this motion was on an ontological par with lifeless nature (*demortua natura*) and inanimate spirits (*spiritus mortuales*), key aspects of nature investigated by Bacon in *De vijs mortis* (written sometime in the 1610s) and his *Historia vitae et mortis* (1623). When understood as a propensity to unchanging equilibrium, death could therefore be seen as more original than life, for life is a temporary reaction, a motion of resistance to a primal urge towards quiescence. In less dramatic terms, but still in line with the terminology and the categories of Bacon's philosophy, we can say that self-preservation is the end of all natural operations, but that it is self-preservation of a conservative tendency. It is an overarching mechanism of self-sustenance in which particular states of affairs are supposed to be indefinitely perpetuated, rather than being seen as a progressive and creative process.

At this point some readers may have recognized a series of uncanny resemblances with Freud's *Todestrieb* or *thanatos* ('death drive'). Like Bacon, who found the ultimate meaning of motion in the desire to restore an original condition of balance, Freud characterized drives as tendencies to rest. He elaborated this most controversial point in the famous essay *Beyond the Pleasure Principle*, written in 1920, after the First World War: 'This conception of drives sounds strange, for we have become accustomed to seeing drives as the key factor pressing for change and development, and now we are supposed to see them as the direct opposite: as the expression of the *conservative* nature of organic life' (Freud 2003 [1920], 76–77). Some may find my way of juxtaposing Bacon with Freud unorthodox. However, when the comparison is contextualized within the long-term history of life and death (and this volume focuses on an important moment within this history), it takes on unexpected implications. At the end of this introductory chapter, I will expand on the reasons why this is significant in this book, with its particular emphasis on motion and power. For the moment it is worth reminding ourselves that in elaborating his theory of death drives Freud had acknowledged his debts to past philosophers and poets (above all, Plato and Shakespeare). Like Bacon, Freud knew quite well the heuristic power of mythopoeia.[8]

[8] Unlike nature, history does make leaps. I have addressed the question of a long-term history of life and death (precisely in its Baconian terms) from the Renaissance down to Jean-Baptiste Lamarck, in Giglioni 2013d. A historian who has found the comparison between Bacon and Freud alarming and out of place is one of the anonymous referees for this volume. I take the opportunity of this footnote to thank both referees for their stimulating and helpful comments on this Introduction.

The idea of rest as the end of the self-preservative efforts of nature has crucial consequences with respect to Bacon's account of matter, life and soul, for the problematic status of the soul in Bacon's philosophy is closely related to his view of material appetites. More importantly, if matter has – quite literally – appetites, then the question becomes whether Bacon can be regarded as a downright materialist. This is a very delicate point, which needs to be addressed by contextualizing the problem from both a historical and textual point of view. In the passage from the *Sylva Sylvarum* quoted above, while investigating several 'secret processes of nature' which seemed to involve the operation of the soul, Bacon made clear that this was not 'a question of words', but 'infinitely materiall in nature' (Bacon 1857–1874, II, 381).[9] The field of nature described in the more than one thousand experiments which form the body of the *Sylva Sylvarum* is undoubtedly a continuum of energy made up of different degrees of corporeal reality, from 'materiate' to 'immateriate' substances. Here it is important to specify that 'immateriate' is synonymous with 'invisible' rather than 'immaterial', and it denotes a level of corporeal subtlety and smallness that cannot be perceived by the human senses. Sound, for instance, is 'one of the most hidden portions of nature' and is 'a virtue which may be called incorporeal and immateriate; whereof there be in nature but few' (436). For this reason, in his approach to the study of nature, Bacon recommended that the investigator's attention should alternate from 'things immerse[d] in matter' to 'immateriate, or less materiate' ones.[10] When 'incorporeal' is understood as 'invisible', it is even possible to study the material conditions of incorporeal (that is, imperceptible) nature, as Bacon suggested on many occasions. Bodies can be resolved into their constitutive indiscernible motions, capable of combining and recombining themselves in infinitely different ways. Bacon, however, is no materialist in a post-Cartesian and post-Lockean sense. As is aptly demonstrated by Sorana Corneanu in Chap. 9 ('Francis Bacon on the Motions of the Mind'), besides 'tangible' and 'invisible' bodies, Bacon included in his philosophical system a sphere of veritable incorporeal beings in the strict ontological sense of the word (minds, angels and God) and he assumed that there were specific areas where the incorporeal interacted with the corporeal (Giglioni 2013b, 202–205).

Rather than using the word 'materialism', I would therefore speak of 'materiality' when referring to Bacon's philosophy. Because of his attention to the material aspects of natural and human experience, Bacon's contribution to philosophy can be characterized as a sophisticated critique of 'impure' reason, for his model of rationality is tainted as it were with the marks of desire, interest and profit. In this sense, although reason itself is not material for Bacon (as it would be for a genuinely Stoic or Hobbesian thinker), it is nevertheless perennially confronted with matter: the matter of unruly appetites in nature and the matter of instrumental causes in ethics

[9] Interestingly, the Oxford English Dictionary records one of the meanings of 'materiality' – 'the quality of being relevant or significant' – as characteristic of the legal discourse.

[10] Bacon 1857–1874, II, 390: 'I practise as I do advise; which is, after long inquiry of things immerse in matter, to interpose some subject which is immateriate, or less materiate… to the end that the intellect may be rectified, and become not partial.'

and politics. Bacon's philosophical experience is therefore defined by the material nature of desire, deeply and disquietingly involved in the life of both nature and humans: as greed, it fuels the economy; as passion, it animates society; as motion, it constantly unsettles the state of nature; as need, it propels power; as lust, it perverts religion. Above all, desire is remorselessly material because it is the ultimate and insurmountable condition of life, and what is most alarming of all is that desire, being blind and unsentient, is more primal than knowledge (see Chap. 7 in this volume). In Bacon's philosophy, perception and knowledge come after desire. In this sense, the materiality of the appetites is a further confirmation of the constitutively political tenor of Bacon's thought.

The title of one of the two colloquia held at the Warburg Institute in 2011 and 2013 from which this volume originates was 'Francis Bacon and the Materiality of the Appetites'. Inevitably, one of the topics that recurred most frequently during discussions was the question of whether or not Bacon can be viewed as a materialist thinker. A number of disclaimers, caveats and qualifications were raised at the time, invoking the principles of anachronism and hindsight. When posed in the brutal terms of one of the many 'isms' that afflict the study of history, the question of Bacon's materialism sounds undoubtedly naïve and ill-informed, and this for various reasons. The principal one is that materialism as a philosophical current is shaped by precise historical and cultural assumptions. In this respect, Bacon is not a materialist in the same sense as Democritus and Lucretius, or Darwin and Marx. And yet Bacon wrote of the 'materiate' states of nature and of the 'infinitely materiall' weight of philosophical inquiries concerning the soul and the 'invisible' dimensions of nature (Bacon 1857–1874, II, 381). While not a materialist, Bacon was nevertheless fully aware of the *material conditions* that determine the exercise of human thinking and its development. Indeed, he argued that thinking depended on the 'matter' of human experience, in all its multifarious forms. In the middle of the *Advancement of Learning* (1605), in introducing the branch of knowledge which deals with 'the APPETITE and WILL OF Man', he resorted to a simile:

> In the handling of this science, those which haue written seeme to me to haue done as if a man that professed to teach to write only exhibit faire copies of Alphabets, & letters ioyned, without geuing any precepts or directions, for the cariage of the hand & framing of the letters (Bacon 2000a, 133).

In subjects concerning moral and political issues, Bacon blamed philosophers for having written in the abstract, confining themselves to 'a certaine resplendent or lustruous masse of matter chose to giue glory either to the subtility of disputacions or to the eloquence of discourses' (134).

To qualify this point further, I would say that in Bacon's philosophy materiality should be understood in at least two senses, one ontological, the other empirical. In an ontological sense, human thinking requires a pre-existent matter (*materia* in the sense of *silva*, i.e., 'material') in order to start and process its activity. There is no way that thinking can place itself outside of its own prejudices (i.e., *idola*) or in a vacuum devoid of already-provided information (i.e., *historia*). Pure intellect and pure reason are concepts that are foreign to Bacon's philosophy. In fact, since the

Cartesian model is the one that prevailed in the end, these are the notions which have contributed most to Bacon's *sfortuna* in the history of metaphysics. In an empirical sense (with respect to the natural history of human thought), to say that thinking depends on pre-existent matter means for Bacon that knowledge and action are constitutively political, both in the world of nature and in that of human beings. The covetous and acquisitive character of natural beings, regardless of whether animate or inanimate, makes the whole field of nature an arena of competitive and riotous individuals (Giglioni 2012a, 2014a).

Whatever the meaning one wishes to attach to Bacon's adjectives 'materiate' and 'immateriate', we cannot downplay the importance that the concept of matter had in Bacon's philosophy, for it was only through a correct interpretation of the corporeal processes of nature that he could justify, from a theoretical point of view, a programme of universal reformation involving both knowledge and institutions. Advocating an experimental understanding of material phenomena, Bacon described matter as a real being, different from both the Aristotelian entity, whose ontological import was by definition extremely feeble, and the more or less hypothetical construction based on the application of mathematical and logical models (the new philosophies of nature). The science of the schools – Bacon wrote in *Cogitationes de natura rerum* ('Thoughts on Nature'), composed sometime before 1605 – 'devises (*fingit*) its matter as fictitious (*commentitia*), universal and indifferent to any form' (Bacon 1857–1874, III, 19).[11] By contrast, as a real condition of natural and human action, matter denoted for Bacon both the pneumatic force of desire and the tangible effects produced by it in nature. In Bacon's cosmos, natural beings were driven by self-interest and lust for power already extant at the atomic level, manifesting their hunger and greed in the original furrows and folds of pliable matter. In being ruled by their desires, they had already committed the sin of idolatrous self-worship in their primal responses, chasing after delusions and being easily manipulated by the appearances of things. This was the grim foundation on which Bacon's political view of life rested.

1.5 Self-Preservation and the Theologico-political Order of Life

As argued in the previous sections, permanence and stability were central concerns of Bacon's philosophy, both in physics and politics. Philosophy for him meant the search after plausible and feasible ways to transform life (both natural and artificial) into a long-lasting – possibly everlasting – enterprise. In doing so, Bacon demonstrated that he was responding in a very original way to Telesio's ideas in physics and to Machiavelli's theories in politics. The classic definition of reason of state, as specified in Giovanni Botero's *Della ragion di stato* (1589), underlined the

[11] On Bacon's views about matter, see Rees 1977; Pérez-Ramos 1988; Gaukroger 2001, 166–192; Giglioni 2013d, 45–49.

importance of procuring the means of preserving and enlarging power and dominion over people.[12] The shift was indeed momentous: from a view of politics grounded in the assumption that nature's paragon of perfection constituted the norm of political rule (a rule that was modelled upon ideals of justice and equity), recent events in the European world, both military and economic, were increasingly validating a consideration of political life as a steady-state balance, precariously dependent on varying circumstances and prudent measures of action (De Mattei 1982; Viroli 1992, 252–257; Tuck 1993; Keller in this volume).

More specifically, the emergence in sixteenth-century Italy of principalities and tyrannies out of the city-republics of the medieval past created the material and intellectual conditions that transformed the exercise of political power into a fully-fledged art of civic prudence, premised on practice (*usus*) and experience (*experientia*). Statemanship became the ability to read concrete situations and derive general maxims from the myriad particulars and accidents of individual lives. In a world in which 'so many unexpected things can happen' and 'circumstances do not permit living a completely virtuous life' (Machiavelli 1988 [1532], 39, 55), the best rulers and men of action were the ones who decided their course by relying on the close observation of contingent and historical forces. In this, early modern theories of statecraft mirrored the new reality of monarchies and principalities. A novel political order emerged during the sixteenth and seventeenth centuries, an order in which the sovereign state was assuming an increasingly central role (Hirschman 2013 [1977]; Tuck 1993). In England, the period was marked by popular and aristocratic dissent, religious factionalism and the intensification of political tensions – between the Monarchy and the Parliament and between religious and civil authorities. Bacon's philosophical work cannot be understood unless it is contextualized within this situation of political and religious restlessness.

In recent years, the field of study known as 'political theology' has become a subject of intense debate and scholarship, intersecting various fields within philosophy, the history of philosophy and political theory (see Agamben 2005 [1995], 2009; Hammil and Reinhard Lupton 2012; Critchley 2012). In this chapter, my use of the phrase 'theologico-political' goes back to Spinoza and the title of his famous work, the *Tractatus theologico-politicus* (1670), which here I am taking as a rather conventional *terminus ad quem*. The starting point, which is especially relevant for a discussion of Bacon's ventures into the domains of theologico-political inquiry, lies in a complex tangle of historical, social and intellectual premises that consolidated between the Middle Ages and the Renaissance. At the risk of simplifying a very complex matter, it can be said that several factors at the time helped to transform the terms of philosophical, political and theological debate. They involved: the gradual dissolution of the approach to philosophical research known as the 'double-

[12] See Botero 1948 [1598], 55: 'Stato è un dominio fermo sopra popoli; e Ragione di Stato è notitia di mezi atti a fondare, conservare, e ampliare un Dominio così fatto. Egli è vero che, se bene, assolutamente parlando, ella si stende alle tre parti sudette, nondimeno pare, che più strettamente abbracci la conservatione'. On Botero's *ragion di Stato*, see Firpo 1948, 1975, 2005, 57–82; Baldini 1992; Keller 2015.

truth' theory, which markedly modified the relationship between the transmission of knowledge, censorship and power; the rise of a distinctively medico-political view of nature, in which environmental pressures were deemed to play a fundamental role in shaping the physiognomy of human communities; the gradual demise of the understanding of life in terms of teleological drives transparent to the laws of the intellect (an understanding that we may loosely characterize as Platonic and Aristotelian); and, finally, the emergence of a new representation of nature, interpreted as boundless appetitive energy (*conatus*), unsteadily and precariously regulated by a brutal struggle for survival where all the parts of nature were involved. Later on, during the seventeenth century, this view of *conatus* became more or less mechanized and more or less reconciled with the power of chance, both in natural philosophy and politics. Looking at the long-term history of *conatus*, from the end of the Middle Ages to the Enlightenment, works such as Averroes's *Destructio destructionum* (written around 1180, but rediscovered in Italy during the Renaissance), Machiavelli's *Il principe* (1513) and Telesio's *De natura rerum* (1565, 1570, 1586) represent the beginning of a crisis in political theory which reached its climax with Hobbes, Locke and Spinoza. Of course, my use of the label 'theologico-political' will inevitably evoke the name of Leo Strauss (1899–1973) and Carl Schmitt (1888–1985).[13] In the final analysis, though, the context I intend to reconstruct here concerns a number of sixteenth- and seventeenth-century authors who were interested in finding new ways of governing desire, whether through the political use of the popular imagination (Renaissance Averroists), by strategic manoeuvring in the field of politics (Machiavelli) or by radically reinterpreting virtue as the expansion of a natural force (Telesio). In all these instances, the aim was not to reconnect with an original standard of natural perfection sanctioned by either intelligible fulfilment or divine authority, but to strive after more realistic goals such as the preservation of individual and communal existence, prolongation of life and protection from harm. For many observers in the early modern period, these ends could be obtained by postponing the immediate gratification of needs and desires and by using circuitous means to reach a reasonably stable agreement among contrasting forces.

In the *Tractatus theologico-politicus*, Spinoza defined individual natural right (*naturale ius uniuscuiusque*) as a prerogative that extended 'as far as everyone's desire (*cupiditas*) and power (*potentia*)'. He stated that no one was obliged by natural right 'to live according to someone else's whim (*ex alterius ingenio*)', but that everyone was 'the defender of his own freedom' (Spinoza 1925–1987, III, 11; Spinoza 1999 [1670], 72). In this sense, by appealing to natural rights and laws (*ius et institutum naturae*), Spinoza meant to emphasize the importance of natural laws for the blossoming of individual lives (*regulae naturae unuscuiusque individui*, in Spinoza 1925–1987, III, 189; Spinoza 1999 [1670], 504). The emphasis here was on nature, power and individuals. Between the sixteenth and the seventeenth centuries,

[13] On Strauss, see Zuckert and Zuckert 2014; on Schmitt, see Meier 1998 [1994]; on Schmitt and Strauss, Meier 1995 [1988]. On the interplay of political philosophy, medicine and history in Machiavelli, see now Gaille-Nikodimov 2004.

various authors tried to triangulate the principle of universal reason with the demands of individual virtue and private interest. Machiavelli maintained that the true cunning of reason lay in making a virtue of the brutal necessity of blind appetites; Telesio argued that appetites and passions followed the self-organizing law of universal sentience; Bacon demonstrated that the appetite for the greater good trumped all other appetitive drives at work in both nature and society; Hobbes pointed out that the clash of the infinite acquisitive tendencies unfolding in innumerable individuals could be curbed by the rational appetite for self-preservation and security. In Spinoza's triangulation, in a way that has some elements in common with Bacon, desire (*cupiditas*) was reconciled with both nature and God. It was a theologico-political equation in that the sphere of individual self-interest and the domain of the greater good were premised on an original interpretation of the relationship between God and nature. There was no ontological gulf between the life of nature and its divine archetype. Nature was the manifestation of God's power as well as the converging of infinite individual centres of power.

For Telesio, Bacon and even Spinoza, the laws of reason (*leges rationis*) could never clash with the laws of appetite (*leges appetitus*); the principles of sound mind (*leges sanae mentis*) were not supposed to hamper the appetitive drives of nature (*appetitus impulsus*); and the path of right reason (*ductus sanae rationis*) should not coerce the force of the passions (*affectuum impetus*) (Spinoza 1925–1987, III, 189–190; Spinoza 1999 [1670], 506–508). The main lines in Spinoza's argument are worth summarizing here. Firstly, nature was identified with God, a step that was reminiscent of the most radical forms of Renaissance naturalism: 'It is certain that nature, when it is considered in the most general sense, has a sovereign right over everything it can (*ius summum habere ad omnia quae potest*), that is, the right of nature extends as far as its power (*potentia*), for the power of nature is the power of God (*naturae enim potentia ipsa Dei potentia est*), who has sovereign right over everything'. Secondly, in a move that, at first glance, seems to contrast with what has just been said, Spinoza identified the power of nature (*universalis potentia totius naturae*) with the collective power of all individuals (*potentia omnium individuorum simul*). The most striking consequence was that 'every individual' had 'sovereign right over everything it can':

> Since the supreme law of nature states that every single thing strives to persist in its own condition as much as it can (*in suo statu, quantum in se est, conetur perseverare*), with no consideration for any other thing, but only for itself, it follows that every individual has sovereign right over this behaviour, that is, to exist and to act as is determined by nature (Spinoza 1925–1987, III, 189; Spinoza 1999 [1670], 506).

Thirdly, after identifying nature with God and with the totality of all individual natural forces, Spinoza concentrated on the infinite modes of the one substance (*Deus sive natura*) and their appetites (*cupiditates*). The shift is startling, but it reminds us of similar argumentative strategies in Telesio and Bacon: 'we do not recognize any difference between human beings and all other individuals of nature'. At the level of the original constituents of reality, as in Bacon's philosophy, appetite was both individual and impersonal. Nature's cohesion resulted from lines of force

that were determined by the particular interests of innumerable individuals. Above all, as in Bacon, appetite was pre-animal and pre-human:

> Nature is not defined by the laws of human reason (*leges humanae rationis*), which are only directed at what human beings consider their true interest (*verum utile*) and their preservation (*conservatio*), but also by infinite other laws which have in view the eternal order of nature as a whole. Of this order, man is a little part (Spinoza 1925–1987, III, 190–191; Spinoza 1999 [1670], 508).

The reason why I am insisting on Spinoza here is that the Bacon-Hobbes-Spinoza line is usually ignored or dismissed as irrelevant to understand the evolution of seventeenth-century thought, for Bacon's vital *conatus* has nothing to do with Hobbes's and Spinoza's kinematic *conatus*. This line needs to be reconsidered (Giglioni 2016). Without giving in to unfounded fears of Renaissance animism, one should follow the dots which connect Renaissance Galenism and Stoicism to Telesio and Machiavelli and then to Bacon, Hobbes and Spinoza. By looking at Bacon as a philosopher who took full advantage of the intellectual resources contained in the traditions of history, medicine and politics, we can then trace his contribution to the early modern natural history of medical and political self-preservation.

In *From Politics to Reason of State* (1992), Maurizio Viroli chronicled the early modern transformation of politics from a form of civil philosophy dealing with the idea of the common and universal good (the utmost desirable thing among human beings in their mortal life) to politics as reason of state, described as the art of preserving power by regulating human appetites through financial and military means. Referring to Italian political writers such as Francesco Guicciardini (1483–1540), Alessandro Piccolomini (1508–1579), Giovanni Botero (1544–1617) and Trajano Boccalini (1556–1613), Viroli detected a significant new trend: 'Deprived of practical relevance for the conduct of government affairs, removed from the educational curriculum of civil man, diminished from its rank as most excellent human discipline, politics gradually lost its identity' (Viroli 1992, 247). It was a long and gradual process which can be summed up by saying that, between the fifteenth and the seventeenth century, jurists, lawyers, theologians and policy makers grew less confident in the force of reason in political matters and more open to the reasons of force.

In the emergence of the new theologico-political order between the sixteenth and seventeenth centuries, Machiavelli's *Il principe* represents a turning point which can be read as a dispassionate *historia* of the life and death of political entities. States were not replicas of ideal constitutions, grounded in divine principles, but a mixture of natural and artificial creativity. This was particularly evident in the case of new dominions: 'like all other natural things that are born and grow rapidly, states that grow quickly cannot sufficiently develop their roots, trunks and branches, and will be destroyed by the first chill winds of austerity' (Machiavelli 1988 [1532], 23). Machiavelli argued that, within the spectrum of appetitive energy, republics had more 'vitality' than principalities, for it was very difficult to obliterate their liberties. The 'motion for freedom' and the 'motion of resistance', to use Bacon's phrases, represented the very soul of republican polities and, within the theologico-

political art of preserving the life of human communities, they were a major variable, to be dealt with by using prudence if one wanted to avoid the extremes of appetitive lawlessness and economic inertia.

It is in the context of the early modern theologico-political order that the natural, ethical, political and theological dimensions of Bacon's notion of the good come to fore. As Silvia Manzo argues in her chapter in this volume, they signify four kinds of *conservatio*. As such, they represent the four cardinal directions of his thought, for Bacon's philosophy as a whole can be seen as a meditation on the different degrees of appetitive energy which hold the universe together, from a speck of dust to God. The energy of natural appetites spreads in four directions: preservation of individual lives (where 'individual' can even refer to a single particle of matter); preservation of the life of the mind (what Bacon called *cultura animi* or medicine of the mind, i.e., the sphere of rational action sandwiched between the domains of ethics | virtue and politics | duty); preservation of the state, that is, the life of the commonwealth; and finally, preservation of the bond between nature and Grace, by restoring the pristine condition of blissful activity that the Creator had imparted to His creation. In the end, the contrast between *cupiditas* (self-interest) and *caritas* (unrestrained disposition for universal good), which is a recurrent theme in Bacon's philosophy, finds its resolution in a distinctively Baconian theologico-political plan, where prospects of physical and social health meet with widely diffused soteriological expectations.[14]

Bacon gave specific recommendations on how to pass from one level of preservation to the next, and – even more urgently from a political point of view – how to secure this series of transitions without resorting to brutal violence. Unsurprisingly, the great majority of these transitions focused on the capacity to control the appetites of nature, that is to say, on 'superinducing' forms on matter, prolonging life, devising directions for mental discipline and managing unruly desires through persuasion. The most difficult issue to address, though, was how to curb appetites without extinguishing the life of natural and social bodies. A fundamental conundrum confronted the early modern theologico-political thinker: if the parts of the body politic were deemed to pursue their own appetites, cohesion in both the natural world and the human commonwealth was always at risk. Self-interested appetites had to be harnessed into a scheme of action defined by farsighted supervision and broad self-preservation, for atomic *conatus* was inevitably destructive in the long term, even when concentrated on the immediate preservation of its own particular good. The solution lay, therefore, in letting individual appetites act as if they were pursuing their own partial good when in fact they were contributing to the well-being of the whole. But what kind of agent could have the cognitive scope and the power to secure such a level of universal preservation? Only God, it seemed to Bacon, could be such an agency.

[14] This characteristically Baconian tradition of political theology has been masterfully studied by Charles Webster in his *The Great Instauration* (Webster 2002 [1975]). On early modern *cultura animi* in England, see Corneanu 2011. On Bacon's theological views, see two recent studies: McKnight 2006; Matthews 2008.