Archipelago, and the information platform that is the state

A political philosophy based on information and its processing

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Foreword

This book outlines a new political philosophy that is based on information and its processing.

Aristotelians will appreciate the analysis; those siding with Plato (there are only two kinds of people, as Coleridge said), less so. In essence, it supports Aristotle's argument by complementing his intuitively correct but unsupported and never fully elaborated claim that states are natural to humans. It corrects Plato and his epigones (practically every political philosopher ever since) by refuting their claim (considered a given today) that states are artificial, the product of agreement among humans.

It is based on only two basic, and straightforward, premises. Therefore, understanding it (but not necessarily appreciating it—for that one has to follow the order of things) can be achieved in anything from a few minutes (see only Chapters 7 and 19) to a few hours (add Chapters 8, 9 and 11), a few days (Chapter 7 onwards) or a few months and beyond (read also Chapters 1–6). Each chapter is independently written specifically for this purpose, and therefore, there is some repetition. Notes (only paragraphs marked with an asterisk are annotated, at the end of the book) are there to help explain—but they do add considerably to the times just promised.

0. Prologue

'To understand an author's meaning all contradictory passages must be reconciled. […] Every author has a meaning which reconciles all contradictory passages, or else he has no meaning at all.'

Blaise Pascal

Synopsis: *A political philosophy of information places information and its processing at the epicentre, perceiving everything as information and all life as information processing (1); The two basic premises of this political philosophy (2); Why a political philosophy of information? (3); The decline of the Westphalian state (4); Why now? The digital world (5); The three (informational) milestone moments in humanity's development (6); The owl of Minerva (7); A God-like, Genesis moment for humans (8).*

1.*

A political philosophy of information places information and its processing at the epicentre, perceiving everything as information and all life as information processing. Using this lens, this philosophy examines Beings and Things, placing a special focus on humans' states. This is because it assumes a common, informational basis between states and humans, a common, unbreakable link between them based on information and its processing. This concerns the entire breadth and also the bare basics of their existence, from their coming into life until their end.

2.*

Two basic premises underlie this political philosophy of information: (a) states are information platforms for their citizens, and (b) (only) humans need to augment their information processing.

3.

Why a political philosophy of information? In order to understand the transition from the analogue to the digital world that is currently taking place, we first have to understand, to make sense of the analogue—from an informational perspective. We first need to understand why and how things around us are as they are, before projecting what we know, and what we expect to find, onto the digital world.

4. The decline of the Westphalian state*

A popular question over the past 50 years has been whether the modern state (modern, in the meaning of the type in which we currently live, which was formed around 1650 in theory by Hobbes and in practice by the Peace of Westphalia) is dead. This of course assumes tacitly that the state is something artificial, something that can die. In this way the question became a given. The state, however, can never come to an end, or die, because it is, as will be seen, natural to humans. In other words, as long as humans exist, their states will also exist.

5. Why now? The digital world*

The questions on why and how states were formed have arisen most pressingly in periods of political upheaval. Plato formed his theory in the aftermath of the Peloponnesian War; Aristotle when the first kingdom subjugated all the city-states of ancient Greece; Cicero during the transition between the Res Publica and the Roman Empire; St Augustine at the point of the demise of Imperial Rome and its replacement by Christianity; Machiavelli while new kingdoms, empires and city-states struggled for sovereignty in medieval Europe; Hobbes when civil war to change the form of government cost thousands of human lives (including a ceremoniously executed king); the writings of Locke and Rousseau supported the American and French revolutions; and those of early and mid-20th century philosophers' dealt with Fascism and Communism.

In other words, these questions have never arisen pressingly during easy times. On the contrary, it is during times of social, political and financial disruption that these questions are asked (notwithstanding the two cardinal mistakes made by all of the above: first to consider the state

artificial and not natural to humans; and second, to confuse the state with its government).

Are ours difficult times too? While today war, in terms of bloodshed and physical despair, may be relatively limited if compared to the above circumstances, it is the advent of the digital world that has brought change. The digital world has brought about an unprecedented challenge to all of humanity's known ideas and beliefs as formed over the thousands of years past.

However, in order to make a jump, and discuss the digital world, one first needs to take a step back.

6. The three (informational) milestone moments in humanity's development*

Ever since humans first walked the earth, three milestone moments occurred until now, at least from an informational point of view (the first one, admittedly, undocumented):

- The first occurred when humans started talking to each other using language and acquired self-consciousness, perhaps more than 200.000 years ago. As will be seen, this is when the state first emerged.[1]

- The second occurred when writing was invented, some 5.000 years ago (agriculture preceded it, around 12.000 years ago; however, it only affected sustenance, not information processing). At this point humans leaped forward to increase exponentially their information processing capabilities; states took form in the analogue world, becoming transactional and territorial.[2]

- The third milestone, the advent of the digital world, occurred only recently, a few decades ago: We can place it, schematically, in the year 2000, although it had been in full swing

1. See Chap. 7.

2. See Chap. 9, par. 5.

for a couple of decades before that. However it was in the year 2000 AD that this milestone took centre stage for humanity.

The creation of the digital world by humans changed everything: nothing remained the same. Like the other revolutionary moments above, the digital world has changed each and every assumption humans have been living with since they first walked the earth. Everything needs to be seen in a new light, everything needs to be re-examined and reassessed.

7. The owl of Minerva*

As with the owl of Minerva, new light has only been cast on the state with the falling of dusk, that is, with the unprecedented challenge to the state caused by the arrival of the digital world. Although the state has been an information platform for its citizens since the beginning of time, it is only now that its true nature can be discerned. It is this new light, brought by the digital world, that has made the creation of this political philosophy possible.

8. A God-like, Genesis moment for humans

Returning, then, to the question asked above (why now?[3]), the answer is the emergence of the digital world. There is some urgency to resolving questions about the analogue world, because humanity is reaching a God-like, Genesis moment (in the absence of any other more suitable term): the creation of an entirely artificial, new reality, whose shaping lies entirely in its hands.

[3] In par. 5.

1. Information

'Let me be quite clear about what I mean here by matter. I mean an item that is not in itself a something and is also not a quantity nor said to be any of the other things by which that which is is defined.'

Aristotle

Synopsis: *Everything is information (1); Datasets (2); Each dataset to be considered a closed system (3); The analogue and the digital worlds (4); Information can be processed (5); Processing on datasets (6); New information (7); Related datasets (8); Life, birth, death (9); The analogue world. Nature (10); The digital world: a simulacrum gone rogue (11); Sometimes the analogue and the digital worlds may appear blended, but they are never the same (12); The individual is torn in the digital world (13); Access to and use of the digital world belong to moral philosophy (14); 'All that is solid melts into air' (15); Information in the analogue world is finite, but infinite in the digital world (16); Total control is impossible in the analogue world, but possible in the digital one (17).*

1. Everything is information*

Everything is information. The analogue and the digital worlds are, material, systems of information.

Life is information processing; to be living is to be processing information.

All that humans think and feel and everything around them is information.

Information is either material or immaterial.

2. Datasets*

Every Being[4] and every Thing[5] is a dataset, meaning a collection of information.

4. See Chap. 2.

5. See Chap. 3.

Datasets are material, they exist in the analogue and/or the digital world. The nature of a dataset is set by its form in the analogue and/or the digital world and its purpose (if any). Each carries a name (individualised or not) and is set, finite in this manner; should it substantially change, a new name is given to it—it then becomes a different dataset than that which it originally was.

The difference between 'information' and 'datasets' is that information can also be immaterial.

3. Each dataset to be considered a closed system*

Of course, everything is, informationally, interconnected, in the sense that everything is made of bits of information that can be broken down into further bits of information, *ad infinitum*. However, in order to make sense when examining the relationships among them, each Being and Thing that carries a name[6] is considered a separate entity (a closed system) that interacts with all others.[7]

4.*

The analogue and the digital worlds are two different material systems (each in the sense of a complex, coherent whole) of information, meaning of datasets (of Beings and Things) interacting.

5. Information can be processed.

It is only Beings that can, and will, process information, because of need.[8] They will process information on other Beings or on Things.

6. See Chap. 8.1.

7. See also Chap. 3, par. 5.

8. See Chap. 5.

A Thing cannot process information, unless it has become an artificial Being.[9]

6. Processing on datasets*

Processing[10] takes place on[11] a dataset~~,~~ which is perceived as a whole, a closed system,[12] unless otherwise clarified (in which case processing on part of it takes place[13]).

Therefore, whenever the 'processing of information' is referred to, what is actually meant is both:

- the material processing on a dataset by a Being in the analogue or the digital world,

and

- the immaterial processing of information (a thought, a feeling, a wish) by a Being, that nevertheless needs to be externalised and thus also becomes material processing.[14]

7. New information*

The processing of information leads to the creation of new information, either material or immaterial.[15]

9. See Chap. 2, par. 10.

10. See Chap. 4, par. 1.

11. Processing 'for' a dataset would imply a purpose and thus is connected to morality (see also note 5/2/2), and processing 'by' a dataset would imply the Being that is doing the processing (see Chap. 2).

12. See par. 3.

13. See, for example, note 1/8/1.

14. See Chap. 4, par. 4.

15. See also Chap. 4, par. 2.

8.*

A dataset can relate to another dataset or not; the existence of a relationship meaning that both datasets contain common information.

9. Life, birth, death*

Because life is information processing, any and all Beings that can process information are alive.[16]

Each, however, comes into existence differently. Biological Beings (animals, including humans) come into existence in the analogue world (i.e. they are born) biologically, outside of (human, at least) design, that is, their nature is given to them in the analogue world by Nature,[17] they are not designed by other Beings. By contrast, non-biological Beings (organisations and artificial Beings) come into existence in the analogue or the digital world (i.e. they materialise) by (human) design, that is, their nature is given to them.[18] They are designed, and created, by other Beings.

Therefore, birth (materialisation, the coming into existence in the analogue and/or the digital world) is the point in time from which a Being is able to process information. Death is the point in time when a Being is unable to continue doing so (at which point it becomes a Thing[19]). By contrast, Things exist (in the analogue and/or the digital world) for as long as information on them can be processed by Beings; Things are destroyed, deleted or consumed if no processing on them is possible any longer.

16. See Chap. 3, par. 2.

17. Or, (depending on religion, see Chap. 23, par. 5) by a higher power.

18. By humans, see Chap. 2, par. 11.

19. See Chap. 3, pars. 2 and 3.

10. The analogue world. Nature*

The analogue world (our natural environment, Nature) is natural to biological Beings, because it is necessary for them to live in.[20]

Nature comprises Things, but is basically itself a Being (it can and will process information, as is dictated by the laws of Nature[21]). In essence, it is in order to be able to process the information of Nature that humans became individuals in the first place.[22]

11. The digital world: a simulacrum gone rogue*

The digital world is a new system that is made up of digital information.[23] It was created by humans; it is the result of their processing of information. In contrast to the analogue world, it is not natural to humans (or animals) because they do not need to live in it.[24]

Because the digital world was created by humans, it unavoidably resembles what humans already know, meaning the analogue world. Even the anarchic, unplanned development of the digital world that is taking place today resembles the point in humanity's history when the analogue world was still largely unknown and seemed immense and endless, and which became interconnected only gradually.[25] In other words, the digital world can be likened to the open sea—one, however, that is not localised and knows no human-made borders, but rather is created out of the interconnection of countless artificial Beings that communicate with each other to offer their creators, meaning humans, countless starting points to reach no known or pre-determined end.

20. On whatever is necessary considered natural, see Chap. 5, par. 5.

21. See Chap. 20.

22. See Chap. 20, par. 3.

23. On digital information, see Chap. 1.1, par. 13.

24. See, however, Chap. 5, par. 6 (and Chap. 17, par. 8).

25. See also Chap. 7.1, par. 5.

From this point of view, the digital world is a simulation of an original that does not necessarily exist as imagined by the simulators; it is a copy of a non-existent original, a simulacrum that has cut loose from its original form—to become, as Ecclesiastes would have it, true.[26]

12. Sometimes blended, but never the same*

Although the analogue and the digital worlds may sometimes appear to be merging, for example, when digital information relates to Things in the analogue world, they are separate, because the digital world is not natural to humans, it has been created by them (and thus, humans will always be able to tell the difference).

13. The individual is torn in the digital world

States turn humans into individuals in order for them (humans) to live a meaningful life[27]. However, this is only the case in the analogue world. In the digital world, the single, unitary nature of the individual is gone. It is irrevocably lost, at least as perceived until now in the analogue world.

In the analogue world a separation between the individual's personal and public lives, the private and public self, is assumed, at least in Western philosophy.[28] But this separation is an internal, imagined one: in terms of the processing of information, which is external and material,[29] each individual is perceived as a single unit, a single actor (who becomes identifiable and unique through his or her state), notwithstanding the many aspects of character or the interesting (or uninteresting) life led by this individual. Anonymous communication or pseudonyms may break down an individual's single, unitary nature, but only temporarily and within a closed environment, for instance, among an author's readers or a singer's listeners in

26. 'True' in the meaning of material, on which (material) processing is possible.
27. See Chap. 7, par. 3.
28. See Chap. 26, par. 4.
29. See Chap. 4, par. 4.

the analogue world. Outside of these occasions, that same individual remains a single unit.

However, in the digital world that same individual, still perceived as a single unit in the analogue world, may split into multiple units.

Consequently, the focus needs to change. It is not only the actual existence of the digital world which is examined in this political philosophy of information (which is, expressly, not a moral philosophy[30]), but also the access to and use of the digital world by individuals,[31] who have become users.[32] This must be examined separately, within the context of a moral (political) philosophy, which will have to follow this book.

This is also the case for other Beings and Things, too: they may exist in either or both worlds (meaning, they may be able to process information or have information on them processed in either of or both the analogue and the digital worlds) but their single, unitary nature is broken down.

14.*

The issues of access to and use of[33] the digital world belong to moral philosophy.

15. *'All that is solid melts into air'*[34]

There are two fundamental and groundbreaking differences between the analogue world and the digital world. The first is that information in the analogue world is finite, whereas it is infinite in the digital world. The second is that total control is impossible in the analogue world, but possible in the digital world.

30. See note 0/1/7.
31. On their processing, see also Chap. 4, par. 1.
32. See Chap. 17, par. 11.
33. Through computer programs, see Chap. 2, par. 18.
34. As prematurely (and thus unsuccessfully) prophesised by Marx.

These realisations are of paramount importance; they are factors that will forever change the path of human history and culture. In essence, two of the fundamental assumptions with which humanity has lived during its entire recorded history in the analogue world do not apply in the digital world.

16. Information in the analogue world is finite, but infinite in the digital world*

In the analogue world the scarcity or uniqueness of the resources found in Nature is the drive behind human culture and history. Because humans have a need to augment their information processing,[35] all of their history so far can be read as a long march to exhaust to the greatest extent possible the processing opportunities offered to them in the analogue world (meaning in Nature). These are, nevertheless, finite. While immaterial information processing (i.e. of thoughts, feelings, wishes) in the analogue world may be infinite, its execution (materialisation) is still restrained by finite resources.

The 'nature of man', and much of political philosophy, is based on this assumption: that information (or whatever it is that anyone is in pursuit of, whatever the objective of any human) is finite, exhaustible and can be enjoyed by one human being only at the expense of another.

This idea is no longer valid in the digital world. Digital information[36] is infinite.[37] Therefore, human processing can go on forever without threatening, reducing or affecting the processing of others. In other words, in the digital world immaterial information processing is infinite, and its materialisation (unlike in the analogue world) can oblige (i.e. it knows no limits).

There is no field of human activity (in peace or war) or thought (in business, science, art or religion) that is not affected by this fundamental change. Humans accustomed to living in a

35. See Chap. 5.1.

36. See Chap. 1.1, par. 13.

37. On why that is, see Chap. 1.1, par. 16.

finite, closed system now also live in what promises to be an infinite one. After the digital world is fully developed (it is currently only a few decades old), nothing in human life will be ever the same.

17. Total control is impossible in the analogue world, but possible in the digital one*

Total control is impossible in the analogue world. Although the state is the information platform that turns humans into individuals and makes a meaningful life possible, and thus knows all of its citizens processing because it is a necessary part of each single one of their actions, it has no consciousness, purpose or will of its own—it is omnipresent but not omnipotent. The government, on its part, aims to be omnipotent through control of the state; however this will always be an elusive and unattainable objective for it. In other words, in the analogue world anyone can act and (at most) that action can be, in principle, prohibited or assessed after the fact—but there is no way to control its occurrence in the first place.

Total control is impossible in the analogue world because the analogue world (Nature) was discovered by humans, it was not made by them. It is possible for myriad processing operations to be taking place on it at any given moment, and there is simply no way for humanity to effectively control them all, that is, to consciously allow or prohibit each and every one of them.

Exactly the opposite is the case in the digital world. The digital world is artificial, created by humans. It may be developing in unforeseen and unforeseeable ways, but it remains artificial, human-made. It is built on the basis of pre-determined specifications. Any action becomes possible or impossible within it according to a pre-known, preset design. In other words, the possibility for anybody, any Being, to do anything in the digital world must have been planned for and built in in advance—otherwise it simply cannot happen, there is no option for it to take place.

Unlike in the analogue world, total control (or, in any event, a new kind of control that defies anything we thought we previously knew) is, for the first time ever, available to humanity,

which is experiencing, in this regard, a God-like creation moment.

1.1. Material and immaterial information

'Even the most perfect reproduction of a work of art is lacking in one element: its presence in time and space, its unique existence at the place where it happens to be.'

Walter Benjamin

Synopsis: *Information is either material or immaterial (1-4); The materialisation and dematerialisation of information (5-6); The materialisation of immaterial information (7); The dematerialisation of materialised (immaterial) information (8-9); The invention of intellectual property (10-11); The (re-)materialisation of information into digits (the digitisation of information) (12-15); Digital information is infinite (16); Digital-born and digital world-only information (17); Digital humans? (18).*

1.*

Information is either material, meaning processable by Beings in the analogue or the digital world (i.e. processable by more than one Being[38]), or immaterial, meaning unprocessable by Beings (plural) in the analogue or the digital world (i.e. it is processable by only one Being—it is a thought, a feeling or a wish, but also, significantly, the spoken word[39] too).

2.

38. For biological Beings it is processable through their senses, while for non-biological Beings it is processable through their nature, meaning the design given to them by humans.

39. *Verba volant*: basically, the spoken word, a verbal discussion, is unprocessable by more than one Being because it has not materialised (for example, on paper) meaning that what was said has not been retained, it has departed and it cannot be proved that it ever existed. However, once speech materialises, e.g. on paper, or if it causes another, material, action (including repetition *verbatim*), then it becomes processable, in this new form, by more than one Being. The same is true of a gust of air: unless it is scientifically registered (e.g. in terms of strength or direction), it is not material information, i.e. it cannot be processed by more than one Being.

Immaterial information is infinite (thoughts, feelings and wishes know no end), but while in the analogue world material information is finite (because the analogue world is finite), in the digital world it is infinite.[40]

3.

All immaterial information is created (thought, felt) by humans and animals, that is, by biological Beings.[41]

Non-biological Beings (organisations and artificial Beings) are (for the moment assumed[42] to be) unable to create new immaterial information (thoughts or feelings).

Material information can either be created by Beings (all Beings can create Things or other Beings) or simply exists in the analogue world (it has been created by Nature).

4.

Humans, as Beings,[43] can and will process information. Once they have become individuals through their unique identification in space and time by their states,[44] they can and will constantly increase their information processing, to serve their need to augment it.[45]

40. See Chap. 1, par. 15.

41. Human creativity, as we know it, is the result of a purely human need to augment information processing, see Chap. 5.1 par. 6, and note 5.1/3/1.

42. Specifically, artificial Beings.

43. See Chap. 2.

44. See Chaps. 7 and 8.

45. See Chap. 5.1.

5. The materialisation and dematerialisation of information*

Material information has been processed by humans and animals in terms of property[46] since the beginning of time.

Immaterial information can become material, meaning processable by other Beings as well (or even by the same single Being in some future time), if it is materialised by its creator (i.e. the Being that thought of it or felt it). Materialisation is the making of immaterial information by a Being processable by others through the conversion into a material, tangible (meaning, processable directly by humans without tools[47]) format. Humans will speak,[48] write, draw and so on in the analogue world, or program in the digital world; all animals, including humans, will build in the analogue world. The materialisation of immaterial information[49] is, in fact, a processing, meaning a material action observable in the analogue or the digital world.[50]

In the vast majority of cases (and this is true for the analysis in the remainder of this chapter), a Thing will be created in this manner.[51] However, it can also be the case that another Being (an organisation or an artificial Being) can be created in this way too[52]—these, nevertheless, cannot be dematerialised in the way described below.[53]

6.

Once materialised by their creator in this manner, Things can be dematerialised, meaning they lose their material, tangible (i.e. processable directly by humans) format, but remain

46. See Chap. 24, par. 3.

47. As is the case with digital information, see par. 12

48. See par. 1, particularly footnote 39.

49. Possible only for biological Beings, see par. 3.

50. See Chap. 4, par. 2.

51. See Chap. 3, par. 4.

52. See Chap. 2, par. 6; on the state, see Chap. 9, par. 1.

53. In par. 6. On the issue of control over the processing operations possible on newly materialised information, see Chap. 6, par. 4.

reproducible, and thus are able to be processed by more than one Being in the analogue or the digital world.

Practically, a book sits in the head of its author (as immaterial information) until it is put on paper (it materialises, becomes material information); after it has been written down on paper, it can be printed as many times as necessary (printing essentially that same, now fixed, dematerialised information). Similarly, music sits in the head of its composer (as immaterial information) until it is put into a musical score (becomes materialised), after which any musician can reproduce it (essentially by replaying that same dematerialised, musical score).

Likewise, a chair has been created in the analogue world following the design of its creator; after the first model has been created, it can be reproduced infinitely, in both the analogue and (if digitised[54]) the digital worlds.

In this way, since the beginning of time, immaterial information has been processed (and therefore controlled[55]) by humans like material information, in four large cycles of materialisation and dematerialisation:

(a) at first, at the beginning of recorded human history, certain immaterial information (thoughts, feelings and wishes) was materialised, meaning that it became perceptible by human senses in the analogue world, through paintings on cave walls and writing;[56]

(b) then, part of the materialised information was dematerialised (it became immaterial again, but this time in a fixed manner perceptible in the same way by more than one individual), when the first book was copied;[57]

(c) in the seventeenth century, the new concept of intellectual property designated only part of the dematerialised information as property;[58] and

54. See par. 12.

55. See Chaps 6, par. 4, and 24, par. 3.

56. See par. 7.

57. See par. 8.

58. See par. 10.

(d) finally and most importantly, the digitisation of information, which has occurred recently and is ongoing,[59] is, for the first time since the beginning of time (as outlined in point (a)), re-materialising this information in a different, entirely new format (the digital format) and for an entirely new world (the digital world). This includes all information: all material information as well as all dematerialised information is suitable for processing in the new digital world.

This is why this current period is the most important in humanity's history since the invention of writing (i.e. it is the third milestone moment in humanity's development[60]). It is not a matter of the Information Age succeeding the Industrial Age, which succeeded the Enlightenment, which succeeded the Renaissance and so on. This is an entirely new era; if anybody wanted to find its equivalent in human history, he or she would have to look thousands, not hundreds, of years back in time.

7. The materialisation of (immaterial) information

Immaterial information has been materialised in the analogue world since the beginning of humanity, or at least since the point at which humans started drawing on cave walls and speaking to each other.

When writing was invented, immaterial information processed by humans (their thoughts, feelings and wishes) was materialised in the analogue world, first in the form of tax or military records[61] or regulations (e.g. the Hammurabi code), and shortly thereafter in the form of books, in which epics and mythologies were written down.

59. See par. 12.

60. See Prologue, par. 6.

61. Which was why writing was invented anyway; see Chap. 9 on the materialisation of the state.

8. The dematerialisation of materialised (immaterial) information

Part of the materialised immaterial information discussed in paragraph 7 was dematerialised again, when the first book was copied.

This was a moment of great importance for humanity. Somebody at that time saw some value in certain among all the written records created up to that time and selected them[62] for copying—that they were copied *verbatim* is the key point here. (This was not the case for musical pieces or paintings, because copies of such works, however artful, cannot be exact, and are therefore new materialised immaterial information.)

Such dematerialised information became an intangible Thing, a dataset[63] separate from the (tangible) original book it[64] came from (which of course remained a tangible, material Thing in its own right).

9.

During the long period from the moment that the first book was copied in ancient times until the introduction of the concept of intellectual property in the seventeenth century, humanity was happily, and freely, copying (and selling, not sharing) the dematerialised information described in paragraph 8, because there was no way for the creator of new information[65] to control the relevant processing operations—therefore control was exercised only over the materialised information (the books themselves).

In other words, although there was book commerce at least as early as in Peisistratid Athens, with scribes copying books and selling them (a practice certainly generalised throughout the Hellenistic and Roman worlds), property-like control was exercised on the end-product, the

62. A choice that haunted us until very recently, see par. 15.

63. See Chap. 1, par. 2.

64. Necessarily, see par. 17.

65. See Chap. 6, par. 4.

book, and not on the work of the intellect contained therein. Neither Plato nor his philosopher students nor Aeschylus or his dramatist followers were paid for each copy, written by hand on papyrus or other material, of the books they wrote. (Their money was made through teaching or reciting instead.) Indeed, nor was the state of Imperial Rome paid either, each time its laws were copied to take from Rome to any part of its vast empire or elsewhere.

The same is true of painting (or music or architecture or industry): the materialisation of information had occurred since the beginning of time, but control was exercised only over the material end-product, not the dematerialised information.[66]

The dematerialised information described in paragraph 8 could be exploited only in its material form, as a tangible thing (a book, a music score, a specially designed jewel, a motto etc.), in spite of everybody acknowledging that it was a(n) (immaterial) Thing. Those who profited were the copiers and manufacturers, not the creators.

10. The invention of intellectual property

The dematerialised information described in paragraph 8, enjoying the freedom (as in lack of control over the processing of it) as described in paragraph 9, became property (intellectual property), and thus under the control of humans, in the seventeenth century. In short, mechanical mass copying (through the invention of Gutenberg's press) made it obvious to humanity for the first time that value lies in the (intellectual) creation of the dematerialised, intangible dataset and not in the (mundane, however tiring to produce, tangible) reproduction—a distinction that, like the one described in paragraph 8, has haunted us until very recently.

A different kind of property, intellectual property, was thus invented by humans.[67]

66. Notwithstanding that they could not have been exact copies of the original, certainly in terms of paintings or architecture, albeit less so in music after annotation was discovered.

67. See Chap. 24.1.

11.

As is obvious, the concept of intellectual property applied to dematerialised information.[68] However, after this concept was introduced by legislators, developments took two different paths.

The part of dematerialised information that was considered valuable (that which is unique, original, technically useful, distinctive etc.) was protected as a new type of property, intellectual property (IP), to distinguish it from the traditional type of property.

The remaining part of dematerialised information, if any (it is not certain that anybody cared to copy tax or military records or other large repositories of mundane information, although it can be imagined that, e.g. transmissions of state data between state agencies qualified as such), remained unregulated and unclaimed (uncontrolled).

12. The (re-)materialisation of information into digits (the digitisation of information)

The digital world is made up of digital information.[69] For the past few decades humanity has been busy digitising its information (and working with it in this form).

Digitisation is not, however, dematerialisation. It is just another form of materialisation (of already dematerialised information), this time in an entirely new format, one that is machine-readable. It is the transformation of information into digits. (Accordingly, the dematerialisation of information should not be confused with the digitisation of information.)

Humans created specific tools for this purpose. Digitised information is not tangible, it can

68. All materialised information (i.e. artefacts) already being covered by the concept of property, see Chap. 24, par. 3.

69. See Chap. 1, par. 11.

only be processed by humans with the assistance of information processing tools (i.e., computers, in essence artificial Beings[70]).

13.

The digitisation of information, a process that is still under way, includes:

- the digitisation of material, analogue-world information;[71]
- the digitisation of dematerialised information (both that covered by IP rights and that which is not[72]); and
- the (slow but steady) digital creation of new information.[73]

Digital information comprises all of the above categories of information.

Practically speaking, therefore, the digitisation of information leaves only immaterial information (thoughts, feelings and wishes) outside the realm of digitisation.

14. The digitisation of material, analogue-world information*

In a process that started in the 1980s but gained speed (culminating in the early 2000s), humanity is digitising all material information found in the analogue world.[74] This includes both information that has been created by humans over the course of their history (i.e. artefacts) and information created by Nature (trees, lakes, rivers, animals etc.).

In essence the digitisation of material, analogue-world information presupposes that it first be

70. See also Chap. 2, par. 12.

71. See par. 14.

72. See par. 15.

73. See par. 17.

74. An act of processing collections of information, see Chap. 2, pars. 5 and 6.

dematerialised before it is re-materialised in a digital format.

However, crucially, this re-materialisation of material information into digits is not unique, in the sense that the dematerialisation that preceded it, and upon which the digitisation is based, takes one form among the many that are possible. In other words, the result of the digitisation of an artefact (e.g. a table) is neither unique nor exclusive, because it is based on a dematerialisation (most likely, in the form of a photo of the object) that is one among the many possible[75]—meaning that it can be digitised many times over. Similarly, the digitisation of, for example, the remains of an ancient temple is not unique—another attempt at its digitisation by another group of archaeologists would produce a second result, existing in parallel to the first one.

In other words, while the digitisation of material, analogue-world information leads to a digital reproduction of the original, it is only one digital reproduction among many possible others—it is not the original itself. A single dataset in the analogue world can lead (through its digitisation) to a potentially infinite number of datasets in the digital world.

15. The digitisation of (already) dematerialised information

The digitisation of already dematerialised information is, in effect, its re-materialisation in a different format. In other words, until recently, dematerialised information was only materialised in the analogue world in a tangible format (e.g. books, films, magnetic means for the reproduction of music, products or buildings following a particular design, insignia (trademarks) affixed on objects), meaning in a format directly processable by humans. Now, through digitisation, already dematerialised information is re-materialised but, importantly, in an intangible format (that is, one not directly processable by humans): the digital copies of books, music and so on cannot be processed as such (as a series of 0s and 1s) by humans, but are reproducible through the intermediary of computers and computer programs.[76] which

75. On (the vastly smaller category of) IP-protected Things (for instance, when the IP-protected design of a chair would be the basis for its digitisation), see pars. 15 and 16.

[76] See Chap. 2, par. 18.

enable them to be processed by humans.

In essence, humanity is now in the process of making (all of its) knowledge processable (accessible, usable) by computer programs, so that it can communicate with them. Once this has been accomplished, the next step will be for computer programs to start communicating with each other.[77]

Importantly, the digitisation of already dematerialised information has not, however, stopped at IP-protected immaterial information,[78] although, of course, it started with it. Although this is an expensive procedure, for efficiency purposes dematerialised information which is not IP-protected (e.g. state records, large repositories of mundane information, such as scientific or military records) is also being digitised.[79] In fact, for the first time in the history of humanity, state records have become dematerialised, that is, intangible, in their entirety. State records had been material information ever since the invention of writing[80] (piecemeal exchanges among e.g. state agencies excluded)[81]—only the material on which they were recorded had changed, with paper succeeding clay tablets, engravings on stone or wooden tablets.

The digitisation of dematerialised information that is not IP-protected abolished a choice made by humans in ancient times that had been maintained by us until recently: namely, on the worthiness (or not) of protecting dematerialised information through (property) law. From the moment the first book was copied until just a few decades ago, only IP-protected dematerialised information was considered valuable—its protection based on criteria such as originality, distinctiveness, effort of the human intellect and so on. Other dematerialised information did not merit any protection (at best it was protected as materialised property) or special treatment by regulation (for example, access rights to state records). Now, once

77. See also note 0/1/14.

78. See pars. 9 and 10 above.

79. Of course, if viewed as information that was only materialised (i.e. never copied), then this would fall under the category described in par. 9 on the digitisation of material information; in any event, this information is digitised anyway.

80. See par. 1.

81. See also Chap. 17, par. 9.

digitised, new regulations protect (or, regulate control over) it for the first time.

16. Digital information is infinite*

Paragraphs 13, 14 and 15 have explained why information in the digital world is infinite.[82] When it comes to the digitisation of material information (par. 14), although the volume of material information is finite (because it exists in the analogue world), the digital reproductions of it may be infinite in number. If one so desired, the same monument or the same table could be re-digitised as many times as one wished, and each time this would create a new digital copy.[83]

On the other hand, when it comes to the digitisation of already dematerialised information (par. 15), although there is a finite number of, for example, books or music scores, they relatively quickly lose their special regulatory (IP) protection and can be reproduced or (partially) processed freely. Information that does not enjoy any legal protection (e.g. state records) is processable in any case.

Most importantly, however, all digital-world-created information (meaning the information described in par. 17) is infinite: (making use of the above information) anyone can create as many digital works, organisations, computer programs and so on as he or she wishes.

17. Digital-born and digital world-only information*

Information, regardless of whether material or immaterial, has invariably been materialised in tangible media in order to be processed by other humans. Although an idea or a thought can of course be transmitted orally, only a relatively small circle of people will receive it—each of them may well transmit it further, but it is not certain that it will be the same thought or idea

82. See Chap. 1, par. 16.

83. Notwithstanding legal restrictions, e.g. in terms of limiting access to monuments to limit such reproductions.

(or rather the opposite is certain![84]). In other words, information has to be made tangible by one human (preferably in writing) in order for it to be processed by other humans.

In practice, therefore information is materialised by its creators. Authors put their ideas on paper, composers do the same, film directors use film; similarly, shopping lists are put on paper, as are laws and tax records. As has been seen,[85] if any of this information is considered worthy of copying, then it is dematerialised (and eventually protected by regulation); otherwise it remains materialised in its original medium (most likely to be lost at some point, after this medium inevitably perishes).

Today, however, new information is increasingly digital-born. This is as true for this book as for most other intellectual works today. State records are created on computers with the assistance of computer programs. Huge repositories of information are created and kept exclusively in digital form.

This is digital-born information. Importantly, however, it can become tangible, that is, it can also exist in the analogue world: the book can be printed, as can state records or other repositories of information, no matter how large. Therefore, digital-born information is material, intangible information that was created digitally but can become tangible, that is, it can be directly processable by humans, if needed.

A subcategory of digital-born information is digital world–only information. This is information that is digital-born (a thought or idea that was materialised directly into digits) that nevertheless can exist only in the digital world. In other words, it cannot become tangible to humans other than through the medium of a computer (unlike a book or state records, which can be printed, or music that can be recorded onto a magnetic medium). This is the case, for example, for a domain name, a website or an object in an online virtual digital world (e.g. the metaverse).

84. See also par. 1.

85. In par. 10.

In both of the above cases, information (in essence, datasets) can be Things and Beings. The main distinction continues: Things, even if digital-born and digital-only, cannot process information. In the above example, a domain name, a website or an object in an online virtual digital world cannot process information. Only Beings, including artificial Beings (specifically, computer programs), can and will process information.

18. Digital humans? *

In the digital world, humans have become users[86] of information. The use they make of such information falls under the scope of a moral philosophy.[87]

86. See Chap. 17, par. 11.

87. See Chap. 1, par. 13.

2. Beings

'Any organism is held together in this action by the possession of means for the acquisition, use, retention, and transmission of information.'

Norbert Wiener

Synopsis: *Beings can and will process information (1); Life is information processing: organisations and artificial Beings have lives of their own (2); All Beings, when they perish, become Things (3); Humans and states, although Beings, carry a distinctive characteristic from their kind (4-5); Organisations (6); Why do organisations come into existence at all? How do they die? (7-8); The state is an organisation (9-10); Biological Beings do not have a purpose, while non-biological Beings do (11); Artificial Beings (12-13); The effigy of an artificial Being (14); The bond with their state of origin (15); Words (language) (16); Money (17); Computer programs (18); A, materialised, fiction (19); Artificial Beings do not have a need to survive and can die (20-21).*

1. Beings can and will process information

Beings can and will process information on other Beings or on Things, because they have needs.[88] It is in their nature to do so, it is what they do, they cannot not do it.[89]

On the other hand, the other category of datasets,[90] meaning Things, (perhaps) can but will not process information on other Things or on Beings.[91]

2. Life is information processing: organisations and artificial Beings have lives of their own*

88. See Chap. 5, par. 2.

89. Or, if seen differently, they can process information because they need to, their nature having shaped their abilities, see note 5/2/1.

90. See Chap. 1, par. 2.

91. See Chap. 3, par. 2.

Based on biology, we can distinguish between biological and non-biological Beings. With this in mind, biological Beings are humans and animals. Non-biological Beings are immaterial information that has been materialised (by humans) into either organisations or artificial Beings.[92]

However, to be biologically living (i.e. not dead) is different to being alive, meaning to be able to process information in the analogue or the digital world. Non-biological Beings come into existence in this sense as soon as they are created (by humans). They assume a non-biological life of their own, because, once created, they can and will process information.

Therefore, all Beings, as soon (and for as long) as they can process information, are alive, that is, they assume a life of their own.[93]

3. All Beings, when they perish, become Things

Other Beings can process information on them, but they themselves are no longer able to process information.

4.

Although humans and states are Beings as per their kind (animals and organisations respectively), there is a basic difference, a distinctive characteristic that differentiates each of them from their kind (explained in paragraphs 5 and 10, respectively).

5.

92. See Chap. 1.1, par. 5.

93. See Chap. 1, par. 9.

Unlike all other animals, humans need to augment their information processing. This need makes humans unique among animals.[94]

6. Organisations

Organisations are groups of more than one individual. Any and all types of corporations, associations, agencies, educational institutions, governments and religious institutions are organisations.

Importantly, the family[95] is an organisation. So are states.[96] In fact, these are the two organisations humans are born into, that are natural to them (and thus do not fall under the analysis on organisations that follows, i.e. they are different unless otherwise specifically mentioned).

Organisations become Beings as soon as they assume a material form in the analogue world. Before that time they are merely immaterial information (thoughts, feelings, wishes)—they cannot process information. However, as soon as they come into existence in the analogue world they can and will process information, because they are composed of humans.

Organisations are created by humans; it is therefore humans that define their nature. This means, among other aspects, giving them a form and a purpose: their coming into existence is not random, by biological birth, but by (human) design,[97] with the specific aim (and equipped with the optimal and necessary means) to serve a specific purpose. Therefore, their need to process information is channelled towards, and constrained by, their human-designed nature. They can use Reason, however, to exclusively serve that purpose.[98]

94. See Chap. 5.1.

95. On the family, see note 8/2/1.

96. See also par. 9.

97. See Chap. 1, par. 9.

98. See note 5/2/2.

7. Why do organisations come into existence at all? How do they die?*

Individuals create organisations because they imagine[99] that such Beings will augment their ability to process information, that through them they will achieve information processing that would otherwise be impossible alone.

Their purpose, however particular and specific in each case, is ultimately to create new information[100] through their processing—this is ultimately the reason humans create them at all. This creation of new information, however, immediately raises the question of who is able to exercise control over it.[101] Although organisations, as Beings, have control in the first instance, the new information created by organisations is actually gained by 'their' humans, meaning those humans who control them, either because they created them in the first place or because they participate in them (meaning those who are permitted[102] to process the information that the organisations create).

Similarly, if humans find 'their' (in the above meaning) organisations detrimental or even neutral to their processing they will remove them in the sense that they will stop participating in them.

Organisations which no longer have any humans participating in them are also no longer processing information, and are therefore no longer Beings but Things.[103] It is in this way that organisations die, ceasing to live as Beings—not through the fulfilment of their purpose, which, as will be explained,[104] is an intentionally unattainable goal.

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99. See also freedom, in Chap. 25, par. 1.

100. See Chap. 1, par. 7.

101. See Chap. 6, par. 4.

102. I.e. have the right, see Chap. 21, par. 1.

103. See par. 3.

104. In par. 11.

Consequently, organisations[105] are human-centric and human-dependent.[106] In the same manner that humans need air or food, organisations need 'their' humans to keep using them, to keep augmenting their own information processing through them, in order for them (the organisations) to remain in existence[107] as Beings.

8.

Organisations, because they are human-centric, have to live (i.e. process information) in the analogue world,[108] even if they also live in the digital world. Like humans, they cannot live exclusively in the digital world.[109]

9. The state is an organisation*

States fall within the category of organisations: they are Beings, meaning humans' immaterial information (thoughts, feelings, wishes) that has been materialised[110] in the analogue world, and they can, and will, process information. Most importantly, however, and in contrast to any other organisation, states are natural to humans: they were formed naturally, automatically and immediately at the moment when two humans started to communicate with each other[111] using names. It is for this reason that states have no specific purpose[112]—no specific Being created

105. In contrast to artificial Beings, see par. 12.

106. Accordingly, there can be single-human organisations, but no organisations without any humans at all.

107. See Chap. 5, par. 3; this does not mean, however, that organisations have a need to survive (see par. 13) or that this is their only need.

108. Again, in contrast to artificial Beings, see par. 12.

109. Because it is humans that compose them, see par. 6.

110. See Chap. 9.

111. See Chap. 8, par. 1.

112. See Chap. 11, par. 7.

them.[113] In essence, states are the first organisations, they are their precursor.[114]

As noted previously,[115] organisations need 'their' individuals. Without them an organisation ceases to exist, that is, it is no longer able to process information and it becomes a Thing. The same is true of states: a state without any citizens ceases to exist—it becomes a Thing.[116]

Organisations, therefore, need their individuals. In fact, because individuals need to augment their information processing and organisations need 'their' humans to keep using them, all organisations (including the state) need their individuals to augment their information processing through them. The difference between states and other organisations is that while organisations need their humans to augment their information processing with regard to their (organisations') specific purpose, for states this augmentation of information processing can take place for any purpose whatsoever.[117]

10.

Unlike other organisations, states do not need to be formally incorporated in the analogue world. There is no need for their formal incorporation according to some regulation[118] or procedure, although, of course, they could be so incorporated—and this is, in fact, the case today. There is no law or procedure that takes precedence (thus coming from a higher authority, which, however, does not exist in Nature) over the creation of the state.[119]

On the contrary, states were formed naturally in the minds of humans, who in this way became

113. Government, which controls states, came after their formation (see Chap. 12, par. 7); see also Chap. 13, on state justification.

114. Sharing this role with the family (extended families were presumably the first states anyway).

115. In par. 7.

116. See Chaps. 10, par. 2, and 15, par. 4.

117. See Chap. 10, par. 1.

118. See Chap. 20.

119. See also Chap. 20, par. 6.

individuals as soon as they started communicating with each other, giving states material form in the analogue world. States took the form known to us much later, when processing requirements, and processing capacity, increased.[120]

11. Biological Beings do not have a purpose, while non-biological Beings do*

It is not the purpose of biological Beings to process information. The above points relate to what Beings can and will do, because it is in their nature to do so. However, information processing is not their purpose.[121] It is not the purpose of Beings to process information (but rather it is what they do while they are alive). In fact, biological Beings have no specific purpose whatsoever, while non-biological Beings do have a purpose, the one given to them by humans at the moment they were created.[122]

Importantly, however, this purpose given to non-biological beings is, in fact, unattainable. It is deliberately an open-ended, perpetual purpose, formed in general rather than specific terms, meaning that, in practice, the purpose of non-biological Beings can never be fulfilled.[123]

However, a clear distinction needs to be made at this point: it is not the purpose but the nature of a Being to process information. In other words, Beings process information because it is in their nature to do so, and not because it is their purpose to do so. Once a biological Being (i.e. an animal or human) sets a (or any) purpose or once a purpose is given to a non-biological Being (i.e. an organisation, artificial Being) then it will process information so as to serve this purpose.

120. Basically, when writing was invented, see Chap. 9.

121. This purpose is not the processing-operation-specific, Reason-relevant purpose, see Chap. 4.1, par. 3.

122. See also note 5/2/2. On the state having no specific purpose, see par. 9. On the (many) purposes of artificial Beings, see par. 12.

123. This is also true of the needs of biological Beings, see note 5/2/1.

12. Artificial Beings*

As noted previously,[124] Things (perhaps) can but certainly will not process information: they do not have the will to do so. A knife, a thermometer, a car or a ship, regardless of the degree of its sophistication, has no will of its own to process information; it does not need to do so. Even if a Thing does process information, it does so following its design, its purpose being given to it by those who created it.[125]

However, in human history, a new intermediate category emerged: humans (relatively) quickly created, not just purpose-specific Things,[126] but a different kind of Thing, one which can process information but for no specific purpose—or, for any purpose whatsoever. These purpose-agnostic Things became crucial to the information processing of humans.

Although these Things have no needs of their own (and are not, therefore, Beings), it is the fact that at the time of their creation they were given an enormous, unforeseeable and unchartable number of purposes that decisively separates them from any other Thing. They thus artificially approximate Beings, because their many purposes give them an artificial will of their own.[127]

These artificial Beings are, following the order of their appearance in human history, words (language), money and computer programs.

13.

The invention of artificial Beings by humans coincides with (or has caused) the three milestone moments in humanity's development:[128] words (language) coincided with the acquisition of self-consciousness, money with the invention of writing and computer programs with the creation of the digital world.

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124. In par. 1; see also Chap. 3, particularly par. 2.

125. [See diagram ...]

126. Artefacts, see Chap. 3, par. 4.

127. Of course, organisations are also artificial (created by humans), therefore the correct term for 'artificial Beings' should be 'artefact Beings'; artificial is used in this analysis for ease of understanding (i.e. no unnecessary introduction of neologisms purposes).

[128] See the Prologue, par. 6.

14. The effigy of an artificial Being*

Artificial Beings are, of course, material, but they are also composite: they have a tangible part (hardware) and an intangible one (software). Both parts are necessary for them to operate as intended by their creator humans.

The tangible part is easy to see: words are spoken (and later written down); money is printed (or in previous times mined) and exchanged; computer programs are installed on our information processing tools, or they move robots or drones. In most cases, hardware, which is the effigy of the artificial Being, is what is understood to be the artificial Being, and the part that is used by the vast majority of humans.

The intangible, informational part of an artificial Being (the software necessary for it to operate) is harder to discern—but material too, nonetheless. Words cannot operate outside an informational system, a language (which is, in turn, only possible on the information platform that is the state). Money cannot operate without an informational system regulating its use—which is also only possible on the information platform that is the state. Computer programs cannot operate (or exist) outside the digital world.

15.

Crucially, Things can also operate as per their intended purpose outside their state of origin.[129] Artificial Beings, in principle, cannot: words and money can, of course, process information outside their state of origin but with limitations (for example, understanding of a foreign language or through currency exchange rates). The case of computer programs, similar to the digital world itself, remains, for the moment, contested.

16. Words (language)*

129. See Chap. 17, par. 5.

Words (language) were the first artificial Beings developed by humans. They are the necessary tool for the processing of information in the analogue world. They immensely increased humanity's information processing capabilities—and also turned humans into individuals.

17. Money*

Money was the next artificial Being created by humans. It is the necessary tool for cooperation among (larger groups of, in the meaning of more than an extended family) humans. The creation of money only became possible when writing was invented.

18. Computer programs*

Computer programs are the necessary tools for the processing of digital information. They therefore make the digital world possible.[130] Accordingly, computer programs need the digital world; they cannot exist only in the analogue world. In other words, the digital world is natural to them.

Computer programs may have effigies in both the analogue and the digital worlds (e.g. in robots and drones, or in online computer game characters respectively) or only in the digital world (i.e. their interfaces towards their users). This is, however, the only possible way to classify them, in view of their immense versatility (and, at the same time, an unavoidable difference from language or money, which both acquired tangible forms in the analogue world).

Computer programs run (operate) on information processing tools ('computers', meaning any artefact that is capable of processing digital information).

Humans have used computer programs to create the digital world. Certain computer programs operate as access points to it. They are the points of entry, the necessary tools through which

130. See also Chap. 1, par. 11.

the digital world is accessible to humans (i.e. they make it possible for its digital information to be processed by them).

19. A, materialised, fiction*

Artificial Beings are based on a fiction, on (created) agreement among humans (essentially, on immaterial information that has materialised in the analogue world).

Language on the assumption that a specific word denotes a specific Thing, money on the assumption that every Thing (or Being) has an exchange value, and computer programs on the agreement to use computers.

20. Artificial Beings do not have a need to survive and can die*

Artificial Beings (as is the case for organisations) do not have a need to survive. Only biological Beings (humans and animals) have the need to survive; artificial Beings only need to process information. If they can no longer process information they cease to exist as Beings and become Things.

21.

Artificial Beings can create Things and Beings (and, of course, other artificial Beings).

2.1. Humans

'All persons exist to society by some shining trait of beauty or utility which they have.'

Ralph Waldo Emerson

Synopsis: *Humans are Being – but different to animals because they need to augment their information processing (1); It is states that turn humans into individuals (2); Humans use reason in their information processing (3); Humans, and animals, differ from each other; the case of other Beings (4-5).*

1.

Humans are Beings, they can and will process information.

Although they are animals too, they are examined separately from animals because of their need to continuously process new information, to augment their information processing,[131] which distinguishes their kind.

2.

States turn humans into individuals, and make possible the augmentation of information processing by them.

3.

Humans use Reason in their information processing in the same way as animals (this not a

131. See Chap. 5.1.

distinguishing characteristic); however, no two humans reason in the same way,[132] because humans differ from each other.

4. Humans differ from each other

Humans can and will process information. While this is common to all humans because they are Beings, the former ('can') is an ability, the ability to process information,[133] and therefore there are variances from human to human (as is the case for animals).

Differences in the ability to process information may be due to internal or external factors, including the character, health or physical characteristics of the individual (internal) and the circumstances surrounding that individual, such as the state in which an individual is living (external).

Although individualisation through states means that all humans are born equal,[134] it is in relation to their state that this is true and not in relation to each other. In other words, humans are different from each other, and this is reflected in their individualisation, once this is made possible through the state. No human is equal to another, even within the same state, in terms of any specific type of processing.

Of course, here this refers to actual ability, rather than any ability imagined by the individuals themselves.[135]

5.

If humans are different to each other and the same applies to animals when they are of the same

132. See Chap. 4.1, par 7.

133. See Chap. 5, par. 8.

134. See also Chap. 22, par. 7.

135. See Chap. 25.

kind, is this the case for non-biological Beings? Organisations are identical to each other in the way they are materialised and process information (as prescribed by regulation), regardless of their purpose.

Artificial Beings (particularly computer programs), on the other hand, are not necessarily identical to each other, even if of the same kind. As with humans and other animals, differences come about in their ability to process information. Although given to them by the humans who have created them, their abilities may differ widely, from the processing of a given dataset for a specific purpose to open-ended generative artificial intelligence systems.

3. Things

'Whatever exists, will either do

Something, or it is itself, by other things, done to'

Lucretius

Synopsis: *Every thing (all that is found in the analogue and the digital worlds that is not a Being) is called a Thing (1); Things, unlike Beings, cannot process information (2); Things are either found in Nature or are created by Beings (artefacts) (3); Artefacts (4); Things (and Beings, in this regard) are to be treated as a single, unitary dataset (5).*

1.*

Every thing (all that is found in the analogue and the digital worlds that is not a Being) is a dataset, a collection of information that can be processed (by Beings). For brevity's sake and for reference purposes, a thing in the above sense (consciously and arbitrarily including the earth, the air, a tree, a plot of land, minerals, an aeroplane, a hammer, and even a digitised artefact) is called a Thing.

2.*

Things, unlike Beings, cannot process information; it is not in their nature to do so. Even those that can process information do not have the will to do so, because, unlike Beings, they do not need to. If certain Things do in fact process information (e.g. a thermometer or a scale), it is their created will (created by Beings that can and will) that causes this (their purpose[136]).

This is what is meant each time it is claimed in this book that Things cannot process

136. Making them not relevant to this political philosophy, see note 0/1/6 (specifically 0/1/9).

information.

3.

Things are either found in Nature or are created by Beings (artefacts).

They are, however, invariably material information, meaning processable by (more than one) Beings in the analogue or the digital worlds.[137]

4. Artefacts*

Things can be created by Beings (animals create nests, humans make tools etc.). They invariably have a purpose, that is, to increase the information processing of their creators, although, of course, their actual uses may vary widely (for instance, a hammer can be used in construction but also as a weapon[138]).

Organisations and artificial Beings can also create Things to serve their (human-defined) purpose.[139]

Humans augment their information processing through the control[140] they exercise either over Things or over the Beings which they have created[141]—and these Beings may create and control Things in turn.

137. See Chap. 1.1, par. 1.

138. See also note 5/2/2 and 4/5/1.

139. See Chap. 2, par. 9.

140. See Chap. 6.

141. For organisations and artificial Beings, see Chap. 2, par. 6 and 12.

5. Things (and Beings, in this regard) are to be treated as a single, unitary dataset

Although there is invariably an infinite number of Things (or even of Beings, at a molecular level), in terms of Things in the context of this political philosophy, each Thing, as denoted by its name that is given to it by a state,[142] is here to be treated as a single, unitary dataset.[143]

For the same purposes and in the same context, the same is true for Beings (with each one of them, too, composed of an infinite number of Things or even of other Beings).

142. See Chap. 8.1.

[143] See also Chap. 1, par. 3.

4. Processing

'For anything that is must be,
By definition, something.'

Lucretius

Synopsis: *Processing is any and every treatment of and interaction with (including the creation of) information (1); The processing of information leads to the creation of new information (2); Processing is a collective term (3); Processing is material (4-5); A beginning but not necessarily an end (6); Co-processing is possible, but not all processing is equal (7); there is no Being or Thing that is outside the control of a single, identifiable Being (8-10); Neither humans nor states are aggressive by nature (11); The processing of information by humans is made possible only on the information platform that is their state (12); Information processing tools (13).*

1.*

Processing is any and every treatment of and interaction with information (including its creation). It refers to any action or operation carried out on information.[144]

As such it is unchartable, that is, the processing operations possible on a dataset (i.e. the actions of Beings or artificial Beings and Things, as the case may be) cannot be catalogued.

Processing of information takes place anyway, by definition, automatically, in both the analogue and the digital worlds. In the digital world this happens because it is itself artificial, the result of processing, and therefore this processing is thus maintained by it.[145] In the analogue world this happens because all Beings can and will process information (Nature being itself a Being[146]).

144. See also Chap. 1, pars. 6 and 7.

145. See also Chap. 1, par. 11.

146. See Chap. 1, par. 10.

2. The processing of information leads to the creation of new information* [147]

The creation of new information is achieved through the act of processing existing information.

There is, therefore, is no standalone processing, that is, all processing is a composite operation. All processing, that is, each action possible by Beings using information, is in fact a set of at least two separate operations: for example, to create new information one has to process older information; equally, to delete a dataset one has to access it first and so on.[148]

Evidently, processing is a composite operation from a Unique Human Observer Perspective only. Although breaking processing up into its constitutional parts is certainly possible and conceivable, there is no (Unique Human Observer Perspective) meaning in doing so: processing always has a purpose, that is, no processing operations takes place for its own sake. For example, there is no point in only accessing information; invariably its deletion or modification, or the creation of new information, is already in view when so doing—otherwise, why access it at all?

Consequently, because all processing is in fact a composite operation, because from the Unique Human Observer Perspective there is invariably a purpose to it, there is Reason in each one of these operations.[149]

3.*

It is of no concern (unless specified otherwise) which specific action constitutes 'processing' on each occasion. Processing is a collective term; it can mean creation, use, deletion, modification and so on.

147. See also Chap. 1, par. 7.

148. By way of a practical example, in the analogue world to use something one has to pick it up first.

149. See Chap. 4.1, par. 2.

4. Processing is material*

Processing on datasets, because they are material, meaning they exist in the analogue and/or the digital world,[150] is similarly material, meaning external and thus perceptible by human senses in the analogue or (indirectly[151]) the digital world.

As information can also be immaterial,[152] processing of information (only for humans, from the Unique Human Observer Perspective) can also be immaterial, internal: the thoughts, feelings and wishes of humans are also the result of information processing. Nevertheless, the existence of such immaterial information, and consequently this type of processing, can only be established arbitrarily, that is, it can only be assumed either if anyone tells us so ('I am thinking') or, retrospectively, if it is followed by an action. In this way, however, this type of processing also becomes material, it becomes external.

5.*

The materiality of the processing, because it is a constraint of the Unique Human Observer Perspective,[153] has a number of consequences:

- Humans can establish the existence of the immaterial processing of information only for themselves.

- A specific (single) processing operation is carried out by a specific Being each time.[154]

- To be living is to be processing information[155] in the sense of material, external processing (i.e. taking actions), and cannot be purely happening in the internal, contemplative sense. That is, to be living is to be processing information on datasets—in other words, life is an externally,

150. See Chap. 1, par. 2.

151. See Chap. 1.1, par. 12.

152. See Chap. 1.1, par. 1.

153. See note 1/1/1; the same is true of Reason, see par. 2 above.

154. On co-processing, see par. 7.

155. See Chap. 1, par. 9.

materially assessable event.

- No dataset can exist outside a state. This is true for Things, which get their names from and thus can be processed by Beings only in states,[156] as well as for Beings themselves (humans constituting a specific case, for whom states are needed and to whom they are thus natural).

- A processing operation, being material, is evidenceable, that is, it exists in the analogue and/or the digital world and it has a beginning[157] that can be established.

6. A beginning but not necessarily an end

A processing operation has an identifiable beginning, a point in time when it started, but it is not necessarily true to say (nor should it be assumed) that simply because it has been started it will be concluded (executed in full).

The processing of information by a Being may well start but, for whatever reason, may remain incomplete.[158] The processing of information is an action that has to start (Beings can and will process information) and at some point will stop, regardless of whether its intended purpose has been achieved or not.[159] In other words, as all processing is a composite action, the accessing of information for the purpose of deletion, for example, may well start, but the deletion itself may never happen or not happen in full (or to the satisfaction of the Being concerned).

Having said that, because all processing has a purpose,[160] once a processing operation has started it must be assumed that it is intended that its purpose will be achieved, that its completion will be striven for, that it is the first part of an intended series of actions, that is, that the Being that undertook the processing will try to conclude it/fulfil its intended (for that

156. See Chap. 8.1, par. 4.

157. But not necessarily an end, see par. 6.

158. As assessed by its purpose, see Chap. 4.1, par. 5.

159. Which, again, is an individually assessable, arbitrary finding each time, see Chapter 4.1, par. 5.

160. See Chap. 4.1, par. 2.

Being) purpose.[161]

7. Co-processing is possible, but not all processing is equal

With the processing of information taking place anyway, automatically, in both the analogue and the digital worlds, co-processing is, of course, possible—that is, many Beings may be processing the information of other Beings or Things simultaneously. For example, a discussion may be taking place between two individuals, while at the same time, in the background, information on them is being processed by a myriad of organisations. Notwithstanding that each one of these processing operations is identifiable and singular, all can take place simultaneously.

Of course, the fact that co-processing is possible does not mean that all co-processing is equal, that is, that all Beings have equal processing rights[162] to a Being or Thing. Depending on the state concerned, and the rights afforded to its individuals, processing, even if simultaneous, may differ widely.

In essence, this is a matter of control: control is the ability of a Being to allow or prohibit the processing on a dataset by other Beings.[163] With regard to specific processing operations on a Thing or a Being, control is exercised by only one Being. The more processing operations that are controlled by a Being, the more control it has over a Being or a Thing[164]—up to the point of the Being or Thing becoming its property[165] (i.e. the Being having the ability to destroy that Being or Thing).

161. See also why we should keep our promises, Chap. 23, par. 4.

162. On rights, see Chap. 21, par. 1.

163. See Chap. 6.

164. See Chap. 6, par. 2.

165. See Chap. 24.

8.

The rights to process (as processing permissions) as well as control over a Being or a Thing[166] mean that there is always a Being able to set or exercise them over any dataset for all other Beings. This Being is singular and identifiable each time (the same is true for each processing operation).

Conversely, there is no Being or Thing that is outside the control of a single, identifiable Being.

9.

How a particular Being came to be able to exercise control over a dataset (which may include itself!) is a matter of human culture and history, and thus beyond the scope of this analysis.

Because a Being can and will process information, whenever it identifies a new dataset (i.e. a dataset is perceived by its senses) it will attempt to process its information. If this processing is unhindered, it will take place as per the Being's nature.[167]

If the processing is restricted in any kind of way, the Being may conform to the processing rules, or not.[168]

In the case of humans, because they need to augment their information processing, they will never stop processing existing information and creating new information. In the analogue world where information is finite, this has led to conflict.[169]

166. See also Chap. 6, par. 3.

167. See Chap. 5.

168. See also power, Chap. 6, par. 5.

169. And to a misunderstanding of human nature, see par. 11.

In the digital world, because information is infinite, the processing of information is endless.

10.

As regards humans, because processing for them is only possible on the information platform that is their state,[170] the state is the Being that ultimately affords (makes possible) to all other Beings (its citizens included) on its platform the control and rights to process information.

11.*

A misunderstanding has occurred concerning human nature (and, in turn, the nature of states). This is because (a) information in the analogue world is finite, (b) Beings can and will process information, and (c) humans specifically need to augment their information processing, that is, to keep processing new information.

Neither humans nor states are aggressive by nature; nor is conflict natural to humans, in an (imagined) 'state of nature'[171] or elsewhere.[172] On the contrary, humans, having no purpose but only needs, simply ceaselessly try to augment their information processing in order to serve these needs[173]. It is as a result of this that conflict emerges in conditions of scarcity.

12. The processing of information by humans is made possible only on the information platform that is their state*

This may appear at first to be a counterintuitive claim: in a previous paragraph[174] it was

170. See par 12.

171. See note 8/2/3.

172. On whether conflict is natural to humans, see Chap. 5.1, par. 9.

173. And, thus, compare their processing to that of their predecessors and contemporaries, see Chap. 5.1, par. 9, on comparison being natural to humans.

174. In par. 1.

established that processing takes place anyway, by definition, automatically, both in the analogue and in the digital worlds. How then, can it be claimed here that processing by humans is possible only through the information platform that is their state?

Although all Beings process information in the analogue world,[175] it is in fact only animals that live (i.e. can and will process information) without a state.[176] Humans, because their basic need is to augment their information processing,[177] process information as individualised Beings. This individualisation is carried out by their states in (closed) processing environments created by the same,[178] and it is this that enables humans to have a meaningful life.[179]

The same is also true for both organisations and artificial Beings.[180]

13.

The processing of information is not a given nor is it static, rather it can be enhanced by tools (artefacts as well as artificial Beings[181]) that further enhance it, in an (apparently never-ending) virtuous circle.[182]

175. See Chap. 2.

176. Or, in small packs that are their states, i.e. within which each member is uniquely identifiable, language or other communication methods among them having never developed enough to necessitate human-style state building (see also Chap. 8, par. 7).

177. See Chap. 5.1.

178. See also Chap. 8.1, par. 4, as well as, 11, par. 3.

179. See note 8/1/3.

180. See Chap. 17, par. 13.

181. See Chap. 2, pars. 12 and 13.

182. See also Chap. 5.1, par. 3.

4.1. Reason

'We have to make an exception of Descartes, the father of rationalism (and therefore the grandfather of the revolution), who granted authority to reason alone: but reason is only a tool, and Descartes was superficial.'

Friedrich Nietzsche

Synopsis: *Reason is an algorithm (1); There is Reason in any processing of information carried out by Beings (2); Reason has no content (3); The purpose of the processing is irrelevant to Reason (4); Humans need to give a purpose to any processing they identify (5); Why does Reason exist in Beings? (6); Information processing is not neutral (7); Is Reason specific to humans only? (8).*

1.*

Reason is an algorithm—any algorithm, not a specific one. It is the processing of information for a purpose (any purpose, not a specific one). It is a method, a process, a set of rules, a way to do things, a *modus operandi*.

In essence, it is a sequence of (separate, different) processing operations that would otherwise be independent but are connected because they aim to achieve a purpose—whatever that may be.

Practically, Reason is the carrying out in sequence of more than one interconnected processing operation by a Being on a dataset.[183]

2.

183. Because processing is external (see Chap. 4, par. 4), Reason's existence can only be established while the processing of datasets (meaning, all material and materialised - but not immaterial - information) takes place.

However, as has been seen, each and every processing operation is, in fact, a composite one, because processing, from the Unique Human Observer Perspective,[184] invariably has a purpose to it.[185] There is, therefore, Reason in all processing of information carried out by Beings. Reason is the algorithm, the methodology through which the purpose of any processing is achieved.

In other words, Reason is inherent in the processing of information anyway.

3.

Reason therefore has no content. The fact that the analogue and the digital worlds are both coherent[186] systems (i.e. their components, meaning their datasets, are interconnected) does not mean that Reason is anything other than an algorithm mechanistically performing a function, aimed at achieving a purpose.

Whoever adds a (moral) perspective to Reason (for example, God in religions, the Reason of State in Machiavelli, or Reason as understood in the Age of Enlightenment), inadvertently adds to it their own beliefs, ideas and hopes.

4. The purpose of the processing is irrelevant to Reason

The purpose is the end outcome, the final processing operation in the sequence of processing operations dictated by Reason. The purpose can be anything, no matter how trivial or important.

It is of course possible, as is usual in human lives, that smaller, case-specific purposes serve larger ones. For example, one eats a healthy meal in order to live a healthy life, a state manages

184. See note 1.1.1.

185. See par. 5 and Chap. 4, par. 2.

186. See Chap. 1, par. 4.

payments in order to serve welfare needs and so on. In essence, in human life there is no purpose that does not serve another. The same is true at an informational level: small processing operations may be part of a larger picture. Neither Reason nor the larger picture are affected, however: each has its own methodology and purpose.

Similarly, the fitness of the processing or the suitability for (or of) its purpose are irrelevant. Any attempt to discuss these topics will only reveal the respondent's beliefs, ideas and hopes.

5.*

The Unique Human Observer Perspective[187] not only makes a purpose necessary for any processing,[188] but also affects the identification of the processing each time it occurs. Because processing is external,[189] humans affected by it will try to interpret it, that is, they will first identify it and then try to understand its purpose, so as to include this information in their own processing (i.e. to process information on the new information created by it).

In other words, it is unavoidably a human that will establish the purpose of any processing (as well as deciding whether it has been achieved or not).

Therefore, arbitrariness and misunderstandings are likely.

6. Why does Reason exist in Beings?

Because Beings have needs, they have the will to process information (i.e. to act) in order to serve them.[190] How do they act, however? How do they do the processing? It is Reason, the

187. See note 1/1/1.

188. See above, par. 2, and Chap. 4, par. 2.

189. See Chap. 4, par. 4.

190. See Chap. 5, par. 2.

ability to create an algorithm (in essence, to put one and one together), that tells Beings how to carry out the processing. Therefore, Reason is the result of need,[191] because, without Reason, a Being would have no way to serve its needs.[192]

7. Not neutral*

Information processing is not neutral, because the algorithm (to achieve a purpose) is never the same for any two individuals. Although individuals, as well as other Beings, may share a purpose (e.g. reading a book, taking a photo, eating, studying), the method or the process employed by each Being to fulfil the purpose varies considerably. In other words, every individual processes information differently from every other individual, notwithstanding shared purposes or other external similarities (e.g. the types of processing employed).

Differences in processing are due to the fact that no two individuals are identical.[193]

Because, therefore, the method differs, information processing is never neutral, that is, it is affected by the ideas, thoughts and wishes of each individual performing it.

8. Is Reason specific to humans only? *

All Beings use Reason. Reason is inherent in any information processing[194].

Reason is therefore not a human-only characteristic (nor one that is present only for biological Beings). On the contrary, all Beings can reason, that is, put one processing operation next to another so as to achieve a purpose. Differences among Beings occur with regard to their

191. See also note 5/2/2.

192. And thus would not have needs as per their nature and therefore would be Things, see note 5/2/1.

193. See Chap. 2.1, par. 4.

194. Otherwise Beings cannot process information, see par. 2.

purpose-setting[195] and, most notably, it is only humans only that need to augment their information processing.[196]

195. See note 5/2/2.

196. See Chap. 5.1.

5. Need and opportunity

On a Statue of Time by Lysippus
A. Who and whence was the sculptor?
B. From Sicyon.
A. And his name?
B. Lysippus.
A. And who art thou?
B. Time![197] who subdueth all things.
A. Why dost thou stand on tip-toe?
B. I am ever running.
A. And why hast thou a pair of wings on thy feet?
B. I fly with the wind.
A. And why dost thou hold a razor in thy right hand?
B. As a sign to men that I am sharper than any sharp edge.
A. And why does thy hair hang over thy face?
B. For him who meets me to take me by the forelock.
A. And why, in Heaven's name, is the back of thy head bald?
B. Because none whom I have once raced by on my winged feet will now, though he wishes it sore, take hold of me from behind.
A. Why did the artist fashion thee?
B. For your sake, stranger, and he set me up in the porch as a lesson.

Posidippus

Synopsis: *The processing of information, in either the analogue or the digital world, is the result of need and opportunity (1); Beings will process information because they have needs (2); The need to survive; the conditions for existence (3); It is not necessary for the processing to happen (4); Is whatever that is necessary to serve a need also natural? (5); The digital world (6); Opportunity (7); Ability (8); Need and opportunity combines (9).*

1.*

The processing of information, in either the analogue or the digital world, is the result of need and opportunity.

In essence, it is caused by need and allowed by opportunity.

A Being (a dataset that can process information) will process information if given the opportunity, because it has needs.

[197] Time, that is, in his character of Opportunity, not of Length of Years.

2. Beings will process information because they have needs*

As noted previously,[198] Beings can process information—it is their nature to be able to do so (which is how they differ from Things[199]). Simply by living they process information, because life is information processing—when they cease to process information they become Things.

However, will Beings process information whenever the opportunity arises? Why would they do that? How is their will (Beings can and will process information) formed? Why do they act,[200] that is, process information, at all?

The will to process (to act) is caused by need. Because needs are inherent to Beings,[201] Beings are forced to act so as to (try to[202]) serve these needs. Otherwise (impossible to serve) needs would not exist: Beings would not be Beings (but Things). In other words, it is need that creates the will to process, as this is the only way for a Being to meet this need.

In the same way, self-consciousness is caused by need, because it is through the urge to satisfy their needs that Beings are able to realise that themselves (as Beings, different from Things) exist at all.

Need is constant, persistent and pressing, always present, forcing Beings to act, creating in them the will to process.

198. In Chap. 2.

199. See Chap. 3.

200. Although the will to act (and action) is mentioned here, for better comprehension purposes, it must also be understood that processing involves immaterial information (thoughts, feelings, wishes) too (see also note 5/2/1).

201. See note 5/2/1.

202. See note 5/2/1 on needs being unsatisfiable, hence the word ‘serve’ is preferred here.

3. The need to survive; the conditions for existence*

The will to process information is not caused exclusively by the need to survive. While the two may be confused in biological Beings, and certainly the processing of information serves the need to survive (humans and animals can adapt to their environment better if they process its information), the two are different.

The will to process information is caused by biological Beings' needs, only one among which is the need to survive (even if it is assumed to be the predominant one, which is certainly not always the case).

The distinction is easier to observe in non-biological Beings, meaning organisations and artificial Beings that share the will to process information with biological Beings but do not have the need to survive.[203]

In other words, biological Beings do not process information to remain alive (although doing so efficiently certainly helps), but rather because they are alive and thus have needs, so as to serve these needs.

Similarly, certain needs are conditions for the existence, the life of the respective Beings. For biological Beings such conditions for existence are air, food or specific climatic conditions. For organisations, the condition required is the participation of humans in them. For computer programs, it is the digital world.

4. It is not necessary for the processing to happen

Whether a processing operation actually takes place or not[204] has nothing to do with having the

203. See Chap. 2, par. 20.

204. On whether a processing operation, even if started, ought to be assumed concluded, see Chap. 4, par. 6.

will to process information. While Beings have the will to process information, a specific processing operation may not start for a variety of reasons. Broadly speaking, these fall into the following two categories:

- by choice[205] (omission in biological Beings in consideration of a different purpose; in non-biological Beings if the processing is unnecessary to achieving their purpose), or

- due to reasons that are beyond that Being's reach.[206]

5. Is whatever that is necessary to serve a need also natural? *

If needs are natural to Beings and at the root of everything,[207] is anything[208] (datasets, meaning Things as well as other Beings) that is necessary to serve these needs also natural for the respective Beings?

To answer this question, two clarifications are necessary. The first is that 'natural' means according to its nature, not that it exists in Nature (i.e. is not made). It could well be the case that something might not exist in Nature (e.g. a nest) but is natural to a Being in the sense that it is in its nature to make it (e.g. a nest is natural to a bird).

The second clarification is that any assessment is based on a human understanding, that is, on the Unique Human Observer Perspective.[209] 'Natural', then, is something unavoidable according to human understanding and perception, something that cannot *not* happen. In other words, (human-perceived) necessity decides what is natural.[210]

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205. On the connection of choice with morality, see Chap. 23, par. 1.

206. There being, therefore, no opportunity to process, see par. 7.

207. That is, Beings' will to process information (see par. 2), Beings' ability to Reason (see Chap. 4.1, par. 6), etc.

208. Of course, that is, material, external—the nature of each Being having equipped it with the means to serve its needs already (i.e. with senses and the ability to Reason).

209. See note 1/1/1.

210. On the question of what is 'natural' in the digital world, see par. 6.

So seen, whatever is necessary to satisfy a need, because needs are natural[211] to Beings, should be considered natural to the Being concerned.

Of course, this is an extremely broad claim, and one which allows for some questionable, or at least counter-intuitive findings. While a nest may be agreed upon as a Thing natural to birds or a house to humans, with humans specifically in mind, taking into account their many needs and the means imaginably necessary to serve them, is practically all that they do and have done so far natural to them? Is a nuclear plant, a space ship or a machine gun natural to them? Is art, language, writing or computer programming natural to humans?

Likewise, assuming clothing is natural to them, at which point do we move from it being perhaps natural (e.g. animal skins found in nature but not killed by humans) to it being, arguably, non-natural (i.e. the elaborate fashions of each period in history)? The same question could be asked with regard to food or shelter.

A certain level of abstraction is, therefore, warranted in this case. It is the idea, the essence of whatever is necessary to satisfy a need that is natural to the respective Being, and not its infinite variations in practice throughout history. For example, clothing or food are necessary to satisfy the human need to survive, and are thus natural to humans, but not in their various, exquisite elaborate or simply exaggerated forms that have appeared from time to time. The same is true of housing. Similarly, tools are necessary for humans to survive, but it is not certain that a nuclear plant (or, taking it further, a nuclear bomb) qualify as such. Equally, air and a temperate climate are necessary for humans to survive, but the replication of these conditions (e.g. in space or the deep sea) may not qualify as natural to humans. Language is necessary to satisfy the human need to communicate, but it is not certain that all languages that exist today are natural to humans (those that have become extinct being a case in point). Of course, it is natural

211. Again, this is neither a moral philosophy nor a political theory (see note 0/1/6), and therefore whether whatever is natural is 'good' (and consequently 'unnatural', 'bad') is not assessed. Needs are natural to Beings, but these needs are neither 'good' nor 'bad'. Accordingly, the means to serve them may be considered natural to these needs; however, whether any given state over space and time has provided (or is providing) or is supporting these means (acting 'well' or 'badly' for its citizens) is beyond the scope of this analysis.

to humans to create all of the above[212] but that they are the product of need and thus natural to humans, does not make their many variants natural to humans, only the basic idea behind them.

The same is, after all, also the case for states: states are natural to humans, as unique identification mechanisms across space and time,[213] but this does not mean that modern nation states specifically are natural to humans (past, extinct forms of state, such as empires, tribes or church communities being cases in point[214]).

Therefore, the task of identifying the means necessary to satisfy a need (whether a Thing or another Being), which are thus natural to the Being concerned, should be approached with a certain level of abstraction.

6. The digital world

In the human-created digital world, humans will continue to process information, extending this world in the context of their need to continuously augment their information processing.

Computer programs also need to process information because it is in their nature to do so (their nature having been given to them, of course, by humans). They need an informational environment to continue to exist, thus the digital world is natural to them.[215]

The digital world is natural only to computer programs; however, this may change. If the digital world becomes critical to humans' need to survive, then the digital world will become natural to them as well.

212. See Chap. 5.1.

213. See Chap. 8.

214. See also Chap. 15.

215. See also Chap. 2, par. 18.

7. Opportunity*

The will to process information (as caused by need) is not sufficient. An opportunity must also arise for the processing to actually take place. Opportunity is the possibility, the chance for something (in this case, information processing) to happen. Opportunity could be called luck or chance – without however any qualitative context attached to it (good or bad).

Contrary to need, which is constant, opportunity for any specific Being is fleeting, momentary. At any given moment a Being, driven by need, will attempt to begin a new processing. Whether the attempt leads to that processing actually happening or not depends on opportunity. It may be that a processing is reattempted if it does not happen the first time, or is repeated at some future moment. Future actions notwithstanding, opportunity exists, or does not exist, in the moment, at the time when any specific processing is attempted.

Opportunity may (appear to) arise as a result of anything from mere accident (luck) to well thought-out strategy. In essence, however, it is either caused by need (which has also created the will to process and therefore forces the actor to act and in this way creates opportunities) or is recognised by it (opportunity exists in Nature or, in any event, is external to the Being).

Certainly, a variety of processing opportunities have arisen for various individuals at various places and times throughout human history. Their result is, in effect, human history and culture—for now, however, the focus is on opportunity itself, the fact that a Being's will to process is not sufficient unless it is accompanied by an opportunity to do so.

8. Ability*

Opportunity must be met by ability. It is not enough that an opportunity to process (to act) arises; one must also be *able* to process.

The above paragraphs cater to the will to process, which is the result of need: Beings *will* process information. What about the ability to process (once an opportunity is met)? Are Beings able to process information? *Can* they do so?

Ability is inherent in all Beings (they can process information, i.e. they are able to act). It is also caused by need,

- as in the ability to Reason,[216]
- as in the ability to control a processing operation,[217] or
- as in the ability to imagine (to be free).[218]

However, the actual ability to act, to process information whenever possible, is not only the result of need but also, importantly, of the state a Being happens to be living in, in terms of its ability to

- own property,[219]
- enjoy liberty,[220]
- make choices,[221] and
- generally, have rights,[222] if seen from a human perspective.

9.

Once need and opportunity are combined, various types of information processing can emerge

216. See Chap. 4.1, par. 2.
217. See Chap. 6, pars. 1 and 8.
218. See Chap. 25, par. 4.
219. See Chap. 24, par. 1.
220. See Chap. 25.
221. On morality, see Chap. 23.
222. See Chap. 21.

for each Being. For the moment, these are taken for granted in this analysis as (material) processing operations taking place in the analogue and digital worlds, that is, they are not assessed in any way. They carry no positive or negative connotations, they are neither good nor bad, fit or unfit for any purpose set by Reason. Information processing takes place by Beings as a result of these two factors; how such processing is assessed, by whom and from which viewpoint are the domain of morality and political theory.

5.1. A need specific to humans

'Man has been given a restless soul, always responding to novelties.'

Ecclesiasticus

Synopsis: *Humans need to augment their information processing (1); Augmentation of information processing: the need of needs (2); Only humans need to augment their information processing (3-4); Augmentation towards an imagined (not real) end (5); Creativity (6); Humans need to augment their information processing individually (7); There is no purposeless individual (8); On human nature (9-10).*

1. Humans need to augment their information processing*

This need is shared by all, throughout human history all over the planet. From the time our ancestors drew on cave walls and improved their food gathering skills to the Greco-Roman age, the Renaissance and the Industrial and the Information Revolutions, humans have basically always tried, and succeeded, to constantly increase their information processing.

In essence, human history (and culture) is the result of a continuous increase in the information processing carried out by humans.

2. Augmentation of information processing: the need of needs*

Every human needs to augment his or her information processing, the information processing he or she carries out. It is only in this way that humans can serve their many and basically unattainable needs (and relevant processing purposes).[223] In essence, the need to augment their information processing is the need of needs[224] for humans, a need that serves all their other needs.[225]

223. See Chap. 5 par. 2, and note 5/2/2.

224. Without this implying any hierarchy of needs or any other classification.

225. It is also caused by them, with nature and needs interlocked in an unbreakable bond, see note 5/2/1.

As regards the difference between the augmentation and the increase of information processing, augmentation refers to qualitative processing, while an increase occurs mechanically and automatically.

A mechanical, blind increase of information processing is caused simply by one day following another in any Being's life. If life is the ability to process information[226] and all Beings can and will process information whenever given the opportunity, then any processing that they achieve in any new moment of their life automatically increases the volume of their information processing. In other words, their will (as set by their nature) to process information increases their information processing for as long as they remain in existence: (human) life is the sum of information processed.

By contrast, the augmentation of information processing is meant to add to it, to increase something that is already well grown. In other words, 'augmentation' implies improvement, a qualitative change, the processing of new information—that is, information that has not been processed (by that Being) before.

For example, a computer program with the purpose[227] of only processing the same set of phone numbers in order to reply to questions addressed to it, increases its information processing with each new question asked, but does not augment the information it has processed as it does not add anything new to it.

3. Only humans need to augment their information processing*

All Beings increase their information processing simply through the fact of their existence, with every passing moment that they (continue to) live in the analogue and/or digital worlds. They have no specific need to increase their information processing, rather it is the serving of

226. See Chap. 1, par. 1.

227. See Chap. 2 par. 12 on humans setting the purpose for artificial Beings.

their many needs (to survive, to communicate etc.) that creates in them the will to process information.

Only humans among all Beings have the specific need to augment their information processing, to increase it qualitatively and not just quantitatively, to constantly process new information.

Mere information processing, for example, to serve their need to communicate, is not enough for humans: they need to augment their communication-relevant processing, to constantly find new ways (or words, tools etc.) to communicate among themselves. It is to this end, meaning to augment their information processing (or because of this natural trait[228]), that humans developed elaborate communication systems (and created artificial Beings[229]) in the first place.

It is therefore because of language and writing, and because it is natural for humans to compare their information processing to that of others, either actual or imagined,[230] that this augmentation builds on what other humans have already attained or aspired to each time, in an apparently never-ending virtuous[231] circle, and is thus the cause of human history and culture.

4.

Only biological Beings need to increase their information processing (not organisations and artificial Beings). Because organisations and artificial Beings do not need to survive,[232] they have no need to increase their information processing—although, as has been seen,[233] this

228. The debate whether an innate need to augment led to language, or whether language, as an innate capacity that existed only in humans, led to the need to augment through it (language), is not only unanswerable but also unnecessary - the latter because, as seen in note 5/2/1, what needs Beings have are set by their nature, which is in turn evolutionary co-shaped by these needs, in an unbreakable, and inseparable, bond.

229. See Chap. 2, par. 12.

230. See par. 9.

231. See, however, par. 5: augmentation towards an imagined but not a real end is the cause of Lucretius' 'discontent'.

232. See Chap. 2, par. 20.

233. In par. 2.

happens automatically with every new day of life. (All animals, because they share the need to survive, need to increase their information processing; it is only humans that also need to augment it.)

Non-biological Beings have the will to process information, because it is in their nature to do so, for as long as they remain in existence, but if it happens that they cease to be alive[234] no need of theirs is left unsatisfied. Based, therefore, on their human-set purposes, non-biological Beings may or may not augment their information processing (augmentation may be the result, for example, of the information processing of conglomerate organisations or open-ended algorithmic computer programs). Augmentation is, therefore, a possibility for them (dependent on their purpose each time), but not a need as per their nature.

5. Augmentation towards an imagined (not real) end

Because the needs of humans are many and unsatisfiable,[235] in effect their need to augment their information processing strives towards an imagined but not a real—in the sense that this end is neither attainable nor existent.[236]

In essence, every human needs to constantly increase his or her information processing, never stopping the processing of new information until his or her biological end.

Augmentation is relative: it is subject to comparison[237] and to space and time, meaning to the processing tools and capabilities that are in the hands of specific humans at any given time. The information processing of each new generation throughout human history has increased in comparison to that of previous generations.[238] However, because it is relative, augmentation is

234. See Chap. 2 par. 9. Beings that are no longer alive become Things.

235. See also note 5/2/1.

236. See also Chap. 25, par. 2.

237. Comparison (and not aggression) being the only natural trait of humans, see par. 9.

238. Relatively, obviously. For example, when empires reach breaking point (e.g. the fall of the Roman world) the level of processing reached is reset and the next generation has to start from a previous level

unsatisfiable, that is, it always strives for an end that is imagined but not real (at least for each generation concerned).

6. Creativity

The augmentation of information processing leads to creativity.[239] The processing of information leads to the creation of new information, including the development of new processing tools, which in turn make further processing of new information possible.

Notwithstanding that information in the analogue world is finite, there is no end to thoughts and ideas, hence to human creativity, which is constrained only by the means available to humans at any given time.

7. Humans need to augment their information processing individually*

It is important to note that humans do not need to augment their information processing cumulatively, but individually. The need is not to selflessly and anonymously[240] add to a global register of knowledge for any predetermined purpose imposed on them by their nature or in any other way, but to qualitatively increase their information processing as individual, identifiable units by their own will and for their own purposes. In other words, because they share no specific purpose,[241] humans process information as individuals (that is, each one for his or her own purposes and to serve his or her own needs), and not cumulatively, as an indistinguishable unit within a hive which sets a common purpose for all.

(with the generation witnessing the fall assumed to have perished).

239. See also Chap. 1.1, par. 3, and Chap. 25, par. 5. Creativity is connected with freedom, because imagination is common to both.

240. Even saints and other holy individuals carry names and are uniquely identifiable in space and time. Similarly, while when entering spiritual communities individuals may lose their worldly names, these are replaced by others—individuals do not remain nameless or anonymous (although in such closed and small communities they very well could), but become individualised in a new, spiritual state.

241. See Chap. 2, par. 11.

This is a result of their nature. Humans, unlike, for example, bees, but similar to other pack animals, live individually, as independent, identifiable units within their group. They thus process information individually, and their need to augment their information processing is similarly individual, for their own benefit (regardless of whether, in practice, this increases the total information processing of their group).

It is the nature of humans to be individuals, meaning uniquely identifiable in space and time, and it is this need that led to the natural creation of states as individualisation mechanisms.[242]

8. There is no purposeless individual*

Because all information processing has a purpose,[243] there is no human who does not have a purpose—an objectiveless, purposeless individual does not exist.

This is of course true of any Being—the difference with humans (and all other animals) being that, because they have no specific purpose in life but many (unsatisfiable) needs, they choose the purpose(s) of their information processing each time (with this choice being a matter of morality).

These purposes can be anything, are different for each individual and can even change many times during that individual's lifetime. It may be that a particular purpose is not really chosen but selected as a result of external influence or even imposed upon the individual. Various circumstances may lead to such purpose designation. The achievement of such a purpose may or may not also be possible for that particular individual[244] (with each human being unique[245]).

242. See Chap. 8.1, par. 1.

243. See Chap. 4, par. 2.

244. See par. 4.

245. See Chap. 2.1, par. 4.

The uniquely human need, however, to augment their information processing means that the setting of a new purpose for each human never stops.

9. On human nature*

Comparison, and not conflict, is natural to humans. If this is the case, are humans by nature aggressive? Is human life by its nature 'brutish, nasty and short' as famously argued by Hobbes? Or, is it that of the 'noble primitive' of Rousseau? What is the true human nature?

Naturally, there can be no answer to this question—any response reveals more about its author's beliefs than any universally acceptable truth. In any event, from the approach of information processing, it is comparison, and not conflict, that is natural to humans.

Humans need to augment their information processing; augmentation, however, is always subjective and relative. It is subjective because humans have many (unsatisfiable) needs, each creating many purposes for information processing, and choosing (and prioritising) among them is subjective. In practice, some humans will strive for wealth, others for knowledge, others for experiences, others for relationships and so on.

It is also subjective, in the sense that it is individually assessed. Each human needs to augment his or her own information processing, to process new information with regard to him- or herself, and with regard to the processing the individual has achieved so far in life. Not, that is, with regard to the information processed by others, who may well already have processed that same information.

On the other hand, the augmentation of information processing is also relative,[246] because humans need to keep increasing their information processing in the informational environment

246. See also par. 5.

in which they happen to be at any given time, with the volume of information and the tools available (or even imaginable) to them.[247] This leads humans to compare their own information processing with the information processing of those around them.

It is comparison, therefore, that is innate to humans, precisely because humans need to augment their information processing and such augmentation is always individually assessed and relative to the processing of others.

Comparison leads to action (to the processing of new information). Even if unfavourable to any specific individual, for example, in cases where the gap in processing is perceived too large to cover in a lifetime, individuals will still try to improve their position. Humans need to augment their information processing, and they will do this following the example of others around them, who will in turn keep augmenting their information processing, *ad infinitum*.

Conflict may follow comparison, but it is only one of the possible outcomes. In other words, humans are not automatically set at birth on a collision course with each other. Conflict (and war) are just one possibility, depending on the environment in which they happen to live. In an environment of abundance there is no reason for conflict, but rather for competitive creation (this is the case today in the digital world). However, in an environment of scarcity (or one controlled by others, and thus limiting to some) the above can lead to conflict. Whether conflict takes place depends on the combined forces of need and opportunity.[248] However, because until now humanity has only known the analogue world, where information is finite, it is understandable that the idea of conflict being natural to humans has arisen.

10.*

With the above in mind, whether humans are by their nature brutal or nasty or untrusting is beside the point in practical terms: although humans need to augment their information

247. See also Chap. 25 on freedom.

248. See Chap. 5.

processing and will do so in any way they can, what information processing they can and cannot do in any given moment (i.e. how they act and behave each time) is dependent on their state.

A state[249] may, theoretically, apply no rules at all, thus allowing its citizens to satisfy their needs in whatever way they can; equally, a state may apply extensive regulations that limit its citizens' actions. An individual in the first state would appear brutish and nasty, while one in the second would appear reserved and self-controlled. The character of each human being (as undecipherable) as it is, and states having always accompanied humans, how individuals actually (materially, externally) behave each time is the work of their states.

249. Basically, its government, the state having no will of its own (see Chap. 11, par. 8).

6. Control

ATHENIAN: Now then, this shows that there is one specific desire common to all mankind. Isn't this the upshot of our discussion?

MEGILLUS: What desire?

ATHENIAN: That events should obey whatever orders one feels like giving – invariably, if possible, but failing that, at least where human affairs are concerned.

MEGILLUS: Very true.

Plato

Synopsis: *Control decides whether the information processing on a specific Being or Thing will or will not take place (1); Total control is impossible (2); There is no dataset without any control exercised over it (3); Control over new or first-processed information (4); Attributes of a dataset (5); Access (6); Control can be delegated (7); Control is not pursued for its own sake (8); Power (9).*

1. Control*

What finally decides if a processing operation will actually take place in the analogue or the digital world? If will and opportunity coincide, does this mean that a Being will actually carry out the processing? The answer is negative: A processing operation also has to pass the threshold of (other Beings') control.

A processing by a Being will or will not happen depending on the control of (an)other Being(s) over a dataset. If a Being is able to allow or prohibit a processing operation by another, then that Being controls that processing. Control is exercised in the analogue and the digital worlds, it is external[250] and material (not imaginative or speculative) in the same way that any processing is material.[251] It either exists or does not exist with regard to a specific processing operation. It may not be exercised or it can be delegated,[252] but it is not immaterial information

250. Internal control, meaning self-restraint (ultimately, choice) by humans falls under the domain of morality.

251. See Chap. 4, par. 4.

252. See par. 7.

(a thought, a feeling or a wish): it is the concrete ability by a specific Being to allow or prohibit a specific processing operation by another.[253]

Although in practice countless variations are possible, for example a processing operation may only be allowed by certain Beings or under certain conditions or may be prohibited unless a particular event occurs,[254] it is the fact of the control itself that is important here: ultimately, it is control that decides whether the information processing on a specific Being or Thing will or will not take place.

Obviously, control is exercised (a) with regard to a Being, over processing operations by other Beings on it, but also over processing operations carried out by it (on other Beings and Things), and (b) with regard to a Thing, over processing operations carried out by other Beings on it (a Thing cannot process information itself).

2. Total control is impossible*

Control is relevant to a processing (a processing operation that takes place results in control[255]), not to a dataset. A Being cannot exercise control over a dataset (a Thing or another Being), but only over certain processing operations on it (by other Beings). In other words, total control is impossible:[256] myriad processing operations are possible on any dataset, and any attempt to control them all is inconceivable (precisely because they are possible, meaning unforeseeable, as the analogue world was not designed by humans[257]).

However, for the sake of brevity, whenever control over a Thing or a Being is claimed in this

253. See also Chap. 16, par. 2.

254. Ultimately, the question of which controls apply each time is political, i.e. it is an issue decided and applied by the government.

255. See par. 4.

256. Except for by the state, see Chap. 16, pars. 2 and 3.

257. On the digital world, which is designed by humans and thus could theoretically enable total control, see Chap. 16, par. 6.

analysis, it denotes control over a certain processing operation on it—in fact, on the majority of its attributes.[258]

Although total control is impossible, Beings strive towards it: they strive to control all processing possible by and on a Thing or another Being, to become sovereign[259] over them[260]. This is not a matter of seeking control for its own sake but the result of information processing in the analogue world.[261]

3. There is no dataset without any control exercised over it

Similarly inconceivable is a dataset over which no Being has control. There can be no dataset (Being or Thing) in the analogue or the digital world over which no control is exercised (meaning that there is no Being that is able to allow or prohibit processing on it by others) whatsoever.

This is easier to explain for humans or Things within a state, because they are controlled by that state.[262] The same is true for organisations and artificial Beings—they are controlled by the humans who created them (and, in turn, by these humans' state).

What happens, however, with Things that are outside a state (for example, in unexplored parts of the universe, or are new and as yet undiscovered particles or, in the past, were unexplored parts of the planet or uncatalogued animals)? Although conceivably they may exist, waiting to be discovered[263] and are as yet uncontrolled by any human, in practice, immediately when they

258. See par. 5, and also Chap. 4, par. 7.

259. See Chaps. 16, par. 5, and 24, par. 7.

260. In the same way as a Being strives to execute an already started processing operation; see Chap. 23, par. 4, on why should we keep promises.

261. See par. 8.

262. See Chap. 16, par. 2.

263. Therefore, when it is claimed above that there can be no dataset in the analogue or the digital world over which no control is exercised, this refers to datasets that have already been discovered by humans—undiscovered Nature (which is, however, also a Being) is exempted, as it is as yet unknown to humans.

become perceivable, and thus processable (materially) by humans, they are controlled by them—by the first human to ever process their information (who, in turn, belongs to a state etc.). Therefore, even if conceivably there are still Things and perhaps also Beings over which no control is exercised, from the Unique Human Observer Perspective[264] they are controlled as soon as they become known to humanity, that is, information about them becomes processable by humans.

Of course, the above points address only the question of why control exists over any dataset, that is, why there exists no dataset over which no control is exercised; the question of why a specific Being controls a specific Being or a Thing (or whether this control is justified or not) is a matter of politics (i.e. decided by the government).

4. Control over new or first-processed information*

Because the processing of already existing information leads to the creation of new information,[265] whenever the Being with control permits another Being to process information on a dataset, new information is created as a result.[266] Of course, this new information may remain immaterial (i.e. a thought, a feeling etc.). If, however, this new information materialises in the analogue or the digital world (e.g. if someone is allowed to read a book or process a material and, as a result, produces a new book or a new artefact), then its creator exercises control over it—notwithstanding the issue of whether this control constitutes property[267] or whether other Beings, most notably the Being that allowed the previous processing, and, of course, the state, also exercise control over this new information.

The same is true of new, previously unprocessed information (which exists in Nature); the first

264. See note 1/1/1.

265. See Chap. 1, par. 7.

266. Of course, from a different viewpoint, as Beings start processing as soon as they come into existence and stop only when they are no longer able to do so (thus becoming Things), they acquire control over information throughout their lifetimes.

267. See Chaps. 24 and 24.1.

Being to process it exercises control over it—again, notwithstanding whether other Beings at the very same moment are acquiring control over that same information too. For example, in the case of a scientist discovering a new particle or a new planet, that scientist acquires control over it, that is, he or she is able to allow or prohibit certain processing operations on it by other Beings (for example, as regards its naming, the circle of people this discovery is announced to or even the announcement of the discovery at all). At the same time, however, that scientist's state, and the rest of humanity, also acquire some control over it—for example, they are able to discuss the discovery.

Control acquired in this manner is not necessarily a deliberate act; it is the natural result of information processing regardless of whether a Being consciously intended or did not intend at all to acquire control of this new or first-processed information for itself.

5. Attributes of a dataset

The controls,[268] the list of the processing operations that can or cannot happen over a dataset, form its attributes. The attributes of a dataset can be the result of anything from its nature (i.e. the way it was created) to temporal and spatial (i.e. the time and state in which it exists).

All datasets have attributes (the controls both exercised and possible over them, i.e. the processing operations that can or cannot happen to them) regardless of whether they are Things or Beings (also, with regard to Beings, regardless of whether they are aware of the fact or not).

Again, in the same way that total control is impossible,[269] construction of a complete list of all controls over a dataset is similarly impossible (as is total awareness of such list's true extent to Beings, even with regard to themselves as a dataset). It is only in theory that such a list exists. However, a Being becomes aware of another dataset's attributes that concern it as soon as it attempts to process it, that is, as soon as it starts a specific processing operation on a Thing or

268. Control, like processing, is material, it exists in the analogue and the digital worlds.

269. See par. 2.

another Being.

6. Access*

Control also settles the matter of access to a dataset—it decides whether access exists (and to what extent) from the non-controlling Being's perspective.

The way control is exercised, meaning whether a Being will decide to allow or prohibit processing for whatever reason, although at all times subject to need and opportunity, refers to choice, and thus morality, and is therefore beyond the scope of this analysis.

7. Control can be delegated*

It is practically impossible for any Being to directly exercise control over the myriad of information processing operations that take place each second and which lie under its control. Beings can therefore delegate control to other Beings, in a hierarchical system.

Evidently, if we wish to examine who actually controls a processing operation, we would have to move up the ladder; at the top is invariably a state.[270]

8. Control is not pursued for its own sake*

Control (whether a certain processing will happen or not) is not pursued for its own sake. No Being needs control.

270. This is because it is states that create the information processing environments in which humans (and other Beings) live (see Chap. 11, par. 3), taking into account, of course, at all times that states do not have a will themselves, but rather their governments do (see Chap. 11, par. 8).

Control is a result of information processing, because a Being can and will process information and any such new processing will invariably produce some type of control by that Being over the information processed.[271] Control, therefore, is not a need or a purpose as such, in and of itself. The ability to control a Being or a Thing is the result of processing undertaken by Beings to serve their (other) needs.[272]

However, in practice control is sometimes considered a pursuit for its own sake: some individuals seek control over as many datasets as possible, or sovereignty[273] over the ones they control already. Why is that? It is because datasets in the analogue world are finite. Control over one of them, therefore, is exercised by an individual or another Being to the exclusion of others.

When it comes to humans, control allows to those exercising it to augment their information processing compared to others. When it comes to other Beings, it either serves their purpose better (for non-biological ones) or helps them to survive (animals). Because information in the analogue world is finite, control is finite too; one has it to the exclusion of others.

However, in the digital world information is infinite.[274] Therefore, any control by a single individual over a dataset is not an obstacle to the processing of others—an individual can carry out as much new processing as he or she likes, foregoing, of course, information already controlled by others (i.e. that specific dataset). Individuals do not need to fall under the decision-making power of those in control. Perhaps, then, control will cease to be visualised in the shape of a pyramid, as is the case today, and take the shape of a square, where individuals will race one another[275] to create (instead of acquire, as is the case in the analogue world) as much information as possible.

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271. See par. 2.

272. And thus it is itself an ability, the result of need (see Chap. 5, par. 8).

273. See par. 2.

274. See Chap. 1, par. 16.

275. Comparison being natural to them, see Chap. 5.1, par. 9.

9. Power*

Control is not necessarily effective. The fact that control over a processing operation is exercised by a Being, which may prevent another Being from carrying out that operation, does not necessarily mean that that particular processing will not happen after all. The other Being may be able to ignore the prohibition and carry out the processing operation anyway. This is the meaning of power: it is the ability to ignore controls.[276]

Of course, power is exceptional (and, hence, coveted): if many Beings acquire power, then this becomes the new control (or lack thereof). In other words, if an initially prohibited processing operation is in practice carried out by many, in spite of the prohibition, then control changes accordingly (in regulation), from prohibited to allowed.[277]

276. In practice, prohibitions. The reverse, to impose processing on an unwilling Being, is a matter ultimately connected with morality.

277. See also note 0/1/13.

7. State definition: States are information platforms for their citizens

'If you leave this problem unsolved it will hardly be possible to solve the ones which come next.'

Cicero, The Republic

Synopsis: *States are information platforms for their citizens (1-4); States store, create and disseminate information on their citizens (5-6); States create the processing environment necessary for their citizens to live in, (7-8); States are Beings (9); Other questions that blur the picture (10).*

1.*

States are information platforms for their citizens. Basically, at their core, they are information processing infrastructures, individualisation mechanisms,[278] that make each and every human uniquely identifiable throughout space and time.

States are Beings that can and will process information;[279] they are organisations that have materialised in the analogue world.[280]

This definition applies as much today, when the digital world is taking shape and challenging the assumptions and understandings of the analogue world, as it did in the depths of human history, from the moment when humans first became self-conscious, developed language and started communicating with each other.[281]

Regardless of any other context or role (artificially) ascribed to them throughout human recorded and unrecorded history, states are, and always have been, first and foremost

278. See Chap. 11, par. 3.

279. See Chap. 2, par. 9.

280. See Chap. 9.

281. With none of these actions taking place in any particular order, see Chap. 8, par. 1.

information platforms for their citizens.

2.

States are information platforms for their citizens in the sense that it is (only) on their platform[282] that the processing of information on[283] and by[284] their citizens is made possible.

3.*

How is this definition best visualised? In essence, whenever any two individuals communicate, a third, silent interlocutor is implied. This is the state, which warrants their communication. The state warrants that, for example, John is John and Maria is Maria, so as for John and Maria to be able to communicate. Unless this assumption is made, there is no way for these two individuals (unless they are within the same family and therefore already know each other) to be certain that the other party is actually who he or she claims to be. It is the silent, omnipresent[285] third party, the state, that warrants this, and thus makes any human contact, and meaningful[286] human life, possible.

4.*

The mechanism through which this is accomplished is so common that it is perhaps overlooked. Immediately at birth every human is given a name. Who gives this name? Most likely, his or her parents. But who is it that makes this name possible?[287] It is the state that this human is

282. On the choice and use of the term see Chap. 7.1.

283. See par. 6.

284. See par. 7.

285. But not omnipotent, see Chap. 16 pars. 2 and 3, as well as Chap. 12 par. 10.

286. As in the human life we all know and, hopefully, appreciate (hence, 'meaningful'; see also Chap. 8, par. 1 and note 8/1/3), and not, for example, the life of an animal, an organisation or an artificial Being; see also Chaps. 1, par. 9, and 2 pars. 6 and 12.

287. See also Chap. 8.1, par. 3.

born into. In other words, the state is the indispensable registry[288] for a name, any name, that allows it to function as it is meant to,[289] to uniquely identify an individual.

Without a state, a name as an identification mechanism is useless: because many may share it, it is unusable outside the strict limits of that human's family (or close circle of people who know him or her from birth). It is the state that warrants a name's uniqueness and continued existence, so as for it to uniquely define a specific human throughout space and time. In this way this personal[290] information is co-created[291] between the human (his or her parents, acting on his or her behalf) and the state.

At the same time, meaning at birth, every human is provided with a citizenship. The state that made the naming possible also provides its citizenship to that same human. This is the second, equally indispensable, part of (humans') unique identification: a name needs to belong to a, similarly uniquely identifiable,[292] registry.[293]

Without these a human cannot exist; a nameless or stateless human being is unthinkable. In this way, through the state's provision of a name and citizenship, a human becomes an individual. Likewise, in this same way, every human is born into, informational, chains.

5.*

Once in place, these two pieces of information are subsequently (tacitly or expressly) warranted by that state each time the individual communicates with other individuals. In other words,

288. A ledger, or in contemporary computing terms, a blockchain; see also Chap. 8.1, par. 5.

289. Using, of course, human logic, see note 1/1/1.

290. See note 1/8/1.

291. Because, however, the part played by parents is arguably the less important in this procedure (they basically select a name from a list, subject to approval by the mechanism that in any event makes this procedure possible), the 'co-' part will be removed from the remaining of this analysis, i.e. states create information on their citizens.

292. Thus, states also need a registry for themselves, hence the archipelago (see Chap. 19).

293. The name of the ledger (or of the blockchain) itself (see footnote 289).

whenever John talks to Maria (and neither belongs to the same family), it is their respective states that make this communication possible, warranting that John is John and Maria is Maria. Without this intervention any communication between John and Maria would be impossible.

Accordingly, once John or Maria has been given a name, whatever new processing of information either one of them carries out[294] is warranted by (registered with, created on) the information platform that is their state.

Importantly, once a human is individualised in this manner, it becomes impossible for any other human to ignore the fact. One[295] cannot choose to ignore, refuse or challenge it: a name and a citizenship is granted at birth to a specific human and one has no choice other than to acknowledge the fact. It may be that one will never interact with that person, whether out of choice or out of chance. However, should any individual initiate communication with another Being, that other Being has to react to the communication (in any way it pleases, of course) on that basis, taking the assumption of a name and a citizenship, that is, of a specific unique identification, for granted.[296] In other words, in the above example, Maria may choose to ignore a contact request from John, but she cannot ignore the fact (or avoid making the assumption) that it is John who contacted her.[297]

6.

Therefore, states create, store and disseminate information on[298] their citizens.

294. The processing of information leading to the creation of new information, see Chap. 1, par. 7.

295. A human, or any other Being for the same purposes.

296. The cases of forced name changing in recorded history being the precursor to the committing of horrendous crimes against the victims of this (dehumanising, because it is de-individualising) practice.

297. In stark difference to state relationships, where a state may simply ignore the name (and existence) of another (see Chap. 19, par. 2, where it is clarified that states are still found in a 'state of nature' (in terms of human development)).

298. Not 'for', see Chap. 1, par. 6.

7.

States also create the processing environment necessary for their citizens to live in,[299] in which information can be processed by them.

States make it possible for the humans that participate in them,[300] that is, their citizens, to augment their information processing (thus fulfilling a need specific to humans[301]).

8.*

A state's citizens ('its' citizens), means the citizens registered with it, whose citizenship they hold. Other categories of residents are, of course, possible (travellers, immigrants, etc.), but each requires a detailed (in terms of time and location) analysis (never forgetting that name and citizenship, once granted, are permanent for the individual concerned, their bond is unchangeable and unbreakable[302]).

9.

States are Beings, they will process information because they can. As such, they will process information on other Beings (i.e. animals, organisations and artificial Beings, including, of course, their citizens), as well as, on Things.

10.*

299. See Chap. 8.1, par. 4.

300. See Chap. 2, pars. 6 and 7.

301. See Chap. 5.1.

302. See Chap. 8, par. 6.

The question ‘what is the state’ (its definition) must remain separate from other questions that may be relevant but could blur the picture, such as ‘what is the state for?’ or ‘how does a state develop?’, or the quintessential questions of ‘how is it best to govern a state?’ and ‘what is the optimal type of government?’[303] All these are related, and extremely important, questions, but they are not the same as the first one. They have been used either to assist in the definition of the state (‘if we understand what it is for then we can understand what it really is’) or as substitutes for a definition from a pragmatic point of view (‘it is fine if we cannot define it; it is not necessary because we all know what it means, so let us focus on the questions that really matter, such as what it is for or what is the best political system’). Nevertheless, these approaches leave the matter wanting: only once we have provided a satisfactory definition of the state will we be able to provide adequate answers to (or, at least, shed new light on) questions regarding what the state is for or how it is best governed.

303. See also note 0/1/6.

7.1. Information platforms

'On ne pense que par image.'

Albert Camus, Carnets I

Synopsis: *Information platforms in the analogue and digital worlds (1-5); The state as a digital platform? (6); In what way, then, are states information platforms for their citizens? (7).*

1.

What are 'information platforms'? The term is used here to define the state; however, it is itself in need of some further explanation because, unlike the state, it has been coined only recently.[304]

2. Platforms in the analogue world*

Platforms are well-known in the analogue world. The term literally denotes a 'flat raised area or structure' or 'a raised level surface on which people or things can stand'.

In practice, today platforms can best be viewed at sea: they are raised structures constructed like artificial islands, floating and visible from afar, anchored and not moving—and therefore independent and self-sufficient, but also in need of interconnection with the rest of the world. Platforms, however, can also be found on shore, for example, in the context of politics: they denote both the raised structure for a politician and his entourage to stand on so as to make a speech, as well as, metaphorically, a politician's principles and ideas. All those who share these principles and ideas are considered to belong, politically, to the same platform, to view the world through the same political lens.

304. This, however, does not affect the timelessness of the definition of the state (see also Chap. 11), but rather has (only now) made it visible.

Platforms, therefore, also have a metaphorical meaning in the analogue world. Both these meanings are helpful for visualising the state as an information platform.

3. Platforms in the digital world*

It is with regard to the digital world, however, that the term is mostly discussed today. For the past few years online digital platforms have caught the public eye, be these private (i.e. belonging to individuals) or public (i.e. belonging to governments).

Online platforms today are digital-born informational infrastructures that offer certain functionalities. Initially their offering was social, meaning that they offered interaction opportunities among individuals in the digital world ('online social networks') in the form of a digital agora or forum. It was not long before financial opportunities were added to their functionality (transforming the agora into a market).

Today, online platforms are enclosed communities, 'gated gardens' or informational islands in the ocean of the digital world (admittedly, with each one serving only a single or a few purposes), where individuals may participate, usually for free, within an entirely new, and until recently unheard-of, business model, wherein value (and strength) lies in user numbers and not (directly, at least) in transactions (with profit made indirectly, by selling the details of these individuals' use of the platform to advertisers).

4.

Online platforms eventually attracted the regulators' attention, admittedly long after their invention and development by large, multinational private actors. For the moment the regulator views them not as competitors to the state but rather as a new field of human activity (one that has already been undertaken and thus freely chosen by the creators of the platforms).

Usefully, however, the newly formed regulations have provided us with the first formal definition of what we can consider to be information platforms: 'service providers that store and disseminate information at the request of their users'.[305] This bland definition, obviously skewed towards the private sector, will have to do for now.

5.

Regardless of the unavoidable specificity of regulation (and therefore its preordained expiry date), it is likely that the way in which information platforms have developed so far is explainable within the context of the advent of a new reality for humans, that of the digital world.

Parallels could be drawn between the digital world, which is only a few decades old, and the prehistoric, imagined, period when humans first had to form (larger) communities—hence the focus of online platforms on user numbers. Similarly, belonging to an online platform is the only way for most humans to understand and make some use of the vast new and unexplored world in front of them, that is, the digital world.

Once formed, these digital communities zealously guarded their members—and tried to sustain themselves in any way possible.[306] Unlike in the analogue world, however, newcomers did not have to fight to remove older inhabitants, or compete for access to limited resources in a first-to-arrive, life-or-death competition. On the contrary, because information in the digital world is infinite,[307] any new platform is set up alongside existing ones, only competing with them for users.[308] And users are happy to oblige by joining the new platform, because they are able to belong simultaneously to more than one—which also explains why individualisation and unique identification remain an issue today for humans in the digital world.

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305. Article 3, point (i) of the Digital Services Act.

306. One must not forget that the for-profit online platforms of today succeeded the large 'forums' of the first days of the Internet, which perished as soon as the money dried up.

307. See Chap. 1, par. 16.

308. On the transformation of individuals (and citizens) into users, see Chap. 17, par. 11.

Crucially, however, information platforms in the digital world are, today, private. In other words, it is not humans and their states that are trying to process information in a (pre-existing) reality (i.e. Nature), but part of them (the private sector) that is opening up new fields of human activity. It is for this reason that the stage of development of the digital world that we are currently in should not, therefore, be paralleled with the original, common to all, prehistoric period when humans and their groups started from zero. Rather it corresponds with a point in time when some engaged with the world better prepared than others, meaning not everyone was on the same level. This is why parallels should instead be drawn with colonialism[309] and company-states in order to visualise, and to better understand, the reality of today's online information platforms.

6. The state as a digital platform?

The digital world may have made the definition, and true nature, of the state finally visible, but has it also affected it in any significant way?

Although private online platforms strive to mimic state functions within their (digital) territories (through the unique identification of their users and creation of their digital ecosystem), they have affected the relationship between the state and its citizens only superficially. Private online platforms may individualise and identify their users; however, they do this on the basis of credentials issued by these users' states and, in any case, not uniquely—in the sense that a user can have many profiles on the same platform.

In addition, although individuals may well live large parts of their lives today on online platforms (for work, study or entertainment), humans are still anchored in the analogue world not only biologically (i.e. digital money earned on a digital platform is still needed to buy groceries in the analogue world), but also socially (i.e. humans still interact physically with each other on a daily basis).

309. See also Chap. 17, par. 14.

Therefore, for the moment, at least, neither the state's definition nor the state's nature[310] has been gravely affected by the digital world. In essence, the digital world affects the government[311] more than the state: because the state is natural to humans and it is humans that had the will to create, and live in, the digital world, their relationship with their states remains intact.

7. In what way, then, are states information platforms for their citizens? *

All of the above points provide useful and relevant visualisations of a state as an information platform. Platforms are distinguishable both in their literal and in their metaphorical sense. One can see them (when physical) or understand their existence (when metaphorical) from outside or from within. They thus have a territory (in which they are sovereign) and borders. These circumscribe the information platform that is the state.

On a platform, people, or things, can stand; in states as information platforms people can carry out their lives, processing information pertaining to other people and things. On political or other metaphorical platforms people share beliefs in ideas; states as information platforms function under common rules (regulations). Platforms' inherent flatness is also relevant; all can stand on them and all, at a specific point at least, are equal, having an equal footing on them,[312] regardless of the fact that this equality only lasts for a moment.

The information platforms that are states can be visualised as informational islands in a vast sea (our planet). Some of these islands may decide to come closer together and form larger constellations, to form archipelagos. The EU is the first such archipelago, the precursor of things to come, as will be seen.[313]

310. See Chap. 11.

311. See Chap. 12, par. 10.

312. See Chap. 22, par. 7, on equality as a platform right.

313. In Chap. 19.

8. States are natural to humans

'There are these two young fish swimming along and they happen to meet an older fish swimming the other way, who nods at them and says "Morning, boys. How's the water?" And the two young fish swim on for a bit, and then eventually one of them looks over at the other and goes "What the hell is water"?'

David Foster Wallace

Synopsis: *States were formed naturally, automatically and immediately at the moment when humans gained self-consciousness and started to communicate using language, and are the only universal and natural human individualisation mechanism (1-2); There is no distinction between modern and ancient states (3); States are the first organisation humans are acquainted with immediately at birth (4); Society (5); The relationship between a state and its citizens is unchangeable and unbreakable (6); Do wolves (or dogs) have a state? (7).*

1.*

States were formed naturally, automatically and immediately at the moment when humans gained self-consciousness and started to communicate using language.

In essence, states are informational individualisation infrastructures that turn humans into individuals,[314] the only universal and natural human individualisation mechanism. States also create the processing environment necessary for (their) humans to live in,[315] making it possible for them to live a meaningful[316] life. Individualisation is natural to humans, and necessary for them to satisfy their need to augment their information processing.[317] States are a necessary part of human existence, in the sense that without them human life as we know it or as has ever been known, would be impossible.

States are neither artificially created by humans (under, for example, social contract or any

314. Through a name and a citizenship, see Chap. 7, par. 4.

315. See Chap. 11, par. 3.

316. See Chap. 7, par. 3.

317. See Chap. 5.1.

other theory) nor the result of a gradual development within human history. There was no state (or society[318]) before individuals, and no individuals before the(-ir) state(s); both were formed simultaneously, at the very same time.

2.*

States have been information platforms for their citizens since the day any type of human group (be it an extended family or tribe or any other type of prehistoric organisation) was formed. Adherence to a group and the provision of a name for each individual within it have accompanied humans since their beginning (or, at least, since the day they acquired consciousness).

Why did states individualise humans in this way? Why did humans individualise themselves at all? Why did humans not remain humans, yet another animal in Nature, forever? Why did humans choose to form ever larger groups, leaving the confines, and limitations, of families or small tribes, and creating the states in which we still live today? After all, dinosaurs ruled the planet before humans without having any use for states.

As has been seen,[319] this is due to human nature. Humans need to augment their information processing, to continue processing new information for as long as they live, and they need to do this individually, for their own sake, not cumulatively (i.e. for a hive). They do not process information for the sake of the group but for themselves. Hence individuality, and states as the sole natural mechanism to accomplish this process of individualisation, are natural to humans.[320]

318. See par. 5.

319. In Chap. 5.1 par. 7.

320. Natural rights theory or religion notwithstanding, because individuality of the human is necessary regardless of which (human rights or sin) applies; see also Chap. 8.1, par. 1.

3. There is no distinction between modern and ancient states*

There is no distinction between modern and ancient states. Whichever means and methods were available to humanity in any given period of time, they were invariably used by humans to carry out their information processing, shaping their states in the process. After all, it was usually for state purposes that these information processing tools were invented (for example, in the case of writing or the Internet).

Any increase in the information processing capabilities of humans within their states led to the identification of new needs, in an ever-expanding process (most likely, a virtuous one, but in any case one that demonstrated historical progress[321]) that has continued until today and shows no signs of abating.

4.*

States are therefore the first organisation humans are acquainted with immediately at birth.[322] They are also the only organisation that remains necessary for humans' (meaningful) existence throughout their lives.[323]

5. Society*

Society is a group of individuals that are individualised by a specific state.

However, society and state are not the same thing, because the state is an information processing platform and society is a group of individuals. One cannot exist without the other, they are inseparable, but they are not the same thing.

321. To no known end, or destination, however.

322. Together with their family, see Chap. 2, par. 9.

323. Unlike their family (see previous footnote).

6. The relationship between a state and its citizens is unchangeable and unbreakable.

The bond between a state and its citizens by birth is an unchangeable one. Although change may come from both directions (state succession on the state's part[324] and change[325] of citizenship by the individual), the original bond remains, because it is a natural one.

In practical terms, the personal information of any individual is never deleted or altered by the individuals' state of birth.[326] Regardless of the state or personal circumstances (which may differ throughout human history), that information remains. This is a natural creation, one that human will or regulation or a change in government or state cannot affect.[327]

7. Do wolves (or dogs) have a state? *

Are states natural only to humans? If they are natural individualisation mechanisms, do animals (which, like humans, have been biologically created and are not artificial[328]) also have states?

From an informational point of view, all pack animals have states: their pack is their state. Within it each individual can be uniquely identified by the others, and the pack itself is also distinguishable from any other.

While individualisation tasks are performed, for instance, within a wolf state, what is important to note is the method of individualisation. In this case it is by smell or the other natural

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324. See Chap 15.

325. Replacement (not merely addition); see also Chap. 17, par. 5.

326. See Chap. 15, par. 6, on state succession.

327. Evidently, when we travel to another state we carry with us the individualisation of our own state and the two states, through bilateral agreement recognise this and exchange the necessary information (see also Chap. 17, par. 5, as well as Chap. 19, par. 13).

328. See Chap. 2, par. 2. As far as non-biological Beings are concerned, organisations are individualised by humans after they have been created (for example, in business registries or government gazettes etc.) but, for the moment at least, artificial Beings (specifically, computer programs; different is the case with money and language) are not.

characteristics of each wolf, and not by language, that is, a name, as is the case for humans. Natural characteristics, however, are an inadequate means of individualisation in view of their limitations: first, we are not certain that they are actually unique (for each of the thousands of wolves on earth, not to mention the billions that have walked the planet). Second, each individual in the pack (i.e. each wolf) can presumably only remember so many (i.e. packs are composed of only a few dozen individuals at most), so it may, for example, know that another wolf does not belong to its pack but it cannot know to which pack it belongs (or, to go further, identify it individually within that other pack). Similarly, communication is certainly possible among wolves, but only on rudimentary, survival-related topics.

Language, therefore, is the critical part of human, and state, development. Because humans developed language, identification and individualisation became not only possible but also necessary for everyone, and hence states came to be.

What is also important is that humans accomplished this themselves, by their own means. For example, dogs have names and recently have been registered with states. This has led to their individualisation, in the sense that they are now uniquely identifiable in space and time, like any human. However, this has not led (for the moment, at least) to any dog increasing its information processing compared to in the past. Individualisation does not seem to lead to a dog culture. The new possibilities enabled by the individualisation of each dog have not been used by them. Why is that? It may be that not enough time has passed; humans have created states and processed information for thousands of years. However there is another difference: humans have individualised dogs to suit their own (human) nature, that is, it was done by humans for dogs. As far as we can tell, dogs have no internal need to individualise themselves uniquely in space and time.

This example, in spite of its oversimplification and arbitrariness,[329] is used for illustration purposes only: humans' individualisation of animals or other Beings is only humans' way of understanding them, of better processing their information within the human need to augment

329. It should be clear that this example only relates to domesticated dogs that live outside of their packs (or, that have formed packs with their humans), to name just one of the countless limitations of this example.

their own information processing. It does not serve the need of the Beings on the receiving end of the humans' individualisation process.

Similarly, awarding legal personality or other rights to Beings (including, significantly, computer programs) does not change their own processing conditions, only those of humans. If they ever need it, these Beings will have to develop information processing mechanisms (individualisation or any other) of their own, to serve their own needs.

8.1. Names

'ODYSSEUS: What shall I call him, Circe? Who was he when he was human?

CIRCE: What relevance does that have? Call him Gryllus, if you like.'

Plutarch

***Synopsis**: Names of humans (1-2); It is states that make the naming of humans possible (3); Names of Things (and non-human Beings) (4); An identification algorithm requires a registry; it is the information platform that is the state that provides that registry (5); The use of names as an individualisation mechanism is a way of giving meaning and creating understanding that is peculiar to humans (6); Individualisation in the digital world (7); Logins and passwords (8); Domain names (and other unique naming attempts) (9); Names of computer programs (10).*

1. Names of humans*

Names serve to individualise humans. They are used to refer to specific individuals, differentiating them from any other human on the planet before or after them. They uniquely identify a human in space and time.

Names are created and used as a result of human language. Other animals have individualised distinct characteristics (e.g. smell, external look etc.) that are discernible both to members outside and within their group, but they carry no names, they have no linguistic expression of this uniqueness.[330] Names are a quick and certain way to refer to a specific human.

Why do humans have names? Simply because they are humans.

2.

330. A particular smell or look is not, ultimately, unique in space and time (see also Chap. 8, par. 7).

Names have become more complex over time (presumably, as human numbers grew and communication increased). Last names were added as recently as the Middle Ages in Europe. In antiquity only first names were used, followed by the name of the state whenever needed. The latter was the case, however, only occasionally, for just a very few individuals,[331] given the locally restricted lives that the vast majority of humans lived until very recently. Within small, closed communities individuals would have been known by a single name, perhaps followed by other, more relevant identifiers. This is visible today within workplaces (e.g. John from Marketing, Mary in Geography class) or in other small and close-knit groups of individuals.

In the Middle Ages the state lost its explicit inclusion in the name of an individual and moved into the background, although it continued to be implied on each use (locality still being relevant in human lives). It has remained in the background ever since, a silent but ever-present third party whenever any two humans interact.[332]

3.*

It is states that make the naming of humans possible. A human's name may have been created by language, but without a state to grant and warrant it each time the specific individual it refers to interacts with another, it would be unusable.[333]

A name is granted to any newborn human in accordance with a state's regulations, both in terms of content (choice of name) and in terms of procedure. Name-giving, although usually a small-circle ceremony, is necessarily followed by (some type of) registration of that name with the individual's state; it is through registration that the name actually comes into existence, with immaterial information thus materialised in the analogue world.

331. For example, authors; see, for instance, 'Thucydides of Athens wrote…'.

332. See Chap. 7, par. 3.

333. See also Chap. 7, par. 4.

4. Names of Things (and non-human Beings)*

States not only make possible the naming of humans, who in this way become individuals (and state citizens), but also create the processing environment necessary for their citizens to live in.[334] It is on states, as information platforms, that humans name Things and other (non-human) Beings (first at the category level, and then sometimes as individuals within these categories), so as for these to become processable information by them (these names are usable only on that platform that is their state). In other words, it is states that make human language possible.[335]

This is the result of human individualisation. Once individualised and (already having been) equipped with language skills, humans were able to serve their need (of all needs) to augment their information processing.[336] Enthusiastic information processing in the analogue world (which has never stopped and is unlikely to do so in the future) created new words for Things and Beings, be they artificial, human-made or found in Nature. As soon as an individual assigned a name to an invention or a discovery that name was used to describe this new information in the individual's state, which was warranted and made possible by that same state.[337] Subsequently, this name may have seen widespread use if individuals in other states, on becoming aware of it, adopted it too, either translated into their own language or used in the original form.

Languages were therefore created and developed within states, by their citizens. Language is the information processing tool of individualised humans, the only way for them to materialise their immaterial information, to understand and give common meaning to the analogue world, and to accommodate their ever-expanding information processing needs. As such, it lies at the base of the information platform that is the state—but could not have existed without it.

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334. See also Chap. 11, par. 3.

335. After, of course, language (i.e. human names) gave birth to states; on their intertwined relationship see note 8/1/4.

336. See Chap. 5.1, par. 2.

337. See also Chap. 6, par. 4.

5.

The use of names, therefore, is an identification mechanism, an algorithm for that purpose (identification), that is used by humans to serve their need to process information. An identification algorithm, however, requires a registry; it is the information platform that is the state that provides that registry.[338]

It is up to humans to decide how far identification goes, that is, whether certain categories of Beings and Things (animals, organisations, boats etc.) after being named as such, also need to have specific names for their individual members (and to what extent), so as for them to become uniquely identifiable in space and time among their kind; for example, planets are individually named; ships, too; elephants are not;[339] only some drones are.

6.

The use of names as an individualisation mechanism is a human trait and development, one which is not found in any other Being. While it is true that organisations have names, these are given to them by humans, they were not developed by themselves—in the same way that dogs, for example, are given names in some parts of the world.[340] Things, of course, do not process information themselves,[341] however they are sometimes given unique identifiers by humans.

The use of names as an individualisation mechanism is a way of giving meaning and creating understanding that is peculiar to humans. For the moment, at least, no other Being[342] has used names—assuming, of course, that our way of understanding and processing information is their

338. See Chap. 7, par. 4.

339. See also Chap. 8, par. 7.

340. See also Chap. 8, par. 7.

341. See Chap. 3.

342. Only Beings can and will process information, see Chap. 2.

way too.

7. Individualisation in the digital world*

Individualisation is critical for human understanding and information processing. But at least for the moment, it is a matter of debate in the digital world. Although the information platform that is the state also extends into the digital world,[343] in the digital world individuals have been transformed from citizens into users.[344] From this point of view, the equivalent of the digital world today can be found in the colonial era of the analogue world, as it is mostly private actors that are expanding (and giving meaning) to it.[345]

Early as it may be in the history of the digital world, however, some preliminary remarks can already be made with regard to names (as individualisation mechanisms).

8. Logins and passwords

As soon as the digital world emerged, human identification in it came about through the use of 'credentials', composed of a 'login name' and a 'password'. Thus humans had to become individuals in the digital world too, to be able to continue the augmentation of their information processing unhindered. In the analogue world each individual is identified by a name and citizenship; in the digital one, by a login name and password.

Of course one might ask how, if states are natural to humans, as argued in this analysis, the digital world has worked for humans so far, and is able to keep expanding? After all, it is not states that give out the credentials needed to (identify) individuals in the digital world.

343. See Chap. 17, par. 12.

344. See Chap. 17, par. 11.

345. See also Chap. 7.1, par. 5.

However, we need to be careful before making any assumptions: in the digital world, credentials from the state have, for the moment, been replaced by those provided by the private online platforms.[346] Any credentials today are valid for a specific platform only, they uniquely identify an individual only on it. When using the platform, they are necessary for humans; outside of it, they are of no use. In other words, while the digital world's credentials (login name and password) correspond to an individual's name in the analogue world, that individual's citizenship (to complement the unique identification mechanism used in the analogue world) is implied in the digital one: it is the platform on which these credentials are valid.

The above-described mechanism for unique identification in the digital world is easily viewable in the structure of email accounts: the @ symbol[347] specifies, in essence, citizenship (individuals are allowed to choose their name in the first part). Similarly, even when so-called anonymous communications are allowed in the digital world, individuals' aliases are registered with and work only on each specific online platform.

In recent years the situation of having multiple digital world credentials has increased to the extent that, first, specialised software was developed to manage them (humans being able to remember only a limited number of passwords) and, subsequently, centralisation occurred, as is the case with the option to 'log in with Google' or 'with Facebook' or other popular private online platforms. When this latter option is replaced with 'log in with your state's credentials', states will have moved decisively towards claiming the digital world for themselves.

9. Domain names (and other unique naming attempts)*

Very few internationally coordinated (non-state run) unique naming attempts have been noted so far in the digital world. These offer informative examples of the requirement for

346. On digital territory (whereby private online platforms are themselves found in the (digital) territory of their respective states), see Chap. 17, par. 12.

347. Meaning 'at', as in 'of', see, for example, ''Thucydides of Athens wrote ....' or 'Herodotus of Halicarnassus ...', see par. 2.

individualisation and the, ultimately unavoidable, need for state involvement. The first is the registration of domain names.[348] In the early days of the Internet this task was undertaken by private parties, centrally at first (in the US) and then allocated per country to the rest of the world. Soon enough, however, states took over either directly (domain names in the vast majority of national cases are managed through regulation) or indirectly (by appointing state agencies to control the relevant activity).

Other attempts to uniquely and authoritatively identify individuals in the digital world have been made on an as-needed basis, for example, in the cases of celebrities or researchers. In both these cases increased use of the digital world by such categories of individuals means that their digital identity needs to be officially warranted. Tellingly, while private online platforms have taken over this task, what they do in practice is use the analogue-world information of the persons concerned to 'lock' an online profile to them.

10. Names of computer programs*

As previously noted,[349] names are necessary for humans to understand and process information around them. They are therefore assigned to identify categories of Things and other Beings, as well as to individualise humans themselves and the few other specific Things or Beings that humans thought it was necessary to individualise. Importantly, however, so far in history, when humans have interacted with another Being, they do so on an individualised basis, meaning as an individualised human with another individualised other human or, even, with a similarly individualised organisation. Of course, humans may also interact with individualised Things (for example, the planet Mars or the ship Titanic or long-gone states or empires that became Things after their demise) but this has always been a one-directional interaction, that is, Things do not process humans' information in return (as is the case with other humans or organisations). Artificial Beings (languages, money, computer programs), in spite of their in-between nature, did not escape this treatment by humans.

348. Themselves digital-born information, see Chap. 1.1, par. 17.

349. In par. 4.

However, there is a recent, specific case, among computer programs, that does not follow this rule, that of the AI assistants developed by software companies and installed on our personal information processing devices (mostly phones, but also computers). Today each one of us can communicate with 'Siri', 'Alexa' or 'Cortana', or even with 'ChatGPT'. Importantly, these are non-individualised, essentially nameless[350] Beings: they are whatever each of their creators decides to make them each time they are used.

This is a first, for humanity. Siri (to denote collectively all AI assistants) is different from an organisation or another human (including slaves), or even domestic animals. All of these Beings are named and individualised as the only imaginable way for humans to interact with them. Siri, however, is a nameless (non-finite) artificial Being (a computer program) that claims to single-handedly carry out personalised interactions with each and every one of us—the same single personal assistant for billions of humans.

It is this realisation that helps explain the fear that AI has instilled in humanity. Until now, humans have communicated only with humans or other Beings, with all their identifiability and also their known characteristics and limitations. A nameless and essentially unaccountable counterpart would previously have been unheard of. A centuries-old way of communication, and society-building, is being challenged from the ground up—its very premise—and needs to be carefully rethought and reassessed.

350. Siri is not a dataset, because it is not set (see Chap. 1, par. 2). Basically, Siri is not a name but a characterisation—, essentially the same as God.

9. State formation: from word of mouth to the modern state

'For though the society we have described seems to me to be the true one, like a man in health, there's nothing to prevent us, if you wish, studying one in a fever'.

Plato

***Synopsis**: State formation (1-4); The transactional and territorial state, (5-6); Is there order in the state? (7).*

1.*

The state was born naturally in humans' minds as soon as they gained self-consciousness and started speaking to each other, and it materialised immediately in the analogue world through the spoken word.[351] For ages (for hundreds of thousands of years) this was the only form the state took in the analogue world, a verbal-only presence. However, at some point this was not enough for humans, it no longer met their information processing needs. There is only so much information processing that humans can do, even collectively, when unassisted by any tools. As the number of individuals within the first tribes or extended families increased (presumably, when agriculture was invented), names had to be recorded for practical reasons (taxation and military records). Writing was invented. States took shape, taking on the form that is basically still with us today, in the analogue world.

2.

States were not artificially created by humans for the purpose of individualisation (or for any other purpose for that matter—for example, under social contract theory, for security purposes or for the protection of property). Humans did not create them consciously, deliberately or intentionally to serve a specific purpose, as is the case for all other organisations.[352] On the

351. See Chap. 1.1, pars. 1 and 5 on information materialisation.

352. See Chap. 2, pars. 6 and 9.

contrary, states emerged naturally, first through human communication and spoken language and then, once writing was invented, as the administrative and bureaucratic mechanisms still known to us today.

3.*

It was writing, therefore, that made it possible for the state to take the functional, administrative and bureaucratic form known to us in the analogue world.

Once writing was invented and up until the present, the state took the form that was possible in relation to the information processing capabilities of humans. At first, only names were processed, for tax and military purposes. Family information was quickly added to the list; however, it took states several centuries to reach the point of keeping professional, academic or medical records for each of their citizens. From that point on, however, things accelerated at a feverish pace, to reach today's wealth of record-creation and -keeping on their citizens that is performed by the information platforms that are states.

Nevertheless, in the digital world, the next milestone in humanity's development after the invention of writing,[353] the state's final form is yet to be seen.

4.

State formation, in terms of information processing on[354] its citizens, should not be confused with the creation of the information processing environment suitable for its citizens to live in by the information platform that is the(-ir) state.[355]

353. See the Prologue, par. 6.

354. See Chap. 7, par. 6.

355. See Chap. 11, par. 3.

The processing environment was created immediately, as soon as humans developed language and identified each other with names. Presumably they then continued to name[356] the Things and Beings around them, at first verbally and then in writing. The more humans processed information in the analogue world, the more they added to the information platform that was their state, expanding their information processing environment—a process that has not stopped since and will not stop in the future because of humans' need to augment their information processing, that is, to constantly keep processing new information.

5. The transactional and territorial state*

State formation as an administrative mechanism in the analogue world, which occurred after the advent of writing, had two consequences that remain with us today.

First, the state became transactional. It was no longer only a human individualisation mechanism (materialised through the spoken word) that created an information processing environment suitable for individuals to live in, but, having expanded its information processing capacity exponentially, it took on a form that individuals could, and had to, transact with.

Second, the state became territorial.[357] It no longer only resided in the minds and (spoken) words of its citizens, but from that point on occupied a territory, which was the area in which the information processing infrastructure was installed. Accordingly, as soon as an infrastructure was created (given also the crude means it employed, meaning clay tablets etc.) it could no longer be moved around. States could no longer be nomadic.[358] From that point on states occupied specific places in the analogue world, their territory.[359]

356. See Chap. 8.1, par. 4.

357. Meaning, physically installed in a specific location; on how state territoriality actually works, see Chap. 17, par. 4.

358. No longer nomadic, but not, however, necessarily meaning not movable (see, for example, the Mongol empire – obviously, for the Mongols themselves, not for the conquered peoples who continued to live in the, conquered, states of their own, see also note 7/1/1).

359. On state territory, see Chap. 17.

6.*

Both of the above consequences have been challenged by the advent of the digital world. As regards the transactional state, in ever-increasing parts of their lives, individuals are no longer obliged to transact through their states: today they can work, buy things, or acquire services and study entirely in the digital world, avoiding any state involvement if they wish—a proposition unheard of since humans first walked the earth.[360]

As regards territoriality, for the first time since writing was invented, state records do not necessarily reside in the territory of a state. Digital-born information on their citizens may be stored, and processed, by states anywhere on the planet.[361] This is a unique, unheard of challenge to (the traditional notion of) state sovereignty.[362]

7. Is there order in the state? *

The increase of states' information processing capacities once writing was invented and thereafter meant that the application of an organisational system for all this processing, a specific way for it to be carried out, became necessary.

Clarifying first and foremost that this has nothing to do with a state's government,[363] this system was (for the vast majority of cases that we are familiar with, at least) hierarchical, because hierarchy is the basic human organisational principle, that is, it is natural to humans.[364] From this point of view, there is order in the state—and, therefore, the state can be characterised as an 'organisation' (after all, states are Beings (organisations)[365]).

360. See also Chap. 12, par. 10.

361. See also Chap. 17, par. 8.

362. See Chap. 16.

363. See Chap. 12, par. 1.

364. See note 6/7/1.

365. See Chap. 2, par. 9.

Nevertheless, the fact that some order exists in the state's information processing says nothing about that order's efficiency or sufficiency for any purpose. In other words, while hierarchy may come naturally to humans, it is not certain (and this is not examined in this book) that it is the best option (assuming, of course, that alternatives were possible).

In the same vein, there is no pre-ordained, imagined order that states have striven to reach historically, through linear development.[366]

366. See Chap. 11, pars. 9 and 5.

10. What states need

'The grand, leading principle, towards which every argument unfolded in these pages directly converges, is the absolute and essential importance of human development in its richest diversity.'

Wilhelm von Humboldt

***Synopsis**: What states need (1-3); Not a matter of politics (4); States and individuals' (their citizens') interests are aligned, not conflicting (5); A material, not a sentimental relationship (6); States need all of their citizens to augment their information processing (7).*

1.*

What do states need? This question is not unwarranted. All Beings have needs;[367] it is their nature that sets their needs, in an unbreakable bond.[368] States, therefore, because they are Beings, must have needs too. But, what are they?

States are organisations;[369] however, unlike any other organisation they have no specific purpose. Therefore, no need can be derived from that point of view, that is, there is no need to serve a purpose (or any purpose).[370] States do, however, share organisations' other characteristics: they are human-centric and human-dependent, that is, without 'their' individuals (meaning their citizens), states perish.[371] States, therefore, need their humans, meaning their citizens, the same as any other organisation. Their citizens, as humans, need to augment their information processing, this is their need of all needs.[372] Consequently, states need their citizens to do exactly that, to augment their information processing.

367. See Chap. 5, pars. 1 and 2.

368. See note 5/2/1.

369. See Chap. 2, par. 9.

370. This is the case in social contract theory.

371. See Chap. 2, par. 7 and Chap. 15, par. 4.

372. See Chap. 5.1, par. 2.

As with any other organisation, states need their citizens to augment their information processing through them, that is, to keep using their information platform.[373] The difference between a state's needs and any other organisation's needs is that other organisations need 'their' humans to augment their information processing through them but are constrained by their specific purpose, whereas states, because they have no specific purpose themselves, need exactly the same thing ('their' humans to augment their information processing through them), but this processing can be for any purpose whatsoever.[374]

2.*

Consequently, states need their citizens to augment their information processing through them, through their information platform. They need their citizens to continue living, communicating and creating on their platform.

If citizens cease to process in that manner information made available to them by their states, these states will cease to exist—they will become Things, whereby only the processing of information on them, but no longer by them, is possible.[375]

By contrast, a state does well when its citizens do well in augmenting their information processing, because in this way the information processing possible on the platform that is their state is also augmented (opening up a virtuous circle, whereby this causes these same citizens to further augment their information processing and so on[376]).

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373. See Chap. 2, par. 7. Theoretically, as is the case for any organisation, it would be enough for states for their citizens simply to keep processing information through them, i.e. not to augment it. However, this is not what humans need. Humans need to augment their information processing, to ever increase it (the use of names, see Chap. 8.1, being an example in this regard), not simply to mechanically process (the same) information each day (see Chap. 5.1, par. 3). Therefore, while in theory simple processing would suffice, in practice this cannot be, and thus augmentation of the information processing is necessary.

374. See also Chap. 2, par. 9.

375. See Chap. 2, par. 3, also keeping in mind that this does not mean that organisations have a need to survive (they do not, see Chap. 2, par. 20). On state succession, see Chap. 15.

376. Assuming the usual, multidimensional mix and spread of their citizens' information processing, i.e.

3.

Augmentation of the information processing carried out by their citizens is a condition for the (continued) existence of states, a need similar to air or food for humans.[377]

4.

If and how states facilitate their citizens' augmentation of information processing is irrelevant. Responses to such questions are political. How best (or if at all) to satisfy a need, once identified, is a matter of politics. In extreme cases, it is possible that a government[378] may choose not to assist a state's citizens at all in the augmentation of their information processing, for example, either by affording them minimal restrictions over their information processing (a non-interventionist approach) or by introducing as many restrictions as possible (a fully interventionist approach).[379] In similarly extreme cases, an aggressive (or oppressive) government may either engage in wars to assist its citizens (because information is finite in the analogue world[380]) or guide them exactly (forcing them) towards the path it considers to be the best one for them to augment their information processing. It is important therefore, at this stage at least, to avoid making any assumptions.

5. States and individuals' (their citizens') interests are aligned, not conflicting*

From this point of view there is no confrontation between individuals (citizens) and their states. The state does not confront its citizens, in fact it lives in them. It is the government that may

excluding for example single-purpose monastic states.

377. See Chap. 5, par. 3.

378. The issue of which controls are exercisable on any dataset is political anyway (see Chap. 6, par. 1).

379. In cases of anarchical and authoritarian states respectively, the two extremes meeting in this regard, see also Chap. 26, par. 7.

380. See Chap. 1, par. 16.

appear confrontational to some, or even to the majority, of a state's citizens, not the state itself.[381]

6.

A state needs its citizens in a material, not a sentimental or immaterial manner. A state does not reside in the hearts and minds of a certain group of individuals.[382] On the contrary, a state is a Being that processes information in the analogue world—first and foremost it is an identification and individualisation mechanism. In other words, the state performs material acts that produce material results—and it does this and continues to do this for as long as it remains in existence.

7.

Equally important is the clarification that states need all of their citizens to augment their information processing. This is not the same as the need to augment the total information processing carried out on an information platform that is a state by its citizens. The latter implies that systemic inequality is embedded in states: at the extreme, if this were the case, one citizen could carry out almost all of the information processing within a state, leaving all others with very little processing to do (given that information is finite in the analogue world).

While this may be or may have been the case, inequality[383] should not be perceived as condoned systemically within the above reasoning. Instead, the need is for each citizen to augment his or her information processing. Should some (or a few) do so in certain pursuits more successfully than others, the extent to which this is or is not acceptable in any given state is a discussion on the optimal form of government, and thus falls into the political realm.

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381. See Chap. 12, par. 8.

382. A 'sentimental', only dreamt-of state may perhaps be a Thing (at best, if a group of people commonly refer to it) but not a Being, it cannot process information.

383. Although natural to humans, see Chap. 24, par. 12.

11. The nature of the state

'Philosophy cannot give us a satisfactory theory of man until it has developed a theory of the state. The nature of man is written in capital letters in the nature of the state.'

Ernst Cassirer

***Synopsis**: The nature of the state is set by what the state is, what the state has and by what the state does (1); What the state is (2-6); What the state has (and does not have). The state has no purpose (7-9); What the state does (and does not do) (10-11).*

1.*

The nature of the state is set by what the state is (and is not), what the state has (and does not have) and by what the state does (and does not do).

2. What the state is*

The state is an information platform for its citizens.[384] It is a Being, in fact an organisation,[385] that is natural to humans, formed immediately when humans gained self-consciousness, and thus names, and started communicating with each other using language. The state is an identification, individualisation mechanism, the only natural one to humans, and one that is indispensable for them to live a meaningful[386] life.

The state remains a Being for as long as its citizens process information on its platform; it therefore needs its citizens to augment their information processing, which is something that is in accordance with human nature.

384. See Chap. 7.
385. See Chap. 2, par. 9.
386. See Chap. 7, par. 3.

3.

The state is the information processing infrastructure that creates the processing environment necessary for its citizens.[387] It is therefore, in fact, not *an* information platform for its citizens, but *the* information platform for them (in the analogue world, at least for the moment).

Specifically, however, the state is actually not the information platform itself, but the informational infrastructure, the mechanism, that created the information platform and underlies and supports it. It is the nucleus of the information platform, the informational seed that gave birth to all and is found at its centre.

Distinguishing between the two, however, is impossible: the informational mechanism, although based on the simplest of algorithms, is a self-referential one (‘every human will be given at birth a unique identifier composed of (a) a name and (b) a citizenship, of which, however, (b) is the name humans give to the mechanism itself’[388]). Subsequently, every information processing operation carried out by that uniquely identified human is warranted by and registered with the same mechanism that made the identification.[389] The information platform that is the state, through the information processing carried out by its citizens on the basis of these self-referential algorithms, continuously expands. It is in view of this understanding that the two terms are equated.

4. What the state is not*

The state is not a corporation, an association or a union, an organism, a political organisation (or institution), a service provider or a public sector. It is not a pawn, a cipher or a network.

387. See also Chap. 8.1, par. 4.

388. So, either humans naturally think in this way, in terms of individualised names and individualised families, tribes etc., or an out-of-Nature entity, e.g. God, created the mechanism for humans (i.e. made humans think in this way).

389. See also Chap. 7, par. 5.

More precisely put, the state may appear to be any of those things (or all of them together) only because it is first and foremost is an information platform for its citizens. All of the above are appearances originating from its actual nature, which is an information processing infrastructure for its citizens. Once states were formed, as natural individualisation mechanisms as soon as any two humans started using language, all of the above appearances became possible—prior to that, this was not the case.

In addition, the state is not the sum of its citizens or of its citizens' information processing.

Finally, the state is not an actor or a structure—or, better phrased, it is both an actor and a structure at the same time.[390]

Most certainly, and clearly, of course, the state is not (its) government.[391]

5.*

Modern states, meaning the states in which most of us live (i.e. centralised nation states) are not the product of evolutionary development towards a particular end. They are not an improvement on previous forms of state that historically appeared from time to time (e.g. empires, city-states etc.). Modern states are not the product of a linear development—this is true even though their next level of organisation, meaning the formation of archipelagos, is already in sight, in the form of the EU.[392]

On the contrary, modern states are the result of changes in the information processing capabilities of humanity. Need and opportunity are very visibly at play here: individuals need to augment their information processing and will take advantage of whatever opportunities to

390. On the transactional state, see Chap. 9, par. 5.

391. See Chap. 12, par. 1.

392. See Chap. 19.

do this come their way; states need their citizens to do exactly that. Whichever technical tools (e.g. information technology) and organisational measures (e.g. centralised administration) are available at any given time are used to the fullest extent possible.

While the use of technical tools is self-explanatory, why this process culminated (today) in the centralised state perhaps needs some more explanation.[393] Individuals need to augment their information processing and they thus invent tools (from language and writing to computers) to achieve exactly that. Any increase in their information processing is translated into increased processing by their state, which also has to keep up.[394] Any increase in the information processing by the state leads to greater centralisation, in a cycle that can be interpreted in many ways, but which seems (historically) inevitable.

6. The state is timeless*

The state existed as soon as humans started using language and has never ceased to exist since. Humans have never been, and can never be, found outside of a state. States are therefore agnostic of (i.e. not an expression of) nations and nationalities, ethnic differences, 'national characters' or 'national souls', or any other distinctions ever placed upon humans. Although it would be foolish to deny their existence, it is important to note that these distinctions are the result of politics[395] (politics being the result of the existence of states as information platforms for their citizens and individuals competing to augment their information processing in the analogue world where there is a finite amount of information[396]).

What is important to keep in mind is that any human ever born once humans gained self-consciousness and invented language, was born into a state. How that particular individualised human and that particular state fared (or fares) on our planet is a matter of politics, not of

393. On why this has culminated in the nation state, see Chap. 18, par. 3.

394. Therefore, it is individuals that create a drag on the state and not vice versa—causing a lag that can be witnessed today in the digital world.

395. See Chap. 18.

396. See Chaps. 12 and 12.1.

existence of the state itself.

Having said that, it is also important to remember that, once established, the link between each individual and the individual's state is unbreakable.[397] Individuals may find themselves in different states during their lifetimes or experience grave changes within their states for whatever reason and in various contexts; however, all of these situations are the results of political (or personal) decisions that do not affect the (continuous) existence of their state.

7. What the state has (and does not have). The state has no purpose*

The state has no purpose. It serves no purpose, it is not aimed at anything specific, it has no preset objectives that it needs to achieve, no end towards which to strive. (Nor, for that matter, does it have any historically predetermined destiny that it will inevitably reach.)

The state was not created, it emerged naturally, as soon as humans started using names. Because it was not intentionally created (it is therefore neither a Thing that is an artefact nor an organisation incorporated by humans), it has no specific purpose.[398] As is the case for family,[399] the state emerged naturally, as the necessary mechanism for using the names of humans in the way humans needed, without any specific planning or intentional thinking on the part of humans.

In other words, states were not artificially created by humans for the purpose of individualisation (as is claimed, for example, under social contract theory for the purposes of security, property or justice), that is, humans did not have the conscious intention to create them as an alternative to other individualisation mechanisms that were available to them or as the result of a conscious choice to augment their information processing as an alternative to

397. See Chap. 8, par. 6.

398. See note 5/2/1 and 5/2/2.

399. See Chap. 2, par. 9, and note 8/2/1.

not doing so.[400] Rather they emerged naturally, as a necessary part of self-consciousness and human language. (After all, the definition of the state in this book has emerged only now after thousands of years, and as a result of the arrival of the digital world which has made such a perspective possible, thus further evidencing how natural states have appeared to humans so far in their history.)

8.*

Similarly, the state has no consciousness of its own, nor a will (other than the will to process information, of course). It therefore does not do anything consciously; most importantly it does not exercise control[401] over its citizens (or over the Beings and Things on its platform)—it has no will, no need,[402] to do so.

(Attempted) control over a state's citizens (in fact, over all Beings and Things on its platform) is exercised by the government.[403]

9. The state does not have a pre-ordained order*

There is no imagined level of order (or rationality) that states strive to attain in linear historical development or progress (nor is there historical inevitability that progress is made, for that matter[404]). The fact that states, regardless of whether tribes or empires or how far apart they were geographically or chronologically, ultimately resembled each other organisationally says nothing about the states themselves but rather about their citizens' information processing capabilities at any given time. States may appear today to have 'progressed' towards increasingly centralised, and complex, information processing infrastructures, but this is only

400. As is the case for all other organisations (see Chap. 2, par. 7).

401. See Chap. 6, and also Chap. 16, par. 3.

402. See Chap. 5, par. 2.

403. See Chap. 12, par. 8.

404. See also Chap. 9, par. 7.

because their citizens have continuously augmented their own information processing.[405] Whatever order or organisation states have reached today or acquired over time only reflects their historical and cultural development as caused by chance and opportunity in the information processing of their citizens, not by any imagined rational end for states themselves—whatever that could be.

10. What the state does (and does not do)*

The state is a Being; it can and will process information. However, it does not think, it does not process immaterial information. The state, also, does not see—nor does it express its citizens' will or wishes.

11.*

Similarly, the state does not reason. Although the state is a Being that can and will process information, actually using Reason in its processing,[406] it does not think in the same way a human does or use Reason to reach a conclusion or some level of, imagined (by humans), order or perfection—or even to make (any) sense to its citizens. In other words, the state is not a person (much less, a humanised, Hobbesian giant-like anthropomorphic one).

405. See par. 5.

406. See Chap. 4.1, par. 2.

12. The government

'If the notion of state is to be at all meaningful, and not merely a ragbag synonym of government, it must be divorced from and even opposed to personal power - not in the legal but in the political sense.'

John P. Nettl

***Synopsis**: A state is different to its government (1); What is a government? (2); The (only) purpose of the government is to control the state (3); How did governments acquire this purpose? (4); How did governments come to be? (5-6); Governments are natural to humans (7); Controlling the state (8-9); On the digital world breaking down governments' control over the(-ir) states (10); A beginning-of-time model fundamentally and irreversibly eroded: Leviathan's demise (11).*

1. A state is different to its government*

Despite widespread (even prevalent, in certain cultures) confusion, a state is different to a government. The connection in the hearts and minds of people (most frequently in times of emergencies, as in 'the state should deal or should have dealt with this') that leads them to treat the two practically as synonyms needs to be dispelled once and for all. A state is not the same as a government—and should not be treated as such.

The state is a Being, an organisation that individualises humans and creates a suitable processing environment for them to live in.[407] The government is also an organisation, but one that is different from the state—in fact, it is the Being that controls the state.

2. What is a government?

A government is a Being, it is an organisation that exists in both the analogue and the digital

407. See Chap. 11.

worlds.[408] It will process information because it can. As with all organisations, it needs 'its' individuals, meaning the individuals participating in it, to augment their information processing through it[409] in order to serve its singular purpose.

3. The (only) purpose of the government is to control the state*

As has been noted, [410] non-biological Beings have no inherent purpose (they process information because they can, but this is not their purpose) other than the one artificially given to them at the time of their materialisation. This is easily visualised in the case of modern organisations, the purposes of which are outlined in their deeds of incorporation. However, the same is true for governments, too. As organisations, governments have a single, specific purpose: to control the state.

This is the only purpose of a government. Other purposes given to it from time to time (to serve God, the state's citizens, the nation etc.) are given to it as a result of politics. All of them follow the necessary, but tacit, assumption that a government already controls a state—how else could all these grand purposes be achieved? These are therefore after-the-fact purposes, not the actual purpose of the Being, the organisation that is government. Its purpose, its *raison d'être*, is to control the state.

4. How did governments acquire this purpose? *

Although today governments (just the same as any other organisation) benefit from written constituting documents, this has not always been the case. Today the purpose of governments is written down in constitutions, but constitutions came to be only recently in human history. Governments (chieftains, kings, emperors, governing councils, etc.) existed long before them, presumably since the beginning of humanity. How then, did governments materialise in the

408. See Chap. 2, par. 6.

409. See Chap. 2, par. 7.

410. See Chap. 2, par. 11.

analogue world and acquire this purpose so early in history?

5. How did governments come to be? *

Governments, in the form of chieftains or heads of (larger or smaller) families or governing councils, existed and were controlling their states (basically, extended families or clans) long before writing was invented. Why did governments exist at such an early stage? How did they come to be? Are they, like the state, natural to humans?

Governments came to be because the state, which was formed immediately when two humans named themselves and started talking to each other, is itself a dataset (a Being, in fact an organisation), and all datasets are subject to control by a Being. There is no dataset, Thing or Being, in the analogue or the digital world that is not under the control of a Being.[411]

Therefore, once a state was formed a Being immediately controlled it, in line with that Being's need and opportunity.[412] It was that Being that formed the first government, establishing a relationship between a state and its government that has never since ended (writing, once invented, merely formalised the relationship).

6.*

It is impossible to say how (or much less, why) that particular Being became chieftain, king or ruler over the first state. It is possible that decisions (most importantly, what to call themselves, i.e. what to call their state) were made by the stronger or the cleverer or the older individual in the state, or, perhaps, collectively. Whatever the case may be, that Being (regardless of whether it was an organisation of one person or one made up of multiple individuals) became the government of that state.

411. See Chap. 6, par. 3.

412. See Chap. 5.

Two things are important to note, however. First, that decision-making was internal, within the state. The naming of the state (and of its individuals) was performed internally, within that state, and not externally, by other states (as, for example, is the case today with humans naming dogs[413]). This self-naming is the result of the self-consciousness acquired by humans, which led to the formation of the state as the only natural way to warrant it (their self-consciousness).

The second point of note is the fact of the decision-making itself. A decision was made by a Being and it was applied within the state. Decisions are, of course, the norm among all pack animals, and made by their leader, but these are sustenance-relevant. In this case, the decision made about the name of the state (and thus the name of each of its citizens), other than revealing self-consciousness, went much further—it initiated a decision-making relationship (that was unavoidably hierarchical[414]) that continues to this day.

7. Governments are natural to humans

The creation of governments therefore immediately followed the formation of states, as a natural result of their (the states') existence. In this sense governments are themselves natural to humans: there can be no state without a government.[415]

8. Controlling the state

What does it mean, that the government controls the state? It means that the government has the ability to allow or prohibit processing operations both on the state and by the state.[416]

413. See Chap. 8, par. 7.

414. On hierarchy as an organisational system natural to humans, see note 6/7/1.

415. Anarchy is, of course, a kind of government, not of state.

416. But the government cannot destroy the state; hence it has no property rights over it (see Chap. 24, par. 1).

The former means that the government has the ability to control processing operations by others (other Beings) on the information platform that is the state. This it does by basically prohibiting (i.e. monitoring) all of these operations to the best of its ability, securing exclusive control over the information processing carried out in a state for itself.[417]

The latter means that the government can allow or prohibit any processing operation by the information platform that is the state, regardless of the fact that the state is natural to its citizens and necessary for them to live a meaningful life. Moments of both inhuman atrocities and of exemplary humanism throughout history are the result of governments and their decisions (i.e. of politics), not of the state.

9.

The state has no specific purpose[418]—and the government does not offer it one. It is easy to confuse the decisions of the government with setting the purpose of the state. The government, because it controls the state, may decide to set any purpose for the state's processing, that is, for the information processing carried out by it.[419] This does not, however, make these purposes the purpose of the state. The state preceded the government and itself has no purpose—or, at least, not a specific one.

In fact, the government, as a Being, has needs and it is these needs that it serves through the information processing made possible to it through control of the state.

10. On the digital world breaking down governments' control over the(-ir) states*

Because a government controls its state, it can allow or prohibit any processing operation on

417. See, however, par. 10, and also the analysis on sovereignty in Chap. 16, par. 4.

418. See Chap. 11, par. 7.

419. After all, this is the case for any organisation—except the state; see Chap. 2, par. 9.

its (the state's) platform.[420] This it does to the exclusion of any other Being. A government, having as its sole purpose the control of the state, zealously holds on to its privileged position; it does not share control with any other party. Although it can be claimed that this absolute and exclusive internal control by the government over its state was introduced only after the emergence of the Westphalian[421] state, this is not the case: no government (chieftain, king, city council or emperor) has historically ever accepted sharing control of its state with anyone. Simply put, a government does not, and will not, share control of its state—not willingly,[422] at least.

How is such control attained in practice? Myriad information processing operations take place, both on the information platform that is the state and by the state itself—how can a government monitor and control all of them?[423]

In essence, until the advent of the digital world, control was achieved factually, in practice.[424] Until only a few decades ago, all information processing carried out by a state's citizens was performed locally, on the information platform that is their state. Individuals created families, studied, worked and transacted within closed, physical state borders. Although travel or relocation (for shorter or longer periods) was possible, there was in fact no way for anyone to transact across borders without their state's involvement, and thus the control of its government, either in the form of products physically crossing borders with the relevant paperwork and paying import/export taxes, or individuals crossing them using passports, visas and other travel documents. Challenges to this process have certainly occurred throughout human history (e.g. from religious organisations, company-states etc.), however none have survived the clash with the government. This was as true in the distant past as it was until a few decades ago, when the digital world (in essence, the Internet) emerged.

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420. See par. 8.

421. See note 16/1/3.

422. Cases of state succession are meant here (see Chap. 15), rather than cases of internal political strife that might lead to replacement of the government by another.

423. Total control is impossible anyway (see Chap. 6, par. 2)—it is an unreachable and unattainable aim of government (see Chap. 16, par. 5).

424. See also Chap. 17, par. 5.

Governments were therefore able to control most[425] processing operations on the information platform that is the(-ir) state, because the state was a necessary party to all information processing carried out by its citizens. In other words, the state knew everything (was omnipresent) and the government, through its control of the state, was able to control everything (was omnipotent[426]).

Governments were therefore able to provide security and protect the rights of their citizens because they controlled their information flows. They basically controlled the flow of money and people through control of the relevant information—and used this control to serve any purpose they wished. Governments could impose internal order and undertake large-scale projects by using this information and could protect themselves from external enemies by being able to mobilise resources (people and material) over which they had control.

11. A beginning-of-time model fundamentally and irreversibly eroded: Leviathan's demise*

The digital world today has eroded this age-old model by removing exclusive control of information from the reach of the state. Now individuals (who have become users[427]) transact over online platforms, bypassing the mandatory state controls (borders, customs etc.) of the past. They study online and acquire certificates from organisations that are not necessarily nationally accredited or supervised. They create cross-national communities and exchange information or carry out common projects without any state involvement. They have direct access to information generated outside their countries' borders, completely unmonitored by their states. Governments that had previously comfortably controlled the flow of the personal information of their citizens through control of the state now face competition from private

425. On the true meaning of control see Chap. 6, par. 2; specifically, then, the government controlled the majority of the attributes of Beings or Things on the information platform that was its state.

426. The state could not be omnipotent, because it has no will of its own, see also Chap. 16, par. 3.

427. See Chap. 17, par. 10.

online platforms (which are controlled by and form the territory of competing states[428]). The age-old, beginning-of-time model of government control over the (its) state, and the state's control over its citizens, is being fundamentally challenged.

A brief examination of the frontispiece in Hobbes's *Leviathan* is revealing for the purposes of this argument. In it, a giant crowned figure is seen emerging from the landscape, towering high above the ground and clutching a sword and a crosier, beneath a quote from the Book of Job: '*Non est potestas Super Terram quae Comparetur ei*'.[429] The torso and arms of the giant are composed of over 300 people all facing inwards, away from the viewer. The giant is intended to represent the state, composed of its citizens. It provides security to them under social contract theory. How is it able to do that? Tellingly, by staying above the landscape, by seeing (and knowing) all, by exercising control over it.

However, the emergence of the digital world has changed everything—it is, in fact, threatening to drown the Leviathan, to bring it to its knees. The artist has decided that none of the people who comprise the giant should face the viewer; rather they all face the state. It is exactly this crucial detail that has fundamentally changed: today individuals have (individual, user[430]) faces, and are looking outwards, to the whole wide world, which has suddenly been opened up to each one of us, for us to use without the need to relocate, in an unprecedented twist in human history.

428. See Chap. 17, par. 12.

429. 'There is no power on earth to be compared to him.'

430. See Chap. 17, par. 11.

12.1. The political system

'For the constitution of a state is in a sense the way it lives.'

Aristotle

***Synopsis**: The political system is the set of rules applied by the government while it is controlling the state (1-2); Two basic questions: who and how (3); Morality in the system (4-5); The response to the who: monarchy, oligarchy or democracy (6); The response to the how: the tacit assumption behind monarchy, oligarchy and democracy (7-8); The most basic assumption of all: the analogue world (9).*

1.*

The political system is the set of rules applied by the government while it is controlling the state. It is the government's rules of processing specifically for the state, that is, the way in which the government exercises its control over the state.

Because the question of how a Being exercises control over a dataset (regardless of whether in a haphazard or a rules-based way) is beyond the scope of this analysis,[431] here only the fact is noted that rules[432] on how governments control the state do exist.

Why is this fact important? Why should these processing rules be exceptional, of special interest? Why should they have a specific name, after all? Are they not similar to any other rules in place when a Being is controlling a dataset (e.g. the owner of a house or a company), which, as noted, are of no concern here?

It is the importance of the dataset concerned, that is, the state, that sets these rules apart. In other words, this set of rules (the political system) determines how the information platform

431. See Chap. 6, par. 6.

432. This does not mean that the rules preceded the actual exercise of control, i.e. chieftains and kings (and, presumably, democracies) existed long before Plato categorised them.

that is the state functions in practice each time—how it runs, that is, what processing operations are allowed on it and by it. In other words, the political system is, basically, the state system, if one replaces the word 'polis' with the word 'state', as per the former's original use.[433] (Similarly, in computing terms a political system can be visualised as an operating system: it includes, and provides, the rules under which any information processing happens.)

While the government, as a Being, interacts with other Beings (significantly, the citizens on the same platform, that of their state) and Things as well, it is only this specific relationship, the relationship of a government with its state, that is examined here.

2.*

Although political systems were applied as soon as governments (and thus the state) emerged,[434] their forms varied widely, challenging categorisations even as broad as Plato's distinction among monarchies, oligarchies and democracies.[435] How else can the hybrid systems of modern constitutional monarchies, the presidential system, or representative democracies be interpreted?

In other words, writing (and political philosophy) merely formalised (and continue to do so—in modern times, in constitutions[436]) what was, and is, practiced in the analogue world by governments in order to control the(-ir) states according to need and opportunity.[437]

3. Two basic questions*

The government may be the Being controlling the (dataset, the information platform that is the)

433. See note 0/1/7. On the use of 'system' in this analysis, see Chap. 1, par. 4.

434. See Chap. 12, par. 7.

435. The rule of one, of a few or of all, thus covering any conceivable alternative in the analogue world.

436. See also Chap. 22, par. 3.

437. See Chap. 5.

state, but nothing has been said so far about who (which Being(s)) control(s) the government. Because it is itself an organisation, it is subject to control by the humans that participate in or created it.[438] This can be anything from a single person to a large group of individuals (rotating into and out of roles of control or not)—broadly aligning with the concepts of monarchy, oligarchy and democracy.

The humans controlling the government, as individuals, need to augment their information processing through the organisation they control. Although in the case of the government, because it controls the state, the advantages for 'its' individuals are plain for everyone to see,[439] the way in which it accomplishes this matters (because it is human nature to compare[440]) as this ultimately affects how a state is run by its government.

Political systems, therefore, basically address two questions: the question of *who* (who controls the government, i.e. who participates in it), and the question of *how* (how is control over the state exercised)—with political philosophy frequently adding a *should* to the mix, a mistake that will nevertheless be avoided here.

Obviously, these are not the only questions a political system needs to address. Because it formalises the most complex relationship on the information platform that is the state (that of the state and its government), a wide array of issues may, and do, occur. The list is long. For example, with platform rights being a given,[441] a political system needs to address the question of whether platform rights are to be respected and, if so, in what manner.

4. Morality in the system

438. See Chap. 2, par. 7.

439. Therefore, the question of whether to keep or dissolve a government has never been an issue, as is the case for any other organisation, see Chap. 2, par. 7.

440. See Chap. 5.1, par. 9.

441. See Chap. 22, par. 5.

Political systems are inherently and unavoidably moral;[442] they reflect and are the result of a certain morality because they include a choice (in terms of which processing is allowed and which is prohibited).

As such, the ways in which any political system provides the answers to the above two basic questions (as well as to related questions, e.g. who drafts the regulations, and how and why), with the exception of the few observations below, are of no concern here.

5.

Although a political system should be considered natural,[443] the actual ways in which it responds on any given occasion to the questions of who and how[444] are anything but. All political systems are invented. They are the product of the human intellect, of human ideas and thoughts. While the existence of a political system is necessary for any state, the ways in which it responds to the above two questions are not predetermined, and nor do such systems make linear progress towards any preordained end—but are simply the result of need and opportunity.

Having said that, while addressing the questions of who and how, any political system necessarily takes into account the basics of an informational approach, which comprises the following elements:

- each and every individual (i.e. each one of a state's citizens) needs to augment its information processing;[445]
- governments are Beings that need 'their' individuals to augment their information processing through them;[446]

442. On whether morality can be avoided altogether see Chap. 23, par. 3.

443. See par. 2.

444. See par. 3.

445. See Chap. 5.1.

446. See Chap. 2, par. 7.

- states are omnipresent, that is, they know everything because they are the necessary party to an(y) information processing on their platform,[447] but they have no purpose[448] (or rather any purpose ascribed to a state is artificially given to it by its government); and
- states need their citizens to augment their information processing.[449]

The way the above are taken into account (basically, whether preference is given to the individuals' or to the government's needs) determines the content of a political system.

An important point concerns the natural conflict between the needs of a government and those of its state's citizens, which can never be reconciled.[450]

6. The response to the *who*: monarchy, oligarchy or democracy

A political system's way of dealing with the question of who comprises the government has given us the distinction between monarchy (one person), oligarchy (a few people) and democracy (all the people). Little has changed since Plato put these distinctions in writing (himself classifying what was already known to humans by that time)—but, of course, in reality, in the analogue world at least, no other conceivable options are possible.

7. The response to the *how*: the tacit assumption behind monarchy, oligarchy and democracy*

A political system's way of responding to the *how* of government is not as straightforward as it is to the *who* (most likely because it is not as visible, and thus not as easy to confirm). A tacit

447. See Chap. 7, par. 3.

448. See Chap. 11, par. 7.

449. See Chap. 10.

450. See also pars. 7 and 8.

assumption is made instead: whichever Being controls the government, it will use the state to serve its need to augment its information processing to the detriment of that state's citizens, given that information in the analogue world is finite. In the case of a monarchy this control is exercised by a single individual (the king or queen); in oligarchies by the (limited number of) individuals involved; and, in the case of democracy, by those in government at any given time.

This assumption has been vindicated time and again throughout human history. Although it may be easy to see in the various cases of monarchies and oligarchies (less so in constitutional monarchies), it is no less true in cases of democracies: although anyone could potentially participate in government, the fact remains that few actually do.

8.

Throughout human history a number of political systems have been devised to address the natural conflict between the government and its citizens, among which should be counted constitutional monarchies, systems following natural rights theories or theories of power separation, and systems of 'checks and balances', as well as political liberalism or individualism.[451] (On the other hand, political systems of communism/socialism or fascism, or those based on religion, have felt no need to apply any one of these models because they are based on ascribing a purpose to the state, to the government and, thus, also to the people; in a single-purpose state (a unity) no conflict is imaginable—or tolerated.)

9. The most basic assumption of all: the analogue world

Notwithstanding all of the above assumptions, theories and findings formulated over the thousands of years of (recorded) human history, what is important to note is that the most fundamental underlying assumption is that the political system is designed for, and will operate in, the analogue world. The digital world having a history of only a few decades, every system or thought humans have ever had about governance has been in relation to the analogue world.

451. On its inherent conundrum, see Chap. 26, par. 5.

This includes not only those concepts relevant to the state and governance, such as borders and locality,[452] but also, more importantly, the idea that information is finite. In other words, whatever objectives these political systems had, be they liberal or not, and whatever premises they were built on, there was always the assumption that information is finite, and that therefore one's (e.g. the government's) information processing increase would lead to another's (in the same example, its state's citizens') decrease.

The creation of the digital world has overturned everything that the political systems of today are built on. Indicatively, information is infinite in the digital world;[453] digital (state) territories are eroding traditional notions of state sovereignty;[454] and a new kind of artificial Being, the computer program (on par with language and money), has entered the scene.[455]

With all humans' basic assumptions overthrown, the digital world is expected to put everything, all the political systems created and political thoughts had by humans so far, to the test. Everything will have to be re-thought and reassessed in view of the new reality.

452. See Chap. 17, par. 4.

453. See Chap. 1, par. 16.

454. See Chap. 17, par. 8.

455. See Chap. 2, par. 12.

13. State justification

'This part of Philosophy is in the same situation as the public roads, on which all men travel, and go to and fro, and some are enjoying a pleasant stroll and others are quarrelling, but they make no progress. The single reason for this situation seems to be that none of those who have dealt with this subject have employed a suitable starting point from which to teach it.'

Thomas Hobbes

***Synopsis**: No particular justification necessary: states are natural to humans (1); Social Contract theory (2); Against social contract theory (3); Religion (4); Other state justification theories (5); Utilitarianism (6); Hegel's Idealism (7); Marxism (8); The welfare state (9); State malaise (10); The digital world (11).*

1.*

Because it is argued that states are natural to humans, no further justification for states is necessary: states were formed naturally, automatically and immediately at the moment when two humans gained self-consciousness and started to communicate with each other using language.[456]

There is some merit, however, in examining a bit more closely (without daring to claim comprehensiveness) other state justification theories, which, after all, form the norm throughout human recorded history, in order to demonstrate how the approach advocated here differs from them and what advantages can be drawn from it (particularly in the digital world).

2. Social contract theory*

Social contract theory has been the dominant state theory for the past 2500 years, ever since Plato was the first to put it in writing. At its barest, it claims that the state is the result of an

456. See Chap. 8, par. 1.

agreement among humans to form states in order to achieve a purpose (of some sort). Thus, because the agreement is artificial, a construct achieved by a group of humans, the state, it is argued, is artificial too.

Plato's epigones[457] never really got away from the 'agreement' idea. In essence, they either popularised and expanded, or viewed from a different angle the same, basic idea, namely that the state is an artificial association of humans, a group of humans deliberately formed on the basis of an underlying agreement among them for a particular reason and purpose.

3. Against social contract theory*

Social contract theory is unsatisfactory simply because, assuming an agreement or a contract is in place (an idea that is not-so-easy to digest for many humans), if states are artificial constructions of humans, then one is obliged to examine their merits. Are they good enough? The best possible? For what purpose and under which metric? Could there, perhaps, be another, better, alternative? At the end of the day, if we are building (and building on) (theoretical) constructions that are in any way artificial, anything goes.

It is essentially at this exact point and for this specific reason, that the *should* entered political philosophy, never to leave it since. It is the artificiality of the state (according to social contract theorists) that explains how political philosophy, as soon as it was born, was basically transformed into political theory.[458]

4. Religion*

457. These include almost every political philosopher ever since, including Aristotle, Cicero, St Augustine, Hobbes, Spinoza, Locke, Rousseau, Kant, Hegel, Schopenhauer, Nietzsche, Marx—practically everybody up until the days of Rawls, as well as, science-specific experts such as Weber, Kelsen and Hayek, but also empiricists such as Hume and Bentham. Regarding Aristotle, although he (alone) claimed that the state is natural to humans, he connected it with a purpose anyway (to secure the *good life*).
458. See note 0/1/3.

Those not satisfied with a human-made, artificial explanation for the state may always find recourse to religion (in which, as a matter of faith, one believes in or does not). God (or gods) is the alternative explanation of state creation throughout human history. From the religious perspective, states originated not from humans but were God's will, they were created by God.

5. Other state justification theories

The above two theories have been the dominant state justification theories throughout human recorded history. Other alternatives have emerged from time to time: while they have never excluded the idea of 'agreement', and thus of the artificiality of the state, they have all approached it from different angles (rather than the purely contractarian). At any event, all of them have been heavily criticised and none have won widespread acceptance—outside, that is, a larger or smaller circle of people who found them useful for their political agendas of utilitarianism, idealism, and Marxism.

6. Utilitarianism*

Utilitarian philosophers (Bentham, Mill, and, to a certain extent, Hume), perhaps trying to refute the social contract theory of their (immediate) predecessors (Hobbes and Locke), suggested that states are natural to humans on account of a habit of obedience. According to Bentham, 'When a number of persons (whom we may style subjects) are supposed to be in the habit of paying obedience to a person, or an assemblage of persons, of a known and certain description (whom we may call governor or governors) such persons altogether (subjects and governors) are said to be in a state of political society.' Notwithstanding that what is described here is the government and not the state, apparently this habit of obedience will continue for as long as the government maximises the greatest happiness of the greatest number—essentially placing agreement on the basis of the relationship, and thus not moving substantially away from social contract theory.

7. Hegel's idealism*

Hegel, adopting a basically Aristotelian viewpoint, suggested that the state is natural and not artificial, claiming that it is the 'rational destiny of human beings to live within a state'. The state is 'the ethical order in which individuals realize their capacities and potentialities.'

8. Marxism*

Marxism (Marx himself admittedly having given relatively little attention to the state) has either followed the Hegelian approach of identification between individuals and their states, ideally merging the two (an approach not foreign to Rousseau, either), or has treated the state as an 'apparatus', merely 'a committee which manages the common business of the bourgeoisie'.

In any event, even one of the few systematic and structured attempts to examine the state under the Marxist toolset has produced few results: (unavoidably) focusing on the functions of the state (and thinking in terms of an Asiatic-Babylonian state, an ancient Greek state, a feudal state and a capitalist state), it concludes that 'there is no general theory of the State because there can never be one'. For Marxists, the state remains an 'undecipherable mystery'.

9. The welfare state*

The welfare state is not a state justification theory but rather a purpose-of-the-state theory, that has, however, gained traction recently by insisting on increased public spending for whatever is (arbitrarily and high-handedly) perceived each time to be needed for the welfare of a state's citizens.

10. State malaise*

The above unsatisfactory theories to justify the existence of something as basic and evident in

human lives as the state are responsible for a certain malaise that has been felt by humans vis-à-vis their states for the past 2500 years. This malaise has left individuals' minds wanting—and wondering (if not, wandering): if the state is something unnatural to humans, something artificially constructed by them, perhaps there are other (better) alternatives? What if there is something out there that is better than living in states for us, patiently waiting to be invented in some distant future? What if our ancestors were simply wrong to have chosen states as their primary form of organisation?

State malaise is further aggravated by the pitting of individuals against their states,[459] as is, after all, bound to happen whenever a contract, and a contractual relationship, is involved (the confusion of the state with its government,[460] although not caused by social contract theory *per se*, has not helped, either).

By contrast, if states are finally acknowledged as being natural to humans, because they are the only natural individualisation and identification mechanism that turns humans into individuals and makes possible a meaningful life, then our efforts can finally be focused at understanding, not questioning them (releasing, in this way, political philosophy from the shackles of the 'should').

11. The digital world*

Current state justification theories are not only unsatisfactory in the analogue world but are also unsuitable for the digital one too. If such fundamental matters as what the state is and why it exists have not been resolved in the analogue world, how can they apply or sound even remotely convincing in the digital? How can they solve the problems of non-territoriality, loss of individual identity or challenged sovereignty?

For the moment state justification remains jumbled in the minds of humans as a combination

459. See also Chap. 26, par. 8.

460. See Chap. 12, par. 1 (but also Chap. 12.1, par. 5).

of social contract theory,[461] realistic findings ('there is no other alternative to living in states throughout human history anyway'), and a pragmatic way to manage current affairs ('states are the only mechanisms available to humans to manage major projects such as mitigating climate change, building large infrastructures or addressing inflation').

While the analogue world may have been served well by the above combination (excepting state malaise), the digital world will put all these theories to the test by challenging (if not reversing) all their basic assumptions. For example, if humans have allegedly agreed to a social contract in the analogue world because they can do little else to avoid a state of nature, does this extend to the digital world too? Significantly, in the digital world there is no state of nature, because it is artificial, made by humans, and thus, unlike the analogue one, entirely controllable.[462]

Or, alternatively, does Reason (in the sense employed by utilitarianism and others), as assumed in the analogue world, remain the same in the digital world too, even if all assumptions (i.e. about individuality, sovereignty, and, most importantly, the finite nature of information) are overturned?

Inevitably, all of the above state justification theories, which have only barely held their ground until today on the basis more of pragmatic than theoretically sound arguments, will crumble under the challenge posed by the digital world.

461. Or Marxist (Hegelian) theory, depending on which part of the planet one lives in.
462. See Chap. 1, par. 17.

14. State legitimacy

***Synopsis**: States create, store and disseminate information on their citizens (1); Creation of information (2); Storage and dissemination of information (3); Storage of information (4); Dissemination of information (5-6); State legitimacy: A state is legitimate when it is able to create, store and disseminate information on its citizens (7-8); Is control over these types of processing necessary? (9); States do not engage in this type of information processing consciously (10); Failed states (11); Does legitimacy give rise to platform rights? (12);*

1.

States create, store and disseminate information on their citizens.[463]

2. Creation of information

As has been established,[464] at the time of his or her birth each human acquires a name and a citizenship. This makes that human an individual.[465] The creation of new personal information jointly by that individual and its state continues for the term of that individual's life, for as long as a human remains a Being.

3. Storage and dissemination of information

Each of the other two types of processing carried out by states on their citizens is also of paramount importance. Although they follow the creation of personal information, they are no less important for the individuals concerned. To carry out a meaningful life,[466] individuals need to have their personal information, first, safely stored for the rest of their lives and, second,

463. See Chap. 7, par. 6.

464. See Chap. 7, pars. 4 and 5.

465. See Chap. 8.

466. See Chap. 7, par. 3.

transmittable at will to third parties by their states.

4. Storage of information*

Individuals need to have their personal information stored securely by their state for the duration of their lives, that is, for as long as they remain Beings (and for a short period thereafter, even though they will have become Things, to make transactions by other individuals possible).

Individuals need this information to be consistent and not tampered with, in order to enable them to transact with any third party over the course of their lives. This information also needs to be kept securely to ensure their safety: if the records of the name or the citizenship of any individual are lost or altered without the individual's agreement then that individual would be in immediate, physical peril. Although storage of their personal information can be achieved individually (i.e. one can keep proof of identity in a safe location at home), such storage is insufficient because individual safekeeping is contestable and, significantly, information kept in this manner is perishable (as a result of natural disaster, war etc.).

5. Dissemination of information*

Individuals need their personal information, as created on them by their states, to be transmittable to third parties at their will, with the intermediation of their state granting validity to the transmission. Trust in human transactions is tacitly or explicitly provided by the state through validation (or even direct transmission) of the personal information concerned. Any contract between individuals implies that these individuals exist within a state. Sometimes state-issued unique identifiers (e.g., identity card or passport numbers, tax numbers, etc.) are needed too.

Unless personal information is authoritatively transmitted by the state, any transaction among individuals is impossible. It is not, therefore, simply a matter of contract execution, but of the

existence of contracts at all.

This transmission is formal, at an individual's request. In this way it differs from the tacit, implied transmission seen in Chapter 7, that John is actually John and Mary is Mary. The latter is implied in any human communication and makes states natural to humans. The former is a processing operation, invoked each time by the citizens concerned. It may simply involve transmission of name and citizenship (for the simplest of transactions), but it usually goes far beyond this, to include any and all subsequently enriched personal information of the individual concerned (family status, health, education, employment etc.).

6.

Any alteration of the personal information that states create, store and disseminate on their citizens is impossible—at least from the citizens' end: their bond with their states is an unbreakable one.[467] They can, of course, ask for changes, even changing their name and their citizenship; however their original, at birth information will always be there, it will never go away. Nor can an individual be selective—for example, they cannot choose to create information but not to store it: all three processing operations are natural and necessary to them.

On the part of the state, any alteration of that personal information or any inability to carry out (any one of) these information processing operations is similarly impossible—or, at least, it is so important to individuals as to constitute a specific threshold, that of state legitimacy.

7. State legitimacy*

It is the ability to execute all these three processing operations (creation, storage and dissemination of information) that makes any particular state legitimate to its citizens. A state is legitimate when it is able to create, store and disseminate information on its citizens.

467. See Chap. 8, par. 6.

As long as a state is able to provide its citizens with a name and a citizenship at birth, and to subsequently store safely and transmit authoritatively this and any other enhanced co-created personal information whenever and to whomever required by its citizens, then legitimacy is warranted for the state concerned. By contrast, if this ceases to be the case for any one of these processing operations then legitimacy is lost (or was never achieved in the first place, in the case of new states).

State legitimacy is a fact, a concrete material finding that exists or does not exist in the analogue (and the digital) world.[468] A state is either legitimate for its citizens, because it carries out these three types of information processing, or it is not legitimate because it does not do so. State legitimacy is not a principle within any political theory connected to decision-making by a government, nor is it the purpose of a state or a justification for any subsequent action by a government or any other actor.

8.

These three processing operations can be carried out only by states, at least in the analogue world. This is the situation with which humans have lived and been used to since the time they gained self-consciousness and started talking to each other.

However, the situation in the digital world today remains contested.[469] To the extent that humans are the users of the digital world within the digital territories of states,[470] states retain their monopoly. The role that the break-up of territoriality, as well as that of artificial Beings, will play remains to be seen.[471]

468. See also par. 10.

469. See also Chap. 7.1, par. 6.

470. See Chap. 17, pars. 11 and 12.

471. See Chap. 17, pars. 9 and 13.

9. Is control over these types of processing necessary? *

Control is the ability to allow or prohibit a processing operation.[472] Is it possible that a state carries out the above three types of processing operation but does not control them, that is, it carries them out at the instructions of another state?[473]

In most of the ancient world (with the notable exception of city-states and isolated states) this was actually the case. For example, the state of Nazareth existed within the Jewish Kingdom that existed under the Roman Empire. The idea of state sovereignty[474] came quite late on in human history, through the concept of the modern Westphalian[475] state (and this is perhaps the determining difference between modern and 'old' states in state theory today[476]).

Control of these three processing operations is therefore not necessary to warrant a state's legitimacy. A state may continue to carry out these operations for its citizens without it (specifically, its government) having control over them, that is, another state may be able to affect them.[477]

10.

States do not engage in this type of information processing consciously. A consciousness is not assumed for them—a state is not a person.[478]

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472. See Chap. 6, par. 1.

473. Specifically, of another government, the state having no (conscious) will of its own (see Chap. 11, par. 8).

474. Meaning of government sovereignty; the state is always sovereign on the information platform that it, after all, created; see Chap. 16 par. 2 and note 16/2/1.

475. See note 16/1/3.

476. See, however, Chap. 8, par. 3.

477. See also note 16/2/1.

478. See Chap. 11, pars. 11 and 8.

Of course, a state, because it is a Being, will process information because it can. While it can (and it does) engage in any other type of information processing, these three specific processing operations are the natural[479] result of personal information creation for its citizens from the moment they are given names at their birth and thereafter. They are not the result of some conscious decision reached after what might be perceived as rational thinking by the state.

A (or any) government's decision to affect these three processing operations in any manner (for example, by giving specific names to specific individuals (e.g. to slaves), or by prohibiting the transmission of information by certain individuals to certain others) ought not be confused with the processing operations which are carried out anyway, automatically and in the background, by the information platform that is the state.

11. Failed states

Can a state be legitimate to its citizens but not exist in the analogue world? This would appear to be an absurdity; a state is a Being and, if it is legitimate, processing is carried out by it and thus it exists (as a Being, not a Thing) in the analogue world.[480]

It may be the case, though, that other states do not recognise a state, that is, they prohibit the dissemination of information on its citizens to their own, they refuse to process its information.[481] In this case, a state may be legitimate with regard to its citizens but fail them in practice, that is, it seriously reduces its citizens opportunities to augment their information processing compared to the opportunities afforded to the citizens of other contemporary states on the planet. Whether this would lead to the state crumbling from within cannot be determined (and certainly such a state would not be a 'failed state', which is an entirely political, and thus arbitrary, term).

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479. Meaning of logical, see note 1/1/1 (therefore, in this case, what is 'natural' is not based on need, see Chap. 5, par. 5).

480. See also par. 7.

481. Because states, with the exception of the EU, are still living in a state of nature, see Chap. 19, pars. 2 and 7.

12. Does legitimacy give rise to platform rights?

If the state carries out these three information processing operations (creation, storage and dissemination) as the natural result of personal information creation for its citizens,[482] and states are, themselves, natural to humans,[483] do these three types of processing give rise to any platform rights?[484]

In essence, they do—to the platform rights of equality, liberty and security.[485] The creation of personal information by the state means that all humans are born equal in the eyes of the state (because all humans are given a name and a citizenship by it). Similarly, because there are no intermediaries in the individualisation relationship between a state and its citizens, all humans are born at liberty (from other humans). This information also needs to remain secure, at least for the duration of their lives (security of information). All of the above are logical[486] inferences of the finding that states are natural information platforms for their citizens.

At the same time, however, the above does not imply that individuals are the same as their information, the sum of the information created, stored and disseminated on the information platform that are their states.[487] Although this may be the case in the digital world, it is certainly not so in the analogue.

482. See par. 10.

483. See Chap. 8.

484. See Chap. 22, par. 5.

485. See Chap. 22, pars. 6–9.

486. See note 1/1/1.

487. See, however, Chap. 1, par. 1.

15. State succession

'The history of art is sometimes described as the story of a succession of various styles.'

E. H. Gombrich

***Synopsis**: States are temporal (1-2); Never a void (3); How does a state die? (4); What happens to a state after it dies? (5); State succession (6).*

1.*

No state has endured the test of time. Very few empires reached the thousand-year threshold; most city-states lasted far less time. The average life of a state does not exceed a few hundred years. Only a handful of modern states have a history longer than that.

States are, therefore, temporal. They may outlast several human terms of life, but that does not mean that an end is never to be expected (as preposterous as this idea may seem to citizens currently living in relatively peaceful, or powerful, states). Each and every state has its own term of life.

2.*

There is no set way in which a state dies, any more than there is a set way in which a state is born.

After states took the form of administrative mechanisms in the analogue world[488] they succeeded one another over time, steadily but surely occupying every corner of the planet.

488. See Chap. 9.

In essence, humans' recorded history can be read as the succession of states. Tribes and extended families formed larger, more established communities; empires swallowed up kingdoms or city-states; and kingdoms or city-states emerged from disintegrating empires, in a timeline which appears to continue indefinitely.[489]

Violence, while present in most such changes, is not always necessary.

3. Never a void*

What is important to note, however, is that because states are natural to humans, immediately when one ceases to exist another replaces it. In other words, there is never a void, humans were never and can never be found out of a state, in limbo.

Consequently, a constitution or any other formal method of forming a state (e.g. the appointment of a king, an emperor etc.) is an act of succession, not an act of creation. Citizens of the new state were already citizens of another state immediately before the new constitution was signed or the new king crowned. States are natural to humans, and no human can ever be, or ever has been, stateless.

4. How does a state die? *

What is meant by saying that a state no longer exists? When it comes to biological Beings one can define the time (and cause) of death. The same is true for other organisations (corporations, state agencies etc.). But how does a state die?

As has been established,[490] a state is no longer legitimate when it does not perform the three information processing operations expected of it (the creation, storage and dissemination of the

489. Or a cycle, depending on one's personal views.

490. In Chap. 14.

personal information of its citizens). A state can be legitimate but not sovereign, in the sense that it performs these three types of processing but has no control over them, that is, another state has the control.[491] But does either of the above cases (loss of legitimacy or loss of sovereignty) mean that a state is dead, that it no longer exists?

Neither loss of legitimacy nor of sovereignty[492] is the same as state death. A state may no longer be legitimate (let alone, sovereign), but it may continue to function, that is, to execute the three processing operations necessary for its citizens.

A state dies when it is devoid of citizens.[493] States are natural to humans, being necessary for humans to augment their information processing. If no individuals need their state in order to augment their information processing, then that state ceases to exist. History has given us many examples of possible variations of state existence (subordinate states, vassal states, due-paying states, isolated states etc.), but never a state without citizens (which, in itself, demonstrates that states are natural to humans).

By the same token, a state may continue to exist if it has citizens, even if (temporarily) it cannot process (in fact, exercise control over) their personal data—that is, a state may have a people but not a territory.[494]

5. What happens to a state after it dies?

After a state dies, as is the case for any other Being, it becomes a Thing:[495] information about it can be processed by other Beings, but it can no longer process information itself.

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491. See Chap. 14, par. 9.

492. Indeed, as legitimacy can exist without sovereignty, this is even less of an issue.

493. See also Chap. 10, par. 1.

494. See Chap. 17, par. 4. On states creating the information processing environment necessary for their citizens to live in, see Chap. 11, par. 3.

495. See Chap. 2, par. 3.

6. State succession*

If this is how states die, and if succession is automatic because states are natural to humans, what exactly is it that is succeeded, or created anew each time?

The deed of succession, if any, is usually a technical legal document of procedural importance. What is important, however, from an informational perspective, is that the three types of processing operations confirming state legitimacy are assumed by the state's successor. In practice, a state succeeds another when the creation, storage and dissemination of its citizens' information is assumed by it.

At least two informational risks may arise from state succession. The first is that the state's files may be used to persecute the population. The second is that state records may be tampered with for some purpose (in order to prove a point, build a narrative etc.) by the successor state. Because establishing the facts can be an impossible task (the successor state may claim that it was the previous state that had falsified the records), this situation offers a useful illustration of the practical use of the platform right to security of information.[496]

496. See Chap. 22, par. 9 (and also Chap. 14, par. 12).

16. Sovereignty

'But it does not require much effort to see that a virtual and always present entity is exactly the opposite of what is needed for the collective to be assembled: if it's already there, the practical means to compose it are no longer traceable; if it's total, the practical means to totalize it are no longer visible; if it's virtual, the practical means to realize, visualize, and collect it have disappeared from view.'

Bruno Latour

***Synopsis**: Sovereignty means control (1); An empty word for the state (2-3); Who else could claim sovereignty? The government (4); Why would the government strive for sovereignty? (5-6); Sovereignty in the digital world (7).*

1. Sovereignty means control*

As has been established,[497] sovereignty means total control; in the context of a state, sovereignty means control over all information processing carried out within its territory.[498]

2.*

As also established, control is both external and material;[499] it is the concrete ability of a specific Being to allow or prohibit a specific processing operation by another. In addition, it is the state that creates the platform, the information processing environment necessary for its citizens to live a meaningful life.[500]

Consequently, by definition, the state is sovereign on its platform (on its territory[501]), that is, it

497. In Chap. 6, par. 2.

498. On state territory, see Chap. 17.

499. See Chap. 6, par. 1.

500. See Chaps. 11, par. 3 and 7, par. 3.

501. See Chap. 17, par. 2.

is able to allow or prohibit (any) processing on it by its citizens. How could it be otherwise? If it is the state that makes any information processing by its citizens possible, then how could it not, at the same time, be able to control it? If the state is the creator of the information platform on which we live, how could it not, by definition, control all of our processing on it?

From this point of view, sovereignty, meaning control over all information processing on the information platform that is the state, is an empty word, it has no meaning, because it is self-evident for the state—the mere existence of a state means that it is sovereign.[502]

3.

Of course, while the state is able to control any processing on its information platform, it will not of its own accord act upon this, because the state has no will[503] of its own. It is able to exercise control naturally, because it created the platform; it has no will (let alone a purpose) either to create the platform or to control the processing by any Being on it, but at the same time it cannot not do it—the state cannot avoid exercising control. Control over its information platform comes as the natural result of its creation.[504] It is not the result of any conscious action by the state.

The state has sovereignty over its platform, meaning that it can control all information processing on it, but this does not mean that it will actually act upon this control in any particular manner.

4. Who else could claim sovereignty? The government*

Of all other Beings within a state (at least in the analogue world), only the government, because

502. This does not, however, mean that another state (specifically, its government) cannot control the processing of that state; see Chap. 14, par. 9.

503. In the meaning of consciousness, see Chap. 11, par. 8.

504. See Chap. 6, par. 4.

it controls the state, could raise a sovereignty claim over all the information processing happening in a state's territory.

The government controls the state; it has the ability to allow or prohibit processing operations both on the state and by the state.[505] The former, in particular, means that the government has the ability to control the processing operations of others (other Beings) on the information platform that is the state. The state is always sovereign, because it is omnipresent, but it is up to the government to itself become sovereign,[506] that is, to control indirectly all information processing on the platform that is its state through its control over the state.

5. Why would the government strive for sovereignty? *

In essence, the government does not strive for sovereignty, at least not directly. The government (which is a Being) merely controls a dataset (in this case, the state); control over a dataset means control of its processing and of processing on it.

If an individual (another Being) exercises control over a Thing, for example, a table, it controls processing on that table (the individual's own processing, as well as the processing carried out by other Beings on it). Similarly, if that same individual controls another Being (e.g. a corporation or a drone), it controls the processing done by the Being itself as well as that which is done on it: whatever processing is carried out by that corporation or that drone is also controlled by that same individual as the indirect result of its control of the corporation and the drone (which created the new information). By the same token, because the government controls the state, it controls the processing done by it and on it[507]—irrespective of the vast, immense scope of such processing.

Therefore it is not for its sake, in pursuit of sovereignty, that the government controls the

505. See Chap. 12, par. 8.

506. And, thus, omnipotent, because the government, unlike the state, has a will.

507. In principle, see par. 6.

state—control over the state is natural to the government, because the state (and the government) exists. Sovereignty (that is, the quest to control each and every processing operation happening on the information platform that is the state) comes as a natural result of the controlling nature of the relationship.[508]

6.*

However, we have seen that total control is impossible.[509] Myriad processing operations are possible on any dataset,[510] and any attempt by any single Being to (consciously[511]) control them all is inconceivable. A Being, or a Thing, cannot be totally controlled by another.

Consequently, if sovereignty is for the state an empty, meaningless word, for the government it is an (unreachable and unattainable) aim. Its control over the state can never be total. This does not, however, mean that the government will ever give up its efforts to achieve total control—on the contrary, it will increase its control over the state as much as possible.

Accordingly, because the state is what it is,[512] the government aims, but can never achieve, to control each and every processing operation by any Being on the information platform that is its state, with such control (as experienced by individuals and organisations, but also animals and artificial Beings) being the indirect result of its efforts above.

In practice, sovereignty for the government materialises on the information platform that is its state because the government controls the majority of its state's attributes, meaning the majority of the processing operations that take place on it.[513] It is in this way that the government

508. In the same manner that, on an individualised basis, it is sought after by any Being exercising control over another Being or a Thing, see Chap. 6, pars. 2 and 8.

509. See Chap. 6, par. 2.

510. Which remain finite in the analogue world; see, however, Chap. 1, par. 16 on the digital world.

511. Therefore, unlike the state, see par. 3.

512. See par. 2.

513. See Chap. 6, par. 2.

governs. Historically, every increase in the information processing capabilities of humans (i.e. citizens) has led to an analogous increase in the sovereignty exercised by the government on the information platform that was its state—at least, this was the case until the advent of the digital world.

7. Sovereignty in the digital world*

As seen previously, the digital world today, specifically in the form of contemporary, large and private online platforms, is fundamentally challenging the beginning-of-time model of government control over the state, and state control over its citizens.[514] However, it is the digital world itself that could ultimately give sovereignty renewed meaning.

Because the digital world is artificial, constructed following preset specifications, total control could theoretically be possible, embedded into the system. For example, in the analogue world a state, and more so a government, cannot control (unless with disproportionate effort) the action of one of their citizens grabbing an apple (regardless of for what purpose the apple is grabbed). However, in the digital world apple-grabbing (and its outcomes) must be predesigned and installed into the system as a potentiality to enable such an action to be possible. Otherwise it simply cannot occur. Purpose, and the means to achieve it, therefore have to be built into the system.[515]

In other words, in the digital world information processing is predetermined and thus controllable. It remains to be seen whether new, in the sense of unpredicted, processing can take place in it, or whether its users (humans and artificial Beings alike) will only be able to act in specific predetermined ways—whether new creation is possible within that which has been created already.

At the same time, in the digital world, in stark difference to the analogue, state territory is

514. See Chap. 12, par. 11.

515. See also Chap. 1, par. 17.

dynamic—it is the information processing environment in the digital world that has been created by that state's Beings.[516] Although appearing to be dominated, for the moment at least, by large online private platforms (in a way that draws parallels with the company states of the colonial era[517]), governments may in the future decide to stake their sovereignty claims more forcefully, particularly taking into account the transformation of (their) citizens into users.[518]

Sovereignty, then, will acquire a new meaning for states and governments alike. States may need to share their unique identification function, at least in the digital world. Governments may see the achievement of sovereignty move further away from their grasp. Or the exact opposite may prove to be the case: states may claim the digital world as they have the analogue world, with governments finally achieving sovereignty in the digital world because of its artificiality. Whatever the case may be, the concept of sovereignty, particularly within the context of the state, which has been the dominant preoccupation of humanity for the past few centuries, is bound to change fundamentally in the digital world, perhaps beyond recognition.

516. See Chap. 17, par. 11.

517. See Chap. 7.1, par. 5.

518. See Chaps. 17, par. 10, and 12, par. 11.

17. Territory and borders

'Whether you can observe a thing or not depends on the theory which you use. It is the theory which decides what can be observed.'

Albert Einstein

***Synopsis**: The territory of a state is its information processing environment (1-2); Territory in the analogue world (3); How state territoriality really works: site-specific locality is irrelevant (4); Moving around in the analogue world (5-7); Territory in the digital world (8-9); The link between control and location; the path from humans to individuals (and citizens) and to (today's) users (10); Users (instead of owners) (11); The digital territory of a state (12); What about artificial Beings? (13); Borders (14); Interoperability and data portability (15); State security and cybersecurity (16).*

1. The territory of a state is its information processing environment

The territory of a state is its information processing environment. It corresponds to those parts of the analogue and the digital worlds where information processing is controlled by the state, where the state is sovereign.[519]

Accordingly, a state's borders lie at those points in the analogue and the digital worlds where an information processing environment (i.e. a state) ends and other information processing environments (i.e. that of another state) begins, that is, where information processing environments meet.

2.

Territory is connected with sovereignty. As has been established,[520] sovereignty means control over all information processing carried out within a state's territory—within, therefore, that

519. See Chap. 16, pars. 2 and 3.

520. In Chap. 16, par. 1.

state's information processing environment.

3. Territory in the analogue world*

The territory of a state is not simply the geographical part of the world that has been allocated to it. It is not a matter of partitioning the planet. The territory of a state is the processing environment that has been created by that state, a processing environment that has been made suitable for its citizens to live in,[521] and that makes a meaningful[522] life possible for them.

The territory of a state in the analogue world is not simply a portion of the land, sea and air of this planet, but the information processing environment covering these parts of the planet that has been created and is maintained by that state, and within which its citizens live.[523]

Until the present (or rather until the digital world emerged), states coincided with a specific location, a site in the analogue world, because this is where they installed themselves, where their information processing infrastructure, developed after the invention of writing, was (materially) placed. This was the point in history when states became territorial.[524]

Although the state does not create the territory (territory, as land, exists in Nature), the state creates its territory.

4. How state territoriality really works: site-specific locality is irrelevant*

It is important, therefore, to understand how territoriality (basically, the information platform

521. See Chap. 11, par. 3.

522. See Chap. 7, par. 3.

523. See also Chap. 9, par. 4.

524. See Chap. 9, par. 5.

that is the state) really works[525] in order to disentangle this from a state's analogue-world location and locality (i.e. the specific place on the planet where a state is located today), as these only create confusion.

The analogue world (i.e. Nature) was not created by states (any more than the digital world was). However, the state is the necessary medium through which humans understand and use it (again, this is the same for the digital world), that is, through which humans are able to process Nature's information. It is through states (through the information platform that is the state) that humans become individuals, and it is through states that meaning and action (within the context of a meaningful human life[526]) are made possible for humans.

States therefore create, maintain and expand[527] the information environment in which each human lives (or has ever lived). Within this environment states are sovereign—they completely control it, because it is their creation.

Crucially, the fact that states' information processing infrastructures had to be installed somewhere on the planet as processing needs expanded (specifically, after writing was invented), has nothing to do with the above. Installation in a specific territory was simply the next step, the second milestone in humanity's development,[528] exactly as is now happening with the digitisation of information, and hence the disentanglement of state-necessary infrastructures from location[529] (in theory at least, unless politics intervenes). In other words, the state essentially does not need a territory—a territory is the result of the unavoidable installation of information processing infrastructures (as a result of humanity's processing capabilities).

525. On how it was really created, see Chap. 11, particularly par. 3.

526. See Chap. 7, par. 3.

527. See Chap. 9, par. 4.

528. We are currently living in the third, in the form of the advent of the digital world; see the Prologue, par. 8.

529. See par. 9.

5. Moving around in the analogue world*

Nevertheless, states are not and have never been insulated, entirely and completely isolated from other states, no matter where or when they have existed on the planet. Products and people move from one state to another. How does territoriality (i.e., the information platform) work in such cases?

In the case of products (Things, specifically artefacts), this was, at least until the advent of the digital world, straightforward: a vase or a table manufactured by a citizen of one state could be sold to a citizen of another state, and control would pass from the territory of one to the territory of the other. The same is true for all Things, even the more complex ones (e.g. cars or other machinery): although a relationship with the manufacturer might continue (e.g. for servicing), control (property) was passed from the territory of one state to that of another. Relocation happened in the analogue world, and it was accompanied by a change of control.

In the case of non-biological Beings (specifically, organisations), the situation was different—but not entirely so. Even if incorporated in one state, if an organisation wished to transact (i.e. process and create new information) in the territory of another, it had to establish itself in that other state's territory too. As with Things, relocation happened in the analogue world, accompanied by a change of control (to the new territory's local subsidiary or agency etc.), even if the decision-making process was not relocated.

The case for humans, however, is different; citizens of one state when found in another still carry their state with them.[530] Basically, their state acts like an information sphere, a (meaningful-)life-support mechanism: it is needed to interact with other humans,[531] to transmit personal information to other humans[532] and to be able to process information on the information platform of any other state through the filter of meaning made possible by their

530. Unless, of course, they change (replace) their citizenship—and name. See also Chap. 8, par. 6 on their unbreakable bond.

531. See Chap. 7, par. 3.

532. See Chap. 14.

own state platform.[533] Essentially, when humans relocate they still live in an information bubble of their state, no matter where they are on the planet. Control over them does not change, it is not passed to the new information platform that is the (other) state that they have happened to find themselves in.[534]

Of course, whenever relocated, whatever new information the citizens of a state create (whether a Thing or a Being) is controlled by the new state, the state in whose territory they happen to be. Their own state, although providing them with the information sphere, does not retain control over Things or Beings they may create (in other words, over their actions) in the territory of another state.

6.

Location and locality in the analogue world, in terms of state territoriality, are distracting, if not illusory. They only (identifiably) came into being around 5000 BC, leading to the dividing up of the planet due to the fact that state information processing infrastructures, until very recently,[535] had to be installed somewhere physically.

However, Things and Beings relocate ceaselessly in the analogue world, moving in and out of state territories. It is important, nevertheless, to note that what they basically do each time they relocate is change information platform, thus affecting the exercise of control over them—the fact that the change of information platform coincides with a change of location is incidental.

7.

The term ‘territory of the state’ does not have a static meaning. In the distant past it included

533. See Chap. 8.1, par. 4.

534. Of course, various stages of relocation, from tourist to permanent resident, or immigrant must be taken into account.

535. See par. 9.

only the land; much later the sea and then the air were included in its meaning. What is included with each of these additions (i.e. minerals, airwaves etc.) also became included in the same notion. These additions do not alter the definition of state territory, they only increase the state's information processing; the more humans expand their reach, the more the territory of (their) states increases and the information platforms that are their states are broadened.

8. Territory in the digital world*

The analogue world (Nature) is natural to humans,[536] hence the information processing environment created and maintained by the state for them is similarly natural, necessary to live a meaningful life. The digital world is not natural to humans,[537] at least not yet. At present humans do not need to live in the digital world to have a meaningful life. From this point of view (or until this becomes the case), any digital state territory is artificial, not natural to humans.

Neither the analogue world nor the digital world was created by states. Humans, however, live in both; therefore there is no question that states exist in the digital world as well (because states are natural to humans[538]). The analogue world has become what it is today after hundreds of thousands of years of human presence and information processing on it. The digital world has a history of only a few decades; however, it already makes new perspectives possible, including with regard to state territory.

9.

The most obvious way it makes a new perspective possible is through the digitisation of information.[539] First, this has meant that information has become easily movable—it no longer

536. See Chap. 1, par. 10.

537. See Chap. 1, par. 11.

538. See Chap. 8.

539. See Chap. 1.1, par. 15.

has to be kept on paper (or clay tablets, for that matter). Second, information and its processing infrastructures have been separated—they no longer need to be physically connected. In the past, information and the tools used to process it were installed on the same physical site. This is no longer the case: information has become digital (and digital-born), meaning that it may be stored anywhere and transported to be processed anywhere. Similarly, information processing infrastructures may or may not be installed next to the information or even within a state's analogue world territory.

This breakdown of the natural, analogue-world territoriality link between a state and its information continues in full swing today: it started with data globalisation and has continued with data nationalism and the quest for (political) digital sovereignty. Political considerations notwithstanding, however, the fact remains that the link between a state and an analogue-world territory as the (obvious) location for the installation of its information processing infrastructure has been irreversibly broken.

10. The link between control and location; the path from humans to individuals (and citizens) and to (today's) users*

The less obvious new perspective made possible by the digital world relates to the transformation of humans to users. This is the latest step in human development. It is the result of the digital world breaking down the traditional models of location and control that have been known to humanity since the beginning of time. As seen above, in the analogue world, control over Things and Beings is, more or less, retained by the information platform that is their state, even in the event of relocation. Spatial, analogue-world relocation decides (or, at least, affects) control. How does this translate in the digital world?

The digital world is artificial; therefore Things and Beings in it are created from scratch by specific identifiable Beings (individuals and organisations). It is these Beings, and consequently their states, that retain control over their creations, as is (and has always been)

the case with anything new created in the analogue world.[540] However, here lies the critical, fundamental difference between the analogue world and the digital world: as seen above,[541] in the event of relocation, control in the former follows the Thing or Being, it moves from the territory of one state to another. By contrast, control in the digital world (for the moment, at least) remains with its creator-Being and originating state.

In other words, in the analogue world information on a Thing, if moved from one state to another, is processed only (or mainly) in the latter's territory and is therefore controlled by the latter. The same is true for a Being (an organisation) that decides to process information in another state (to relocate). By contrast, in the digital world a Thing or a Being never leaves the territory of the state where it was created: it can process information, or information can be processed on it, from a(n) (analogue-world) distance, from far away, from (or in, as the case may be) the territory of other states. The age-old link between control and location has been irreversibly broken.

11. Users (instead of owners)

Where does this leave the billions of individuals who are processing information in the digital world today? Basically, they have become users[542]—the latest step in humans' (political philosophy) development. Starting simply as humans (i.e. animals), humans became individuals through their states, and citizens thereof (around 200.000 years ago), and today they are users (in the digital world). A user is an individual, citizen of a state, who processes information in the digital world, of course within the (digital) territory of its state, but importantly also in the territories of other states without ever physically leaving his or her own territory. A user of digital information differs from a user of analogue-world information due to the fact that the need for locality is removed—a physical presence in order to process (to act) is no longer necessary.

540. See Chap. 6, par. 4.

541. In par. 5.

542. See also Chap. 1.1, par. 18.

Why use a different name? It is necessary to denote the grave difference between control in the analogue world and in the digital world. In the analogue world, location-decided control meant that a state was able to award property rights to its citizens[543] unhindered. In the digital world, control is retained by the originating state, meaning that property rights are affected, that is, reduced. In other words, an individual processing information in the analogue world, and acquiring property rights while doing so, is not able to do the same in the digital world. Control has been eroded, because the individual's state's control (sovereignty) over its territory has been similarly eroded.[544] This is why 'user' is a more appropriate term—it denotes the significant change to (property-like) control in the analogue world, which has been understood by humanity since the beginning of history.

This is a huge, 200,000-year jump. In the few years that have passed since the advent of the digital world, we have already seen every traditional, familiar notion about individuals (e.g. relating to location, accountability, property, identity etc.) seriously and irreversibly affected. The digital world, because it is artificial and, in theory at least, completely controllable, in total contrast to the analogue, turns the focus onto use, rather than creation. State territories will never be the same again.

12. The digital territory of a state*

The territory of a state in the digital world is, therefore, the information processing environment in the digital world created by that state's citizens (or, more accurately, that state's Beings[545]).

In this case, in stark difference to the analogue world,[546] any (perceived) moving around in the digital world does not affect control, that is, the state of the citizens that create any information in the digital world retains control over these citizens and their creations, meaning their

543. See Chap. 24, par. 6.

544. See par. 13.

545. See also par. 13.

546. See par. 5.

creations add to its territory, not to any other state's (digital world) territory.

13. What about artificial Beings?

Because they are created by (individualised) humans, artificial Beings belong to the state territory of their creators. Specifically as regards the digital world, computer programs are controlled by their (their creators') state, and their own information processing adds to that state's (digital world) territory.

14. Borders*

Borders within an informational context are the points where two different information processing environments (states) meet. In the analogue world these are visible (or can at least be drawn on a map).

In the digital world, because its development still remains unclear, specifically delineated state borders do not (yet) exist. Instead, because the territory of a state in the digital world is the information processing environment created by that state's Beings, digital state borders are dynamic, following[547] this development.

In both cases borders are the points where state sovereignty[548] ends and the sovereignty of another state begins. They are the points where a specific information processing environment ends, the point where a state no longer controls the information processing operations in either the analogue or the digital world.

Obviously, in the digital world some state borders extend well into (make forays into) what would otherwise be perceived as the (analogue-world) territory of another (that state's citizens, located in its analogue-world territory, having become users). This is modern-world (digital)

547. And protecting, see par. 16.

548. On sovereignty, see Chap. 16.

colonialism.[549]

15. Interoperability and data portability*

Borders are, in essence, points of communication. In the analogue world they are points of interaction and exchange. In the digital world, in spite of its as yet undecided form, communication among different processing environments (information platforms) is achieved through interoperability and data portability.

Interoperability warrants that information is exchanged and used by Beings on two different information platforms. Data portability is the ability for individuals to receive their personal information and transmit it to a different information processing environment (platform) at will.[550]

In the analogue world interoperability is achieved through international law and bilateral agreements among states.[551] Data portability is achieved through (certain) governments' (political) will to allow this type of information processing to their citizens (to varying degrees and based on various conditions each time).

For the moment, in the digital world both notions are achieved, if at all, through regulation, which is perhaps inevitable given the digital world's artificiality.

16. State security and cybersecurity*

Security of the state in the analogue world (not to be confused with the security that the state

549. See also Chap. 7.1, par. 5.

550. See also state legitimacy (Chap. 14, par. 5), whereby information dissemination is one of the three information processing operations that supports it.

551. See also Chap. 19, par. 12.

provides to its citizens) means protection of its territory and borders from external enemies.

(Cyber)security of the state in the digital world means protection of the state's digital territory, the information processing environment controlled by it because it has been created by its Beings.

18. Nation

'He was a simple man – a Swiss (a people little given to vanity and lying).'

Michel de Montaigne

***Synopsis**: Nation a political and arbitrary term (1-3); Nationality (4); Are nations human-specific? (5).*

1. Nation*

Because states are natural to humans, nations play only a peripheral, temporary role in their development. After all, the concept of a nation state is only a recent development in human history; prior to this nations did not coincide (at least to any great extent, as is the case today) with the states that existed. Although today we take this connection for granted (and it is this finding that accounts for this chapter) and are ready to discuss state legitimacy on those terms, this is contemporary thinking that is only a couple of centuries old.

2.*

Nation is a political, hence arbitrary, term. Although commonalities are identifiable in the processing methods (morality, reason) of groups of individuals as distinguishable from others, it is impossible to say whether this was a development that originated from the bottom up (meaning from the individuals themselves, for reasons such as climate or geography) or from the top down (meaning imposed by an institution, specifically their governments). Hence it is also impossible to say whether the formation of nations was a natural or an artificial development.

After all, most humans throughout history have identified themselves in (at least) two ways, meaning as citizens of a state and as members of a (usually wider) nation—and many still do.

3.*

Although discussion of how modern (nation) states emerged is beyond the scope of this analysis, the fact remains that a centuries-long procedure seems to have culminated, today, in the formation of nation states.[552] Why is that? It is possible to provide an explanation from an informational viewpoint: individuals need to augment their information processing and their states also need them to do exactly that. The long process of state succession is explainable through exactly this lens: each time individuals felt their need would be better served through (the formation of) a different state, they pursued that path. Today (and for the past 200 years) an understanding has been reached by humanity that nation states better serve individuals in augmenting their information processing, at least better than any known alternative so far—the digital world and, most importantly, archipelagos[553] notwithstanding.

In spite of the above, regardless of the theory, state-making seems to be an unfinished business.[554] If one suggests that nation states are the culmination of a development that has been happening since the existence of the ancient states, then there is no reason to suggest that this development will not also continue (in whatever new direction) in the future. Similarly, if one considers that modern states emerged because certain factors were in place, it cannot be imagined that new factors will not appear (or may have already appeared) that will lead to the next step.

4. Nationality

Nationality, the connection of any individual with a nation, is different to citizenship[555] because only the latter, in the meaning discussed in this book, is necessary for an individual to live a meaningful life (for a human to become an individual). By contrast, nationality is subjective,

552. On their centralisation see Chap. 11, par. 5.

553. See Chap. 19.

554. See also Chap. 15.

555. See note 7/1/1.

political, and time-specific.

5. Are nations human-specific? *

Could artificial Beings (specifically, computer programs) form nations as well? As has been established, nations are separate from states; therefore this question is separate from that of whether artificial Beings need states, that is, for individualisation.[556] Notwithstanding that both nations and individualisation are viewed from the Unique Human Observer Perspective, the question remains as to whether artificial Beings, after they have been created, could form commonalities that would, perhaps, group them and distinguish them from other artificial Beings, albeit artificial Beings of the same kind.

There is perhaps some merit in examining the situation of other non-biological Beings, namely organisations. Organisations, despite their centuries-old presence, have not formed commonalities, even if a certain 'ethos' may sometimes distinguish organisations (corporations, foundations etc.) originating from one state from those of another.

As regards artificial Beings, their connection with a specific state being unavoidable,[557] as a minimum they are likely to create (imaginary or actual) commonalities, similar to organisations. Any development beyond this would call into question the basic assumptions about what it is to be human, such as identity or self-consciousness.

556. See also Chap. 8, par. 7.
557. As part of its digital territory, see Chap. 17, pars. 12 and 13.

19. Archipelago: where do the information platforms that are states live? The EU

'I would first of all like to say something about archipelagos. I think the idea of the archipelago - as a place where we can begin to understand and resolve the contradictions of the world - should be propagated. The archipelagos of the Mediterranean must encounter the archipelagos of Asia, and the archipelago of the Antilles. These archipelagos must encounter each other because, across their many islands, interdependence and difference coexist - and, in this way, they carry the energy that is necessary for our whole globe, our whole world.'

Edouard Glissant

***Synopsis**: Where do the information platforms that are states live? If the information platforms that are states can be visualised as informational islands living in a vast ocean, meaning, our planet, some of them have decided to come closer together and form larger constellations, that is, to form archipelagos: information platforms for the information platforms that are states; The EU is the first such archipelago (1); States are still in the 'state of nature' (2-3); International law and the UN (4-7); The EU as the platform for platforms (8); Cosmopolitanism, and other (utopian) alternatives (10); The EU (11); Interoperability versus integration (12); What the EU is and what it does (13-15); Archipelagos enlarged (16); Are archipelagos natural? (17-20); The differences between an archipelago and a federation—or an empire (21).*

1.

Where do the information platforms that are states live? Within their respective platforms each state individualises its citizens and makes it possible for them to live meaningful lives[558]—in fact, giving (human) life, meaning.[559] However, states do this internally, within the confines of their information platforms, their borders.[560] Where do these platforms themselves live?[561]

558. See Chap. 7, par. 3.

559. See Chap. 8, par. 1.

560. See Chap. 17.

561. In the sense that they are Beings, they therefore can and will process information, see Chap. 2, par. 9.

In human development terms, states are still living in a 'state of nature', where life is precarious and recognition by others, if any, is bilateral and conditional. For humans, this was the stage when, having just acquired self-consciousness and developed language, they presented themselves to the other members of their tribe or the community they lived as a separate individual with a new name that they had chosen for themselves, and asked for recognition as such. These are unquestionably distant, prehistoric times.

More specifically, these are the times when, out of this prehistoric soup, the first states emerged, in the sense of self-conscious separately named groups of individualised humans, that is, the first tribes or extended families to call themselves by a name different from that of the others around them—the first states that were created out of the fact that each of its members had his or her own name. It is these groups that allowed the newly self-conscious, language-using humans to individualise, to uniquely identify themselves in space and time.

In the same manner, the EU is the first state of states, the first named constellation of states, within which individual states retain their self-consciousness and individuality while having their own names, warranted each time in the relationships among them by the EU.

In other words, if the information platforms that are states can be visualised as informational islands living in a vast ocean, meaning our planet, some of them have decided[562] to come closer together to form larger constellations, that is, to form archipelagos. The EU is the first such archipelago, the information platform for information platforms that are states, a state for states, and the precursor of things to come.

All of the above will be elaborated in the paragraphs that follow.

2. States are still in the 'state of nature' *

562. Acting through their governments—an assumption that is made throughout this chapter. On the relationship between a state and its government, see Chap. 12.

It is in what we can imagine as far-distant, prehistoric times in terms of human development that states are found today. States are thousands of years behind in their development compared to humans. In other words, humans may have developed within their states to the level of human civilisation we are living in today, but the states themselves have been left behind, in the time of the prehistoric soup from which human civilisation emerged.

3.

One needs only to think briefly about the 3,000, or fewer, years of human recorded history before the reality of this finding hits. State individualisation, in the way that states individualise 'their' citizens, had never occurred until very recently, with the emergence of the EU.

The empires of the past, be they Iron Age ones, Imperial Rome or even the empires of the nineteenth century, never looked or asked for the recognition of anybody. Confident in their power and might, these empires self-identified, decided on their own name and insignia, and imposed these on others. Nor was this only the case for imperial powers: city-states from Athens to Florence did not ask for recognition from others either—even when they were troubled by neighbouring empires. They too chose a name for themselves and imposed it on other states, even when they were conquered.

4. International law and the UN*

The situation changed only a little with the emergence of international law and the establishment of the UN. International law was first introduced in Europe some 400 years ago to regulate matters of war and management of the seas—these being matters not regulated internally by states. This was the first time that (more than a few neighbouring) states realised that they could work together.

International law resulted in the world we live in today, in the Westphalian nation state[563] (the Westphalian peace was entered into in 1648, shortly after the initial cooperation mentioned above). The Peace of Westphalia warranted that states existed (as named in its text and acknowledged by their peer states), and that their internal matters were managed by themselves alone.

Of course, the Peace of Westphalia only included some of the states in Europe. It took hundreds of years for its system to expand to cover all of the planet, to create the system in which we live today in the form of the UN. Effectively, however, the same system is more or less still in effect today, based on the same basic principles: states enter an international (cross-state) treaty, recognising each other and warranting certain rights among them (with the right of non-interference still much contested).

5.*

If, however, one were to remove the grand and impressive veil of the UN and the system of international law, one would quickly realise that states are still effectively in a 'state of nature'. In essence, the UN and international law are permanent *fora* for cooperation, providing formalised, permanent opportunities to discuss and to collaborate,[564] not mechanisms that provide firm state identification and individualisation—no such thing exists (other than the EU).

If accepted in the UN, a state may, perhaps, discuss with others and, potentially, enter into case-specific agreements (on human rights, citizenship etc.), potentially subjecting itself to international law. Other states which also participate in the UN may or may not accept part or all of the above, and may perhaps enter into bilateral agreements with the first state. Incentives[565] to participate (in anything from loans and bailouts to military assistance) are

563. See also Prologue, par. 4.

564. Therefore, no *agora* of a *demos*, but rather a *Hyde Park Speakers' Corner*.

565. These naturally being self-serving for the same international order.

introduced; however, participation is ultimately voluntary.

Similarly, no one, no state that is, is obliged to accept the (self-)identification of any other state simply because it has joined (or has not joined) the UN. No state is obliged to interact with that state on the terms of its self-identification (or UN membership) or to accept that it exists at all. It is entirely possible (as is frequently the case) for a state (or a group of states) to refute everything about another, self-proclaimed state, to deny its existence altogether.

Therefore, as far as states are concerned, there is no individualisation mechanism in international law today that automatically grants them recognition as separate and distinct entities, uniquely identifiable in space and time, in the way that states do this for their citizens. Instead, states (and empires) come and go, deciding for themselves how to be named and identified, and may be unrecognised and potentially even ignored by others.[566]

6.

However, it is not only an individualisation mechanism for states that is sorely missing. Language, and thus common meaning, among them is missing too. Whatever common language there is today among states has been developed through international treaties in a technical and case-specific manner. Today international law is the only way for states to collaborate, that is, to speak a common language, to understand each other. For example, in order to agree that a ship is a ship (including their various categorisations) or that a book in one state is also a book in another (so as, for example, to protect books through regulation), a specific international legal treaty is needed each time. Evidently the same is true for every other aspect of human activity—hence the scarcity of international legal treaties and other instruments, because of the tremendous effort required each time to achieve common meaning among states.

566. Or, as is also frequently the case, later historiography not recognising them in the way that they self-identified (for example, the Byzantines identified themselves as Romans, but we do not).

7.*

Thus states are self-conscious, but without any individualisation mechanism in space and time, and without any substantially developed language to communicate: this is their stage of development today. As has been said, in human development terms this would be the equivalent of finding humans deep in the prehistoric soup from which they emerged as individuals through the assistance of (their) states.

8. The EU as the platform for platforms

The first state for states to emerge out of this prehistoric soup, hundreds of thousands of years after humans formed states for themselves, was formed in the 1950s. The EU is an informational superstructure where states can live a meaningful life[567]—it is the information platform for the information platforms that are states, and a precursor of things to come.

9.

Essentially, states are like humans; they are, whether they like it or not, social (indeed, political) Beings.[568] They need to collaborate with the other states around them—or at least, even if enemies, need to share a common language and a common understanding (of such basic things as borders, peoples, acts of aggression or goodwill, etc.). An isolated, insulated, lonely path for any state is (and always has been) impossible.[569]

If this is, however, the case, then why have states stayed in a 'state of nature' for so long, so immensely outdone by their own citizens, who (relatively) quickly turned themselves from humans into individuals through their states?

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567. *Mutatis mutandis*, the same as for humans (see Chap. 7, par. 3): each (humans and states alike) having no specific purpose, the conditions necessary for the fulfilment of any purpose are in place.

568. And thus there cannot be only one, see par. 10.

569. See also Chap. 17, par. 5.

This is because states are Beings and need to process information, but do not themselves need to augment their information processing—they just need their own citizens to do so.[570] Therefore, whereas humans quickly moved from self-consciousness to individualisation, states did not follow; it was enough for them to simply continue to exist, to remain alive. There was no need for them to individualise, to be uniquely identifiable in space and time. Whenever they were outdone in their usefulness for their citizens, in terms of the processing opportunities offered to them, they were succeeded by another state,[571] following need and opportunity. In the meantime, whatever limited (because of similarly limited processing capacity) common meaning it was necessary to develop for cross-border transactions was imperceptibly gradually achieved, because exchanges occurred anyway among neighbouring (territorial[572]) states. (Tellingly, huge clashes of understanding occurred when states expanded across oceans, for example.)

10. Cosmopolitanism, and other (utopian) alternatives*

With the advent of the digital world, states can no longer operate as information processing silos, fortified informational castles or closed gardens, as was the case in the past.[573] They can no longer rely on bilateral, unarbitrated[574] relationships, within which each party must on every occasion first convince the other bilaterally of its existence: the formation of informational archipelagos is thus the only way forward.

Before, however, elaborating upon informational archipelagos, one ought first to examine possible alternatives. What about humans having only one state—could only one state exist on the planet (i.e. following the concept of cosmopolitanism)?

570. See Chaps. 10 and 5.1.

571. See Chaps. 15, and 18, par. 3.

572. See Chap. 9, par. 5.

573. See also Chap. 12, par. 10.

574. Unless they voluntarily submit to international arbitration mechanisms, which are themselves voluntary—and thus effectively unarbitrated.

Discussions about a single-state planet are certainly not new; however, nothing of the sort has come to fruition—or is ever likely to do so. This is because it is unnatural, in the sense that it is contrary to the nature of the state itself: a state has always been defined through its juxtaposition with another, a necessary other. Individuals belong to one state[575] and not to another (neighbouring one), this is how they self-identify.

In technical terms, in a single-state planet one of the two basic components of identity (citizenship) would be abolished (there cannot be a group or a category, as in Aristotelian categorisation, if only one group exists overall). Therefore another individualisation mechanism would have to be discovered to replace it, a mere name not being nearly[576] enough. While this may sound technically feasible, one ought not forget the tremendous change the introduction of any such (necessarily invented and artificial) mechanism for identification (unlike states, which are natural to humans) would bring—reversing the human way of thinking since we first set foot on the planet (or in any event acquired self-consciousness[577]).

The same would be the case for archipelagos: why not have one state individualisation mechanism on the planet, perhaps using the EU as its blueprint? This, however, would also not appear to be a viable option, even taking into account the transitory stage (towards archipelago formation) that humanity is living in. This is because, similar to states, archipelagos are defined through their juxtaposition with other archipelagos and, more importantly, with the ocean. An archipelago, such as the EU, will always be defined through its juxtaposition with other archipelagos (and any remaining states)—otherwise, a new way to define it, and the states that are individualised through it, would have to be invented, which would, as above, most probably be an invention too many for humans to bear.

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575. And, for that matter, family (see also Chap. 2, par. 9).

576. Hence today, long after surnames, parental names and other characteristics are also added (see also Chap. 8.1, par. 2).

577. This also accounts for why there can be no two states for the same individual—no two digital and analogue world citizenships: what happens in practice is that the second, or additional, states take the identification information from the state of birth; see also Chap. 8, par. 6.

11. The EU*

It was certainly not realisation of any of the above that led to the formation of the EU in the 1950s. The EU was formed out of need, the need for Europeans to end the wars among them that had lasted for 2,000 years, from the moment Julius Caesar decided to move north. By the 1950s certain states in Europe had a history of around 1,000 years and Christian dogma, which was common among them, had an even longer history. It was need and opportunity that led to the formation of the EU.

Whatever its cause and original purpose may have been, the EU assumed a life of its own once established. From modest beginnings emerged a unique structure, an (informational, virtual) environment for its member states to live in without forfeiting their individuality. In this way, the first information platform for all other information platforms was formed. In other words, European states, which can be viewed as separate and independent islands (as is the case for other states too), decided to form an informational archipelago.

However, none of the above ought to be understood as invoking a linear development (e.g. as in Aristotle, from family to city-states, in the sense of moving from simpler to more complex forms) or an evolution, by selection or otherwise, that led to the EU. There was no following of rational steps on a state-formation ladder or any grand-scale design that caused the EU to come to be; rather, need and opportunity were in play here too.

12. Interoperability versus integration*

One can visualise and quickly understand what it is that the EU actually does and how it differs from contemporary international state order if the notions of (system) integration and (system) interoperability are compared.

Interoperability is the ability of systems to communicate with each other to a larger or smaller degree. While it is a notion developed in computing (and enforced by regulation), it can be

seen as the dominant principle in international law today. States, as information platforms, have become able to interact with each other, that is, they have developed throughout human history in a way that enables them to, at a minimum, communicate with each other. For example, the unique identifiers of one state (identification numbers, tax numbers, business registration numbers) are recognised as such, by means of bilateral agreements, in another state, even if the other does not internally have an exact equivalent. However, this is as far as communication goes, and can go. Each state continues to function independently, with each information platform developed within its confines. Whenever the need arises for more communication (for example, through the development of more complex regulation as in intellectual property law or more complex accounting systems) then the list of functions that are interoperable expands. Nevertheless, communication is always on an *ad hoc*, case-specific (and thus fragmented) basis, through small, restricted and closely guarded access points.

By contrast, system integration means that systems share components, and thus the boundaries between them are removed. While retaining their individuality, they no longer communicate through specific, identifiable (and thus controllable) access points, as in the case with interoperability, but through the sharing of resources, information, meaning and understanding. In the example above, the unique identifiers provided in one state are not only recognised by another but they are common or matched—they also exist in that other state. The issuing authority may change (each state continues to provide its own name and citizenship to its citizens) but datasets, and their attributes, are basically the same.

13. What the EU is and what it does

In essence, the EU is an informational archipelago, a network composed of separate, individual (peer) information platforms (islands), meaning its member states, which have been individualised and uniquely identified by it. The EU warrants that communication among the member states is seamless without any losing its individuality, despite being integrated into this new super-platform. Having formed the archipelago (i.e. the network having been established), system integration among the various individual information platforms that are its member states is what the EU actually does, while each member state continues to function as an information infrastructure for its citizens—that is, it continues to grant to each of them at

birth a name and a citizenship, to issue regulation, to maintain a language or an official morality (religion), and so on.

In effect, the EU is the tacit interlocutor when two of its member states talk to each other. In the same way that a state does this for its citizens, it is the EU that, silently and in the background, intervenes whenever two of its member states interact, warranting that the other state is who and what it claims to be in order to enable the communication to proceed seamlessly.

For example, if Belgium and Italy are interacting, the EU is silently present each time, warranting[578] that each party is who it claims to be in order for the interaction to continue as intended (essentially, as if the countries were a single state). However, were they not EU members, for example, if Belgium and Canada interacted, each one would first nervously try to validate the other, be it through bilateral agreements or a third-party validation mechanism (e.g. the UN and/or any other international system), before the interaction could take place. Furthermore, even if this validation occurred, the interaction would always be restricted by the boundaries of the validation mechanism used (the terms of the bilateral agreement or the international treaty/-ies signed by each party[579]).

In the example of John and Maria in Chapter 7, if they happen to be citizens of different states, the interaction between them can go in either one of two directions: if both of their states are EU member states then, through the identification mechanism described above (essentially, with three silent parties present), the interaction can take place as if both John and Maria belonged to the same state; understanding and meaning is common to both. However, if their states are non-EU member states, then the two silent parties present (their states) will have to check if, bilaterally, they accept the existence of the other (and on what terms and to what extent): interaction between John and Maria is thus always framed under the terms of this tacit

578. Of course, for the purposes of communication, within its own borders each party can be whoever it claims to be (this equivalence, however, not working in terms of individuals and their states).

579. In reality the situation today is even more complicated than that because the EU also conditions the bilateral agreements of its member states, but there is no need to complicate the example any further given the difficulty of the scheme already.

but ever-present check.

In other words, from a state point of view, an EU member state cannot ignore, refuse or challenge the existence and self-identification as such of another EU member state. It must be treated as one of their kind and taken at face value as irrefutably existent, in the very same way that citizens within a state (as well as when crossing borders) treat one another. State individualisation and unique identification are achieved in this manner through the EU, the state for states. In addition, through the *acquis*, understanding and meaning is common among all of them: any one EU member state citizen is to understand and treat all Things and Beings in exactly the same way as another EU member state citizen, as if they existed on the information platform that is their own state.

This state-within-a-state condition, unique to humanity,[580] is caused and warranted by the EU. All states are created[581] equal with regard to the EU, the platform for platforms, if they are its member states. All others, unfortunate enough not to be individualised and uniquely identified by any mechanism, have to undertake a bilateral struggle to convince others of their uniqueness and existence, until such time as a relevant mechanism is established for them.

14.*

In terms of datasets,[582] the EU is a Being, specifically an organisation. However, in the same way as states and unlike any other organisation,[583] an informational archipelago has no specific purpose. It has only a function, which is present simply because of its existence: system integration for its member states. This is both an impediment and an opportunity. The former, because the EU is not itself a state, and it therefore cannot assume state-like functions, that is, it will always follow what first and foremost preoccupies its member states and their citizens, whatever purposes they set for themselves to each time. At the same time, however, it is an

580. On its differences with already known formations (e.g. federations, empires), see par. 21.

581. In fact, admitted; on whether the EU is natural see par. 17.

582. See Chap. 1, par. 2.

583. See Chap. 2, par. 9.

opportunity because, liberated from state-like preoccupations (internal politics and strife prominent among them), it can carry out its function unhindered.

For the larger part of its life so far, the EU has given priority to market considerations out of expedience: what better (in the sense of quicker) way to avoid war, if not by financially integrating the previously conflicting parties? Having accomplished this quick, superficial fix, the EU has recently moved in the direction of influencing the formation of values, thus establishing a distinct 'European way of life' and a morality of its own, a project that remains underdeveloped.

The question, however, remains: how can the component parts best be integrated without damage?

For the moment, the solution intuitively (and understandably) adopted replicates the state–individual relationship, along the lines of liberalism:[584] individuals have a core with which the state should not interfere, and this model seems to be followed at the EU level too (through the triple effect of its principles of subsidiarity, proportionality and EU legal supremacy). Is this the best way forward? Could what has effectively not been satisfactorily resolved for humans after more than 2000 years of intense thinking[585] work for states? Essentially, the same problem remains: states know everything because they are the necessary individualisation mechanisms for their citizens, and the EU (its system integration ever-expanding) is on its way to becoming exactly the same thing for its member states.

15.

As such, today the EU archipelago is unique, the first of its kind and clearly distinguishable from all the other information platforms that are states and that can be found around it (or within it).

584. See Chap. 26.

585. See Chap. 26, par. 5, on the inherent conundrum that individualistic theories have to deal with.

This accounts for the bizarre effect still caused by it with regard to interstate relationships. Non-EU states find it strange that they have to communicate at the same time with both a member state and the EU. This is understandably confusing for all the parties involved. Because the EU breaches the prehistoric model, being the first of its kind, it is bound to create confusion for some time longer.

16. Archipelagos enlarged*

On the other hand, informational archipelagos need not be geographically located; the fact that the EU emerged, out of need and opportunity, as a localised entity does not mean that it cannot include member states that are not in Europe. Archipelagos should not be viewed literally, spatially; because they are informational, they transcend space, unhindered and unperturbed by analogue-world limitations.[586]

17. Are archipelagos natural?

As it has been claimed that states are natural to humans, should archipelagos be considered natural (to states) as well? States formed naturally, so as to individualise humans, to uniquely identify them in space and time. Because the first archipelago is doing the same for states, should they be considered natural to them, in the same way that states are natural to individuals?

At first sight this would appear a counter-intuitive question: the EU was established through a treaty signed on a specific date and in a specific place—nothing can be more artificial than that. How could it ever claim to be natural to its member states? Such considerations should, however, be quickly put aside: in the case of housing, despite the fact that the field of architecture is constantly expanding, houses are still considered natural to humans. As has been established,[587] it is the idea behind them (houses for humans, like nests for birds) to which

586. See also Chap. 17, on (state) territory.

587. In Chap. 5, par. 5.

attention should be paid.

Is there a need, then, for an individualisation mechanism for states, as there was for humans, who needed states in order to augment their information processing as soon as they gained self-consciousness?

Again, intuitively, the reply would have to be negative: if it is natural to them, why did it take so long for such a mechanism to emerge? And, furthermore, being the result of need and opportunity, for totally unrelated reasons (to avoid war, instead of state individualisation)? It is, however, exactly in this pivot that an answer can be found as to why (following the arrival of a more recent need and opportunity) this mechanism emerged (or rather, is developing into an 'ever closer union'): because of the advent of the digital world.

As has been seen,[588] in the digital world states can no longer afford to operate as information processing silos. They can no longer rely on bilateral relationships where each party first has to convince the other of its existence on each occasion. Mere interoperability[589] is no longer enough. Informational archipelagos are the way forward, specifically because the digital (state) territory transcends analogue-world borders and humans have become users.[590] From this point of view, archipelagos are natural to states because, similar to humans who needed to become individuals to augment their information processing, archipelagos are sorely needed.

18.

However, the answer to whether archipelagos are natural to states cannot rely only on *ad hoc* problem-solving. After all, while need and opportunity may motivate humans, if no pattern emerges out of their combination, no specific need (in the form of an underlying idea) can be identified—only the one that has gone before it.

588. In par. 10.

589. See par. 12.

590. See Chap. 17, pars. 11 and 12.

In the case of states, because they are Beings, they need an individualisation and identification mechanism—all Beings have one. Humans have their states, animals their packs or herds (or their humans, as the case may be), organisations are individualised through regulation. This is a matter that ultimately relates to the Unique Human Observer Perspective, to the way in which we view and understand Beings. However, such a mechanism will not emerge until it is needed. In the case of states, it has now emerged, dragging states out of their 'state of nature' slumber. (In the case of artificial Beings, specifically computer programs, which have only recently come into existence, their 'state of nature' is perhaps only just beginning.)

19.

Of course, this leaves open the question of whether this is a process without end, *ad infinitum*: if archipelagos individualise states, what will individualise archipelagos?[591] Following the reasoning of paragraph 17, a post-archipelago-level development seems imaginable but unforeseeable, taking into account the thousands of years it took for the individualisation mechanism for states to emerge. However, as long as there is a need for unique identification mechanisms, for humans or other Beings, there seems, from the Unique Human Observer Perspective at least, to be only one way to address it.

20.

Even if this realisation is accepted, what can possibly be done about it? As has been seen,[592] in state-making change frequently, but not necessarily, comes through violence. The same is true of the EU: violence is exercised not in the form of war but through regulation. The formation of its archipelago has not been achieved through geographical but informational conquest. The EU *acquis* has, in essence, a double meaning, it is a modern Janus of sorts: new member states must adopt it in full and adhere to it.[593] There is violence in regulation, just as in war, but one

591. Of course, taking into account that there can never be only one, see par. 10.

592. In Chap. 15, par. 2.

593. This is not unprecedented—it was anticipated in Europe by the Napoleonic codes, which long

that hurts humans infinitely less.

21. The differences between an archipelago and a federation—or an empire*

The above paragraphs[594] also serve to showcase the differences between an archipelago of states, such as the EU, and a federation. Within a federation, the individuality of its component parts, of the states forming it, is lost. In practical terms, names and citizenships are granted by the new, super-state and not by the individual parts. States within a federation are absorbed into a new entity, a new information platform that replaces them. In contrast, states within the EU retain their nature as information platforms for their citizens.

Could archipelagos, then, constitute modern empires? The great empires of the past mostly left their component (conquered) states untouched, allowed to mind their own business as long as they complied with the empire's authority. This may of course have been the result of expedience, because effective control by the (new) centre could not be exercised due to a lack of information processing abilities. If so, have need and opportunity led to the creation of a modern-style empire, in the form of the EU? The obvious difference (voluntary participation, rather than conquest by war) aside, the EU differs from an empire because there is no centre, there is no dominant state, there is no EU nationality coveted (or abhorred) by the nationals of its member states. In this respect the EU is unlike, for example, Imperial Rome, which privileged its citizens and granted Roman citizenship to non-Romans only as an exceptional gift. By abolishing the dominant centre,[595] the EU avoids any likeness with an empire, holding the role of a precursor of things to come rather than that of an updated and modernised relic of the past.

outlived their instigator. Of course, even in that case, his example followed that of Imperial Rome and, in any case, was that of a lawyer following legionaries or grenadiers, and not vice versa.

594. See particularly par. 13.
595. Most likely as a result of Christian dogma.

20. Law

'The word law (lex) in an absolute sense signifies that, in accordance with which, each individual thing, or all things, or all things of the same kind, behave in one and the same fixed and determined way, depending upon either natural necessity or a human decision.'

Baruch Spinoza

***Synopsis**: The law is the written list of processing operations that can or cannot happen on a dataset (1); Many laws? (2); No law? (3); No eternal law (4); Regulations (5-8); The digital world differs; A controlled environment (9); Regulations are organised hierarchically (10).*

1.

Control is exercised over each and every dataset on the information platform that is the state;[596] the law is a materialised, written list of its attributes.[597]

The law is the written list of processing operations that can or cannot happen on a dataset. In effect, the law specifies whether a(ny) specific processing operation is allowed, and under which conditions. And, just as the construction of a complete list of attributes would be impossible,[598] the law cannot be exhaustive.

2. Many laws? *

Law is not met only within the legal (i.e. regulatory) context; we also come across the laws of Nature or laws of science (physics, mathematics etc.). This is because the term simply denotes a concrete, written-down list of controls, of processing operations that can (or cannot) happen.

596. See Chap. 6, par. 3.

597. See Chap. 6, par. 5.

598. Ibid.

This list, however, may come from anywhere, be it Nature (including the sciences) or human creation (regulation).

While the difference between the two basic sources of law (Nature or humans) is significant, ultimately the result (law) comes down to a single, concrete list (no matter how long). In the case of Nature, law has to be discovered; in human-made law, it has to be invented. Nevertheless, the fact remains that what has not yet been discovered is not law. The same can be said about law that has not yet been invented by legislators. No unwritten law exists.

3. No law? *

As has been acknowledged,[599] the law has to be discovered or invented, but it cannot be that there is no law. This is because controls over datasets are natural on the information platform that is the state;[600] therefore cataloguing and expanding them is also natural to humans (who need to augment their information processing[601]).

As regards Natural law, controls over datasets are natural because Nature itself is a Being[602] and therefore exercises control over the datasets found on it. States giving (human) meaning to Nature,[603] individuals on them (on the information platform that is their state) need to discover these controls so as to augment their information processing (i.e. to control Nature).

As regards invented law (regulations), for each new dataset discovered or created by humans, control over it by the creator or first processor is immediate.[604] This control later expands through rules that regulate the access of all other humans (individuals on the information

599. In par. 2.

600. See Chap. 6, par. 3.

601. See Chap. 5.1.

602. See Chap. 1, par. 10.

603. See Chap. 8, par. 1.

604. See Chap. 6, par. 4.

platform that is their state) to these new datasets—thus forming regulation. This process, although applied throughout human history, is uniquely demonstrable today because of the advent of the digital world: because it is entirely new to humanity, new regulations by each state aim to exercise control over it.

Human history concurs: until the Enlightenment (the brief exception of ancient Greece notwithstanding), religion was the human way to catalogue Nature's laws; writing was invented in order to bring into material format (i.e. make known more widely) human regulations (for taxation and military purposes).

4. No eternal law

Although law is inevitable,[605] it is at the same time relative. No eternal law exists—the list of laws on each information platform that is the state is the result of, and is related to, its place in space and time.

The list of laws expands (and deepens) keeping pace with humanity's increase of knowledge, of information processed. However, this should not be taken to mean that progress is linear or simultaneous among states.

5.*

A few more clarifications need to be made on invented law (regulations)—because, after all, Nature's laws are not artificial.

For the moment attention will be paid only to the existence of regulations, as an inevitable, and relative,[606] part of states. Crucial questions such as how any specific regulation came to be,

605. See par. 3.

606. See par. 4.

who made it, who it is aimed at, how it is imposed, whether it is effective and so on, will not be discussed at this point.

6.*

Regulations are not created by states. Their existence may be inevitable on the information platform that is the state; their actual content, however, is anything but. In practice, the content of regulations is formed by the government.[607]

Accordingly, the state cannot be defined through regulation, because it precedes and predates it, that is, regulations become possible on the information platform that is the state and not vice versa. Regulations cannot therefore define the state, much less bring it to life.

7.*

Regulations are functional and operational, providing the rules for a processing operation, but they are also descriptive: the attributes of a dataset, the list of processing operations that can or cannot happen on it,[608] are to be found in them.

8.

Of course, while the applicable regulation may allow an individual to carry out a processing operation, the individual may still choose not to execute it, in spite of that individual's will (as caused by need) and opportunity. As has been seen,[609] the choice of which processing operation to carry out each time, that is, the prioritisation of each individual's purposes, falls under the domain of morality. In other words, the fact that a regulation allows (or even prohibits) an

607. See Chap. 12.

608. See Chap. 6, par. 5.

609. In note 5/2/2.

action does not mean in practice that this action will happen (or not happen) accordingly.[610]

Choice, however, refers only to whether to carry out a processing operation or not (for example, drive a car, get married, build a house etc.). If the choice is to do the operation, then the relevant regulations (driving, marital or construction, respectively) must be applied, otherwise consequences follow. These consequences invariably reduce the information processing opportunities available to the individuals concerned (to varying degrees, from a fine to loss of life). In effect, regulation creates a yes or no situation, unless there will be consequences; if a third option exists (that is, it is a situation with nuanced consequences, thus requiring a choice) then we enter, once again, the domain of morality.[611]

9. The digital world differs; A controlled environment*

It is at this point that a stark difference between the analogue and the digital worlds can be noted. In the analogue world regulation may prohibit a processing (an action); however it does not, and cannot, control whether the processing will take place or not—individuals may break the law. For example, a driving speed limit may be imposed, but cars allow drivers to go over it; if they do, the law intervenes only after the act (if at all, meaning if it ever learns of it).

The situation in the digital world is different, however. In the digital world there is always a way to prohibit a certain processing operation from ever happening—in the example above, this would be to simply not allow a (digital) car to travel faster than the speed limit on a (digital) street. Or an artificial Being could be stopped from having access to a prohibited processing operation.

In effect, choice[612] is inherent for biological Beings in the analogue world (regardless of the

610. See also Chap. 6, par. 9.

611. See Chap. 23; and also ‘power’ in Chap. 6, par. 9.

612. Whether or not to break the law is not to be confused with permitted choice in morality; see Chap. 23.

endless nuances surrounding it); in the digital world, however, because it is artificial, there is a way (for the humans who design it) to remove choice altogether. In other words, regulation in the analogue world is enforced retrospectively, while in the digital world it can be enforced proactively.

This is, ultimately, the difference between a controlled and an uncontrolled processing environment. The information platforms that are states provide their citizens with a suitable information processing environment in which to live a meaningful life[613] and, by so doing, have a way of knowing all of the processing operations (actions) carried out by their citizens.[614] The key here is that this is just *a way* of knowing. States *can* know, but they do not *actually* know unless they (meaning, the government) actively try to know.[615] The analogue world is basically an uncontrolled environment. By contrast, the digital world is a controlled environment, in which states or whoever is controlling it have real-time knowledge.[616]

Concepts such as accountability or liberty, with which humanity has been struggling for centuries (and which still largely remain undefined) will need to be rethought and revisited. The same is true of pragmatic considerations, such as power:[617] should the ability to ignore a processing prohibition be embedded in the digital world's system, because it is practiced in the analogue world?

10.*

Regulations are organised hierarchically, because hierarchy is the preferred organisational system for humans, allowing them to process information more effectively.[618]

613. See Chap. 7, par. 3.

614. See Chap. 16, par. 2.

615. See Chap. 16, par. 4.

616. See also Chap. 1, par. 17.

617. See Chap. 6, par. 9.

618. See also note 6/7/1.

21. Rights

'The light dove, in free flight cutting through the air the resistance of which it feels, could get the idea that it could do even better in airless space.'

Immanuel Kant

***Synopsis**: Rights are not claims but permissions (1-3); Rights are material (4); Rights, as materialised in regulation on each information platform that is the state, are specific each time to certain categories of individuals (5).*

1. Rights are not claims but permissions*

A right is a permission for a Being to process information on a dataset (another Being or a Thing).

A right is not a claim to do something, a request for a specific processing of information to take place. Because Beings[619] have a permanent will to process information,[620] a claim to process is considered present each time, that is, it is a constant—it is not something that can be used to distinguish between two conditions (i.e. a claim and a non-claim by an individual). In other words, individuals, as Beings, will always want to act, to process information.[621] Whenever allowed (and able[622]) to do so, they have a right to do so.

619. Rights are primarily addressed to humans, as individualised through their states. As far as other Beings are concerned, organisations can have rights and are afforded to them in regulation; animals whenever afforded 'rights' fall under the category of protected Things, below; while the issue of the rights of artificial Beings remains, as yet, undecided. On the 'rights' afforded in certain states to Things so as to protect them, i.e. to prohibit certain types of processing on them that would otherwise be possible, see Chap. 25, par. 5.

620. See Chap. 5, par. 2.

621. Of course, not all individuals for each instance of processing but one or more individuals for each: not everyone wants to eat something at the same time and not everyone wants to build on a specific plot of land, but someone at any given moment does.

622. See par. 3.

2.

Rights are permissions that are, in effect, afforded[623] by the information platform that is the state. Because the state controls all information processing taking place on its platform, all permissions for its citizens to act, all rights come from it and are controlled by it.

Of course, control can be delegated,[624] which allows for rights to be (seemingly, only in appearance) afforded by one individual to another.

3.

Therefore, from the individual's point of view, a right is the actual[625] ability to act, a permission granted to process information, and thus ultimately connected with liberty.[626]

A right gives access[627] to a dataset—and, in turn, enables the processing that creates new information.[628]

4.

623. Meaning that their existence is made possible by the state—whether they are afforded (or rather which ones are afforded, with none not being an option for humans) is a matter of politics (see Chap. 20, par. 6).

624. See Chap. 6, par. 7.

625. See Chap. 5, par. 8.

626. See Chap. 25, par. 8.

627. Of course, if seen from the point of view of that dataset, be it a Being or a dataset over which another Being has already established control (as is invariably the case, see Chap. 6, par. 3), such granting of access is an obligation. In other words, one Being's right is another's obligation. On access, see also Chap. 6, par. 6.

628. See Chap. 6, par. 4.

Rights are material.[629] They are materialised on the information platform that is the state through regulation.[630]

5.

Rights, as materialised in regulation on each information platform that is the state, are specific each time to certain categories of individuals (for example, adults, employees, children, consumers etc.). In contrast, human rights are horizontal, they apply to all citizens indiscriminately.[631]

629. As are control and processing; see Chaps. 6, par. 1, and 4, par. 4.

630. See Chap. 20.

631. See Chap. 22.

22. Human rights

'The fortunes of ideas, like those of men, depend as much on accident as on their own worth and character'

Elie Kedourie

***Synopsis**: Rights which apply to all citizens indiscriminately on the information platform that is their state are human rights (1); Human rights, as is the case for rights, are permissions afforded by the state (2); The constitution (3); Human rights may or may not be afforded within a state (4); Platform rights (5-6); Equality (7); Liberty (8); Security (of information, not of the person) (9); Needs do not give rise to a respective platform right (10); Platform rights and natural rights (11); Some clarifications on platform rights (12-13); Human rights in the digital world (14).*

1.*

Rights[632] which apply to all citizens indiscriminately on the information platform that is their state are human rights. As has been established,[633] rights are normally specific to certain categories of citizens (for example, adults, employees, children, consumers etc.). By contrast, human rights are those rights that are applicable to all, at all times, without distinction.

In practice, from the point of view of individuals, human rights describe what can (and cannot) happen to them, or, conversely, what these individuals are allowed to do on the information platform that is their state.

2.

Human rights, as is the case for rights, are permissions afforded by the state.[634] It is the state that grants the permission to all of its citizens to carry out specific types of processing on

632. Permissions to process; see Chap. 21.

633. In Chap. 21, par. 5.

634. See Chap. 21, par. 2.

datasets (other Beings and Things).

In other words, it is the state that allows its citizens, for example, to hold property, to have families, to process any religious information they wish (freedom of religion), to materialise their every thought (freedom of expression) and so on.

Unlike other rights, however, human rights are not delegated. While other rights are customarily delegated by the state to its citizens,[635] human rights are managed by the state itself.

3. The constitution*

As is also the case for other rights,[636] human rights are material, materialised on the information platform that is the state through regulation—usually at the highest level possible in the hierarchy of regulations for that specific state[637] so as to affect all citizens indiscriminately.

The constitution, which is designed to sit at the top of the regulatory hierarchy in each state, is the obvious place in which to list human rights (and thus to materialise them).

4.

Of course, human rights may or may not be afforded within a state, meaning their materialisation is a political decision (as is the case, after all, for all rights[638]).

635. Ibid.

636. See Chap. 21, par. 4.

637. See Chap. 20, par. 10.

638. See Chap. 21, par. 2.

As history has proven time and again (also taking into account that the cataloguing of human rights, preferably in constitutions, is a relatively recent policymaking exercise that still lacks unanimity), whether all or some citizens enjoy many, a few or any human rights at all depends on the government and the political system[639]—the state merely makes this choice possible.

5. Platform rights

Notwithstanding that their acknowledgement in regulation in any given state is a matter of politics, are there any human rights that are inherent on the information platform that is the state, simply by means of its existence?

In other words, does the finding that states are information platforms for their citizens (in essence, individualisation mechanisms for humans) lead to the logical[640] inference of any human rights?

If yes, then these (human) rights could be named platform rights, because it is to information platforms that they owe their existence and it is throughout the information platform that is the state[641] that they would[642] apply.

6.*

Although logical[643] inferences can be drawn from any finding (proposition), there are certain human rights that can be inferred logically, simply because of states' existence (as information platforms for their citizens).

639. See Chaps. 12 and 12.1, respectively.

640. See note 1/1/1.

641. Essentially, in any and all states, today and throughout human history.

642. 'Should' effectively belonging to political theory (see note 0/1/3).

643. See note 1/1/1.

These pertain to[644] equality, liberty and security (of information).

7. Equality*

Because all humans receive a name and a citizenship from their state, all humans are born equal towards their state.

However, it is important to note that all humans are born equal only with regard to their state. All humans are not born equal among them, each having varying abilities and health, and different characters, even before political systems and governments step in.[645]

8. Liberty*

Because all humans get a name and a citizenship (directly) from their state, all humans are born free from control by other humans, that is, all humans are born at liberty. Because there are no intermediaries in the individualisation relationship between a state and its citizens, no human is born controlled by (much less, the property of[646]) another human.

All humans are thus born at liberty from other humans and not from their states, because it is their state that turned them into individuals, given that states are natural to humans.[647]

644. Although one cannot hope to construct a complete list of all platform rights derived logically from the finding that states are information platforms for their citizens, any list is expected to be short (or at least shorter than perhaps hoped for), because it is only direct logical relationships that give rise to them (so, for example, equality does not also give rise to, for example, human dignity or to freedom of expression, in spite of these rights stemming logically from it).

645. Meaning, even before the particular circumstances of family or state increase even further the inherent inequality among humans, see also Chap. 2.1, par. 4.

646. See Chap. 24, par. 5.

647. See Chap. 25, par. 1.

With regard to the processing operations available to them, all humans have (some) control over all Things and Beings within their state—at the very least they can talk about them. In essence, this is what states do, they make possible the processing of information to individualised humans on their (information) platform.[648] Consequently, all citizens on that platform can process, and thus control in some way, all information on that platform (of course, the types of control that each citizen can actually exercise vary vastly).

9. Security (of information, not of the person)*

Because all humans receive a name and a citizenship from their state (and are thus individualised), this information needs to remain secure, free from any tampering, at least for the duration of the human's life (and for a short time thereafter[649]).

Security of information[650] may cover, particularly in developed societies, all information about the person, the creation of which was made possible[651] by the state; not only name and citizenship, but also family life, academic and professional achievements, and so on.

Importantly, however, security of the person ought not to be considered a platform right; no logical justification for the protection of human life comes as a result of a state's existence[652]—as history, unfortunately, has time and again proven most emphatically (and horribly).

10.

As has been seen,[653] the list of platform rights is short: most notably, needs, even the need to

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648. See Chap. 8, par. 1.

649. See also Chaps. 14, par. 4, and 15, par. 6.

650. See also Chap. 14, par. 12.

651. Personal information, see note 1/7/1, and also Chap. 14.

652. Therefore, an individual (a person) is not its information, see also Chap. 14, par. 12.

653. In par. 6.

survive, do not give rise to a respective platform right (or to any other right for the same purposes, although they do, of course, lie at the root of a(ny) right, in the sense that it is need that creates the will to process[654]).

11. Platform rights and natural rights*

Platform rights lie close to so-called natural human rights and their related theories. The fundamental difference between them, however, is that natural human rights are based on and derived from a theoretical assumption, a fiction (they are believed to exist in Nature and be discoverable through Reason, or to come from God), while platform rights come from a logical finding based on fact (states are individualisation mechanisms for humans).

12.

Needless to say, platform rights may or may not be granted to individuals within any given state—it is a matter of politics whether to grant them or not, as is their extent or the circumstances under which they apply.[655]

13.

Platform rights apply only to humans, because states are natural only to them (and not to animals or organisations—or to artificial Beings, at least for the moment[656]).

14. Human rights in the digital world*

654. See Chaps. 21, par. 1, and 5, par. 2.

655. See also par. 4.

656. See also Chap. 21, par. 1.

In the digital world the basic assumptions about human rights need to be reclaimed. As has been seen, human rights apply to individuals and are afforded by their state. These rights are, however, analogue-world-specific, the culmination of a process with its roots deep in human history—crucially, within an environment of scarcity (remembering that information in the analogue world is finite[657]). Both assumptions (that human rights apply to individuals and are afforded by their state) are being gravely challenged today in the digital world.

Even if these assumptions also remain in the digital world (notwithstanding that information in the digital world is also infinite[658]), it is far from certain that the list of human rights in the analogue world will also work in the digital. In other words, simply adding the word 'digital' next to any human right acknowledged today will most likely not work.

657. See Chap. 1, par. 16.

658. Ibid.

23. Morality

We want information... information... information...
You won't get it.
By hook or by crook we will.
Who are you?
The new number two.
Who is number one?
You are number six.
I am not a number! I am a free man!

The Prisoner (1967), Opening Titles

***Synopsis**: Morality is the ability to choose whether to carry out a processing operation or not (1); An analysis of morality's systems of thought (moral philosophies) is unnecessary for the moment within the context of this political philosophy (2); Can morality be avoided altogether? (3); On whether individuals should keep their promises (4); On religion (5)*

1.*

These regulations[659] that are so well embedded on the information platform that is the state (through hundreds or thousands of years of implementation) that they allow choice (that is, the consequences of breaking them are nuanced) form morality.

In other words, morality is the ability[660] to choose whether to carry out a processing operation or not. This choice is made possible through regulations that have been applied for so long and so extensively that, instead of a yes or no situation enforced through consequences (as is the norm[661]), many more options are allowed to the individual. This is what is meant whenever it is claimed that morality is subjective: it is possible for the individual to decide what to do, to

659. See Chap. 20, par. 5.
660. See Chap. 5, par. 8.
661. See Chap. 20, par. 8.

choose.

Consequently, there is no morality that is outside of or beyond regulation. However, there is law that has not yet become morality,[662] with the digital world, being relatively new, offering us a suitable opportunity to witness this procedure.

2.

An analysis of morality's systems of thought (moral philosophies) is unnecessary for the moment within the context of this political philosophy, for the simple reason that the basic questions asked by each do not coincide: the former suggest what humans should do, while the latter explains why, and how, things are as they are—why, and how, humans live as they live.

In other words, moral philosophy is, in fact, an algorithm that addresses the individuals' question, 'What should I do?', in the event that morality allows him or her a choice in any given situation in life: for example, to avoid pain and seek pleasure (epicureanism), to patiently endure (stoicism), to do whatever benefits the greatest number of others (utilitarianism), to do what one thinks should become a universal principle (Kant) or to do what God commands (religion).

Be that as it may, other than providing a definition for morality and moral philosophy, this chapter will only discuss two basic moral questions (one inherent, the other posited), and leave the topic of morality (a moral philosophy of information) for discussion at a later stage.

3. Can morality be avoided altogether? *

Is there any philosophy or other human endeavour that does not engage with it? Even within

662. See, for example, data privacy legislation, which is most likely on this path after more than 50 years of implementation.

the context of a political philosophy that does not address the question of what humans should do (or, for the same purposes, within the context of any other human endeavour), it is impossible to altogether avoid morality, to claim amorality[663] in any one of our actions.

With information processing explained through need[664] (and opportunity), the question can be asked as to whether this focus on need is not already some kind of morality. In its effort to explain how things are, and in replying that this is how they need to be, does this approach not adopt an ultimately conservative viewpoint? Does it not ultimately reveal a certain morality, that of affirmation, of acceptance of things as they came to be?

The same is, after all, true of any human endeavour. If it is accepted that states are individualisation mechanisms for humans, as suggested in this analysis, does this not reveal a certain morality as well? Should humans exist as individuals at all? Or should we be, for example, numbered[665] animals—with numbering resetting locally and periodically so that no identification across time and space is possible? Similarly, any social interaction (business, employment etc.) or scientific discovery (from its assumptions to the way it is used) also invariably reveals a certain kind of morality.

Difficulties, however, are also met with a hypothetical question. A hypothetical question about how things could have been[666] is useful in opening up new perspectives and elucidating overlooked aspects. However, being hypothetical, not only does it miss the reality test, which would after all demonstrate its worthiness (or from the opposing viewpoint, the fact that it was never reality is an argument for its unworthiness), but it too also reveals a morality: that of the person who asks it.

In other words, (a, any) morality cannot be avoided in any human action, because, quite simply,

663. Even the negative connotations of the term revealing the impossibility of the endeavour.

664. See Chap. 5.

665. The state in this case providing the numbering anyway—revealing even in this hypothetical scenario that states are natural (necessary, as per their nature, see Chap. 5, par. 5) to humans.

666. The suggestion of how things should be thus revealing the morality of the speaker.

it is humans who act.[667]

The topic of morality is expected to hold a central role in the digital world, because it is a fully controlled, artificial environment.[668] Even if it is a simulacrum gone rogue,[669] the fact remains that processing operations need to be pre-planned in order to exist in it, offering humanity a unique, God-creator moment. Whether choice will be embedded in the system (and to what extent and under which circumstances) remains an open issue.

4. On whether individuals should keep their promises*

In spite of this striving (as seen in the previous paragraph, to the greatest extent humanly possible) not to be a moral philosophy, some replies to moral questions need to be provided here too, if for no other reason than illustration. After all, any theory is also assessed on the responses it gives to basic human questions, particularly if these have already been prominently[670] asked.

One such prominent question is, why should individuals keep their promises? In an informational approach, one would first have to analyse what a promise is: it is a (conditional) processing initiated on the information platform that is the state by an individual assisted by its state (warranting the individual's identity—and also the identity of the other party, for the same purposes). Keeping the promise, therefore, would be the final part, the conclusion of the algorithm underlying the processing—nothing more or less. A promise should (presumably) be kept because it exists, because the corresponding processing has been initiated on the

667. Causing, after all, the Unique Human Observer Perspective disclaimer (see note 1/1/1), because ultimately (a certain) morality is in the eyes of the observer.

668. See Chap. 1, par. 17.

669. See Chap. 1, par. 11.

670. Although, one has to admit, these questions are themselves the practical result of the implementation of older philosophies, placing any new philosophy at the disadvantage of having to heed, and tend to, the problems of the past—and therefore treating the question (on the relevance of the philosophy concerned) as the answer.

information platform and it strives for its completion.[671]

Whether an individual should be forced to keep a promise (something entirely possible on the information platform that is the state), as for example in the case of a contract, is an entirely different (political) matter.

5. On religion

Religion is a type of morality. In fact, it is a morality that is different to the one described above,[672] because its basic terms of reference are different: morality is based on regulation, whereas religion is based on holy texts. These two moralities, therefore, have developed independently within states. At times they have had a harmonious relationship, when their texts of reference have been the same, and at other times a conflicting one, meaning that each insisted on its own solution as to what individuals (in fact, the very same individual) should do.

The reason why two types of morality exist in parallel in each state is due to the fact that, from humanity's beginning (or at least its recorded history) until a few hundred years ago, each served a very different purpose: religion was humans' only way to discover the law of Nature,[673] whereas morality was the outcome of regulation to manage human relationships. Of course, with each passing century each type of morality gained depth as a result of human progress, that is, humanity's increase of its information processing capacity; and religion unavoidably developed its own moral code (humans need to control Nature anyway[674]). After the Enlightenment, religion was replaced by science; however, its moral code, developed over thousands of years, often through indescribable pain and bloodshed, remained in place.

671. See also Chap. 4, par. 6.

672. In par. 1.

673. See also Chap. 20, par. 3.

674. See Chap. 20, par. 3.

24. Property

***Synopsis**: Property is control over (specific processing operations out of the many possible on) a dataset; In essence, a Being can be said to have property-like control over a dataset when it can destroy it (1); Property is an attribute of a dataset (2); Property is natural to all Beings (and, thus, is not a platform right) (3); Property is not a pursuit for its own sake (4); No property over humans (5); Property is dependent on the state (6); Property and sovereignty (7); Appropriation (8); Property in the digital world (9-11); On inequality (12);*

1. Property is control over a dataset*

Property is control[675] over a dataset,[676] meaning a Being or a Thing.

Because total control is impossible,[677] property is control over specific processing operations out of the many possible on a dataset. In other words, property is a bundle, a batch of processing operations (that have come to be known collectively under that name), that a Being can allow or prohibit to others (and which, obviously, it can itself carry out), as afforded to it by its state. Exactly which processing operations these are varies vastly. Because property is afforded to individuals by their state according to its political system at any given time,[678] its content is dynamic; property has not been and is not defined in the same manner over space and time. Its definition each time depends on the particular state.

Accordingly, the right to property (ownership), is the ability of a Being[679] to allow or prohibit a specific processing operation on a dataset and (if appropriate) by a dataset.[680] Processing on it, of course, meaning by another Being, while by it, meaning by the dataset itself (only, of

675. See Chap. 6.

676. Immaterial information is not subject to it; see, however, Chap. 24.1 on intellectual property.

677. See Chap. 6, par. 2.

678. See par. 6.

679. Afforded to it by its state; see Chap. 21, par. 2.

680. See also Chap. 6, par. 1.

course, if it is another Being; Things do not process information[681]).

Although the batch of processing operations that constitute property may include any single one,[682] because property's content is dynamic, the one universal characteristic of property is the destruction[683] or deletion (in other words, consumption) of a dataset. In essence, a Being can be said to have property-like control over a dataset when it can destroy it.

2. Property is an attribute of a dataset

Property is an attribute[684] of a dataset, a batch of processing operations that is possible by a specific Being on a specific Thing or (another) Being.

Property is only one among many attributes of a dataset; it is always relevant to specific processing operations, but it is never absolute, in the same way that total control is impossible.[685] In other words, the restrictions over property reflect the impossibility of complete control over any dataset, even though property's existence means in practice more control over a dataset than, for example, partial ownership (lease) or no ownership (common goods[686]). In the same vein, this specific attribute, meaning property, may or may not exist for a specific dataset—not all Things or Beings belong to a Being.

The processing rules included in property as an attribute are state-dependent on each occasion, but the decisions behind them (whether to grant them, to whom and to what extent) are political.[687]

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681. See Chap. 3.

682. See Chap. 4.

683. See Chap. 1, par. 9.

684. See Chap. 6, par. 5.

685. See Chap. 6, par. 2.

686. See also Chap. 22, par. 8, on the platform right of liberty, where it is clarified that all humans have (some) control over all (Things and Beings) on the information platform that is their state.

687. See par. 6.

3. Property is natural to all Beings (and, thus, is not a platform right)*

In the analogue world property has been exercised over datasets, be they in Nature (land, trees etc.) or human-made (artefacts), since the beginning of time by humans[688] and animals alike.

Can it then be claimed that property is natural to Beings, specifically to humans? The political considerations behind this question aside, property is natural to humans (in fact, to all Beings) because destruction (deletion, consumption etc.) is natural, that is, it is a processing operation among the many possible over a dataset. In other words, because destruction of a Thing by a Being is possible in Nature, property is natural to all Beings.

Exactly for this reason, because property is natural to all Beings (and not specifically to humans in spite of it stemming from their states[689]), property is not a platform right.

In the digital world property is (for the moment, at least) exercised in the same way as in the analogue world.[690]

4. Property is not a pursuit for its own sake*

Although property is natural to humans, making it a primary purpose in one's life (meaning giving it primacy over other purposes that are possible) is a choice within the domain of morality[691] that is made possible by the state.

688. Regardless of whether by a single individual or collectively by a family, a tribe etc. (see also Chap. 1.1, par. 5).

689. See Chap. 22, par. 6.

690. See, however, par. 9.

691. See note 5/2/2.

Ownership, the accumulation of wealth, is one purpose among many that certain humans choose to set for themselves if afforded to them by their states. Propelled by the constant need of humans to augment their information processing,[692] this pursuit may never end for the humans concerned. The same (or at least similar) is true for organisations, depending on their (human-set) purpose.[693]

Artificial Beings are not yet able to hold property, because their states do not allow them to, although, as has been seen, property is natural to them as well.

Accordingly, because Things have no purpose (purpose being the result of need[694]), no Thing's purpose is to become the property of a Being. Similarly, even after a Thing becomes the property of a Being (for any period of time), and even though the Being will certainly process it in a way that serves its purposes, the Thing itself does not acquire a purpose (the purpose being imposed on it by the Being who happens to be its proprietor), meaning Things have no purpose, or rather their short-term purpose depends on their short-term use.[695]

5. No property over humans*

Although one Being can be the property of another (organisations are owned, for example, by their shareholders or by whoever created them[696]), this does not apply to humans. A human cannot, logically, be the property of another human (or in the same context, of another Being), notwithstanding centuries of human slavery. Why is that?

In short, because of the platform right to liberty.[697] Because all humans receive a name and a

692. See Chap. 5.1.

693. See Chap. 2, par. 7.

694. See Chap. 5, par. 2.

695. See also Chap. 3, par. 4.

696. See Chap. 2, par. 7.

697. See Chap. 22, par. 8.

citizenship directly from their state, all humans are born free from control by other humans, that is, all humans are born at liberty from other humans.

Of course, whether the platform right of liberty materialises (and to what extent) on any information platform that is a state at any moment in human history (and whether for all or only for a few) is a matter of politics—as can be seen by the issue of property over artificial Beings (specifically, computer programs) that remains undecided today.

6. Property is dependent on the state*

Property is inconceivable without a state, because only through the state is the identification of Beings and Things possible. It is only through a state that the designation of an owner (the Being exercising property) or a dataset to be owned can be carried out. This, however, has nothing to do with acknowledging a right to property within a state for all or some of its citizens. This is a political decision made by a state's government.[698]

Throughout practically all of human history the right to property has been acknowledged within states (regardless of how many of their citizens this applied to) to such an extent that states are frequently depicted as effectively protecting property. However, it is important to clarify how and why they do this. States are able to protect property first and foremost because it is through them that both the owner and whatever the attribute of property applies to exist. States have full control over all information processing concerning property.[699] States can therefore protect property, but it is not necessary the case that they will do so. Protection can be provided but whether it is actually provided and on what terms is a matter for the political system and the government. In other words, it is not the state's purpose to protect property (states have no specific purpose anyway[700]), rather it is the role of the government, if under the political system

698. See Chap. 12.

699. As is the case for any information processing happening on their information platform; see Chap. 16, par. 2.

700. See Chap. 11, par. 7.

applicable at the time[701] this is considered a worthy cause.

Therefore, the reason that states in practice appear to protect property is because their political systems and governments ask them to—and the state obliges, being uniquely in the position to do so because property is entirely dependent on it.

Consequently, the way in which we have experienced property, and the human right to property, over history varies greatly depending on the political systems and governments in place, not on states or individuals' property-relevant processing.

7. Property and sovereignty*

As has been established,[702] sovereignty means total control; in the context of a state it means control over all information processing carried out within the territory of a state. The state is by definition sovereign on the information platform that is, after all, its own creation (i.e. its territory); however, for the government that controls the state, sovereignty, although factual and material in each state, is an unattainable objective, because total control is impossible.[703]

In practice, sovereignty and property are quite similar, but not identical. Property allows for control over a batch of processing operations that may seem wide-ranging (wider-ranging, at least, than any other control usually exercised by a Being over another Being or a Thing), and includes its destruction. From this point of view it resembles sovereignty (i.e. total control) because (especially in property-favouring political systems) it seems to cover every processing imaginable.[704] Nevertheless, this is not actually the case. Property grants practical control over pre-known, pre-described, and thus pre-assessed, so as to be permitted, processing operations.

701. See Chap. 12.1.

702. In Chap. 16, par. 1.

703. See Chap. 16, pars. 2–5.

704. On the connection of imagination with freedom, see Chap. 25.

In other words, property is not open-ended; most notably, it does not allow for processing operations not foreseen by regulation at the time of the creation of new information;[705] if any new types of processing are made available to citizens on the information platform that is the state, the government has the last word on whether they will be allowed under property rights and on which terms.

In contrast to property, sovereignty strives for total control—which is, of course, an unattainable objective. In essence, property is material, whereas sovereignty is an objective. Property and sovereignty may (depending on the political system) appear to coincide, but they are not the same—an individual is not sovereign over the Things or Beings it has property rights to—at least, not in the analogue world.[706]

8. Appropriation*

As has been seen,[707] the mechanism of establishing property is simple: any time that control over a dataset is allowed by one Being to another, and processing takes place, new information is created. If this new information materialises (in the analogue or digital world) then its creator exercises control over it that may (or may not) constitute property, depending on the state (specifically, on the government and the political system) the creator lives in. In other words, whenever a human is allowed to interact with a dataset, new information is created (thoughts, feelings, wishes) in that human, over which, if this leads to creation of another (i.e. a new) dataset (be it in the analogue or the digital world), that same human may have property rights (or not), depending on the state in which the human lives and its political system.

The same is true for new, previously unknown datasets (existing in Nature); the first human to discover them exercises control over them, which may amount to property depending on the state in which that human lives.

705. As seen most visibly in intellectual property.

706. On the digital world, where total control may be possible, see Chap. 16, par. 7.

707. In Chap. 6, par. 4.

9. Property in the digital world

The gravest challenge for traditional, analogue-world notions about property in the digital world comes from the breakdown of the natural, analogue-world link between control and location. As has been seen,[708] in the digital world, contrary to what has been known to humanity since its beginning, a Thing or a Being never leaves the territory of the state where it was created: it can process information, or information can be processed on it, from an analogue-world distance, from (or in, as the case may be) the (digital) territory of other states. This affects (in fact, reduces) the control of states within their own territories and thus the property rights of their citizens—in essence, their citizens have become users (instead of owners).

Of course, from the point of view of the owners, their property is strengthened, because the digital world, artificial as it is, allows for more control than the analogue.[709]

10.

That aside, as in the analogue world, property can be exercised over digital information (including digital-born and therefore digital world-only information).[710] Because digital information is intangible, ownership of digital information will be discussed in the context of intellectual property.[711]

11.

Although increasing property in the digital world can be a purpose for humans, as in the

708. In Chap. 17, pars. 10 and 11.

709. See also par. 7.

710. See Chap. 1.1, par. 17.

711. See Chap. 24.1.

analogue world,[712] in the case of digital information, wealth will unavoidably need to materialise at some point in the analogue world for the purpose to be considered (partially, as is always the case) fulfilled by humans. In other words, because humans are biological Beings, wealth can never exist for them exclusively in the digital world.

Because, however, this materialisation can be partial (a rich individual in digital assets does not have to make all of them materialise in the analogue world too), the bigger picture of information being infinite in the digital world, but finite in the analogue, is not affected.[713]

12. On inequality*

As has been seen,[714] although all humans are born equal towards their state, differences among humans start to emerge as soon as they are born (in terms of abilities, health and characteristics), which are immediately accentuated after birth by circumstances (particularly, the state into which they are born) and opportunity (luck). Inequality thus being natural to humans,[715] this is also reflected in property accumulation, even among those born in similar circumstances in the same state—and much more so if either of the two is different. In other words, among individuals who have given primacy to wealth accumulation,[716] even if they live in similar conditions, some will succeed in amassing (much) greater wealth than others; even slightly different conditions may dramatically accentuate the differences.

The above unavoidably leads to inequality in property acquisition among humans; in other words, just as property is natural to humans,[717] inequality is also natural to them. (As is the

712. See par. 4.

713. What is affected, however, is aesthetics, because processing (or the enjoyment of wealth) in this case is no longer carried out visibly by the individual in the analogue world but rather happens in the digital world. In other words, the traditional picture of Scrooge McDuck swimming in his vault full of golden coins is not possible to achieve with digital assets.

714. In Chaps. 2.1, par. 4, and 22, par. 7.

715. In other words, there is no inequality because there can be no equality.

716. See par. 4.

717. See par. 3.

case with regard to any purpose-setting between any two different individuals.)

As has also been seen,[718] comparison (and not conflict) is natural to humans. Humans need to augment their information processing;[719] augmentation, however, is always subjective and relative.[720] Consequently, inequality, in spite of being natural, will not go unnoticed.

Whether, and to what extent, such natural inequality among humans is to be reduced by states (which have the means to do it, because they control all the processing operations that make inequality possible) is a political decision of their governments.

718. In chapter 5.1, par. 9.

719. See chapter 5.1.

720. See also chapter 25, on freedom.

24.1. Intellectual property

'Something that doesn't actually exist can still be useful.'

Ian Stewart

***Synopsis**: Intellectual property is a kind of property that is exercised over dematerialised datasets (1); All that was said about property is applicable also on intellectual property; Crucially, however, intellectual property does not afford the owner the option to destroy the dataset (2); Intellectual property, same as property, is dependent on the state; similarly, it is natural to humans (3);*

1.*

Intellectual property is a kind of property[721] that is exercised over dematerialised[722] datasets.

Although property in the analogue world has been exercised since the beginning of time,[723] the concept of intellectual property was invented only relatively recently in human history, in the seventeenth century. It reproduced, to the greatest extent possible, what was already known of the traditional notion of property. Because it was created by humans, intellectual property was made to resemble what humans were already familiar with (a remark that, as can be seen, is also valid for the digital world[724]).

2.

All that has been said about property above[725] is also applicable to intellectual property: it means control over a dataset (which is, however, dematerialised); it gives to a Being (human

721. See Chap. 24.

722. See Chap. 1.1, par. 10.

723. See Chap. 24, par. 3.

724. See Chap. 1, par. 11.

725. In Chap. 24.

or organisation) the ability to allow or prohibit another's processing operation over that specific (dematerialised) dataset. Ultimately, intellectual property is an attribute of a specific dematerialised dataset that dictates whether and what type of processing on it is allowed, by which Being(s) and under which conditions.

Crucially, however, intellectual property does not afford the owner the option to destroy the dataset. Unlike traditional property, this being its distinctive characteristic,[726] owners of intellectual (dematerialised) datasets cannot destroy them once they have been created, that is, once they have materialised and come into existence in the analogue or the digital world. Apparently, the replication of the traditional property system was unsuccessful—and this accounts for the dysfunctions of the intellectual property system.

3.

Notwithstanding the differences between the traditional notion of property and intellectual property, intellectual property, like property, is dependent on the state[727] and is protected by the state in accordance with the political system and government decisions in place at any given time.

The question of whether intellectual property is natural to humans merits some explanation.[728] Although the fact that intellectual property was invented late on in human history suggests the opposite, one must not forget that humans will process information in any way they can. Until the seventeenth century (with the Industrial Revolution leading to mass mechanical reproduction), humans processed dematerialised information in the only way they knew how, augmenting their information processing in accordance with their processing capabilities. When things changed, a new type of property was invented, one which was natural to them.[729]

726. See Chap. 24, par. 1.
727. See Chap. 24, par. 6.
728. As with property, see Chap. 24, par. 3.
729. On the basis of the abstraction criterion set out in Chap. 5, par. 5.

As with property, however, intellectual property is not a platform right.[730]

730. See Chap. 24, par. 3.

25. Freedom and liberty

'Since we are not, in fact, free, but could not live without the conviction that we are, what are we to do?'

Isiah Berlin

***Synopsis**: Freedom is the ability to imagine; It is constrained by the state, the information platform any individual happens to be living on—and is thus transformed into liberty (1); Freedom is impossible to attain (2); Freedom is relative (3); A human need to be free? (4-5); The state is at the same time the source of and the basic impediment to human freedom (6); States are still ('freely') living in an (imagined) 'state of nature' (7); Liberty (8); Liberty is also relative (9); A platform right to liberty exists only with regard to other humans (10); Liberty to be examined within the context of a moral philosophy at a later stage (11).*

1.*

Freedom is the ability[731] of individuals to process information to the greatest extent imaginable by them, to potentially carry out any processing operation they wish, to do what they want. It is not material, in the sense that the processing need not actually happen; it is only enough that individuals imagine that it is possible for it to happen. Freedom is ultimately the ability to imagine.

Freedom is constrained by the state, the information platform any individual happens to be living on—and is thus transformed into liberty.[732]

2. Freedom is impossible to attain

The struggle for freedom is notoriously unending: because human imagination has no limits, freedom can never be attained.

731. See Chap. 5, par. 8.

732. See par. 8.

Accordingly, although everyone is born free (i.e. with the ability to imagine), there is no generally accepted threshold for freedom or generally accepted definition of what it actually means to be free. Freedom is imagined each time, by each one of us, according to our imagination of either what is possible for us or what should ideally be the case—the point being that the relevant threshold is constantly changing in space and time throughout human history.

3. Freedom is relative*

However, even imagination has to be anchored somewhere. Humans alive one hundred years ago could not have imagined the digital world—if they could, they certainly would have liked to process information in it too, otherwise they would not have considered themselves free.

Practically, therefore, any one person's freedom is relative to another person's freedom. An individual only imagines oneself to be more or less free than another individual, and even then freedom is in the eye of the beholder (because one can only imagine another's actual freedom). Consequently, because comparison is natural to humans,[733] a human is free or unfree in relation to, or compared with, an (imagined) other.

4. A human need to be free? *

Notwithstanding its relativity and the impossibility of attaining it, humans (nominally at least) have striven for freedom throughout their history—they want to be free. Millions have died willingly in the name of this cause, making this a question that cannot be ignored. Is there a human need to be free? Why do most (or at least certain) humans claim that they need to be free?

As has been seen, humans need to augment their information processing. In fact, each and

733. See Chap. 5.1, par. 9.

every human needs to augment his or her own information processing, to constantly process new information for as long as he or she lives.[734] However, humans strive towards an imagined, not a real end, because needs are unsatisfiable.[735] Imagination is, therefore, critical: humans need to be able to imagine that further, new processing is possible for them[736] that may satisfy their needs (even though this is, however, never actually the case). If they could not imagine that new information processing is possible for them, they would simply stop (reducing themselves to a mechanical increase of their information processing with every new day of their lives). It is therefore humans' need to augment their information processing that causes (gives rise to) humans' ability to imagine—and, thus, to be free.

5.*

One cannot know if only humans among all other animals have the ability to imagine and thus a need to be free. There is certainly empirical evidence that certain animals cannot live in captivity. Notwithstanding, however, whether animals can or cannot imagine, animals whose freedom is protected within (human) states enjoy liberty[737] (not freedom[738]).

Under the Unique Human Observer Perspective, the two other categories of Beings, organisations and artificial Beings, cannot imagine, and thus do not need to be free.[739] After all, having a specific purpose in their lives means that all of their information processing is constrained by it (meaning that even if they could imagine, this would happen within the confines of serving their purpose). However, it is possible that, partially at least, the algorithm behind human imagination (the comparison of a Being's information processing with that of

734. See Chap. 5.1, par. 2.

735. See Chap. 5.1, par. 5.

736. This does not necessarily have to be entirely new or never-before-heard-of processing; it may well be that the processing already done by others is imagined to be applicable to them as well—comparison being natural to humans.

737. The same is true for certain Things that have been granted rights in human states, such as specific rivers or trees, see also Chap. 21, par. 1.

738. See par. 8.

739. In essence, organisations and artificial Beings are treated as not able to process immaterial information and thus as lacking in creativity; see Chap. 5.1, par. 6.

another's and the reproduction of it—but perhaps not the innovative increase) could occur in the case of artificial Beings (specifically, computer programs).

Of course, as with animals, liberty within any given state can be shared by all, Things and Beings alike. There is no reason, therefore, why artificial Beings, specifically computer programs, should not be given rights by regulation (similar to organisations).

6. The state is at the same time the source of and the basic impediment to human freedom[740] *

The state is the source of human freedom, because the state is the only way for humans to become individuals and thus to be able to augment their information processing.[741] At the same time it is the greatest impediment to human freedom, because it controls all of its citizens' information processing. This is unavoidable: all human information processing on the information platform that is their state exists because of the state and takes place with its intermediation. The state is a (tacit, implied) participant in any and all human interaction. State sovereignty, after all, means control of any and all information processing within its territory.[742] In other words, the state constrains freedom because it gives humans the terms of reference necessary for them to be able to imagine.

This conflicted role accounts for all of the ages-long disputes and fights between individuals and their states over human freedom which, among others, have resulted in the creation of

740. This also helps to make sense of Rousseau's famous opening, that 'man was born free'. Humans are born free, i.e. able to imagine. What they imagine as their freedom, however, is transformed through government and political system into liberty as soon as they are born, unavoidably restricting their imagined freedom—hence Rousseau's immediate follow-up that 'he is everywhere in chains'. In other words, the state, as an information platform, is actually found everywhere around humans (i.e. it is natural to them), thus transforming their natural-born freedom into liberty as soon as they come to life.

741. See par. 4.

742. See Chap. 16, pars. 1 and 2.

social contract theory,[743] the individual's division into two selves[744] and political systems.[745]

Needless to say, freedom is not impeded by other individuals, but liberty most certainly is.[746]

7.

In essence, therefore, states are the only Beings that are truly free today, in the sense that no other Being exercises control over their information processing.[747]

This shows that states are (still) living in whatever 'state of nature' can be imagined: a non-state point in history that predates language and consciousness (with the EU being the first state of states, an information platform for all the information platforms that are states[748]).

8. Liberty*

As has been established,[749] freedom is the ability to process information to the greatest extent imaginable—ultimately, it is the ability of humans to imagine. Liberty, on the other hand, is a condition, an absence of restraints within a specific state, a permission to process information (i.e. a right[750]). As has also been seen,[751] freedom can never be attained. An individual can appear to be be free (i.e. nominally proclaimed to be able to be free) but, in fact, is not free (their state being able to control all his or her processing); in any event, most of the time

743. See Chap. 13, par. 2.

744. See Chap. 26, par. 4.

745. See Chap. 12.1, par. 5.

746. See Chap. 21, par. 3.

747. Notwithstanding breaches, of course, such as those caused by the digital world or the global markets (see also Chap. 12, par. 11, as well as, note 16/1/3 on the Westphalian state).

748. See Chap. 19.

749. In par. 1.

750. See Chap. 21.

751. In par. 2.

individuals feel themselves to be less free than others or than their imagined level of freedom.

In contrast, liberty is a (reached or at least agreed upon) level of freedom on the specific information platform that is the state. Liberty is effectively a subset of freedom, a smaller batch of processing operations than those imagined by freedom but one which is actually materialised, afforded to individuals within a state.[752]

In other words, liberty is materialised freedom: liberty decides whether the information processing imagined in the context of feeling free can materialise in the analogue or the digital world, or not.

9. Liberty is also relative

Like freedom,[753] an individual is neither at nor not at liberty, because liberty's content varies in space and time. Most importantly, however, there is no state where some level of liberty, even minimal, was or is not afforded to individuals, that is, some absence of restraints so as to allow them to be able to process information on the information platform that was or is their state.[754] Whether that level was satisfactory or not each time is a matter of politics (comparison being natural to humans[755]).

Freedom therefore, whenever found in political discourse, invariably actually means different levels of liberty, that is, it is part of the discussion on political systems.[756]

752. Meaning that individuals have access to them, see Chap. 6, par. 6.

753. See par. 2.

754. See also Chap. 22, par. 8.

755. See Chap. 5.1, par. 9.

756. See Chap. 12.1.

10.

Although (some) liberty invariably exists in human states, the human right to liberty (freedom of the person) has been acknowledged as a fundamental (natural law) human right only recently. As is the case with all rights, including human rights, its acknowledgement is political, it is assumed.[757]

By contrast, a platform right to liberty exists only with regard to other humans:[758] all humans are born free from other humans' control[759]—but certainly not from their states' control.

Of course, whether this platform right actually materialises in any state is a matter of politics (as has been painfully demonstrated through human slavery for thousands of years).

11.*

Although the provision of more liberties would intuitively appear better to individuals than fewer liberties, because in this way their information processing would be augmented even further, this is not a matter to be decided lightly, first and foremost (utilitarian reasoning notwithstanding) because it is not claimed here that the augmentation of information processing is a worthy purpose for any state to pursue[760] (taking into account, for example, the measures this pursuit also unavoidably necessitates). This would be a political decision.

Evidently, for the very same reasons, liberty is not analysed any further here. Liberty is to be examined within the context of a moral philosophy at a later stage; here only what freedom and liberty really are is identified.

757. See Chap. 22, par. 11.

758. See Chap. 22, par. 8.

759. See Chap. 24, par. 5.

760. States may need their citizens to augment their information processing (see Chap. 10), but whether needs need to be served (and to what extent) is a moral and political issue.

26. Liberalism

'As for me, I only exist 'at home' (in myself); and as for that other life of mine which lies in what those who love me know of me, considered naked and simply in itself, I am well aware that I feel no fruit or joy from it, other than from the vanity of an imagined opinion.'

Michel de Montaigne

***Synopsis**: The individualisation of humans and the limits of this philosophy (1-2); Individualistic political theories (3); The distinction between the public and the private spheres (4); The inherent conundrum that individualistic theories have to deal with (5-8); The digital world and the right to informational self-determination (9-10); In need of an alternative political theory (11).*

1. The individualisation of humans and the limits of this philosophy*

States turn humans into individuals.[761] It is states that provide each human with a name and a citizenship at birth, making them uniquely identifiable over space and time—and, therefore, an individual. Once individualised in this way, humans are able to satisfy their need to augment their information processing.[762]

2.

In the manner described above, humans become individuals. This is the individualisation of human beings. It is a natural process, common to all humans ever since they gained self-consciousness. Individualisation is a technical procedure that takes place automatically for each and every human on the planet—there is no political theory behind it.[763] Therefore, this procedure demarcates the borders of this political philosophy of information, beyond which

761. See Chap. 8, par. 1.

762. See Chap. 5.1.

763. Of course, other than that humans become individuals that are uniquely identifiable in space and time, and thus are different to other pack animals (or artificial Beings, for that matter). On morality, and whether it can be avoided altogether, see Chap. 23, par. 3.

this philosophy cannot expand.

3. Individualistic political theories*

Individualisation is different to, and ought not to be confused with, individualism or individuality—or any other political theory of the individual, for that matter.

Individualism is a political theory that considers the individual the only social[764] unit, and gives priority to its various needs.

Individuality is a cornerstone of the political theory of liberalism. It assumes a unique character for each human, and therefore adds qualitative features to individuals which need to be nourished within a specific political system.

4. The distinction between the public and the private spheres*

What is important to note is that, regardless of variations and differences in approaches (which can of course be quite significant in everyday politics), all individualistic political theories are based on a fundamental dichotomy: specifically, that an individual is composed of a private and a public sphere[765] (or a private and a public self).

The dichotomy works, and makes sense, through conflict.[766] The two spheres that supposedly make up an individual are conceived to be mutually exclusive: each time one of them increases it does so at the expense of the other.

764. Consider, however, that society is a group of individuals who are individualised by a specific state (see Chap. 8, par. 5).

765. The contents of each being left deliberately vague.

766. Obviously, because the self is imagined to be constrained.

If this theoretical model is accepted, which one of the two spheres is to be supported? Conveniently, two political theories have emerged, one for each.

Liberalism[767] broadly favours the private sphere over the public. It basically suggests that each individual's private sphere is not only inalienable (i.e. it should not be completely dominated by the public one), but that it should also be increased (nourished, fostered) as much as possible (again, to the detriment of the public one). At its extreme, meaning the complete domination of the public by the private sphere, lays anarchism and libertarianism.

On the other hand, communitarianism broadly favours the public sphere over the private one. Here belong all political theories that formulate a 'common will of the people' with which the private sphere of each individual needs to merge. At its extreme are authoritarian regimes that entirely deny the existence of any inalienable private sphere.

5. The inherent conundrum that individualistic theories have to deal with*

Nevertheless, if seen from an informational point of view, this assumption, the dichotomy between the private and the public self, is basically false, it does not exist. The state, because it is the information platform that individualised humans and made it possible for them to live meaningful lives, has access to all information, it is omnipresent.[768] For the state, there is no private and public sphere. It is just information processing as usual. In other words, the state knows everything anyway. It cannot avoid doing so as it is an indispensable, ever-present party to any information creation and processing that takes place by any one of its citizens on its (information) platform.

This is the basic problem, the inherent conundrum for any individualistic theory, on the information platform that is the state. What is to be done with the fact that the state knows

767. The name is derived from its support of the private sphere, at the core of which reside, supposedly, an individual's thoughts and ideas, and thus imagination. In essence, liberalism yearns for freedom, but achieves liberty instead (see also Chap. 25).

768. See Chap. 7, par. 3, and also Chap. 16, par. 2.

everything anyway?

Of course, so formulated, the question is stylistic: the state is not a person, only an informational infrastructure. It enables knowing but it does not know itself, it has no purpose[769] (let alone consciousness); effectively, it is the Being that runs the state, meaning its government (specifically 'its' individuals) that can know everything anyway, through its control[770] of the information platform that is the state. Basically, because the state is omnipresent, its government can be (relatively) omnipotent.[771]

[INSERT DRAWING]

6.

In view of the above, the government, representing the public sphere, is at an inherent advantage, which explains why liberalism has had to come up with a number of ideas to limit government, [772] while communitarianism provides practically none (it simply developed theories to justify its claim instead).

7.*

Understandably, one could claim that the practical result of the above false dichotomy is the same, no matter the theory behind it (meaning, whether one accepts the dichotomy of the self or not). That is, in view of humans' need to augment their information processing, and because information in the analogue world is finite,[773] those asking for more liberties for themselves in order to be able to process (to act) more will always come up against those who would prefer not to give these to them (because they wish to keep these opportunities for themselves, so as

769. See Chap. 11, par. 7.

770. See Chap. 12, par. 1.

771. See Chap. 12, par. 10.

772. See Chap. 12, par. 8.

773. See Chap. 1, par. 16.

to increase their own information processing). Conflict, regardless of whether innate or the result of comparison, is inherent in an environment (system) of scarcity.

Whatever the case may be, within an individualism context (and resulting political systems) it is clear that the middle political ground (those accepting the theory of the two spheres and therefore supporting some balance between them) has a harder time than the extremes, which, each for its own purposes, want the system of the two spheres gone. This explains why historically, democracy (the epitome of individualistic political systems and itself a perpetual balancing exercise) has had (and still has) a harder time defending its case, and why the two extremes (far right and far left) meet (in their wish to abolish the dichotomy and individualism itself).

8.

However, the most serious problem caused by these individualistic theories and their false dichotomy between a private and a public self is that they pit the individual against the state, causing state malaise.[774] This is not only unnatural on the information platform that is the state (because states are natural to humans[775]), but is also counterproductive, in the sense that it requires a Sisyphean effort to make countless subtle distinctions work while also trying to strike a balance each time: there are myriad instances that the government should (pretend to) not know of and others that it is expected to know of (the same case sometimes falling into both categories, for example in cases of emergency[776]).

9. The digital world and the right to informational self-determination*

In the digital world the false dichotomy between a private and a public self is accentuated,

774. See Chap. 13, par. 10.

775. See Chap. 8.

776. It is on this premise that the dictator (Fuehrer) theory is based—which takes us back to Caesar (and even before that, to Aristotle's *aesymnetes*).

because, for the first time in humanity's history, total and complete control is possible. The digital world is an artificial world; control is embedded in the system, in the sense that those who have constructed and maintain it are able to know and monitor at all times[777] all behaviour in it (regardless of whether that of individuals or artificial Beings).

This is a fundamental, tremendous change from the analogue world. In the analogue world the state may be omnipresent and the government (relatively) omnipotent, nevertheless these are only possibilities, not facts. The reality depends on the processing capabilities available at any given time. In other words, the state *does* know and the government *can* know all that an individual does in any moment of his or her life, however whether they *actually actively know* this, whether they actually process any and all information so as to acquire that knowledge is a completely different matter. From the beginning of humanity until very recently, processing was done manually (e.g. on paper), and therefore actual knowledge was impossible to achieve. Computing has improved processing capacities tremendously, but the immense variation of the analogue world still impedes actual, real-time total knowledge, at least it does today. Significantly, however, this is not true in the digital world, where the complete opposite is the case.

10.

By way of a response to the completely new challenges facing humanity, the distinction between an individual's private and public spheres has already been projected onto the digital world. A new right, the right to data privacy, emerged in the 1970s, when computers first appeared, and quickly took over the world, adopted by liberal and authoritarian regimes with equal enthusiasm.[778] At its basis lies the assumption that individuals have a right to determine (in principle, at least) for themselves (i.e. through self-determination) how information that lies within their private spheres is used in both the analogue and the digital worlds.

777. See Chap. 1, par. 17.

778. Of course, differing in the extent of its application, i.e. whether it also applies in full in the public sphere (i.e. the government, the public sector) too. Whatever the case may be, the vast majority of states today have introduced legislation that tacitly subscribes to the individualism dichotomy (see also par. 2).

However, in this way the conundrum of the two spheres will be perpetuated—specifically, in an environment (system) where the supposed dichotomy of the two spheres could not be further from reality, due to the technical specifications of the digital world.

11.

If the two basic premises underpinning much of modern human life (social contract theory and the individualistic theories) are fundamentally flawed, what could replace them? Because both engage with the 'should' rather than the 'is', they are prescriptive rather than descriptive, and thus the answer to this question is beyond the scope of this philosophy.

New political theories need to be devised to provide us with alternatives for the roles of the state and humans, as well as all other Beings, in both the analogue and the digital worlds.

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