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 state's information processing environment.

519 See Chap. 16, pars. 2 and 3.
520 In Chap. 16, par. 1.

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 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

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.
525 On how it was really created, see Chap. 11, particularly par. 3.

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).

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,

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.

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 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

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.
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.

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 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.

536 See Chap. 1, par. 10.
537 See Chap. 1, par. 11.
538 See Chap. 8.

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 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

539 See Chap. 1.1, par. 15.

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.

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

540 See Chap. 6, par. 4.
541 In par. 5.
542 See also Chap. 1.1, par. 18.

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 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,

543 See Chap. 24, par. 6.
544 See par. 13.
545 See also par. 13.
546 See par. 5.

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) 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

547 And protecting, see par. 16.
548 On sovereignty, see Chap. 16.
549 See also Chap. 7.1, par. 5.

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 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.

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.