

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).*

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

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.

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 Things¹⁹⁹). 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 to²⁰²) 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 not²⁰⁴ has nothing to do with having the 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 choice²⁰⁵ (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

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.

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

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

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 anything²⁰⁸ (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

So seen, whatever is necessary to satisfy a need, because needs are natural²¹¹ 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

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.

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.

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 to humans to create all of the above²¹² 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 point²¹⁴).

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,

212 See Chap. 5.1.

213 See Chap. 8.

214 See also Chap. 15.

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.

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.

215 See also Chap. 2, par. 18.

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 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.

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.