



# Being and Value in Technology

---

*Edited by*

Enrico Terrone · Vera Tripodi

palgrave  
macmillan

# Being and Value in Technology

Enrico Terrone • Vera Tripodi  
Editors

# Being and Value in Technology

palgrave  
macmillan

*Editors*

Enrico Terrone  
Department of Antiquity, Philosophy  
and History  
University of Genoa  
Genoa, Italy

Vera Tripodi  
Department of Philosophy  
University of Milan  
Milan, Italy

ISBN 978-3-030-88792-6

ISBN 978-3-030-88793-3 (eBook)

<https://doi.org/10.1007/978-3-030-88793-3>

© The Editor(s) (if applicable) and The Author(s), under exclusive licence to Springer Nature Switzerland AG 2022

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Palgrave Macmillan imprint is published by the registered company Springer Nature Switzerland AG. The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

# Acknowledgments

We would like to thank the authors of the papers collected in this volume, for their willingness to cooperate during the whole review process, as well as the referees, for carefully reading the contributions and for giving constructive comments which helped improving the volume. We are also grateful to the editorial committee of *Palgrave Macmillan* for all the support given to the publication of this book.

# Contents

|                |   |           |
|----------------|---|-----------|
| <b>Part I</b>  | <b>Ontology</b>   | <b>1</b>  |
|                | <b>What Are Technical Artefacts in Patent Practice? A Practice-Based Ontology</b>                                   | <b>3</b>  |
|                | <i>Wybo Houkes</i>  |           |
|                | <b>The Cyberspace Strikes Back: An Ontological Account of Social Networks</b>                                       | <b>27</b> |
|                | <i>Enrico Terrone</i>   |           |
|                | <b>Cognitive Artifacts Between Cognitive Sciences and the Philosophy of Technology</b>                              | <b>45</b> |
|                | <i>Marco Fasoli</i>   |           |
| <b>Part II</b> | <b>Ethics</b>   | <b>61</b> |
|                | <b>Anticipating Sex Robots: A Critique of the Sociotechnical Vanguard Vision of Sex Robots as ‘Good Companions’</b> | <b>63</b> |
|                | <i>Janna Van Grunsven</i>   |           |

|   |     |
|---|-----|
| <b>The Right and Unfair Aspects of Artificial Womb Technology</b>   | 93  |
| <i>Vera Tripodi</i>   |     |
| <b>Missed Opportunities: Feminist Grounds for Regulating Transnational Surrogacy, in the Anthropocene</b> | 115 |
| <i>Dana S. Belu</i>   |     |
| <b>Part III Aesthetics</b>  | 139 |
| <b>Computer Art, Technology, and the Medium</b>   | 141 |
| <i>Christopher Bartel</i>   |     |
| <b>Breaking the Fourth Wall in Videogames</b>   | 163 |
| <i>Nele Van de Mosselaer</i>  |     |
| <b>Games, Artworks, and Hybrids</b>   | 187 |
| <i>Manuel García-Carpintero</i>   |     |
| <b>Index</b>  | 219 |

## Notes on Contributors

**Christopher Bartel** is Professor of Philosophy at Appalachian State University and an Adjunct Research Fellow at Charles Sturt University. His research interests primarily lie within ethics and aesthetics, with a special focus on music and videogames. He is the author of *Video Games, Violence, and the Ethics of Fantasy: Killing Time* (Bloomsbury 2020).

**Dana S. Belu** is Professor of Philosophy in the Philosophy Department and Women's Studies Department at California State University, Dominguez Hills. She works at the intersection of phenomenology, feminist philosophy of technology and bioethics, and is the author of *Heidegger, Reproductive Technology & The Motherless Age* (Palgrave 2017).

**Marco Fasoli** is a Research Fellow at the Scuola Universitaria Superiore IUSS of Pavia. His research areas are the philosophy of cognitive sciences and the philosophy of technology. In recent years, he has focused on the ontological and moral issues surrounding cognitive artifacts, also addressing the impact of new digital technologies on personal well-being.

**Manuel García-Carpintero** obtained his PhD at the University of Barcelona and has taught there since then. He works in the philosophy of language and mind, and related epistemological and metaphysical issues. He is completing a book under contract with OUP on the nature of speech acts in general and assertion in particular, entitled *Tell Me What You Know*.



**Wybo Houkes** is Professor of Philosophy of Science and Technology at the Department of Industrial Engineering & Innovation Sciences of the Eindhoven University of Technology (TU/e). After studying theoretical physics and philosophy in Amsterdam and Leiden, he defended a PhD thesis on Kantianism in early twentieth-century philosophy at the University of Leiden (2000). Until 2004, he was a Post-doctoral Researcher in the program “The Dual Nature of Technical Artefacts” funded by the Netherlands Organization for Scientific Research (NWO). In 2008, he was awarded a Vidi fellowship for a project on evolutionary theories of technology. His research interests include technical artefacts and their functions; cultural-evolutionary models of technology; scientific modelling; and the interrelations between technology, individual users and societal practices. He (co-)authored three books, including Houkes/Vermaas, *Technical Functions* (Dordrecht: Springer, 2010), and articles in peer-reviewed journals such as *The British Journal for the Philosophy of Science*, *Design Studies*, *The Monist*, *Philosophy of Science*, *Research Policy*, *Studies in History and Philosophy of Science* and *Synthese*.

**Enrico Terrone** is Associate Professor at University of Genoa, Italy. He works on philosophical issues concerning aesthetics, ontology and technology. His main research is philosophy of film. His last book (co-authored with Luca Bandirali) is *Concept TV. An Aesthetics of Television Series*.

**Vera Tripodi** is an Assistant Professor at University of Milan, Italy. She specializes in feminist philosophy and ethics, bioethics, ethics of technology and social ontology. She is a Founding Member and Vice President of the SWIP ITALIA (The Society for Women in Philosophy—Italy).

**Nele Van de Mosselaer** is a Postdoctoral Researcher in Philosophy at the University of Antwerp (Belgium). Her research focuses on topics in philosophy of fiction, game studies, philosophy of technology and narratology. She has published on the emotional experience of fiction, the aesthetics of videogames and interactions with virtual entities. In her ongoing research, she investigates how the boundaries between reality and fiction are blurred within experiences of virtually represented environments.

**Janna Van Grunsven** is an Assistant Professor in TU Delft's ethics and philosophy of technology section and the university-wide coordinator of TU Delft's ethics and philosophy education. She is also a Research Fellow in the NWO-Gravitation research programme "The Ethics of Socially Disruptive Technologies." Her work, which often uses insights from 4E Cognition, has appeared in journals such as *Social Epistemology*, *Ethics and Information Technology*, *Techné: Research in Philosophy and Technology*, *Phenomenology and the Cognitive Sciences* and the *Journal of Consciousness Studies*.

# Introduction

Technical artifacts are objects towards which one can take two different stances. First, one can take a descriptive stance, considering how a certain artifact is made, the way in which it functions, what it is for. Second, one can take an evaluative stance, wondering, for instance, whether a certain artifact is good or bad, or whether it is beautiful or ugly. From a philosophical perspective, the descriptive stance leads one to an ontological investigation concerning what technical artifacts are, while the evaluative stance leads one to consider whether technical artifacts are ethically problematic or rather possess moral qualities, as well as whether and how technical artifacts can be assessed aesthetically, finding them, for instance, beautiful or ugly.

This book proposes a philosophical approach to technology that aims to combine descriptive and evaluative stances. To wit, the descriptive inquiry into the being of technical artifacts in the first part of the volume paves the way for the evaluative inquiry into their value in the second and the third part. Understanding the nature of technical artifacts will put us in a privileged position for assessing the activities they enable and the experiences they elicit.

The first part thus concerns the ontology of technology. In *What Are Technical Artefacts in Patent Practice? A Practice-Based Ontology*, Wybo Houkes proposes a general framework for investigating the being of

technical artifacts, while Enrico Terrone in *The Cyberspace Strikes Back. An Ontological Account of Social Networks* and Marco Fasoli in *Cognitive Artifacts between Cognitive Sciences and the Philosophy of Technology* focus on special kinds of technical artifacts, drawing connections between their ontological description and the possibility of their evaluation. Specifically, Terrone proposes an ontology of social networks which ends up individuating the special kind of experiences that those artifacts are meant to elicit, thereby paving the way for an evaluation of those artifacts on the basis of the evaluation of these experiences. Likewise, Fasoli's descriptive inquiry into the ontology of cognitive artifacts ends up in an evaluation of the ethical issues that those artifacts raise.

The second part is about the ethics of technology. The three essays of this part evaluate, from a moral perspective, contemporary technologies that are meant to reshape the basic biological features of mating and reproduction. In *Anticipating Sex Robots: A Critique of the Sociotechnical Vanguard Vision of Sex Robots as 'Good Companions'*, Janna van Grunsven focuses on the moral significance of sex robots. In *The Right and Unfair Aspects of Artificial Womb Technology*, Vera Tripodi considers on the ethical valence of artificial wombs. In *Missed Opportunities: Feminist Grounds for Regulating Transnational Surrogacy, in the Anthropocene*, Dana Belu investigates the moral implications of assisted reproductive technology, focusing on commercial surrogacy.

The third part is about the aesthetics of technology. The three essays of this part concern the aesthetic appreciation of objects created by contemporary technologies that seem to challenge the traditional conception of art. In *Computer Art, Technology, and the Medium*, Christopher Bartel discusses the status of computer art, as well as the aesthetic responses that it is meant to elicit. In *Breaking the Fourth Wall in Videogames*, Nele van de Mosselaer argues that the peculiar aesthetic response that works of representational art such as plays and films elicit when they break the invisible barrier separating the world portrayed from the audience can be found also in videogames. In *Games, Artworks, and Hybrids*, Manuel García-Carpintero shows that videogames can elicit both ludic experiences, in virtue of their functioning as technically designed games, and aesthetic experiences, in virtue of their functioning as works of art.

# Part I

## Ontology



# What Are Technical Artefacts in Patent Practice? A Practice-Based Ontology

Wybo Houkes

Constructing an ontology of technical artefacts is a curious endeavor. From a practical perspective, questions such as “What is my iPhone X?” or “Is there such a thing as my Tesla Model Y?” seem pointless—or a sign of deep alienation. The existence of smartphones appears as undeniable as Descartes’ *cogito*, if not more so. Yet much work on the ontology of artefacts has consisted of doubts concerning their existence and attempts to dispel those doubts. Perhaps most famously, Peter Van Inwagen (1990) has argued that an artefact is an arrangement of ‘simples’: tables, tablets, and Teslas are elementary particles, arranged table-, tablet-, or Tesla-wise.

This chapter presents one more attempt to avoid—or perhaps side-step—this conclusion. Before doing so, however, it needs to be clarified what might have brought ontologists like Van Inwagen to their denial of artefacts. This suggests that a more constructive account of the ontology of artefacts may require a different method or ‘meta-ontology’. In Sect. 1, the currently dominant (Quinean) meta-ontology is presented, together

---

W. Houkes (✉)

Eindhoven University of Technology, Eindhoven, The Netherlands

e-mail: [w.n.houkes@tue.nl](mailto:w.n.houkes@tue.nl)

with the arguments that it generates for doubting the existence of artefacts. Then, we turn to an alternative, ‘easy’ approach, and reasons are given for exploring a variant that grounds ontologies in societal practices.

After this meta-ontological part, an ontology of technical artefacts is developed on the basis of a societally vital practice that governs our involvement with technologies, namely patent law. Section 2 sketches some key elements of patent law, focusing on the European Patent Convention (EPC). These elements create a context in which technical artefacts need to be distinguished from other types of entities, and from each other. Moreover, non-trivial conditions are imposed—both in the letter of the law and in jurisprudence—on what counts as an artefact. In Sect. 3, it is shown how these aspects of legal practice can be reconstructed by taking technical artefacts to be abstract types, with some distinctive, non-standard characteristics. Section 4 concludes.

## 1 Toward a Practice-Based Meta-ontology

Before developing an ontology of technical artefacts (henceforth, where possible: artefacts), it needs to be clear why such a project is called for, and what shape it should take. This requires, first of all, explaining why some have denied that there are artefacts: this is the background against which the more constructive project will be undertaken. Secondly, it is explained how philosophers in the analytic tradition deal with ontological issues. This section is therefore an excursion into meta-ontology, that is, the study of the aim and method of ontology, which is the theory of being. I will first sketch the currently dominant, Quinean meta-ontology and review how it can be employed to generate or substantiate doubts concerning the existence of artefacts (Sect. 1.1), before turning to an alternative, ‘easy’ approach for which I propose a practice-based variant (Sect. 1.2).

## 1.1 The Troubled (Non-)Existence of Artefacts

Ontology in the analytic tradition is rooted in an approach that originated with W.V.O. Quine's essay "On What There Is" (1948). This Quinean<sup>1</sup> meta-ontology is so dominant that it can be presented as 'The Standard View' (Berto & Plebani, 2015, especially Chaps. 2 and 3).

For Quine, the aim of ontology is to determine what there is, that is, to make a complete inventory of entities. Whereas such an inventorying task usually occurs in a clear practical or theoretical context (e.g., cataloguing a museum or identifying virus strains), the Quinean approach offers a formal criterion for 'ontological commitment' instead: to determine what there is, one should inspect language use, in particular the domains of quantification of statements. Here, paraphrasal into some formal language—for Quine, first-order predicate logic—is needed to reveal how statements may be true without requiring belief in all manner of objects. In addition, Quineans insist on the importance of *identity criteria*—through the slogan "No entity without identity". Types of entities should have clear (ideally, formalizable) conditions under which they are identical and non-identical. Often, these criteria are distinguished from *individuation* conditions, that is, those by which we identify entities as the same or different in actual practice.

In its application, the Quinean approach is not so much an ordinary-language-oriented inventorying enterprise as a massively reconstructive sanitization program. In Quine's words, language use resembles a "slum ... [that] is a breeding ground for disorderly elements" (1948, p. 4). Insistence on identity criteria should, aided by paraphrasal, lead to dismissal of many objects to which everyday statements appear to refer. Prominent examples of 'disorderly elements' that have been 'sanitized' by some Quineans include numbers, mental states, propositions, organisms, and technical artefacts. There is, it should be stressed, no consensus among Quineans about the ontological commitments on which we may forego. In every case, if there are arguments for doubting the existence of some objects, the 'sanitization' method is to reveal by paraphrasing how

---

<sup>1</sup> Sometimes called 'neo-Quinean' to indicate differences between the original approach and more recent successors. Since I will largely ignore those here, I use the simpler label.



ordinary language does not, in fact, require commitment to these objects (see, e.g., Varzi, 2007).

A comprehensive overview of the arguments that have led some Quineans to doubts regarding artefacts cannot be given here. Instead, I will briefly review the kinds of concerns that have been raised, also as an introduction to the types of arguments that characterize analytic ontology.

An artefact could be a material object, like a hedgehog; a mental one, like my intention to finish this paper before the deadline; or an abstract one, like the number five. For purposes of this review, assume that each option is plausible, that they are mutually exclusive and that, together, they are exhaustive. Quinean doubts, focusing in particular on identity criteria, can then be raised for each option—leaving artefacts without an ontological safe haven.

First, suppose that an artefact is a material object. Then, problems arise from the mere fact that engineering is not *creatio ex nihilo*: virtually every artefact is, on our best current understanding, composed of other (material) objects. Now, according to many—though definitely not all—Quineans, the identity criteria for material objects refer to their spatiotemporal location. Thus, the locations objects share must be identical: there is no reason to admit them both into our inventory. Because artefacts are composed of other objects, they would ultimately coincide with a collection of ‘simples’: material objects that have no constitutive parts. For practical purposes, we may refer to such collections as ‘smart-phones’ or ‘Teslas’, but strictly speaking, talk of such objects is a convenient fiction and can be paraphrased away (Van Inwagen, 1990; Rosen & Dorr, 2002; Renz, 2016).

Some authors resist this conclusion and allow composite objects into their ontology, but only if we refer to them by *sortal predicates*—roughly, terms that categorize entities into sorts or kinds. At face value, this may seem overly permissive: after all, not only a term such as ‘smartphone’ serves this purpose, but so does ‘unicorn’. To avoid this, so-called ‘neo-Aristotelean’ ontologies focus on those sortal predicates that, for a kind of entities, specify the essence or provide persistence conditions, that is, criteria for determining when something of the kind comes into being or ceases to exist. Leaving aside details and difficulties of the resulting accounts (e.g., Lowe, 1998; Wiggins, 2001), it should be noted that these

ontologies are hardly more welcoming to technical artefacts than some neo-Quinean ones. Artefact kind terms are not considered genuine sortals, because they do not provide sufficiently robust individuation and persistence conditions. To quote these worries, expressed by two prominent neo-Aristoteleans instead of their arguments: “Can a *table* ‘morph’ into a *chair*? It seems so—in fact, it can do so very easily” (Lowe, 2014, p. 22) and “A clock is any time-keeping device, a pen is any rigid ink-applying writing implement, and so on” (Wiggins, 2001, p. 87). The deeper worry here is different from the composition problem mentioned above, but also refers to a basic fact of human dealings with technology: we can arguably enlist all manners of entities for practical purposes, and are only minimally constrained by any intrinsic features or ‘characteristic activities’ of these entities. Consequently, the items in especially broad functional categories or ‘instrumental kinds’ (Houkes & Vermaas, 2014) such as pens and tables, are so variegated that it becomes difficult to see what makes anything into a pen apart from our using it as such.

This may be reason to consider the second option: an ontology of artefacts as *mental* objects, for instance the content of mental states of such beliefs and intentions. After all, the previous considerations suggest that we tell artefacts apart, assign them to the same category, and determine how they come and cease to be by referring first and foremost to human intentions—those of designers or of users. Still, the Quinean meta-ontology can be readily employed to raise some steep obstacles for this ‘mental’ route. For one thing, it is difficult to state the identity conditions of mental states and their content: it is unclear when my representation of a pen is the same as yours; and even mine is hardly stable over time. For another, mental objects seem insufficiently persistent. A designer might manage to keep a particular artefact in mind throughout work hours or, less plausibly, throughout a design project, but artefacts intuitively persist after their designers or any individual user has focused on other things or, to make the point in a more extreme way, passed away. Thirdly, our engagement with technical artefacts is often collaborative or collective. An ontology in which, say, a soccer ball is primarily a mental object in the mind of a player would have a hard time analyzing how they manage to play together. These considerations may not fatally discredit mental objects or artefacts conceived as mental objects, but they may

explain why hardly anyone has developed an ontology of artefacts along these lines.

This leaves the third option: that artefacts are abstract objects. To make this plausible, it is worthwhile to compare technical artefacts to art works, entities with which they share a long conceptual history. Art works have been analyzed as abstract objects in a large body of literature (e.g., Currie, 1989; Levinson, 1980). The arguments typically employ what has been called the ‘Way of Negation’ (Lewis, 1986). For instance, they involve denying that works of art have a definite spatiotemporal location—for instance, because they can have multiple copies or instantiations (e.g., renditions of *Bohemian Rhapsody*), persist despite damage to any such instantiation (e.g., Venus de Milo), and arguably precede and succeed any instantiation. Since neither material nor mental objects have such persistence conditions, only abstract objects fit the bill.

As forceful as these arguments may be—and we shall return to them later—they need not satisfy Quineans. Traveling down the Way of Negation implicitly assumes that works of art—or technical artefacts, for that matter—have to be *some* kind of entity. Thereby, it ignores the option to dismiss them from our inventory entirely. Arguing that a kind of entity cannot be identified by its spatiotemporal location is not tantamount to offering clear alternative identity or persistence conditions—so Quineans are free to respond that the arguments only show that artefacts are not physical objects; they need not be convinced that they are real objects at all. The quest to specify these alternative conditions, and thus offer a *positive* argument, is still ongoing and seldom focused on technical artefacts rather than, for instance, works of art or works in general (see Sect. 3 below). Without attempts at spelling out identity criteria, however, artefacts are easy victims of Quinean sanitization efforts.

## 1.2 A Practice-Based, Easy Alternative

That the Quinean approach can be employed to generate or substantiate doubts about the existence of artefacts—whether they be material, mental, or abstract—need not be bad news for your smartphone. It could just as well be a reason to look for an alternative meta-ontology that is better

sued to account for our statements about and dealings with artefacts. One alternative, the neo-Aristotelean approach, was mentioned in passing above and found not to be more welcoming to artefacts.<sup>2</sup> Recently, yet another meta-ontology has gained significant popularity: a ‘deflationist’ or ‘easy’ approach to ontology. After outlining this, focusing on Amie Thomasson’s recent (2015) version and ignoring differences between easy approaches, a practice-based variant is proposed as a basis for the ontology developed in this paper.

The easy approach is rooted in Carnap’s (1950) distinction between internal and external existence questions. The former may be asked within a ‘linguistic framework’, governed by specific rules, and answered *within* this framework. An example is “Is there a prime number greater than 100?”, which can be answered within the framework of number theory. By contrast, the question “Do numbers exist?” is not internal to any such framework. It is therefore either an unanswerable pseudo-question for lack of an appropriate framework, or rather a practical, evaluative question why we ought to accept a framework (in this case: number theory) in the first place. On any reading, constructing ontologies requires no substantive philosophical argumentation: internal questions can be answered through empirical or logical means within the relevant linguistic frameworks, and external questions require linguistic decision-making, weighing pros and cons of particular frameworks.

Carnap’s ‘easy’ approach has recently regained popularity, in particular following Thomasson’s (2015) detailed development of it, which includes answers to some stock objections. Among many things, Thomasson does away with Carnap’s explicit appeal to frameworks, and the distinction between empirical issues and choices of the framework that was attacked by Quine. For Thomasson, it can be determined whether *K*s (say, smartphones) exist by checking whether the application conditions for the term ‘*K*’ are fulfilled. Application conditions are basic semantic rules of use that allow competent speakers of a language to evaluate situations as ones in which the terms would or would not refer (2015, p. 90). Since in

---

<sup>2</sup>This is not to say that it is impossible to defend the existence of (some, or many) artefacts in a neo-Aristotelean approach, just as neo-Quineanism is not necessarily incompatible with the existence of all artefacts.

our everyday lives, there are many situations in which we have no trouble determining whether a smartphone is involved or not, ‘smartphone’ has application conditions—and there is, on the easy approach, no more to the existence of smartphones than that. Again, no more than basic linguistic competence and empirical evidence is needed to answer existence questions. Even the Quinean quest for identity criteria can be deflated: rather than govern the existence of objects, such criteria concern the co-application of sortal terms in statements such as “ $x$  is the same  $S$  as that” (2015, Sect. 6.3 and Thomasson, 2007), the truth of which can again be established by competent language use and empirical evidence.

Clearly, this retains analytic ontology’s focus on language use, but without the need for identity criteria stricter than co-application conditions. Without Carnap’s appeal to linguistic frameworks, however, it is an open question which and whose language use provides the basis for ontology. Here, Thomasson leaves room for deferring to competent users and experts, but also, interestingly, seeks to revive Carnap’s idea of external questions as practical decisions. One suggestion, using a term coined by David Plunkett and Tim Sundell (2013), is to consider such questions as part of *metalinguistic negotiation* (Thomasson, 2017): disputes on the way in which we should use language, or whether we should use particular terms or sets of interconnected concepts.<sup>3</sup> Such disputes are genuine rather than merely verbal, but they may persist even if disputants would agree about other facts or about how language is actually used.

Much of this is geared toward showing that there may be something substantive about the discussions between, say, Quineans and neo-Aristoteleans. It leaves unclear whether and how such debates could be resolved, and why one should care about the outcome unless one has vested interests in analytic ontology. Negotiations, metalinguistic or otherwise, crucially revolve around stakes. But many disputes on identity criteria—or the lack thereof—are based largely on intuitions and thought experiments, and any practical repercussions or negotiated stakes are at best implicit.<sup>4</sup>

---

<sup>3</sup>There are close connections to work on ‘conceptual engineering’ (see Thomasson, 2015, Section C.2).

<sup>4</sup>This does not hold for the stock examples of conceptual engineering—concepts such as ‘race’ and ‘gender’. However, reconstructions of debates on those concepts as metalinguistic negotiation cannot be extended to debates on the existence of artefacts unless we identify the stakes.

There may be ways to identify what is at stake in the existing debate concerning the existence of artefacts, such that different ontologies can be taken as conflicting proposals to solve a practically relevant problem by conceptual means. Alternatively, we might take a practice-based route. This would start by identifying bodies of language use that are connected to societally vital, perhaps even controversial practices—so that it is clear from the outset that there may be something at stake. In such practices, we can then identify application and co-application conditions, or more interestingly, debates and decisions concerning such conditions, to arrive at one or more *practice-based* ontologies. My aim in the remainder of the paper is to construct such an ontology for technical artefacts. This would, then, require first of all the identification of language use, associated with a societally vital activity, that involves statements such as “This is an iPhone X” or “This device is the same smartphone as that one”—where, again, it should be clear what is at stake at accepting or denying, for instance, the last statement.<sup>5</sup> Without claiming that it is the only one, the next section presents one such body of language.

## 2 A Suitable Framework for Technical Artefacts: Patent Law

In the previous section, a practice-based variant of the ‘easy’ meta-ontology was proposed. On this approach, developing an ontology of artefacts requires, as a first step, identifying a suitable practice.

Here, we focus on legal practices concerning patents. Patents, and the activities associated with them (e.g., applying for, protecting, infringing), play a central role in contemporary society: Apple and Samsung alone have fought dozens of multi-million-dollar lawsuits citing patent infringements over the last decades. More generally, the practice has strong advocates, who consider patents to be essential in incentivizing innovation, which is in turn held to be essential to continued economic prosperity

---

<sup>5</sup>It is easy to think of contexts where such statements are meaningfully made about individual smartphones (“Hey, that is my phone!”), less straightforward for statements about kinds of phones.

and sustainable human well-being; but there are also outspoken critics, who maintain that patents stifle innovation. Moreover, artefacts are obviously central to patent law, which is also not obviously restricted to a particular subset of technical artefacts, unlike, for instance, theories in the engineering sciences. Finally, this practice comes with its own, specialized and circumscribed bodies of language, namely that used in bodies of law, written jurisprudence, reports on patent applications, and the applications themselves. Thus, we may expect to find in patent practice a wealth of statements regarding the identity and persistence of artefacts; and given the controversies surrounding the practice, any disputes on or conflicts between such statements might well be taken as signals of meta-linguistic negotiation. In the context of *Apple Inc. v. Samsung Electronics Co.*, a lot is at stake when making statements such as “This is the same graphical user interface as that”.

There are important differences between legal systems regarding patents, which are partly coordinated by international treaties. Consequently, there is not a single unified practice associated with patents, and ontologies based on patent practices are necessarily ‘local’ ontologies. This section focuses on the European Union, in particular the 16th edition of the European Patent Convention (2016),<sup>6</sup> and the activities of applying for and granting a patent within this legal context. Still, no single section can do justice to every or even any aspect of this restricted practice, or its full linguistic complexity. Rather, I only outline some of the basic elements of patent law (2.1), before reviewing—with an equally broad brush—some aspects of particular interest (2.2).

## 2.1 Patents: Basic Elements

Patent law is one part of intellectual property (IP) law. Like all branches of IP law, it is meant to grant persons certain rights over their intellectual creations. Specifically, a patent owner has the right to exclude others from making, using, selling, or otherwise exploiting the invention for which a patent is granted, until the patent expires and provided that the invention

---

<sup>6</sup> Available at <https://www.epo.org/law-practice/legal-texts/epc.html>