

Patents as Capitalist Aesthetic Forms

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'Myth is not the classless longing of a true society, but the objective character of the alienated commodity itself.'

Adorno in his letter to Benjamin, 1935, in Aesthetics and Politics, p. 125

'The worn out state of a myth can be recognized by the arbitrariness of its signification.'

- Barthes, Mythologies, 1972, p. 127

The phenomenon of patents as a *cultural* sign appeared acutely as a *political* and *economic* problem during the Covid-19 pandemic. As debates about intellectual property (IP) law's effects on access and distribution of Covid-19 vaccines reached mainstream newspaper front page (Williams et al. 2021), there were increased public relation campaigns about the vital necessity of IP for 'innovations' in the life sciences (PhRMA 2021). In 2021, a battle for public opinion was raging around the proposal to waive IP protection on medicines and technologies needed to combat the Covid-19 pandemic at the World Trade Organization. At the same time, in a parallel discourse, patent offices and organizations were continuing to promote patents as essential ingredients of an 'innovation' journey. As civil society organizations and members of public carried 'Drop the Patents' signs on symbolic coffins in demonstrations against Covid-19 vaccine IP on 12 October 2021(Fig. 1), a few days earlier, the World Intellectual Property Organization celebrated IP in the latest James Bond film release with the slogan: 'No Time to Die for Global Creators and Innovators' (Staines 2021; Fig. 2).

How does a patent—an abstract legal form—accrue such contradictory associations with life or death beyond its legal meaning? Such conflicting discourses cannot be adequately explained by references to legal, sociological, or economic causes alone; patents seem to have acquired meanings that exceed their legal or commercial uses.

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Fig. 1 Parliament Square, London, 12 October 2021. Author's own

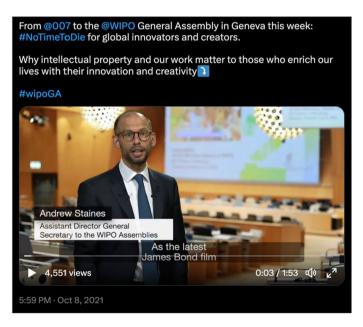


Fig. 2 @AndyWIPO Twitter, 8 October 2021 (Staines 2021)

Perhaps IP law's rapid and extensive private enclosure of what were previously public or non-commodifiable objects may explain the migration of IP forms to other social and cultural contexts. In this vein, much of interdisciplinary scholarship of intellectual property law have adopted a critical tenor (Biagioli, Jaszi, Woodmansee 2002). They have analyzed and critiqued the expansive commodification of cultural expressions, knowledge practices, and of everyday lifeworlds (Coombes 1998; Dut-field 2000; Drahos and Braithwaite 2003; Bowrey 2005, 2020; Macmillan 2006, 2022; Bellido and Bowrey 2022). This direction of dynamics—the colonization of social and cultural domains by law driven by economic rationality—continues to remain of concern. My focus in this article is different and is on the other direction of law-society-culture dynamics: the question of how cultural forms shape and stabilize legal-economic forms and their meanings. I want to probe and examine how patents have become signs of cultural economy and how their signification shapes the ideology of intellectual property.

Critical theory's cultural turn of the 1980s and 1990s examined the role of aesthetics and mass media for legitimizing economic rationality, and a distinct field of a Marxist cultural economy emerged from it (for example, Hall 1983/2016; Jameson 1991). Paul du Gay's characterization of Stuart Hall's Hard Road to Renewal (1988) encapsulates the importance of cultural economy as showing 'how the discursive, or meaning, dimension is one of the constitutive conditions for the operation of economic strategies. That the "economic", so to speak, could not operate or have "real" effects without "culture" or outside the meaning or discourse.' (2000, p. 113). In legal scholarship, there appears to be little study of how cultural forms are not only shaped by legal regulation in service of economic forces, but also how they act as political and economic strategies that furnish law with legitimacy. Such an approach would differ from studies of popular representations of law in culture that have little interest in economic and commercial strategies that underlie it. It would also differ from studies of political economy, such as 'law and economics' or 'law and political economy' that are acultural because these do not closely examine the relationship between aesthetic representations, legal legitimacy, and hegemonic economic rationality. But tracing the interrelation between these three practices-aesthetic, legal and the political-economic-would help to analyze and explain society's persistent fascination with patents and intellectual property, as well as the tenacious association of notions of 'innovation' and 'creativity' with these legal forms.

The relationship between aesthetics, forms of representation, and political economy is not new, and has indeed been a central concern in literary studies. A work that took forms as social signs and practices seriously, independent of their contents, was Barthes' *Mythologies*, which analyzed myths as 'mode of signification, a form' that arise as 'a type of social usage' (original emphasis, 1972, p. 109). Linking aesthetics to political economy, and thus positing a relationship between form and substance, Jameson argued that the 'deeper affinities between a Marxian conception of political economy in general and the realm of the aesthetic (as, for instance, in Adorno's or Benjamin's work) are to be located precisely here, in the perception shared by both disciplines of this immense dual movement of form and substance' (Jameson 1991, p. 265). If Jameson's claim is right, patent law and the political economic structure that it enables are connected to the realm of aesthetics in which patents circulate as cultural signs in contemporary capitalism. It is in this sense that an inquiry into patents as specific aesthetic forms affords insights into patents as social and cultural signs. Such a study of patents is missing from current studies of patent value and valuation (Kang 2015, 2020; Roy 2020).

The aim of this article is to explore the 'dual movement between form and substance' (Jameson 1991) in the cultural economy of patents by analyzing their aesthetic forms beyond their legal substantive meanings or commercial functions. Aesthetic forms and techniques of representation literally and figuratively matter, especially for patents, for it is only through the legal formalist requirements that the intangible inventive 'essence' is made tangible (Pottage and Sherman 2010). Painstaking questions of representation went hand in hand with the question of political representation in the making of patents as 'rights' (Biagioli 2006). Given the importance of the legal formalist requirements on the substantive force of legality in this subfield of law, sensitivity for patents' different aesthetic forms and media is indispensable for analyzing their substance. I have done so previously from the perspective of the changing media technologies in patent administration. Here I do so by focusing on other modes of patents' representations that are not related to their originally intended legal uses: patent drawings that lack the legal diagrammatic context of the patent document, and artistic reimaginations of patent drawings as speculative hacking practice.

The article begins with a discussion that situates patents within the contemporary economy and the attendant imaginaries of science and innovation. Although there have been serious challenges to the legitimacy of transnational IP framework during the Covid-19 pandemic from within IP law scholarship, as well as those of other legal subfields, legal institutions, such as patent offices, and national governments continued to promote unsubstantiated association of patents with notions of progress, research and innovation. The second part provides a brief overview of the current scholarship that focuses on patent's form and media. The discussion highlights the disconnect between what is believed to be patents' substantive public value as scientific information and their function as legal bureaucratic medium—a deed. The analysis distinguishes between the legal form of patents, in essence, the patent specification (comprising of description and claims) and other forms of representation, in particular patent drawings. In the third section, I try to understand why patent drawings hold such an attraction in public imaginaries of patents and argue that they represent a particular capitalist aesthetic form: a gimmick (Ngai 2020). I examine the increasing promotion of decontextualized zany patent drawings in patent offices' public relations, as well as their popularization in commercial culture as decorative visual objects. In the fourth part, I discuss an artistic and architectural project, the 'Institute for Patent Infringement' by Matthew Stewart and Jane Chew. The project isolated some abstracts and patent drawings from Amazon's patent documents onto a different format and issued an open call for the 2019 Venice Architecture Biennale which invited re-imaginations of the Amazon patent drawings. I discuss the use of patent components in this project and ask what kind of cultural imaginaries it presupposes and projects. In the last part, I offer some thoughts on these parallel and contradictory modes of a patent's representation and their social meanings. This may help us to understand why there is such a distinct idea, or even strong belief, in patents by people who know very little about patents or patent law; why inventions, patents and innovation get



Fig. 3 'Bathroom Patent Prints. Patent Art. Bath Patent Wall Art. Bathroom Patent Posters. Toilet Paper Patent. Rustic Bathroom Wall Décor'. Website: < https://patentprintsstore.com/listing/500423745/bathr oom-patent-prints-patent-art-bath >

routinely conflated by lay and so-called patent experts alike, although they are different and rarely overlap; and how and why the ideology of patents persists.

Patents as Hegemonic Forms in Contemporary Cultural Imaginaries of Science and 'Innovation'

There are incongruous representations of patents circulating today, both in the medium of text and of a pictorial image.¹ On the one hand, there is an increase in the popular aestheticization of patent drawings. A patent drawing decontextualizes and simplifies an abstract legal monopoly right into a pictorial representation of an invention. But an isolated patent drawing removed from its original document context has no legal meaning or force in the sense of ascertaining, codifying or even understanding the contours of a patent as an intellectual property right. Patent drawings seem to be valued mainly for the aesthetic pleasure or familiar 'novelty' factor that they may generate (as seen in Fig. 3).

On the other hand, in contrast to patent drawings' popularity, efforts towards the full digitization of patent bureaucracy are continuing with networked distribution of

¹ I am specifying a pictorial image here because patents are increasingly represented as textual images. See Kang (2019).

patent documentation and examination practice (Kang 2019). Patent law drives and relies upon databases of digital documentation and networks. These have also engendered a tertiary service of information provision. These comprise private providers such as Clarivate, which merged the leading private IP 'intelligence' services, such as Derwent and CompuMark, as well as the free, publicly available databases of the World Intellectual Property Organization, European Patent Office, or the US Patents and Trademark Office.² Such an international network of digital patent 'information' is the possibly the largest legal networked bureaucratic information infrastructure, and it remains below the public radar. In contrast to public imagination of patent with geeky inventions depicted in technical drawings, the legal system is not particularly concerned with patent drawings. Its primary mode of representation of an invention is that of a text. The main genre of a patent's representation is that of a document. The document in turn serves as a medium in the form of an indexical file in the overall system of patents as data management (Kang 2012).

Such a wide gap between the cultural representation of patents and their legal form remains underdiagnosed and underexplained. Analyzing IP's effects on cultural signification and practices, Rosemary Coombe wrote her influential book, *The Cultural Life of Intellectual Properties: Authorship, Appropriation, and the Law* in the 1990s. The book's analytical gaze was socio-legal by foregrounding the inquiry on law's effect on society and culture, and not so much the other way around. The proliferation and adoption of patent drawings as cultural artefacts, however, indicates novel cultural imaginaries of patents, which shape the ways in which patent law is understood and legitimized. Furthermore, the realm of science, associated with patents in modern IP law's subject matter division between arts and sciences, remained underexamined in Coombe's treatment, perhaps because it was seen as being separate and/or extraneous to the cultural realm.

The stipulated division between arts and sciences in modern intellectual property law runs along the legal divisions of copyright and patent laws. They conceal how sciences occupy a central role in contemporary cultural imaginaries of development and progress (Kim 2017). Sciences are not outside their cultural and social environments.³ University and industrial sciences, financial capitalism, and economic nationalism are closely intertwined with the privatization of sciences (Mirowski 2011). Close links between university technoscience, understood as interrelated scientific, business and cultural practices, and financial speculation underpin the Silicon Valley culture of venture capitalism and its adoption at a national(ist) scale by authorities through their 'high tech' and 'start-up nation' agendas (Daub 2020; see Stadler, Steuwer, Wulz 2021, for a historical contextualization of university policies and right-wing knowledge

² Derwent, a leading patent information provider, as well as CompuMark, a leading trademark database provider, were bought by Onex Corporation and Baring Private Equity Asia and spun off to the newly formed entity, Clarivate Analytics in 2016: 'Acquisition of the Thomson Reuters Intellectual Property and Science Business by Onex and Baring Asia Completed' 3 October 2016 < https://clarivate.com/news/acquisition-thomson-reuters-intellectual-property-science-business-onex-baring-asia-completed/>.

³ There is too much history of science literature to cite in support of this, but some of the seminal texts in this regard are Kuhn (1962), Fox Keller (1985), Shapin and Schaffer (1985), Haraway (1989), Latour (1999).

politics).⁴ In such a context of speculative, finance-driven capitalism, patent law has not only acted as techniques of commodification, but also of financial assetization: patents are not only used for raising capital, but also act as capital themselves (Kang 2015, 2020).

Glossing over questions of causality, patents are associated with 'innovation' and are used as indicators of national 'innovativeness' in rankings, such as in the WIPO's Global Innovation Index. There are many reasons why this is problematic (for an overview, see Biagioli 2019). But the notion of innovation and IP continue to be bundled and associated together. For example, the 2022 European Commission's 'A New European Innovation Agenda' states as its aim 'deep tech innovation' and lists 'cutting edge science, technology and engineering', large scale venture capital financing, and intellectual property as some of its most necessary ingredients (European Commission 2022). Symptomatic of the conflation of meanings of innovation, patents and science, the Commission's Agenda lists these three very distinct concepts—originally historical/sociological, legal, and academic—without a deeper understanding of the specificity of their relations. It also disregards the mixed effect of venture capitalist funding on 'innovation' (Lee 2022).

If innovation was understood as an overall benefit to a notion of a global public, IP rights, especially patents held by biotechnology and pharmaceutical industries, have arguably proven detrimental to it by creating monopoly rights in essential medicines and vaccines, as observed in the context of the TRIPS obligations during the Covid-19 pandemic (Thambisetty, McMahon, MacDonough, Kang, Dutfield 2022) and the resulting vaccine nationalism (Kang 2021). Despite the 2001 Doha Declaration on TRIPS agreement and Public Health that specified the rights of the WTO member states to take appropriate measures to 'protect public health' and to 'promote access to medicines for all' (WTO 2001), IP law gives private monopoly rights to pharmaceutical companies not only in the form of the power of capital, but also what Max Weber diagnosed as 'the purchase of privileges from the political authority' (quoted in Schwartz 2022) that result in the corporate capture of the 'public' institutions and political actors. Weber wrote: 'Capitalist interests are intent to pursue the continuous extension of the free market up and until some of them succeed, either through the purchase of privileges from the political authority [politischen Gewalt] or exclusively through the power exerted by their capital [kraft ihrer Kapitalmacht], in obtaining a monopoly for the sale of their products or the acquisition of their means of production and in this way close the market for themselves alone' (1978, p. 108). Indeed, this is the narrative that the pharmaceutical lobby, International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) advanced: 'the system that built a coronavirus vaccine in record time relies on robust intellectual property protections' (Cueni 2020). Yet it has been well known that IP rights present significant barriers to vaccine development

⁴ 'Start up nation' is a term employed to describe Israel, and adopted by, for example, Romania, Scotland and European Commission as its small and medium sized enterprise strategy and digital strategy < https://digital-strategy.ec.europa.eu/en/policies/startup-europe >.

UK government currently runs the biggest European venture capital fund with tax payers' money, Helen Thomas, 'Taxpayers should know more about UK's venture capital spree', 5 April 2021, Financial Times https://www.ft.com/content/becbe678-acaf-410e-8ba3-480b3f7f58ac. This may be soon surpassed by the European Commission's Agenda for Innovation (2022) decision to deploy EUR 5.5 bn which it says it will be used to 'support breakthrough innovations' up to 2027.

(Chandrasekharan et al. 2015). Vaccine development was also well-known as an example of 'market failures' because of the little monetary incentive that vaccines, especially for neglected tropical diseases, provided for pharmaceutical companies to invest in their research and development (Lezaun and Montgomery 2014).

The vaccine makers, especially BioNTech, Pfizer, Moderna and Curevac, mobilized layers of intellectual property rights—patents, trade secret, and copyright—in order to prohibit the sharing of knowledge and know-how related to medicines and regulatory data about the vaccines. At the same time, they argued that the scarcity of vaccines was not caused by intellectual property rights, but by a plethora of other factors, such as supply chain issues and other logistical difficulties. When India and South Africa proposed to a waiver of the TRIPS obligations in Covid-19 related health technologies for the duration of the pandemic in October 2020, the pharmaceutical companies and their national governments, such as Germany, Switzerland, UK, as well as the European Union, pushed back intensely to maintain the status-quo.

The battle around the Waiver was not only conducted at the WTO level but at multiple fronts, especially as political lobbying and public relations campaigns. Pfizer, a big lobbying spender and co-producer of BioNTech's Cominarty Covid vaccine, intensified its lobbying expenditure in 2021 and 2022 against the TRIPS waiver initiative (Brennan 2022; Bragman 2023). Symptomatic of the perversion of meanings that could be observed in in the battle for public opinion around IP's role in vaccine inequity, Pfizer co-opted the concept of 'Equity' and science. The campaign which was published across a full New York Times page is photographed in Fig. 4 and features a trademarked the sentence 'Science will winTM'. Pfizer registered the sentence and was granted the trademark after the outbreak of the Covid-19 pandemic.⁵

⁵ US TM registration no 6494324, filed 19 April 2020, registered 21 September 2021. The advertising agency, Grey, led and launched the campaign for Pfizer amidst of TRIPS waiver debate and pressure on the Covid-19 vaccine makers to license more broadly and share the manufacturing knowledge: https:// www.grey.com/en/work-detail/pfizer-science-will-win. The format of the ad mimics poem stanzas. Here is the text of the Fig. 4 for better readability:

Equity.

It's our north star.

Since the beginning of our race to make the impossible possible we've been committed to making our vaccine affordable and accessible for everyone. From our neighbors down the street, to our neighbors around the world. Because there's no point in creating breakthroughs unless all people can access and benefit from them. Towards that promise, we've committed two billion vaccine doses to the poorest countries around the world. And just this week we partnered with the U.S. Government to deliver 500 million of those doses as quickly as possible. Now, we are not only one step closer to helping end this global health crisis, we are one step closer to proving again that Science Will Win TM. For Everyone. Everywhere.

Equity.

It's our north star. Since the beginning of our race to make the impossible possible we've been committed to making our vaccine affordable and accessible for everyone. From our neighbors down the street, to our neighbors around the world.

Because there's no point in creating breakthroughs unless all people can access and benefit from them.

Toward that promise, we've committed two billion vaccine doses to the poorest countries around the world. And just this week, we partnered with the U.S. Government to deliver at least 500 million of those doses as quickly as possible.

Now, we are not only one step closer to helping end this global health crisis, we are one step closer to proving again that Science Will Win[™]. For everyone. Everywhere.

Fig. 4 Full page New York Times advertisement, 13 June 2021

Pfizer's invocation of 'Equity.'—Equity with a full stop—resembles an admission of guilt by denial. Whereas the whole page ad does not mention patents or IP, its title, the defensive text, and the prominence of sheer space of a whole page in a leading U.S. national newspaper only gives an intimation of how acutely Pfizer must

Pfizer

have been aware of the need to sway public opinion amidst the background of criticism of IP monopoly rights in a pandemic; and it did so by precisely invoking the opposite concept of what it was accused of.

Pfizer's PR campaign suggests that intellectual property, and in particular patents, do not only act as technocratic economic regulatory tools and trade instruments (Bowrey 2005; Sell 2003, 2011) but also as cultural and political hegemonic forms (Gramsci 1971) around which a battle in the court of public opinion is fought. These representations and discourses engender what Raymond Williams called a 'structure of feeling' (1958), and they condition and promote a distinct set of affects and beliefs around intellectual property. Some of these feelings and beliefs - rather than legal or economic functions-may be contradictory in their logic, such as the broad brushstroke statements that are the opposite of each other: for example, 'patents = death' vs. 'patents save lives through life science innovation'. In IP law itself, critique and its co-option can be found in the notions of 'progress of arts and science', 'public domain' as the opposite concepts of private monopoly rights, or most prominently in patent law's justification of a 'bargain' in which private and public interests are supposedly balanced, without not being really clear what exactly is being balanced (Biagioli 2019). These tropes of 'public' could be understood as part and parcel of the IP hegemonic form, which absorb such logical and ethical contradictions by incorporating them internally as part of legal doctrine, and thereby have the effect of neutralizing dissent (Laclau & Mouffe 1985). Although hegemonic forms can harbor critical potentials, it remains unclear how much of democratic contestations from civil society would be needed for structural change at the legal and political economic level. The full politics of interplay between the legal technocratic patent form and popular representations and contestations of patents is something to be worked out at a finer level at a different time, but this article hopes to contribute by considering one part of such lattice that has so far been under the radar: patents' power of affect as aesthetic capitalist forms.

From the present vantagepoint after the TRIPS waiver battle of 2020–2, an optimistic reading of the critical debates of the Covid-19 pandemic could be that the TRIPS waiver discussion and the campaigns by the well-organized umbrella coalition of civil society groups, especially The Peoples' Vaccine Movement or Feminists for Peoples' Vaccines, introduced a crack in the facade of the hegemonic norms of IP monopoly rights. Another interpretation is that the legal TRIPS waiver discussion shifted the terrain and terms of the discourse by re-politicizing highly technical IP and trade law fields. A more sober reading of the debate, however, is that the overlap of Covid-19 pandemic with the political economy of IP reflected the normally under-the-radar status-quo of the contemporary "intangible economy" (Haskel and Westlake 2017) rather than representing an unprecedented event (Kang 2021). The legal enablement of the monopolistic nature of the material conditions of vaccine production, or more generally of much of pharmaceutical production, was laid bare in these discussions and prompted moral outrage and strategic acknowledgments of this being problematic, such as by the EU Commission. However, the preservation of the IP status-quo, despite the apparent unethical and appalling injustice of the pandemic handling at the level of vaccine distribution, equally demonstrated the stickiness and stability of the hegemonic norms of IP, as well as their ideological

power. IP's hegemonic ideology needs explanation beyond the political liberal deliberation of whether IP is good or bad for the 'public' overall.

How are we then to understand the processes by which these discourses come to form a 'dominant cultural logic or hegemonic norm' (Jameson 1991, p. 8)? How have patents mutated into cultural, and thus political and economic, forms, regardless of their accuracy in relation to their legal meaning? Have patents become tired 'myths' with arbitrary significations (Barthes 1972)? To begin to address these questions, it is necessary to take a closer look at the aesthetic representations of patents which encompass text, image, and data. The difference in their aesthetic forms also discloses differences in their significance. The next sections present and discuss such patents' forms: first, in the original legal context, as a document and text; and then, as a cultural image impregnated with a distinct aesthetics and varying cultural and political valences.

The Legal Form of a Patent: The Primacy of Textual Claims

Patents have acquired meanings that have little to do with their legal functions.⁶ One way of tracing how this may occur is by considering a patent's form and its circulation. Forms act both as the substance and the vehicle of significance. Such an approach raises questions, such as, are patents text or an image? What kind of 'images' of patents circulate in different contexts? In this section, I focus on two aspects of patents as legal forms: first, the meaning and function of the patent document that is constituted by a rigid legal form; and second, the practice of circulation and administration of the patent document in a digitally mediated network. The analysis will help to contrast a patent's legal mode of existence and non-legal ones.

First, with respect to the substance of a patent document, its content is primarily legal and contains limited scientific information, when compared to a scientific journal article. Although Ouelette's empirical analysis indicates that scientists do read them (2017), it is not entirely clear if her analysis distinguishes between different motivations and definitions of reading, such as whether scientists consult patent documents for legal reasons rather than scientific ones, and what the practice of reading entails in detail. It is well-known that a patent document contains unverified scientific and 'prophetic' inventive information which may not exist in physical reality.⁷ As many scholars have analyzed and observed, the quality of disclosure of inventive information in the written description section of the patent document is poor (Fromer 2009; Rai et al. 2009). The requirement that the specifications (the sections of written description and claims in a patent document) must enable a person skilled

⁶ For US legal readers: my analysis of patents refers to utility patents, not design or plant patents. The two latter differ in their forms of representations. An analysis of those would be fascinating in relation to the legal distinction and imagination of how patent law also formulates the differences of the subject matters, pertinent examples of such strands of scholarship are Sherman (2008), Braun (2021).

⁷ 'A prophetic example describes an embodiment of the invention based on predicted results rather than work actually conducted or results actually achieved.' US MPEP on Enablement Requirement: <<u>https://www.uspto.gov/web/offices/pac/mpep/s2164.html</u>>.

in the arts to make and use the claimed invention is notoriously lax in practice. A patent can be granted without the applicant having reduced the invention to practice (for a recent prominent example, see patents granted to Theranos: Carreyrou 2018). When scientists consult patent documents today, it may be for commercial and legal reason to see who has filed for an application and received grant, as well as to check for freedom to operate without infringing others' patent rights, rather than for the purpose of seeking scientific information contained in the document. The rise of scientist-entrepreneurs in the non-commercial research and university settings makes it more difficult to separate scientific from legal and commercial motivations for reading a patent.

In its original legal context, a patent document is not only a record of a property title, a deed, but also the central technique through which the property right itself arises. It is important to recognize the constitutive relationship between the peculiar form of the patent document and a patent's substantive meaning. That is why a scientist had trouble recognizing his own invention in the patent document (Myers 1995). To know what is owned, the patent document outlines the object of the property right, the invention. The invention for which a patent is sought must be first described and then claimed as the property object. As in the rhetorical meaning of *inventio* as the capacity or material to create an argument, from a legal point of view, the patented invention comes into being through textual claims, a separate section within a patent document. Whilst it is understandable that the most accessible part of a patent document for a patent novice is the patent drawing, it does not form part of the property object. A patent document underlies rigid format and drafting requirements, and thus it needs to be read in a diagrammatic manner (Drucker 2013; Kang 2019). One cannot interpret and understand a patent without knowing the meaning and functions of the different documentary parts, as well as the specific legal-internal writing conventions.

Second, the documentary function of patent documents is primarily for patent bureaucracy and administration. There is much historical evidence for the mundane bureaucratic and practical motivations that shaped the ways in which a patent document was designed and drafted (Pottage and Sherman 2010), administered once it arrived at the patent office, and finally filed for storage and retrieval (Kang 2012). The rigidity of the form that I've described above is connected to patent law's substantive rationale and workings: its rationale is to ascertain priority of novelty now claimed against the background of novelties past. And in order to do so the patent documents need to be uniform in order to be comparable. In this specific context, the patent document functions as a Peircean icon of the patented invention, which becomes significant as an indexical representation in classificatory structures.

The identification of a patent document's primary legal administrative function does not mean that there aren't other ones. Beyond its existence as a legal file, other kinds of para- (technological, economic, historical) or meta-information (commercial, second-order data analytics) can be extracted, isolated, and recombined from it. Such a large-scale datafication and the field of 'patent information' have become more possible since the digitization drive of patent offices since approximately 2000, and the development of a network between major patent offices' bureaucracies. It is arguably through the recombinatory potential of patent documents' data that the

documents have started to resemble some sort of scientific information. Patent professionals primarily use the private providers' databases, such as Derwent World Patent Index, in their work, but for a free overview of the patent offices' internal filings and patent status, the Five IP Offices' Global Dossier digital file wrappers are also useful.⁸ Patent drawings matter little in the daily workings of patent practice, and in the increasingly monetized patent analytics business, particularly because they cannot be easily analyzed and recombined as data and yield no meta data.

Eva Hemmungs-Wirtén has interpreted the history of patent documents from the viewpoint of history of documentation and analyzed how the practices and knowledge of documentation have shaped the current understanding of patent as documents (2019). Such a non-legal focus on patents as documentation points to the differences and convergences between patent forms (textual and/or pictorial), their substantive contents (property right, indexical information, and/or data), and their aesthetics (bureaucratic, legalese, or retro-technofuturistic). The act of documentation makes information contained in a document mobile, but arguably it is not concerned with the substantive contents or quality of the documents (as seen in the making of a new patent class, Kang 2012). Such a difference in the explanatory function of what at first sight appears to be the same object—a patent—reflects diverse analytical perspectives and raises questions about what an analysis explains and why it would matter. Different contexts and uses of the same object may yield the conclusion that the resulting identity, or the substance of the analyzed object, may be not the same, despite sharing the same name and form. For example, from an epistemological point of view, a patent as a medium of documentation is a different object than a patent defined as a legal property right, or as a cultural sign, as I will discuss later on. It is not clear whether one talks about the same object, as the analyzed identities will vary considerably, depending on the contexts, practices of interpretation, and usage.

Another way of interpreting such diverse levels of analysis would be to assign multiple identities to one object whilst asserting a core identity. Star and Griesemer's concept of a boundary object (1989) posits that the substance of objects remains stable despite their different uses. Stipulating such a central stable identity to an object like a patent may be plausible if one took a material approach, but as a contemporary patent is abstract in triple sense (it is an *abstract* legal property right in *intangibles*, now *immaterial* in the sense of its physicality as a digital file), understanding patents as boundary objects may only make much sense if one adopted a definition of patent that is physicalist-materialist or historical materialist. Whatever the vantage point of analysis one may take, one should clarify one's own understanding of patents as either fundamentally plural alterities or as boundary objects. In the analysis here, I

⁸ The global dossier is an initiative of the five largest patent offices the European Patent Office, Japan Patent Office, Korean Intellectual Property Office (KIPO), the US Patent and Trademark Office, and the National Intellectual Property Administration of China (CNIPA). It is a networked platform which provides access to internal documentation in the process of patent filing ('prosecution') in these jurisdictions. <<u>https://www.uspto.gov/patents/basics/international-protection/global-dossier-initiative</u>>. It remains to be seen how much of this remarkable administrative transparency and collaboration will survive the geopolitical tensions and nationalist economic policies.

would contend that the concept of the boundary object is stretched to a limit through patents' circulating plural meanings. Understanding patents as malleable, multiple, or pluralistic objects may itself be a hegemonic ideological conceit.

The Banality of Patents as Aesthetic Forms: Zany Patents and Patents as Gimmicks

The expectation of IP literacy cannot and ought not be high. Copyright, patents, and inventions have continued to get mixed up by most journalists, even during the TRIPS waiver debate, revealing ignorance about IP laws' basics. Even law students and other well-meaning academics do not distinguish inventions from innovation. On the one hand, the poor level of public understanding of IP law—or what patent law does and does not—is worrying, because it means that the public is ill equipped to critically evaluate the effects of IP monopoly rights and their economic and political implications. On the other hand, such an ignorance of IP, a central part of contemporary financialized economy, is puzzling in itself so to represent a curious object of analysis.

The motivation of this article has been to trace and articulate how contradictory notions of patents ('patents kill' vs. 'patents incentivize lifesaving innovations') were simultaneously claimed by various actors when patents, but also other IP rights, blocked knowledge-sharing in a catastrophic pandemic (Fig. 5).

In contrast to the promotion of IP as an ingredient of knowledge economy by governments, what has been interesting to observe is that much of popular cultural interest in patents does not seem to relate much to the political and economic effects of the legal monopoly right of a patent, but rather to the weirdness of patented inventions, especially the patent drawings. There are not many, if not any, other legal documents or formats that enjoy as much geeky popular appeal and are reproduced as decorative posters (Fig. 6 below).⁹

Such visual representations of 'patents' revolve around the images of inventions in the format of patent drawings, and they appear to be based on an aesthetic affect than legal relevance. The drawings are easy on the eye; they are orderly and uniform due to the exacting detailed drawing requirement which require draughtsmanship expertise. The enjoyment of patent drawings does not require special training for searching and reading the patent document as a diagrammatic text (Kang 2019). The aesthetic form of patents as images is impervious to the complex legal textual mediation and the digital infrastructure that I outlined in the previous section. This section explores the relations between the erasure of the patent text, the decontextualization of patent drawing from its documentary context, and the aesthetic forms of patents circulating in non-legal specialist discourses today. I think with Sianne Ngai's work on capitalism and aesthetic theory, especially the aesthetic categories of

⁹ A recent example is Netflix series, 'Extraordinary Attorney Woo', which features framed patent drawings against a blue background as a boy's room decoration (last episode of season one).



Fig. 5 From AFH Europe, an HIV patient advocacy organization, 4 Jun 2021. Available at: <https://twitter.com/AhfEurope/status/1400710541073596416?s=20>



Fig. 6 Vintage Coffee Patent Posters, from Etsy shop AlbPrints. Accessible at: <<u>https://www.etsy.com/</u>ca/listing/598473911/vintage-coffee-patents-set-of-6-prints>

Fig. 7 Website banner of the umbrella of civil society organizations, patents-kill.org



'zany' (2012) and a 'gimmick' (2020), which afford an analysis of patents as images and as particular capitalist aesthetic forms.

The discrepancy between the digital format and information infrastructure sustaining patents and the stylization of patent drawings in what seem to be mostly nostalgic reproductions points to a particular entanglement of patents' legal and economic functions in the broader context of post-industrial cultural economies. The popularization of analog, historical patent drawings as icons evoke technological nostalgia for analog times, such as the once-technological novelty of familiar household items like the Bialetti Mokka maker. Considering that patents as intellectual property rights were intimately connected to the rise of industrial mass production, these images embrace both the fetishization of technological, inventive essence as authentic, as well as the industrial mass commodification of authentic technicity.¹⁰

It is particularly in light of these parallel realities—analog technicity reproduced on paper as aesthetic objects in contrast to the reality of digitized patent practice that the patent offices' choice of what to promote in their public relations is interesting. Throughout the Covid-19 pandemic, official patent office communications avoided addressing, or even acknowledging the raging TRIPS waiver debate, as well as the human and social cost of pharmaceutical patents which have been at the center of patent policy debates for the last twenty years (Fig. 7).

Choosing to ignore the elephant in the room, the patent offices jarringly continued to promote the narrative of patents as rewards for inventors and being indispensable incentives for 'innovation' (see Fig. 2: WIPO's promotion '#NoTimeToDieFor-GlobalInnovators'). Many of their publicity ('education') campaigns stipulated an undefined association between the history of innovation and patents (for a detailed historical refutation, see Moser 2012). Symptomatic of the broad brush-stroke association of intellectual property with entrepreneurship, the UK Intellectual Property Office continued to publish its blog about the BBC reality TV show, *Dragon's Den*, a variation of the UK and US television shows, *The Apprentice*, on its official gov. uk website. 'Dragon's Den: the Intellectual Property blog' (Fig. 8) associates a patent grant with a start-up's success, but does not spell out the fact that the patent is no guarantee for commercial success.

During the pandemic years in which the lethal effects of patents were debated, patent offices also continued to promote historical patent drawings, which admittedly provided entertaining novelty factor from the past, as well as a light relief from having to engage with arguments that 'patents kill people' (Fig. 7). The annual list of WIPO's 'Patent Picks—Weird and Wonderful' engages in the celebration of past

¹⁰ I thank Bernard Keenan for this observation.

🗰 GOV.UK

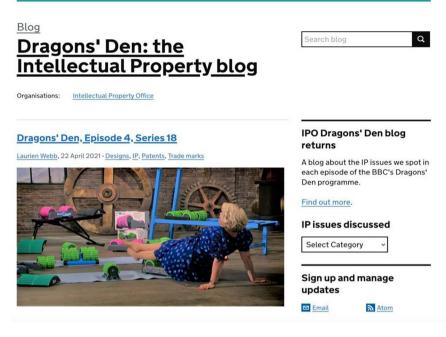
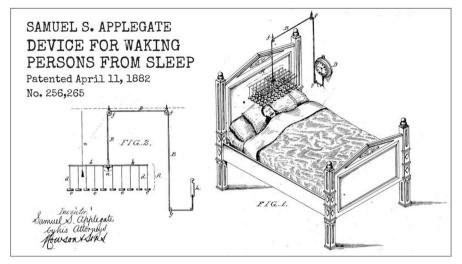


Fig.8 UK intellectual Property Office's blog page in conjunction with the BBC's reality game show, Dragon's Den: <<u>https://dragonsden.blog.gov.uk/2021/04/></u>

wacky inventions and cajoles: '[i]f ever proof were needed that innovation knows no bounds, look no further than our list of out-of-the-ordinary patents' (2021). I have found it difficult to describe the sensation of seeing silly patent drawing being reproduced into a poster or social media posts (Fig. 8) during the pandemic years, but Sianne Ngai's categorization of zaniness as a post-Fordist aesthetic category comes closest to describing it. Ngai's work on the specificity and transformation of aesthetic experience in modern and post-modern capitalism combines Marxist cultural and economic theory with aesthetic theory. By linking modern and post-modern aesthetic categories to the specific types of labor and methods of production in late capitalist political economy, her work allows us to reflect on the role of intellectual property law in contemporary capitalism. For example, zaniness, the feeling that the Dragon's Den UK IP Office blog invoked, she defines as

'an aesthetic [which is, my insertion] more explicitly about the politically ambiguous convergence of cultural and occupational performing under what Luc Boltanski and Eve Chiapello call the new "connexionist" spirit of capitalism: the dominant ideology of a capitalism that has absorbed and adjusted to the "artistic critique" of the 1960s ... there is something strained, desperate, and precarious about the zany that immediately activates spectator's desire for distance.' (Ngai 2012, pp. 7-8).



Device for Waking Persons from Sleep (1882)

Fig. 9 WIPO, 2018 Patent Picks – Weird and Wonderful. < https://www.wipo.int/patents/en/2018_patent_picks.html >

An example of a zany film is Charlie Chaplin's Modern Times. A contemporary example of the ambiguous zany person would be Clive Sinclair, or maybe also Elon Musk: 'the zany object or person is one we can only enjoy—If we do in fact enjoy it or her—at a safe or comfortable distance.' (Ngai 2012, p. 9).

Similarly, many strange patent drawings invoke the feeling of fascination and unease because of their subsequent failure that we know about with hindsight, or because they are useless inventions that someone must have thought is useful, or at least interesting, to expend labor on it and undertake the effort of applying for a patent. Many inventions simply try too hard.

As the above invention depicted from the WIPO's 'Patent Picks—Weird and Wonderful' (Fig. 9) curated collection, patent drawings combine aspects of painstaking labor (technical draughtsmanship and inventive labor) with a doomed aspiration to a technical function (industrial application or utility). This combination precisely invokes a zany affect, a 'performative aesthetics,' which denotes the increasing blurring boundary between labor and play. It suggests a comical ability to flip between work to play, from seriousness to light heartedness. No matter how serious or silly the depicted invention may be, the aesthetic form of the patent drawing stays the same. The tightly regulated form of patent drawings highlights the mechanical nature of the depicted inventions according to highly normed aesthetic standards. In other words, the aesthetic quality of zaniness arises in the context of WIPO's chosen patent drawings because the form is serious, but the contents are ridiculous. From a sociological point of view, patent drawings appeal to a geeky sensibility, with its appeal to technicity rather than artistic aesthetics. Both in their sociological and aesthetic forms, patent drawings provide a

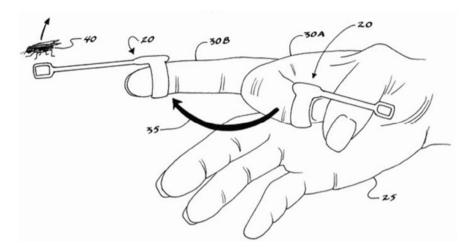


Fig. 10 Patent drawing in US patent 7,48,4,328, Finger mounted insect dissuasion device and method of use, issued 3 February 2009

record of uniform, mechanical past—a sense of futurity in retrospect—in today's networked, re-versible, digital times.

Despite the entertainment value that they provide, it is not clear why patent offices deploy zany patent drawings as examples of innovation. They are not exactly the socially important innovations that it claims to promote and be indispensable for. A patent drawing, especially if the invention depicted in it is comically useless, makes an intriguing gimmick (Fig. 10). This is perhaps because it is severed and alienated from its very textual context, when there are arguably very few other legal artefacts that are as formally and textually coded and its contents far removed from everyday language as a patent document. Reflective of contemporary capitalism in which paradoxes like planned obsolescence and routinized innovation exist simultaneously, Ngai defines a gimmick as a 'temporally sensitive and fundamentally unstable form' (2020, p. 6): 'We call things gimmicks when it becomes radically uncertain if they are working too hard or too little, if they are historically backward or just as problematically advanced, if they are wonders or tricks' (2020, p. 49). Whereas zany objects work too much and seem contrived, gimmicks exert a more ambiguous aesthetic effect. They hover between being 'too easy' and 'too difficult' (2020, p. 48). Gimmicks are examples of capitalist disenchantment equivalent of revealing magic's know-how. Relatedly, patents as gimmicks are instances of capitalist disenchantment rather than enchantment. As Ngai points out, they are 'a conjunction of transparency and opacity' (2020, p. 84).

In my analysis, I ought to be careful to distinguish gimmicky inventions (the object of patent right) from the transformation of the very legal form of patent into a gimmick. Many patented inventions fit the definition of gimmicks, but this is not a novel insight. The focus of the analysis has been rather on the cultural meaning of patents as aesthetic and cultural forms. The pressing question is then what the representation of legal monopoly rights - the very legal aesthetic form as

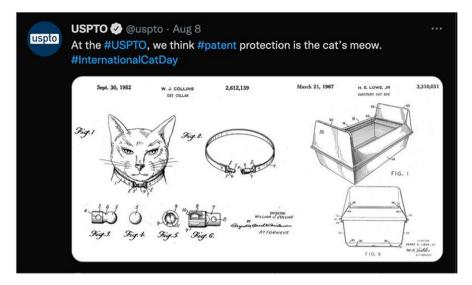


Fig. 11 USPTO, official twitter page. < https://twitter.com/uspto/status/1424369894511022083?s=20>

gimmicks - effects. The discussion in the previous sections presented a constellation in which the textual and the image-based forms of patents yield a proliferation of contradictory meanings. The focus on images facilitates the dissemination of a technical field of law concerned with technology into popular culture. But the banality of patents as images keeps out of view the modes of production, the material and immaterial labor that produced the inventions, and as well as patent law's complex digital network that enact legality. It distracts from patent's legal force as an abstract monopoly right. It blends out the reality of patents as formal, stratified documents written in a highly legal internalist language that requires know-how of drafting and interpretation. Rather the patent drawings—which actually depict inventions rather than patents – have the effect of isolating patents as wacky artefacts of zany or gimmicky aesthetic qualities. They elicit fascination and uneasy sympathy for erroneous directions and valiant failures in the long road to progress. In sharp contrast to present political and legal debates that have fulminated over intellectual property rights and the monopolies that they enable, as cultural signs, patents circulate as playful gimmicks: 'At the #USPTO, we think #patent protection is the cat's meow' (Fig. 11).

Institute of Patent Infringement

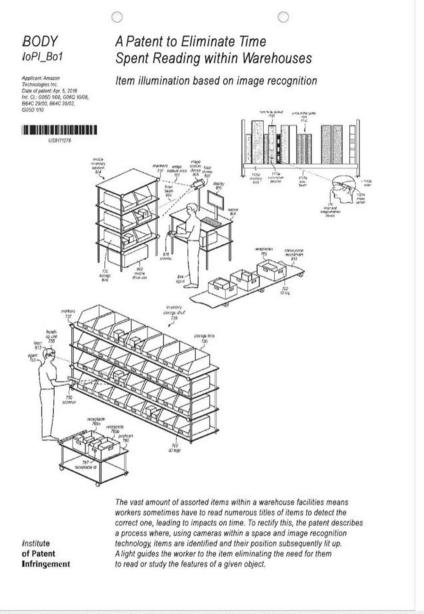
The 2018 project by Matthew Stewart and Jane Chew, 'The Institute of Patent Infringement,' was commissioned by Het Nieuwe Instituut for the Dutch Pavilion at the Venice Architecture Biennale. Whereas patent infringement is increasingly becoming criminalized from having been traditionally being a civil offence, and counterfeiting associated with and stigmatized as a criminal activity, the officious

sounding project name-"The Institute"-was an architectural project in the true sense of the word, a projection into the future. Its aim is described as follows: 'The project provides a means to visually represent and document often abstract information related to current unfolding questions surrounding automation that will impact the future of architecture. Secondly, it allowed professionals to redefine what our automated futures might look like or to critically reflect on this process taking place.' It comprised an open call for proposals to 'reimagine' Amazon patent filings for the 'radical and emancipatory potential inherent in these new technologies assembled by Amazon' (Institute of Patent Infringement 2018). It focused mainly on technologies of logistics, in which data, 'AI', and spatial physical technologies intersect to regulate 'automation, the body, space'.¹¹ Prior to the open call, patent documents were pre-selected for this specific thematic scope and made available online. Drawing on both granted patent documents as well as patent applications, the represented 'patents' were not the original patent documents but mimicked them closely visually and in their format. They were mostly one-page reproductions of the patent drawings with a short description (mostly from abstracts) and the patent number. The resulting document looked like a patent document, but it wasn't. It was a quasipatent document. Most of the paper space was taken up by patent drawings. The sections for descriptions and claims were missing, so were the prescribed diagrammatic format. The mechanisms of the described invention and their identified function were at the forefront of these quasi-patent documents, distilled to their function, drawing and title (Fig. 12).

The individual submissions for the Architecture Biennale were invited 'to negate this top-down and closed system. ... The Institute of Patent Infringement thus invites submissions from students, industrial designers, architects, urban planners, artists, programmers and the wider public to merge, reimagine, infringe, and hack existing Amazon patents' (2018). With this proposition, the project aimed to reclaim patents as public information in an original and subversive way, by purposefully disconnecting the invention from its original stated use towards other functions. Somewhat paradoxically, in doing so, the central cultural connector of all these hacked imaginary inventions remains the patent holder or applicant, Amazon, as well as the legal format of patent document. Stewart and Chew were intrigued by the Amazon patents because, distinct from other technology companies, Amazon's operations involved physical and algorithmic spatial organization and infrastructures. Their call specified: 'Since 2010, Amazon Technologies Inc. has filed 5,860 patents that range from the seemingly banal to the resolutely absurd. Illustrated by dry line drawings these patents provide a glimpse and representation of the automated future Amazon aim to create' (2018). The 'banal' to 'the resolutely absurd' aspects reflect the popular fascination with patents as gimmicks, as the previous section has analyzed.

In contrast to the future-making and -restricting power of legal patent documents, the submissions resemble the format of a patent document and aesthetics of the

¹¹ On the exhibition at the Het Niuwe Institut, Rotterdam, at the V&A Museum, London, and as part of the Dutch Pavillion in the Venice Architecture Biennale with the selected submissions, see here: https://futurearchitectureplatform.org/projects/1a3e9885-f38e-4de3-b839-147f55e89653/



commissioned by Het Nieuwe Instituut for the Dutch Pavillion the project firstly involved research into the thousands of patents amazon had filed related to automation, the body and space. These patents were made available online on a website.

Fig. 12 Matthew Stewart (with Jane Chew), Project of Institute for Patent Infringement. Available at < https://futurearchitectureplatform.org/projects/1a3e9885-f38e-4de3-b839-147f55e89653/>

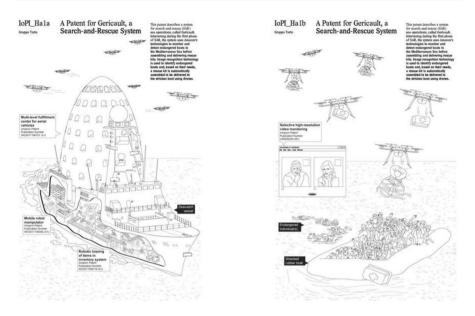


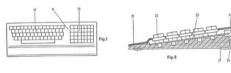
Fig.13 Matthew Stewart (with Jane Chew), Project of Institute for Patent Infringement. Available at < https://futurearchitectureplatform.org/projects/1a3e9885-f38e-4de3-b839-147f55e89653/>

patent drawings, but the lack of specificity and capacity to reproduce to invention (due to lack of technical infrastructure, know-how, financial resource) points to the limitations of the 'public' nature and understanding of patent information. Although they are as zany as authentic patent drawings, situated uneasily between play and inventive labor, the mimicry lacks legal materiality (Kang & Kendall 2019) and act as cultural signs. The proposed hacked inventions alternate between gimmick, science fiction, and technoscientific geekery. Their primary difference to the original Amazon patent documents seems to lie in the different political or social function for which the hacked inventions would be employed (Fig. 13 depicts the original Amazon patent drawing on the left, and the reimagined patent drawing on the right side). In that sense, the project was a creative re-enactment of potentiality against technological over-determination).

As Covid-19 hit, the idea of a patent hack required inventing around a patent, like Decathlon's snorkel mask in times when oxygen masks were in short supply in the first year of the pandemic, and people desperately resorted to DIY efforts to make oxygen masks. The tweet below (Fig. 15) engages in its own subversion of the arbitrary European Patent Office's #patentfact tweets which puts forward a random association between the languages of European patent bureaucracy and ergonomic keyboards (Fig. 14). It suggests that Decathlon's patent stands in the way of people to modify it, and indeed, it is not the first contestation of the effects of Decathlon's snorkel mask patent (Fig. 16), which has gone through multiple

EuropeanPatentOffice @ @EPOorg · Aug 17 #patentfact

EP0093080B1



#patentfact

Fig.3

The European procedure is conducted in one of the three official languages of the EPO, namely English, French and German.

Fig. 14 European Patent Office, official twitter account, 17 August 2021. < https://twitter.com/EPOorg/status/1427556308111220751?s=20>

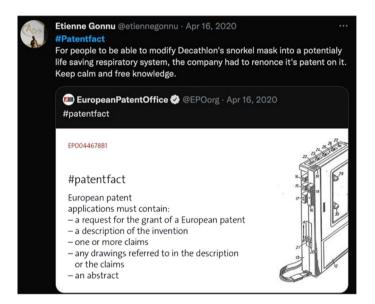
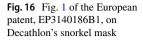
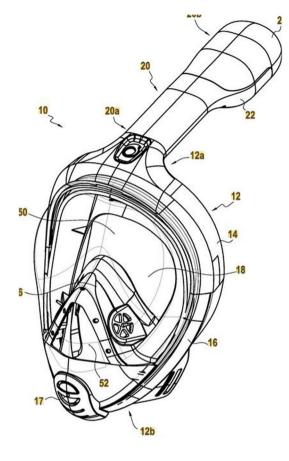


Fig. 15 Quote tweet of the European Patent Office's random hashtag patentfact. Available at < https://twitter.com/etiennegonnu/status/1250765021912670209?s=20>

opposition proceedings at the European Patent Office.¹² What is striking here is that none of the depicted patent drawings circulated by the European Patent

¹² European patent number: EP3140186B1. For its filing and opposition history, see < https://globaldoss ier.uspto.gov/#/details/EP/14727012/A/66829>.





Office (Figs. 14 and 15) relate to the content of the accompanying text, as if they are exemplary instances of Barthes' observation that the 'worn out state of a myth can be recognized by the arbitrariness of its signification' (1972, p. 127).

The Institute of Patent Infringement's project and motivation are different from the mobilization of patent drawings into an aesthetic, cultural artefact, which I had previously described in the previous section. Even though the aim of the project is subversive, it also has the strange effect of objectifying patent drawings as real inventions through aesthetic reproductions, regardless of how different the hacks may be from the original purpose. The project presumes the accuracy of patent documents and their drawings and does not contest the narrative of futureshaping effect of patents. But many of patented inventions in fact are never realized or used (European Commission 2005). There is often a tendency to overestimate patents for different reasons. Patented inventions are taken as inherently innovative and valuable, as if patent documents, or even applications, signify legal tokens of credit of technological and scientific achievements (Kang 2015). With little scrutiny over inventive substance, patents are overhyped as both incentives and outcomes of innovation in a circular manner. Also there is sometimes an undifferentiated condemnation of patents as creating monopolies, whereas a bulk of patents turn out to be useless and not valuable. There is a lack of distinction between patents as legal monopoly rights and monopoly market structures that they may enable, but do not necessarily always result in.

The Institute for Patent Infringement also attributes a central role to patent drawings as if they depict scenarios from a projected future, on the basis of which there is then a creative invitation to subvert them away from the vision of a dominant multinational corporation, such as Amazon. This results in the curious effect that the act of subversion itself results in the solidification of a patent's speculative legalist potentiality, which raises the question if the act of subversion results in co-option. The threat of the future that the patents depict is imminent, yet also it is highly speculative and fantastical. It is easy to see both the Amazon patents and their hacks as occupying the same place as the patent gimmicks of WIPO's Weird and Wonderful selection. Yet what if the creative patent hacks could be really made? Would they not be useful, although they would not fulfil the patentability requirement of industrial application? What are the possibilities and limits of reimagining patent drawings as aesthetic, non-industrial, non-commoditized artefacts? The Institute for Patent Infringement project poses valuable questions about the strategic uses of patents by powerful corporations, as well as giving an indication of their imagined futurities for which they think it is worth to go through the patent prosecution process. It reveals an uneasy oscillation between precaution, critique of monopoly rights, and patent speculations by re-imagining patent drawings as aesthetic forms to be hacked.

Patents as Capitalist Aesthetic Forms and the Hegemonic Ideology of Innovation

Stuart Hall wrote that '[o]ne always begins to grapple with and analyze difficult political situations using one's experiences and understandings. But one draws upon theories to break into experience, to open to investigation the problematic nature that such political situations present to us to better understand what is going on and how to respond' (2016, Preface). My intention when starting this paper was to find out what makes patents fascinating or even likeable to people who have little understanding of patent law.¹³ I was puzzled by the mythical power that the association of patents, or IP generally, with 'innovation' seemed to hold in the minds of people who could not see a problem with pharmaceutical monopolies that were exacerbating vaccine hoarding, inequitable distribution, and thus causing over a million deaths as a result of vaccine nationalism (Ledford 2022). Such a willingness to sacrifice present lives for an abstract, ill-defined idea of innovation for which IP rights are allegedly essential is what one might appropriately define as 'IP fundamental-ism' (Dutfield 2006).

¹³ For IP expert, the intensity of affect required may be more than just 'like': 'if you love IP' was an attribute specified in a tweet advertising a post for an IP-related publication.

Understanding how patents circulate as cultural signs via legally irrelevant images provides a beginning for a cultural economic analysis of patents. It gives clues about why the trope of 'innovation' persists so much and how 'innovation theology' (Godin 2019a, b) has mutated into IP fundamentalism and its acceptance by what seems to be broad parts of the public. For example, the proponents of an IP maximalist regime, such as the pharmaceutical lobby and their political and legal supporters (the European Commission and other national governments) have repeatedly invoked the under-defined concept of 'innovation' against attempts to limit IP rights for the duration of the pandemic (IFPMA 2022). They accused opponents of an IP maximalist legal regime and TRIPS waiver supporters of making an 'ideological' argument, thus effectively perverting the Marxist meaning of ideology which is grounded in material relations. Such mutations and fluid positions of ideology/ counter-ideology, even amounting to the invocation of ideology itself as a derogatory term, reveal patents not only as capitalist aesthetic forms, but as contemporary hegemonic forms (Laclau and Mouffe 1985; Hall 1988) which blur the boundaries between legal, economic, and cultural spheres of signification. But how can such hegemonic discursive power co-exist with the circulation of patents as aesthetic forms that are represented as wacky gimmicks? Are they not too zany to be taken seriously?

The analysis showed the contradictory dynamics of simultaneously understanding patents as both too legal-technical textual forms and also as aesthetically zany forms of techno-nostalgic, or dystopian projections. Patents appear to operate in two overlapping and ambiguous temporal modes: a linear future perfect in claims that associate 'innovation' with patents and the past of linear future perfects in depictions of patents as gimmicks. Although patents drawings as aesthetic artefacts have no legal force and are insignificant in the context of the legal form of patents, they circulate as both zany (the examples of patent office PR) and also threatening (the example of the Institute of Patent Infringement project) cultural signs. These contradictory meanings are figured by patents' different aesthetic forms (image or text) and they reflects Toscano and Kinkle's observation on the limits of observing capitalist society: '[a] social theory of capitalism as a totality, and the imaginations and aesthetics that strive toward it, could only be marked by an excess of coherence-as its opponents see it-to the extent that it papered over the incoherence (or contradictoriness, difference, unevenness) in its object' (2015, quoted in Ngai 2020, p. 33). The political economic reality of patents as both monopoly rights and sources of monopoly profit exists side by side with circulation of patents as gimmicks, which give the viewer a pleasure of re-immersing into harmless, retro-modernist futures. Patents as cultural aesthetic forms signify 'gimmicks'-commodities about which we are not certain 'if they are working too hard or too little, if they are historically backwards or just as problematically advanced, if they are wonders or tricks' (Ngai 2020, p. 49). But as legal signs, patents do not function as gimmicks, at all; they are legally sanctioned monopoly rights.

Such a discrepancy between the substance of patent as a legal property and the cultural signification of patents as gimmicks as capitalist aesthetic forms points to a process which Guy Debord called as 'the image as the final form of commodity reification' (Jameson 1991, p. 277). This particular process of commodification differs

from the recognition that a patent turns an invention (or knowledge) into a private or market commodity, which is the mainstream liberal critique of patent law. What Debord describes, in the context of this analysis, is that the abstract 'patent' itself has become a commodity through its re-materialization into an image.¹⁴ Such a shift in a patent's aesthetic form and substance—from technical text to a zany image—transmutes patents into a myth. And as Benjamin wrote, a myth is 'the objective character of the alienated commodity itself' (Adorno, Benjamin 1935/2020, p. 125).

As signs in contemporary capitalist economy, a patent has become an image of itself.

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References

- Adorno, Theodor, W. Benjamin, E. Bloch, B. Brecht, and G. Lukács. 1977. Aesthetics and Politics. London: Verso.
- Barthes, Roland. 1972. Mythologies. New York: Hill and Wang.
- Bellido, Jose, and K. Bowrey. 2022. Adventures in Childhood. Intellectual Property, Imagination and the Business of Play. Cambridge: Cambridge University Press.
- Biagioli, Mario. 2006. Patent Republic: Representing Inventions, Constructing Rights and Authors. Social Research 73 (4): 1129–1172.
- Biagioli, Mario. 2019. Weighing Intellectual Property: Can We Balance the Social Costs and Benefits Of Patenting? *History of Science* 57 (1): 140–163.
- Biagioli, Mario, P. Jaszi, and M. Woodmansee. 2002. Making and Unmaking Intellectual Property. Chicago: University of Chicago Press.

Bowrey, Kathy. 2005. Law and Internet Cultures. Cambridge: Cambridge University Press.

Bowrey, Kathy. 2020. Copyright, Creativity, Big Media and Cultural Value: Incorporating the Author. London: Routledge.

¹⁴ This process is a different, yet adjacent one, from assetization of patents as capital because the rematerialization does not occur in the financial assetization process, whereas in the cultural sphere it is precisely the pictorial image that rematerializes whatever is depicted as a 'patent' into a commodity. Both processes point to the commodification of law itself, albeit through different processes.

- Bragman, Walker. 2023. 'Pfizer Spends Big on IP Lobbying With Billions on the Line'. Readsluge 9 March. https://readsludge.com/2023/03/09/pfizer-spends-big-on-ip-lobbying-with-billions-on-theline/. Accessed 18 June 2023.
- Braun, Veit. 2021. Holding on to and letting go of seed: Quasi-commodities and the passage of property. Journal of Cultural Economy 14 (3): 306–318.
- Brennan, Zachary. 2022. How much? Pfizer leads top pharma companies' ramped up lobby spending on Congress. https://endpts.com/how-much-pfizer-leads-top-pharma-companies-ramped-up-lobbyspending-on-congress. Accessed 19 May 2023.
- Carreyrou, John. 2018. Bad Blood. New York: A. Knopf.
- Chandrasekharan, Subashini, et al. 2015. Intellectual property rights and challenges for development of affordable human papillomavirus, rotavirus and pneumococcal vaccines: Patent landscaping and perspectives of developing country vaccine manufacturers. *Vaccine* 33 (46): 6366–6370.
- Coombe, Rosemary. 1998. The Cultural Life of Intellectual Properties: Authorship, Appropriation, and the Law. Durham, NC: Duke University Press, Durham.
- Cueni, Thomas. 2020. The Risk in Suspending Vaccine Patent Rules. *New York Times*, 10 December. https://www.nytimes.com/2020/12/10/opinion/coronavirus-vaccine-patents.html, Accessed 14 June 2022.
- Daub, Adrian. 2020. What Tech Calls Thinking: An Inquiry into the Intellectual Bedrock of Silicon Valley. New York: FSG Originals x Logic.
- Drahos, Peter, and John Braithwaite. 2003. Information Feudalism: Who Owns the Knowledge Economy? New York: The New Press.
- Drucker, Johanna. 2013. Diagrammatic Writing. *new formations: a journal of culture/theory/politics* 78: 83–101.
- du Gay, Paul. 2000. Representing 'Globalization': Notes on the Discursive Orderings of Economic Life. In Without Guarantees. In Honour of Stuart Hall, eds. Paul Gilroy, Lawrence Grossberg, and Angela McRobbie. London: Verso, 113–125.
- Dutfield, Graham. 2006. "To copy is to steal": TRIPS, (un)free trade agreements and the new intellectual property fundamentalism. *Journal of Information Law and Technology* 1. https://warwick.ac.uk/fac/ soc/law/elj/jilt/2006_1/dutfield/. Accessed 19 May 2023.
- Dutfield, Graham. 2000. The Public and Private Domains: Intellectual Property Rights in Traditional Knowledge. Science Communication 21: 274–295.
- European Commission. 2005. PatVal-EU Project. The value of European patents. Evidence from a survey of European inventors. Final report. http://ec.europa.eu/invest-in-research/pdf/download_en/patval_ mainreportandannexes.pdf. Accessed 19 May 2023.
- European Commission. 2022. A New European Innovation Agenda. COM(2022) 332 final.
- Fromer, Jeanne C. 2009. Patent Disclosure. Iowa Law Review. 94: 539.
- Godin, Benoît. 2019. The Invention of Technological Innovation Languages, Discourses and Ideology in Historical Perspective. Cheltenham: Edward Elgar.
- Godin, Benoît. 2019b. Innovation Theology. Project on the Intellectual History of Innovation. http:// www.csiic.ca/wp-content/uploads/2020/02/InnovationTheology_BG_2019b.pdf. Accessed 19 May 2023.
- Gramsci, Antonio. 1971. Selections from the Prison Notebooks. New York: International Publishers.
- Hall, Stuart. 1988. The Hard Road to Renewal: Thatcherism and the Crisis of the Left. London: Verso.
- Hall, Stuart. 2016. Cultural Studies 1983. Durham, NC: Duke University Press.
- Haraway, Donna. 1989. Primate Visions: Gender, Race, and Nature in the World of Modern Science. New York: Routledge.
- Haskel, Jonathan, and Stian Westlake. 2017. *Capitalism without Capital: The Rise of the Intangible Economy*. Princeton, NJ: Princeton University Press.
- Hemmungs-Wirtén, Eva. 2019. How patents became documents, or dreaming of technoscientific order, 1895–1937. Journal of Documentation. 75 (3): 577–592.
- International Federation of Pharmaceutical Manufacturers & Associations (IFPMA). 2022. Press release. Pharmaceutical Industry Expresses Deep Disappointment with Decision on Waiving Intellectual Property Rights Adopted at the World Trade Organization Ministerial Conference'. 17 June. https:// ifpma.org/news/pharmaceutical-industry-expresses-deep-disappointment-with-decision-on-waivi ng-intellectual-property-rights-adopted-at-the-world-trade-organization-ministerial-conference/. Accessed 19 May 2023.
- Institute for Patent Infringement. A project by Matthew Stewart with Jane Chen. 2018. *Open Call*. https:// www.archdaily.com/889315/open-call-institute-of-patent-infringement. Accessed 19 May 2023.

Jameson, Fredric. 1991. Postmodernism, or, the Cultural Logic of Late Capitalism. London: Verso.

- Kang, Hyo Yoon, and S. Kendall. 2019. Introduction to the special issue on Legal Materiality. *Law Text Culture* 23: 1–15.
- Kang, Hyo Yoon. 2020. Patents as Assets: Intellectual Property Rights as Market Subjects and Objects. In Turning Things into Assets: New Lineaments in the Study of Technoscientific Capitalism eds. Kean Birch and Fabian Muniesa. Cambridge, MA: MIT Press.
- Kang, Hyo Yoon. 2021. Patent Capital in the Covid-19 Pandemic: Critical Intellectual Property Law. Critical Legal Thinking. https://criticallegalthinking.com/2021/02/09/patent-capital-in-the-covid-19-pandemic-critical-intellectual-property-law/. Accessed 19 May 2023.
- Kang, Hyo Yoon. 2012. Science Inside Law: The Making of a New Patent Class in the International Patent Classification. Science in Context 25: 551–594.
- Kang, Hyo Yoon. 2015. Patents as Credit. When Intellectual Property Becomes Speculative. Radical Philosophy 194: 29–37.
- Kang, Hyo Yoon. 2019. Ghosts of Inventions: Patent Law's Digital Mediations. *History of Science* 57 (1): 38–61.
- Keller, Fox, and Evelyn. 1985. Reflections on Gender and Science. New Haven: Yale University Press.
- Kim, Sang-Hyun. 2017. Science, Technology, and the Imaginaries of Development in South Korea. Development and Society 46 (2): 341–371.
- Kuhn, Thomas. 1962. The Structure of Scientific Revolutions. Chicago: University of Chicago Press.
- Laclau, Ernesto, and Chantal Mouffe. 1985. Hegemony and Socialist Strategy. London: Verso.
- Latour, Bruno. 1999. Pandora's Hope. Cambridge, MA: Harvard University Press.
- Ledford, Heidi. 2022. Covid Vaccine Hoarding Might Have Cost More Than a Million Lives. *Nature* 2 November. https://www.nature.com/articles/d41586-022-03529-3. Accessed 19 May 2023.
- Lee, Peter. 2022. Enhancing the Innovative Capacity of Venture Capital. Yale J.L. & Tech. 24: 611.
- Lezaun, Javier, and Catherine Montgomery. 2014. The Pharmaceutical Commons: Sharing and Exclusion in the Global Health Drug Development. *Science, Technology & Human Values* 40 (1): 3–29.
- Macmillan, Fiona. 2006. Public Interest and the Public Domain in an Era of Corporate Dominance. In Intellectual Property Rights Innovation, Governance and the Institutional Environment. ed. B. Andersen. Cheltenham: Edward Elgar.
- Macmillan, Fiona. 2022. Intellectual and Cultural Property: Between Market and Community. London: Routledge.
- Mirowski, Philip. 2011. Science Mart. Privatizing American Science. Cambridge: Harvard University Press.
- Moser, Petra. 2012. Innovation Without Patents: Evidence from World's Fairs. Journal of Law and Economics 55 (1): 43–74.
- Myers, Greg. 1995. From Discovery to Invention: The Writing and Rewriting of Two Patents. Social Studies of Science 25 (1): 57–105.
- Ngai, Sianne. 2012. Our Aesthetic Categories. Zany, Cute Interesting. Cambridge: Harvard University Press.
- Ngai, Sianne. 2020. Theory of the Gimmick: Aesthetic Judgment and Capitalist Legal Form. Cambridge, MA: Harvard University Press.
- Ouelette, Lisa. 2017. Who Reads Patents? Nature Biotechnology 35: 421-424.
- PhRMA. 2021. PhRMA Statement on WTO Intellectual Property Waiver, 5 May. https://phrma.org/ Coronavirus/PhRMA-Statement-on-WTO-TRIPS-Intellectual-Property-Waiver. Accessed 21 June 2023.
- Pottage, Alain, and Brad Sherman. 2010. Figures of Invention. A History of Modern Patent Law. Oxford: Oxford University Press.
- Rai, Arti K., et al. 2009. Proprietary Science, Open Science, and the Role of Patent Disclosure: The Case of Zinc Finger Proteins. *Nature Biotechnology* 7: 140.
- Roy, Victor. 2020. A Crisis for Cures? Tracing Assetization and Value in Biomedical Innovation. In *Turn-ing Things into Assets: New Lineaments in the Study of Technoscientific Capitalism*, ed. Kean Birch and Fabian Muniesa. Cambridge: MIT Press.
- Schwartz, Herman Mark. 2022. Noli Me Tangere: Fixing the Intangible Economy. Review Essay of Haskel and Westlake, Restarting the Future. *How to Fix the Intangible Economy, American Affairs Journal* VI (2): 68–81.
- Sell, Susan. 2011. TRIPS Was Never Enough: Vertical Forum Shifting, FTAS, ACTA, and TTP. Journal of Intellectual Property Law 18: 447.

- Sell, Susan. 2003. Private Power, Public Law: The Globalization of Intellectual Property Rights. Cambridge: Cambridge University Press.
- Shapin, Steven, and Simon Schaffer. 1985. Leviathan and the Air-Pump. Princeton: Princeton University Press.
- Sherman, Brad. 2008. Taxonomic Property. Cambridge Law Journal 67 (3): 560-584.
- Stadler, Max, Janosch Steuwer, and Monika Wulz. 2021. Rechtes Wissen Eine Problematisierung. In Rechtes Wissen Konstellationen zwischen Universität und Politik. Æther, ed. Janosch Steuwer and Monika Wulz. Zurich: intercom Verlag.
- Staines, Andrew (2021) [Twitter] 8 October. https://twitter.com/AndyWIPO/status/144652056260875 4694?s=20. Accessed 24 April 2023.
- Star, Susan Leigh, and J.R. Griesemer. 1989. Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907–39. Social Studies of Science 19 (3): 387–420.
- Thambisetty, Siva, Luke McDonagh, A. McMahon, H.Y. Kang, and G. Dutfield. 2022. Addressing Vaccine Inequity During the COVID-19 Pandemic: The TRIPS Intellectual Property Waiver Proposal & Beyond. *Cambridge Law Journal* 81 (2): 384–416.
- Toscano, Alberto, and Jeff Kinkle. 2015. Cartographies of the Absolute. Alresford: Zone Books.
- Weber, Max. 1978. Economy and Society. Berkeley: University of California Press.
- Williams, Aime, Kiran, S., Hannah, K., Donato Paolo, M. 2021. US Backs plan to suspend Covid vaccine patent. *Financial Times*. 6 May.
- Williams, Raymond. 1958. Culture and Society: 1780-1950. London: Chattos & Windus.
- World Trade Organization. 2001. Declaration on the TRIPS agreement and public health. WT/MIN(01)/ DEC/2, 14 November. https://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_trips_e. htm. Accessed 19 May 2023.
- World Intellectual Property Organization. 2021. 2021 Patent Picks Weird and Wonderful. https://www. wipo.int/patents/en/2021_patent_picks.html. Accessed 19 May 2023.

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