

## More Problem Than Solution? Patent Subject-Matter Eligibility Following *Choueifaty* and CIPO's 2020 Practice Notice\*

Mitchell Folk

### Abstract

The Canadian Intellectual Property Office's (CIPO's) use of a problem-solution approach unfairly denied patents to inventors of business methods, diagnostic methods, and computer-implemented inventions by failing to consider the inventor's intentions when determining the essential elements of the invention. With important and practical elements excluded from consideration, the remaining elements were left vulnerable to being found patent-ineligible "abstract" subject matter. In *Choueifaty*, the Federal Court reiterated the Supreme Court of Canada's holding in *Free World Trust* that an element is essential if the inventor intends it to be. Following *Choueifaty*, CIPO issued an updated practice notice. This article argues that CIPO has incorporated its previous error into its updated practice notice by recycling the problem-solution approach and establishing a physicality requirement. Thus, despite *Choueifaty*, patent applications that describe atypical, non-physical subject matter are nonetheless likely to experience the same fate as under the previous regime.

### Résumé

L'Office de la propriété intellectuelle du Canada (OPIC) utilise un processus de résolution de problèmes en vertu duquel l'Office refuse injustement d'octroyer des brevets aux inventeurs de

---

\* © 2021 Mitchell Folk, BBA (hons), JD (2022).

méthodes commerciales, de méthodes de diagnostic et d'inventions mises en œuvre par ordinateur, en omettant de prendre en compte les intentions de l'inventeur lors de sa détermination des éléments essentiels de l'invention. En excluant de prendre en compte certains éléments importants et concrets, les éléments restants se sont retrouvés en situation de vulnérabilité de devenir des objets « abstraits » inadmissibles à la brevetabilité. Dans l'affaire *Choueifaty c. Procureur général du Canada*, la Cour fédérale a réaffirmé les conclusions de la Cour suprême du Canada dans l'affaire *Free World Trust c. Électro Santé Inc.*, en précisant qu'un élément est essentiel si l'inventeur a manifestement voulu qu'il le soit. À la suite du jugement rendu dans l'affaire *Choueifaty*, l'OPIC a publié une version mise à jour de son énoncé de pratique. Cet article prétend que l'OPIC a incorporé son erreur précédente dans l'énoncé de pratique mis à jour en recyclant le processus de résolution de problèmes et en établissant une exigence en matière de physicalité. Par conséquent, malgré la décision rendue dans l'affaire *Choueifaty*, les demandes de brevets qui décrivent un objet atypique et non physique seront néanmoins susceptibles de connaître le même sort qu'en vertu du régime antérieur.

## **1.0 Introduction [AU: headings number in CIPR style; please correct any misapplied numbering]**

The Canadian Intellectual Property Office's (CIPO's) interpretation of the *Patent Act* requirement that “no patent shall be granted for any mere scientific principle or abstract theorem” has dogged inventors of certain business methods, diagnostic methods, and computer-implemented inventions (referred to throughout as “atypical inventions”).<sup>1</sup> In prosecuting claims

---

<sup>1</sup> *Patent Act*, RSC 1985, c P-4, s 27(8).

for such atypical inventions, CIPO has commonly used the prohibition on abstract subject matter to deny otherwise valid claims by substituting the inventor's characterization of the invention with its own characterization (that is, that the inventor had *really* only invented an abstract idea, like an algorithm, and therefore claimed non-patentable subject matter). With its "problem-solution approach," CIPO effectively enacted a moratorium on patenting atypical subject matter. On August 21, 2020, the Federal Court released its decision in *Choueifaty v Canada (Attorney General)*.<sup>2</sup> The decision of Zinn J is brief and cogent and confirms that the inventor's intention is paramount to the proper construction of a patent claim. Yet, despite a barrier to inventors being lifted, another was created: CIPO's updated practice notice. CIPO's retention of its problem-solution approach and its interpretation of the law in respect of physicality may continue to challenge inventors of atypical subject matter.

## **2.0 Choueifaty v Canada (Attorney General)**

### **2.1 The Decision of the Commissioner of Patents**

On June 19, 2008, inventor Yves Choueifaty, president and chief investment officer of investment management firm TOBAM SAS, sought a patent for a "method and system for provision of an anti-benchmark portfolio." The invention, which would use a computer to execute a method of weighing and selecting assets for an investment portfolio in a manner that would minimize risk without impacting returns, was denied a patent for failing to disclose an invention under section 2 of the *Patent Act*. Mr Choueifaty filed a revised claim with his appeal to the Patent Appeal Board, which characterized the invention as an optimization procedure that

---

<sup>2</sup> 2020 FC 837 [*Choueifaty*].

would allow a computer to solve an anti-benchmark equation significantly faster and with less processing power. The revised claim also included an affidavit of Tristan Froidure, head of research at TOBAM, attesting that a person skilled in the relevant art would readily recognize the significant increase in computer functionality that would arise by using the invention, known as the Choueifaty Synthetic Asset Transformation, to transform the diversification ratio from a quasi-concave problem to a convex problem.

In rejecting the appeal, the board applied the guidance of CIPO's *Manual of Patent Office Practice*,<sup>3</sup> which requires that a "problem-solution" approach be used to determine the essential elements of the invention.<sup>4</sup> The problem-solution approach identifies the essential elements of the claim by asking whether a person skilled in the art, applying their common general knowledge, would consider an element necessary to solving the disclosed problem using the proposed solution.<sup>5</sup> The board found that the problem addressed by the invention was "a financial portfolio engineering and investing problem to reduce the volatility of an investor's portfolio in comparison to the market and return to risk ratio."<sup>6</sup> The disclosed solution, according to the board, was "the construction of an anti-benchmark portfolio, wherein the weighting of each security within the portfolio is calculated according to an anti-benchmark ratio such that the

---

<sup>3</sup> Canadian Intellectual Property Office, *Manual of Patent Office Practice* (June 2015), online: <[http://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/h\\_wr00720.html](http://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/h_wr00720.html)> [MOPOP].

<sup>4</sup> MOPOP s 13.05.02Cc; Choueifaty, *supra* note 2 at appendix A.

<sup>5</sup> *Commissioner's Decision No 1478* (27 February 2019), online: Canadian Intellectual Property Office <<https://brevets-decisions-patents.opic-cipo.gc.ca/pab-cab/p/en/item/467998/index.do?q=2%2C635%2C393>> at para 15.

<sup>6</sup> *Ibid* at para 40.

portfolio of securities maximizes diversification using a scalable long-only approach within a given universe of securities.”<sup>7</sup> The board concluded that the essential elements of the invention were “directed to a scheme or rules involving mere calculations used to construct the anti-benchmark portfolio” and “[a]ccording to *PN 2013-03*, such schemes or rules are not patentable subject matter.”<sup>8</sup> Put simply, the board determined that the problem was a business problem and the solution was a business method. The applicant asserted that the computer-related elements were essential as the revised claim described an improvement in computer technology.<sup>9</sup> While the board noted that “where a computer is found to be an essential element ... the claim will generally be statutory,” it disagreed that a person skilled in the relevant art would view the computer elements as essential to the claim, finding that the problem remained “a need to reduce the volatility of an investor’s portfolio in comparison to the market and return to risk ratio.”<sup>10</sup> The board was silent on whether Mr ChouEIFaty’s intention as the inventor rendered a computer an element essential, either alone or by directing the problem and solution to a computer technology improvement. The commissioner of patents affirmed the decision of the board in February 2019.

---

<sup>7</sup> *Ibid.*

<sup>8</sup> *Ibid* at para 54, citing Canadian Intellectual Property Office, *Practice Notice*, “Examination Practice Respecting Computer-Implemented Inventions” (8 March 2013) [*PN 2013-3*].

<sup>9</sup> *Ibid* at paras 43, 64.

<sup>10</sup> *Ibid* at para 24.

## 2.2 The Decision of the Federal Court

Two issues were submitted for consideration by Zinn J. The appellant claimed that the commissioner had erred by applying the wrong legal test in the problem-solution approach and in not finding the computer to be an essential element. The first issue, as a matter of statutory interpretation, was reviewable on a correctness standard, while the second, as a question of mixed fact and law, was subject to a test of palpable and overriding error.<sup>11</sup>

The appellant and the respondent agreed that a purposive construction of the claim was required.<sup>12</sup> The respondent submitted that the problem-solution approach as described by *MOPOP* is a logical derivation of purposive claim construction and is consistent with leading case law. The appellant submitted that the problem-solution approach ignores the instruction of the Supreme Court of Canada in *Free World Trust* that an element is essential where the inventor intends that it be such.<sup>13</sup>

Binnie J, writing for the Supreme Court, provided the leading direction on patent construction in *Free World Trust*, a case about patent validity, and *Whirlpool*,<sup>14</sup> a case about patent infringement. Binnie J noted in *Whirlpool* that the “[t]he key to purposive construction is therefore the identification by the court, with the assistance of the skilled reader, of the particular words or phrases in the claims that describe what the inventor considered to be the ‘essential’

---

<sup>11</sup> *Canada (Minister of Citizenship and Immigration) v Vavilov*, 2019 SCC 65 at para 37.

<sup>12</sup> *Choueifaty*, *supra* note 2 at paras 27–28.

<sup>13</sup> *Free World Trust v Électro Santé Inc*, 2000 SCC 66 [*Free World Trust*].

<sup>14</sup> *Whirlpool Corp v Camco Inc*, 2000 SCC 67 [*Whirlpool*].

elements of his invention.”<sup>15</sup> Binnie J framed this principle negatively at para 55 in *Free World Trust*, saying that “[f]or an element to be considered non-essential and thus substitutable, it must be shown either (i) that on a purposive construction of the words of the claim it was clearly not intended to be essential, or (ii) that at the date of publication of the patent, the skilled addressees would have appreciated that a particular element could be substituted without affecting the working of the invention.”<sup>16</sup> Furthermore, “[t]he words chosen by the inventor will be read in the sense the inventor is presumed to have intended, and in a way that is sympathetic to accomplishment of the inventor’s purpose expressed or implicit in the text of the claims.”<sup>17</sup>

Zinn J’s analysis in *Choueifaty* dispensed with the problem-solution approach in two ways. First, he confirmed that *Free World Trust* and *Whirlpool* apply to the patent examiners, and therefore the inventor’s intention must be considered in interpreting the claim. Second, he reasoned that the methodology of the problem-solution approach is excluded by *Free World Trust*.

Zinn J began by examining the instruction provided by *MOPOP*, finding that although section 13.05 of *MOPOP* references *Free World Trust* and *Whirlpool*, “[i]t is evident on a reading of the *MOPOP* that the Commissioner ... does not intend or direct patent examiners to follow [their] teachings.” Instead, the commissioner distinguished those cases by relying on *Genencor International Inc v Canada (Commissioner of Patents)*,<sup>18</sup> which says:

---

<sup>15</sup> *Ibid* at para 45.

<sup>16</sup> *Supra* note 13 at para 55.

<sup>17</sup> *Ibid* at para 51.

<sup>18</sup> 2008 FC 608 [*Genencor*].

Whirlpool was, of course, an impeachment proceeding. It was not a re-examination proceeding and I am satisfied that the foregoing, in all its implications, was directed to trial judges and to judges of courts of appeal and not to patent examiners in the course of examinations to determine whether applications for patents should be granted or in the course of re-examinations as here.<sup>19</sup>

Zinn J concluded that *Genencor* is neither binding on him nor is it good law in light of *Amazon.com, Inc.*<sup>20</sup> *Amazon*, also an appeal of the commissioner's refusal to grant a patent, explicitly and impliedly overruled *Genencor*. Sharlow JA, writing for the court, stated that "the jurisprudence of the Supreme Court of Canada, in particular *Free World Trust* and *Whirlpool*, requires the Commissioner's identification of the actual invention to be grounded in a purposive construction of the patent claims."<sup>21</sup> *Free World Trust* also applies (and therefore *Genencor* does not) because the commissioner, like a trial judge, is determining patent validity when assessing an application. Sharlow JA found that, in prosecuting a patent claim, "the Commissioner is essentially determining whether, if the patent application is granted for the patent claims as set out in the patent application, the resulting patent would be valid."<sup>22</sup>

In *Choueifaty*, Zinn J also found the problem-solution approach to be conceptually similar to the "substance of the invention" approach prohibited in *Free World Trust* and thus concluded that it should be rejected, although Zinn J provided no reasons for such. The "substance of the invention" approach held that a patent claim was to be considered abstractly for its essence or

---

<sup>19</sup> *Ibid* at para 62.

<sup>20</sup> *Canada (Attorney General) v. Amazon.com, Inc*, 2011 FCA 328 [*Amazon*].

<sup>21</sup> *Ibid* at para 43.

<sup>22</sup> *Ibid* at para 33.



substance in addition to the literal words of the claim.<sup>23</sup> However, when “the inquiry is no longer anchored in the language of the claims, the Court may be heading into unknown waters without a chart.”<sup>24</sup>

Because the first issue was dispositive of the appeal, the second issue was not addressed by Zinn J, except to note that the commissioner failed to provide reasons for excluding the appellant’s second characterization of problem and solution and to say that the second claim requires closer examination.

Zinn J ordered the commissioner to set aside her refusal and reconsider the application.

### **3.0 The Decision in Choueifaty Is Consistent with the Jurisprudence**

Zinn J’s interpretation of *Free World Trust* and *Whirlpool* accords with the jurisprudence of the Federal Court and Court of Appeal.<sup>25</sup> In *Mediatube Corp*, Locke J wrote: “The claims language will, on a purposive construction, show that some elements of the claimed invention are essential while others are non-essential ... according to the intent of the inventor, expressed or inferred from the claims, that a particular element is essential irrespective of its practical effect.”<sup>26</sup>

---

<sup>23</sup> *Free World Trust*, *supra* note 13 at para 39.

<sup>24</sup> *Ibid* at para 46.

<sup>25</sup> See also *Flatwork Technologies, LLC (Powerblanket) v Brierley*, 2020 FC 997 at para 47; *Janssen Inc v Teva Canada Ltd*, 2020 FC 593 at para 96; *NuWave Industries Inc v Trennen Industries Ltd*, 2020 FC 867 at para 23; *Bauer Hockey Corp v Easton Sports Canada Inc*, 2010 FC 361 at para 110, *aff’d* 2011 FCA 83; *Eli Lilly & Co v Apotex Inc*, 2009 FC 991 at para 87, *aff’d* 2010 FCA 240, leave to appeal to SCC refused, 33946 (22 November 2010).

<sup>26</sup> *Mediatube Corp v Bell Canada*, 2017 FC 6 at para 32, *aff’d* 2019 FCA 176, leave to appeal to SCC refused, 38797 (19 March 2020) [*Mediatube Corp*].

Likewise, in *Tearlab Corporation*, the Federal Court of Appeal, speaking through DeMontigny JA, found that the court, in undertaking a purposive construction, ought to identify “the particular words or phrases in the claims that describe what the inventor considered the ‘essential elements’ of the invention and to give the legal protection to which the holder of a valid patent is entitled only to the essential elements.”<sup>27</sup> Zinn J was right to hold that the commissioner is bound to consider the intention of the inventor in determining the essential elements of a claim.

#### **4.0 Significant Barriers Remain for the Patenting of Certain Subject Matter Despite *Choueifaty***

CIPO has, according to Siebrasse, enacted a prohibition on the patent of atypical subject matter through *PN 2013-03* and *MOPOP*.<sup>28</sup> However, there is no legal bar to business method patents in Canada per se, a point recognized by the board in its rejection of Choueifaty’s appeal.<sup>29</sup> Siebrasse argues that the prohibition occurs when patent examiners change the lens through which they view claims during prosecution. To prohibit subject matter, examiners narrow their focus to the essence (or substance, as it was described in *Free World Trust*) of the invention to conclude that the “inventive idea” is abstract and therefore not patentable per section 27(8) of the *Patent Act*. To permit subject matter, examiners emphasize the full and proper wording of the

---

<sup>27</sup> *Tearlab Corporation v I-MED Pharma Inc.*, 2019 FCA 179 at para 31 [*Tearlab Corporation*].

<sup>28</sup> See Norman Siebrasse, “CIPO’s Approach to Patentability of Computer-Implemented Inventions” (11 September 2020), online (blog): *Sufficient Description* <<http://www.sufficientdescription.com/2020/09/cipos-approach-to-patentability-of.html#more>> [Siebrasse, “CIPO’s Approach”]; Norman Siebrasse, “The Structure of the Law of Patentable Subject Matter” (2011) 23:2 IPJ 169 [Siebrasse, “Structure of the Law of Patentable Subject Matter”].

<sup>29</sup> *Supra* note 2 at para 53.

claim.<sup>30</sup> That adjustment is perhaps what Zinn J contemplated when he noted the similarity of the problem-solution approach and substance of the invention approach.<sup>31</sup>

Indeed, a review of the commissioner’s decisions shows a penchant for denying patents to atypical subject matter. In the year preceding the Federal Court’s decision in *Choueifaty*, the commissioner received 43 appeals related to computer-implemented inventions and business methods, and each was refused (save for one file where a conditional refusal was issued). Many of those decisions held that “the claims on file do not define statutory subject-matter and thus do not comply with section 2 of the *Patent Act*.”<sup>32</sup> In one instance, when confronted with the principle that elements are presumed to be essential, the board responded that “the claim language chosen by the inventor cannot override all other considerations during purposive construction of the claims” because “a patent claim may be expressed in language that is deliberately or inadvertently deceptive.”<sup>33</sup> To inventors, it appears that their intention rarely overrode *any* considerations of the board.

Following *Choueifaty*, patent professionals across Canada expressed optimism that *Choueifaty* would improve access to patents for their clients—and for good reason. At first blush, it seemed that inventors would find the ease and frequency of a successful application improved by the

---

<sup>30</sup> Siebrasse, “CIPO’s Approach,” *supra* note 28 at para 13.

<sup>31</sup> *Choueifaty*, *supra* note 2 at para 37.

<sup>32</sup> *Amazon Technologies, Inc (Re)*, 2020 CACP 28 at para 47 [*Amazon* (2020)]. See also *The Strategic Coach (Re)*, 2020 CACP 30; *Transcon Securities Pty Ltd (Re)*, 2020 CACP 29; *Intercontinental Exchange Holdings Inc (Re)*, 2020 CACP 27; *ExxonMobil Upstream Research Company (Re)*, 2020 CACP 25; *Waterleaf Limited (Re)*, 2020 CACP 24.

<sup>33</sup> *Amazon* (2020), *supra* note 32 at para 41.

incorporation of their intentions in patent claim construction. However, such optimism may be premature. In response to *Choueifaty*, CIPO elected not to appeal the decision, which would risk elevating and entrenching its precedential value, and instead published a practice notice (*PN-2020*) that purports to update *MOPOP* in light of the direction from the Federal Court.<sup>34</sup>

*PN-2020* instructs examiners to follow a three-step process. First, the claim must receive a purposive construction to determine where a person skilled in the art would understand the inventor to have placed the fences of their claimed monopoly, acknowledging that elements are presumed to be essential unless stated otherwise, and to determine the nature of the invention.<sup>35</sup> This purposive construction determines the subject matter of the claim. Second, the subject matter is assessed for compliance with the *Patent Act*. The subject matter, composed of the essential elements, must be a new or improved art, process, machine, manufacture, or composition of matter, and must not be a mere scientific principle or abstract theorem.<sup>36</sup> Third, the “actual invention” is assessed to ensure that it has a “physical existence or manifests a discernible physical effect or change and relates to the manual or productive arts, meaning those arts involving or concerned with applied and industrial sciences as distinguished in particular from the fine arts or works of art that are inventive only in an artistic or aesthetic sense.”<sup>37</sup> The actual invention is the elements of the claim that provide a solution to a problem and includes the

---

<sup>34</sup> See Canadian Intellectual Property Office, *Practice Notice*, “Patentable Subject-Matter Under the Patent Act” (3 November 2020) [*PN-2020*], online: <<http://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/wr04860.html>>.

<sup>35</sup> *Ibid* at para 6.

<sup>36</sup> *Patent Act*, *supra* note 1, ss 2, 27(8).

<sup>37</sup> *PN-2020*, *supra* note 34 at para 10.

inventive aspect of the solution as it would appear to a person skilled in the art.<sup>38</sup> The subject matter will necessarily be the same as or less than the actual invention.<sup>39</sup>

#### **4.1 The “Actual Invention” Approach Recycles the Disclaimed Problem-Solution Approach**

Courts have implored those tasked with determining validity “to capture the scope of the actual invention, rather than strictly limit the scope of claims to disclosed embodiments or allow the claim language to become divorced from what the specification conveys is the invention.”<sup>40</sup> Yet, on inspection, it appears that CIPO’s “actual invention” approach does precisely that—it divorces the invention from the specification. CIPO has seemingly revised its assessment process to limit the impact of *Choueifaty* by retaining the ultimate control of the final characterization of the “actual invention.” The problem-solution approach was problematic because it unfairly excluded the inventor from describing what it invented in its own words. The final determination was instead left to “a person skilled in the art,” whose sensibilities often appeared indistinguishable from those of the patent examiner. The overarching principle affirmed by *Choueifaty* is that the inventor does, in fact, get a say in what it invented. After all, would the inventor not also be a person skilled in the art considering it is the inventor’s skill that conceived of the invention?

---

<sup>38</sup> *Ibid* at para 12 and n 16.

<sup>39</sup> *Ibid* at nn 13, 16.

<sup>40</sup> *OrthoArm Inc v GAC International, LLC*, 2017 ONCA 418 at para 25 [*OrthoArm*], citing *Retractable Techs Inc v Becton, Dickinson Co*, 653 F (3d) 1296 at 1305 (Fed Cir 2011).

However, the updated practice note confines the application of the inventor's intention to the determination of the subject matter only. In fact, the inventor's intention is specifically disclaimed in respect to the examiner's consideration of the "actual invention." In CIPO's view, the "actual invention" cannot be beholden to the essential elements because an element might be essential only because the inventor "intended it to be essential" and not because it has any "material effect on the working of the invention"<sup>41</sup> Instead, the "actual invention" is composed of the elements that collectively provide the "solution to a problem."<sup>42</sup> Once more it seems that "the Commissioner, notwithstanding stating that the patent claims are to be construed in a purposive manner, does not intend or direct patent examiners to follow the teachings of *Free World Trust* and *Whirlpool*."<sup>43</sup>

In effect, CIPO has created a workaround for the direction of the Federal Court with its introduction of the "actual invention" approach, a reincarnation of the problem-solution approach that is patently inconsistent with *Free World Trust* and *Whirlpool*. The inventor's intention can again be rendered irrelevant when its intention applies only to determining patent subject matter, and that subject matter is subordinate to the examiner-determined "actual invention." Thus, we return to the circumstances that culminated in the *Choueifaty* decision: the inquiry ends with CIPO describing the invention to the inventor, and not the other way around. While patent applicants would be right to be concerned with this test alone, the physicality requirement is also a formidable barrier for applicants.

---

<sup>41</sup> *PN-2020*, *supra* note 34 at para 14.

<sup>42</sup> *Ibid* at para 12.

<sup>43</sup> *Choueifaty*, *supra* note 2 at para 31.

CIPO draws support for its position that a patent examiner must retain the final characterization of an invention because a patent claim may be “deliberately or inadvertently deceptive.”<sup>44</sup> However, deceptive drafting may well be a consequence of a system that unfairly bars atypical patent claims. Inventors have cast their claims in language designed to appeal to patent examiners and to limit examiners’ uneasiness with atypical subject matter. Inventors would have no reason to frame their intentions in artificial and potentially misleading ways if they knew that the validity of their claim rested solely on their description of the invention and the application of the *Patent Act* to such.

#### **4.2 CIPO Physicality Requirement Is Inconsistent with Case Law and Confused with the Prohibition Against Abstract Subject Matter**

*PN-2020* discusses the physicality requirement as follows:

An actual invention that includes a disembodied idea, a scientific principle or an abstract theorem is not patentable unless the disembodied idea, scientific principle or abstract theorem is part of a combination of elements that cooperate together and that combination has physical existence or manifests a discernible physical effect or change and relates to the manual or productive arts.<sup>45</sup>

CIPO cites *Shell Oil* and Sharlow JA’s endorsement in *Amazon* of part of Phelan J’s treatment of *Shell Oil*.<sup>46</sup> Interestingly, CIPO has added a single word to an otherwise direct quotation from *Amazon*: “physical.” The text of *Amazon* reads: “physical existence, or something that manifests

---

<sup>44</sup> *PN-2020*, *supra* note 34 at n 20.

<sup>45</sup> *Ibid* at para 13.

<sup>46</sup> *Shell Oil Co of Canada v Canada (Commissioner of Patents)*, [1982] 2 SCR 536 [*Shell Oil*]; *Amazon*, *supra* note 20 at para 66.

a discernible effect or change”; whereas CIPO’s version requires an invention to have a “physical existence or [manifest] a discernible *physical* effect or change.” In fairness to CIPO, Sharlow JA later in her decision wrote that the physicality requirement cannot be met solely on the basis of a claimed invention having a practical application, such as the execution of mathematical formula by a computer in *Schlumberger*.<sup>47</sup> The appellants in *Schlumberger* invented a “process whereby the measurements obtained in the [oil and gas] boreholes are recorded on magnetic tapes, transmitted to a computer programmed according to the mathematical formulae set out in the specifications and converted by the computer into useful information produced in human readable form (e.g., charts, graphs or tables of figures).”<sup>48</sup> The Federal Court found that “[w]hat the appellant claims as an invention here is merely the discovery that by making certain calculations according to certain formulae, useful information could be extracted from certain measurements” and ruled, although without reference to case law, that such is not an invention within the meaning of the *Patent Act*.<sup>49</sup>

However, *Schlumberger* rests on tenuous footing for two reasons. First, this abstraction would violate the Supreme Court’s direction in *Free World Trust* not to use a “substance of the invention” approach and to incorporate the essential elements as intended by the inventor if made today. The inventor did not *only* claim that a formula could yield useful information. Rather, it discovered that this *specific* formula applied to this *specific* industrial circumstance created a

---

<sup>47</sup> *Amazon*, *supra* note 20 at para 69, citing *Schlumberger Ltd v Canada (Commissioner of Patents)* (1981), [1982] 1 FC 845 at para 6, 38 NR 299 [*Schlumberger*].

<sup>48</sup> *Schlumberger*, *supra* note 47 at para 1.

<sup>49</sup> *Ibid* at para 6.



commercially useful product. Second, as Siebrasse has noted, *Schlumberger* is incongruent with the Supreme Court’s holding in *Shell Oil* that “a disembodied idea is not *per se* patentable ... but will be patentable if it has a method of practical application.”<sup>50</sup> In fact, the Federal Court of Appeal, citing the English Court of Appeal, has found that an abstract idea can form the basis of a patent when it is coupled with a practical application:

“[I]nvention may lie in the idea, and it may lie in the way in which it is carried out, and it may lie in the combination of the two; but if there is invention in the idea plus the way of carrying it out, *then it is good subject-matter for Letters Patent*. ...

No doubt you cannot patent an idea, which you have simply conceived, and have suggested no way of carrying out, *but the invention consists in thinking of or conceiving something and suggesting a way of doing it*.<sup>51</sup>

Further, a practicality requirement as described in *Shell Oil* (that is, that a patent claim for a specific practical application of an idea or principle) is consistent with the law of other common-law nations, which have ruled that the physicality requirement is incorrect because it revives Moulton J’s discredited vendible products rule.<sup>52</sup> That rule was held not to be good law by the High Court of Australia in *NRDC*, a case later relied on by courts in the United Kingdom and

---

<sup>50</sup> *Shell Oil*, *supra* note 46 at 554. See Norman Siebrasse, “The Rule Against Abstract Claims: History and Principles” (2011) 26:2 CIPR 205 at 207 [Siebrasse, “Rule Against Abstract Claims”]; Siebrasse, “CIPO’s Approach,” *supra* note 28; Siebrasse, “Structure of the Law of Patentable Subject Matter,” *supra* note 28.

<sup>51</sup> *Hickton’s Patent Syndicate v Patents and Machine Improvements Co* (1909), 26 RPC 339 at 348 (CA) [*Hickton’s Patent*] [emphasis added], cited with approval in *Shell Oil*, *supra* note 46 at para 32; quoted with approval in *Tye-Sil Corp Ltd v Diversified Products Corp*, [1991] FCJ No 124, 35 CPR (3d) 350 at 364 (FCA).

<sup>52</sup> *Re GEC’s Application* (1942), 60 RPC 1 at 4, cited by *Lawson v Commissioner of Patents*, [1970] Ex CJ No 13, 62 CPR 101 at para 32.

New Zealand to strike down a vendible product rule in their jurisdictions.<sup>53</sup> The case is often cited for the principle that “vendible” should be treated as “requiring utility in practical affairs” and “product” be treated as “covering every *end, result, outcome, or effect* produced.”<sup>54</sup> In *NRDC*, the inventor discovered a new application for known chemicals as selective herbicides. In *Shell Oil*, known chemicals were combined to create a new fertilizer. Siebrasse argues that, in Canada, *Shell Oil* therefore stands for the same principle as *NRDC*, that it is practicality and not physicality that is required, because the cases are strikingly similar on their facts, reasoning, and result.<sup>55</sup>

CIPO’s insistence on a physicality requirement appears to be pragmatic. On one hand, in virtually all cases, a practical benefit manifests in a physical effect, in which case physicality becomes an analytical shortcut to identifying a practicality in a claimed invention. In Siebrasse’s view, the recurrence of a physicality test is explained by this intuitive aspect of the physicality requirement.<sup>56</sup> Indeed, in *Amazon*, the commissioner endorsed similar reasoning in her rejection of Amazon’s appeal, finding that “[a] practical application of knowledge necessarily implies an

---

<sup>53</sup> *National Research Development Corporation v Commissioner of Patents*, [1959] HCA 67, 102 CLR 252 [*NRDC*]. For UK application, see *Swift’s Application*, [1962] 2 QB 647 at 657. For New Zealand application, see *Swift & Co v Commissioner of Patents*, [1960] NZLR 775. In the United States, *In Re Bilski*, 545 F (3d) 943, aff’d *Bilski v Kappos*, 561 US 593, served a substantially similar purpose to *NRDC*. See also Ben McEniery, “Is There a Physicality Requirement at Common Law? A Survey of the Pre-*NRDC* Cases Discussing ‘Manufacture’” (2011) 32:1 Adel L Rev 109 for further discussion of the correctness of a practicality requirement over a physicality requirement in Australia.

<sup>54</sup> *Apotex Pty Ltd v Sanofi-Aventis Australia Pty Ltd*, [2013] HCA 50 at 84–85.

<sup>55</sup> Siebrasse, “Rule Against Abstract Claims,” *supra* note 50 at 226. Siebrasse notes that the vendible products rule was likely not addressed in *Shell Oil* because it was not argued.

<sup>56</sup> Siebrasse, “Structure of the Law of Patentable Subject Matter,” *supra* note 28 at 198.

act or series of acts resulting in a change of character or condition of a physical object.”<sup>57</sup> On the other hand, the requirement for physicality may also arise from an underlying tacit institutional concern of an overreaching commoditization of patent law, where the boundaries of potential property rights become unworkably broad.<sup>58</sup> This concern is made especially tangible when the inventor’s characterization of the invention is held to be paramount, and inventions are increasingly non-physical in the Information Age.

However, irrespective of the underlying reason, CIPO’s physicality requirement rests on a misunderstanding of why patents are granted. A patent is not granted for the thing described in the patent, but instead for the ideas that underlie that thing. It is the inventor’s disclosure of its novel coupling of an abstract idea with a practical application that warrants the reward of a patent. As Dickson J, as he then was, wrote for the Supreme Court in *Consolboard Inc*, it is “[t]he description of the invention therein provided for is the *quid pro quo* for which the inventor is given a monopoly for a limited term of years on the invention.”<sup>59</sup> Fletcher-Moulton LJ recognized the same in *Hickton’s Patent* over 100 years ago:

I think you are losing grasp of the substance and seizing the shadow when you say that *the invention is the manufacture as distinguished from the idea*. It is much more true to say that *the Patent is for the idea as distinguished from the thing manufactured* [emphasis added].

---

<sup>57</sup> *Commissioner’s Decision No 1290* (4 March 2009), online: Canadian Intellectual Property Office <<https://brevets-decisions-patents.opic-cipo.gc.ca/pab-cab/p/en/item/467812/index.do?q=1290>> at para 137.

<sup>58</sup> Ben McEniery, “Physicality and the Information Age: A Normative Perspective on the Patent Eligibility of Non-Physical Methods” (2010) 10 Chi-Kent J Intell Prop 127.

<sup>59</sup> *Consolboard Inc v MacMillan Bloedel (Sask) Ltd*, [1981] 1 SCR 504 at 517, 112 DLR (3d) 203 [*Consolboard Inc*].

Practicality, not physicality, properly delineates the boundary between abstract and patentable subject matter. A physical manifestation or indication is better viewed merely as a clue that subject matter *could* be patentable rather than a dispositive factor in finding that it is not.<sup>60</sup> As a result, CIPO's use of *Schlumberger* to ground a physicality requirement is, at best, undeserved and, at worst, in error.

#### **4.3 The Collective Impact of the “Actual Invention” Test and Physicality Requirement Is a Dead Blow to Inventors**

The “actual invention” test and physicality requirement, together, permit CIPO to continue its policy of selectively denying patents claiming atypical subject matter. The “actual invention” test gives CIPO the unilateral ability to make a subjective and final determination of the nature of an invention. The physicality requirement provides the basis on which to deny an invention a patent. At base, it is the same methodology as the previous approach: divorce the inventor's intention from the invention and then rule that the invention is non-compliant with the *Patent Act* according to CIPO's revised characterization. It is a proven one-two punch to patent applicants, though now predicated on shakier ground.

More abstractly, by grounding the physicality requirement contained in *PN-2020* in the prohibition against claims, CIPO continues to promulgate a doctrinal conflation of the rule against abstract claims and subject-matter (or field-specific) exclusions. After all, it is not that business methods, for example, suffer from abstraction—they are clearly concrete and practical; it is that they are treated unfairly owing to their non-physicality. The prohibition on abstract

---

<sup>60</sup> See McEniery, *supra* note 53 at 167.

claims and prohibitions on specific subject matter are fundamentally different and have different reasons for being. The prohibition of abstract claims prevents a patentee from being rewarded where the public could not properly recognize a patentee's property claim (that is, where the fences of the patentee's monopoly reside). Subject-matter restrictions bar otherwise compliant claims from receiving protection for policy reasons (for example, higher life forms).<sup>61</sup> "[I]t should not be a radical thesis to argue that field-specific exclusions and the rule against abstract claims are distinct doctrines, as they are codified in separate sections of the *Patent Act*," according to Siebrasse.<sup>62</sup> Indeed, the Supreme Court recognized as much in *Tennessee Eastman*, in which a method of surgical treatment was excluded from patentability even though it was "clearly in the field of practical application," and in *Harvard Mouse*, in which a patent for creating an oncogenic mouse was withheld.<sup>63</sup>

CIPO may continue to enforce a subject matter exclusion against atypical subject matter through a physicality requirement instead of a prohibition on abstract claims. In that respect, the experience of patent applicants may remain the same as before *Choueifaty*. Although the Federal Court of Appeal in *Amazon* was called on to decide whether business methods are patentable, its response, in five paragraphs, was a familiar and lawyerly "it depends."<sup>64</sup> Thus, an open policy question remains about whether and to what extent business methods, diagnostic methods, and computer-implemented inventions are patentable, especially where the physicality of the

---

<sup>61</sup> See *Harvard College v Canada (Commissioner of Patents)*, 2002 SCC 76 [*Harvard Mouse*].

<sup>62</sup> Siebrasse, "Structure of the Law of Patentable Subject Matter," *supra* note 28 at 170.

<sup>63</sup> *Tennessee Eastman Co v Canada (Commissioner of Patents)*, [1974] SCR 111 at 117, 33 DLR (3d) 459 [*Tennessee Eastman*].

<sup>64</sup> *Amazon*, *supra* note 20 at paras 59–63.

invention is not apparent. If CIPO is of the view that non-physical subject matter should not be patentable (or, phrased positively, that only *objects* or *things* should be patentable), then it ought to make that case known to Parliament. After all, Parliament, at least according to the Supreme Court in *Harvard Mouse*, is the correct forum for striking a balance between patent inclusion and exclusion when the distinction is a matter of policy.<sup>65</sup> But in the likely absence of such a policy statement, the least that CIPO could do for inventors and the public is to prosecute claims consistently with the case law, in its entirety, and be bold enough to call its methods what they are: a subject-matter prohibition. Perhaps it might then find inventors' claims become less "deceptive."

## 5.0 Conclusion

The Federal Court's decision in *Choueifaty* is unquestionably a win for patent applicants insofar as it corrects a jurisprudential misinterpretation by CIPO regarding claim construction, and for Yves Choueifaty, who has since been granted a patent for his invention on the basis that "computer and the algorithm together form a single actual invention that has physicality and solves a problem related to the manual or productive arts."<sup>66</sup> However, the impact of *Choueifaty* may nonetheless be dampened by the problem-solution approach retained within the "actual invention" test and the physicality requirement. Together, these two aspects of *PN-2020* allow CIPO to continue a selective prohibition on the patenting of certain atypical business methods, diagnostic methods, and computer-implemented inventions. Applicants for patents that describe

---

<sup>65</sup> *Harvard Mouse*, *supra* note 61.

<sup>66</sup> *Commissioner's Decision No 1556*, (11 January 2021) online: Canadian Intellectual Property Office <<https://brevets-decisions-patents.opic-cipo.gc.ca/pab-cab/p/en/item/492141/index.do?q=1556>> at para 34.

atypical subject matter can continue to expect that they will find their claims “do not define physical subject-matter and thus do not comply with section 2 of the *Patent Act*” without apparent physicality. This is unlikely to change without a clear statement by Parliament or the courts that moves CIPO from its position. While patent applicants would be right to revel in their victory in *Choueifaty*, it is certainly not the last time that an applicant will attend the Federal Court to seek fairness and predictability in the determination of patentable subject matter.