

# Alice And The Case Of The Terrible Twos

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## I. The Terrible Twos

Two prongs, two steps, and too many patents declared invalid. Regardless of what one thinks about software patents, a little more than a year has passed since the Supreme Court's decision in *Alice Corporation v. CLS Bank International*, 134 S.Ct. 2347 (2014), and the U.S. patent system is in disarray. *Alice* has been running from one end of the U.S. patent system to the other, knocking over the good china just like a toddler on a sugar high.

Shortly after *Alice*, the U.S. Patent & Trademark Office (PTO) issued new guidance for section 101 patent examination<sup>1</sup> and since then, new patent issues have all but stopped in some areas of software.<sup>2</sup> Courts have been busy applying *Alice* at an unprecedented rate, and section 101 *Alice* challenges have become "a major industry."<sup>3</sup> As a result, courts have invalidated more patents in the fourteen months since *Alice* than they invalidated in the five years prior.<sup>4</sup>

The practical effect of *Alice* will most likely include loss of patent protection for billions of dollars in technology investment in software and software related technologies.<sup>5</sup> But the impacts extend beyond existing software patents to future investments in software, because *Alice* already affects corporate research and development investments as well as patenting decisions for well over 100,000 technological innovations a year.<sup>6</sup>

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<sup>1</sup> See 2014 Interim Guidance on Patent Subject Matter Eligibility, 79 Fed. Reg. 74618 (Dec. 16, 2014).

<sup>2</sup> See Robert R. Sachs, #ALICESTORM: THE SUMMERTIME BLUES CONTINUE, BILSKIBLOG (Aug. 29, 2015), <http://www.bilskiblog.com/blog/2015/08/alicestorm-summertime-blues-continue.html>.

<sup>3</sup> *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, No. 2014-1194, slip op. at 45 (Fed. Cir. Jul. 9, 2015).

<sup>4</sup> See Sachs, *supra* note 2.

<sup>5</sup> See *CLS Bank Int'l v. Alice Corp.*, 717 F.3d 1269, 1313 (Fed. Cir. 2013) (Moore, J., dissenting) ("this case is the death of hundreds of thousands of patents, including all business method, financial system, and software patents as well as many computer implemented and telecommunications patents.").

<sup>6</sup> See Patent Technology Monitoring Team, *EXTENDED YEAR SET - Patenting By Geographic Region (State and Country), Breakout By Technology Class Count of 1963 - 2014 Utility Patent Grants*, U.S. PATENT & TRADEMARK OFFICE, [http://www.uspto.gov/web/offices/ac/ido/oeip/taf/stcteca/allstcl\\_gd.htm](http://www.uspto.gov/web/offices/ac/ido/oeip/taf/stcteca/allstcl_gd.htm) (classes 345, 348, 369-70, 375, 379-80, 382-86, 455, 700-26)

Nevertheless, as with an overly tired child running around after drinking a bottle of soda, all things must end. Either *Alice* will run its course and find a nice quiet place to take a nap, or it will continue until the house burns down. Because so much money is at stake for U.S. patent holders, many in the patent community have sought ways to overturn, limit, or mitigate the effects of *Alice*. Proposals have included: changing the Patent Act to codify or overturn specific Supreme Court decisions<sup>7</sup> and appealing to courts and Congress to declare software “patentable.”<sup>8</sup> However—without a systematic overhaul of section 101—future innovations in software, biotechnology, and pharmaceuticals may be denied patent protection for failing to claim patent eligible subject matter.

These proposals may be too heavy-handed for a case of The Terrible Twos, and this Paper argues that the solution for *Alice* is a simple formula of removing all stimuli by slowing things down, putting the toys away, and changing the setting. Fortunately, patent prosecutors and litigators are already doing this by building a body of case law in an effort to draw manageable corners around *Alice*’s two-step Inventive Concept Test (ICT). A key question about *Alice* is procedural—can courts apply the ICT in pretrial motions?<sup>9</sup> If so, under what circumstances?<sup>10</sup> If the procedural challenges succeed, the next question is substantive, because the ICT will most

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(last visited Jun. 1, 2015) (showing that 99,589 software and software-related patents were issued in 2014, accounting for 33.1% of all patents issued that year).

<sup>7</sup> See Robert R. Sachs, *Twenty-Two Ways Congress Can Save Section 101*, BILSKIBLOG (Feb. 12, 2015), <http://www.bilskiblog.com/blog/2015/02/twenty-two-ways-congress-can-save-section-101.html>.

<sup>8</sup> See David J. Kappos and Aaron Cooper, *At The Core Of America’s Competitive Edge: Why Software Implemented Inventions Are—And Must Remain—Patent Eligible*, INTELLECTUAL ASSET MANAGEMENT MAGAZINE (Sep. 4, 2015), <http://www.iam-media.com/files/Software%20White%20Paper%20-%20Sept%204%202015%20FINAL.pdf>.

<sup>9</sup> See, e.g., Hidetada James Abe, Marsha E. Diedrich, *Pretrial Dismissals and Judgments in Post-Alice Courts*, ALSTON & BIRD (Apr. 23, 2015), <http://www.alston.com/publications/pretrial-dismissals-and-judgements-in-post-alice-courts>.

<sup>10</sup> See David Bohrer, *Guest Post: In Rush to Invalidate Patents at Pleadings Stage, Are Courts Coloring Outside the Lines?*, PATENTLYO (Jul. 1, 2015), <http://patentlyo.com/patent/2015/07/invalidate-pleadings-coloring.html> (outlining how courts applying *Alice* have applied extrinsic evidence and have taken judicial notice of facts contained in pretrial decisions by other courts).

likely require findings of fact that may place it out of range for some Rule 12<sup>11</sup> motions and will clarify the burdens necessary for success at summary judgment and at trial.

This Paper begins in Part II by outlining *Alice*'s case of *The Terrible Twos* and discussing the doctrine of judicial exceptions to section 101 and the cases leading up to and including *Alice*. In Part III, this Paper argues that there are three steps to calming down the frenetic activity spawned by *Alice*—namely by addressing the reasons why the Inventive Concept Test should include subsidiary findings of fact. The first step is to turn down the lights as discussed in Part III.A by precisely defining the scope and basis for the judicial exceptions to section 101 and how this necessitates a narrow interpretation of the ICT. Part III.B outlines the second step of cozying things up by pulling the curtains and finding harmony between *Alice* and the factual findings elsewhere in patent law. Finally, Part III.C discusses the third and final step, which involves warm milk and *Graham*<sup>12</sup> crackers in the form of factual findings similar to those found elsewhere in patent law and outlined in the test for nonobviousness. Finally, this Paper concludes that a change of setting and some findings of fact can resolve *Alice*'s case of The Terrible Twos.

## II. *Alice*'s Case Of The Terrible Twos

*Alice*'s case of The Terrible Twos involves a two-pronged interpretation of section 101 that supports the judicial exception doctrine, a two-step test for whether a patent claims eligible subject matter or a judicial exception to that subject matter, and too many patents invalidated in U.S. courts.

The two prongs are the Supreme Court's modern interpretation of section 101 of the Patent Act to include the dual conditions of patent eligible subject matter and patentability. The Court's judicial exception doctrine says that there are things that fit the requirements of section 101's but that nonetheless *are not* patent eligible subject matter.

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<sup>11</sup> See Fed. R. Civ. P. 12(b)(6) & (c).

<sup>12</sup> *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966).

The two steps exist in the two-step Inventive Concept Test, which the *Alice* court used to determine whether a software patent claims patent-eligible subject matter.<sup>13</sup> If a patent does not claim eligible subject matter, it is not valid and enforceable, and therefore a court decision of patent invalidity quickly ends patent litigation. In this context, *Alice* has quickly become a commonly used pretrial tool. Courts have already applied the two-step Inventive Concept Test to invalidate more than 212 patents and 4,672 patent claims in pretrial motions and before key factual inquiries, including claim construction.<sup>14</sup>

Finally, the “too many” invalidated software patents is a function of the role software plays in the United States’ economy—as a tool to process information, as an instruction set for unleashing the capabilities of ever-smarter and omnipresent electronic devices, and as the glue to connect us with each other. The scope of technologies that touch software is staggering, and in 2014, nearly one third of U.S. patents were issued for software and software-related technologies.<sup>15</sup> While it is too soon to determine the scope of *Alice*’s impacts, the Inventive Concept Test has already affected the issue of new patents<sup>16</sup> and new patent applications, which have fallen by 1.8% this fiscal year.<sup>17</sup>

### A. Two Prongs

The Supreme Court’s modern doctrine of judicial exceptions to section 101 forms the foundation for *Alice* and the Inventive Concept Test. Section 101 of the Patent Act defines patent eligibility and conveys relatively simple language that “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful

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<sup>13</sup> See *Alice Corp. v. CLS Bank Int’l.*, 134 S.Ct. 2347, 2357 (2014).

<sup>14</sup> See *id.*

<sup>15</sup> See *supra* note 6.

<sup>16</sup> See *Sachs*, *supra* note 2.

<sup>17</sup> See Patent Public Advisory Committee, *Patent Operations Update*, U.S. PATENT & TRADEMARK OFFICE (Aug. 20, 2015), [http://www.uspto.gov/sites/default/files/documents/20150820\\_PPAC\\_Patent\\_Operations\\_Update.pdf](http://www.uspto.gov/sites/default/files/documents/20150820_PPAC_Patent_Operations_Update.pdf) (showing a drop in Technology Center 3600 and USPC class 705 Business Methods applications accompanied by a rise in Requests for Continued Examination in the same classes).

improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”<sup>18</sup> Since 1972, the Supreme Court has interpreted the language of section 101 to address two prongs—patent eligible subject matter and “patentability”<sup>19</sup>—explaining this interpretation as follows:

The § 101 patent-eligibility inquiry is only a threshold test. Even if an invention qualifies as a process, machine, manufacture, or composition of matter, in order to receive the Patent Act’s protection the claimed invention must also satisfy “the conditions and requirements of this title.” § 101. Those requirements include that the invention be novel, see § 102, nonobvious, see § 103, and fully and particularly described, see § 112.<sup>20</sup>

Meanwhile, the *threshold test* for subject matter eligibility addresses the requirement that *new and useful* innovations fit within the four statutory categories of invention—processes, machines, products, and compositions of matter. Yet, even if a patent nominally claims an invention within a specific statutory category, the Supreme Court has created a mechanism for courts to hold that the subject matter of the invention is nonetheless nonstatutory. In the judicial exception doctrine, the Supreme Court has explained that section 101 “contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.”<sup>21</sup>

Section 101 has become a valuable tool in patent litigation where opponents to software patents often seek to dispose of specific patents in pretrial motions by calling upon these judicial exceptions so that a court will declare a patent invalid as a matter of law. The Inventive Concept Test as articulated in *Alice* has become an effective tool for this purpose, and today section 101 validity challenges are “a major industry.”<sup>22</sup>

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<sup>18</sup> 35 U.S.C. § 101 (1952).

<sup>19</sup> See *Gottschalk v. Benson*, 409 U.S. 63, 64 (1972).

<sup>20</sup> *Bilski v. Kappos*, 561 U.S. 593, 594 (2010).

<sup>21</sup> *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S.Ct. 2107, 2116 (2013) (quotation omitted). For reasons to be discussed, the Court’s basis for these “judicial exceptions” is shaky at best. See discussion *infra* Part III.A.

<sup>22</sup> *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, No. 2014-1194, slip op. at 45 (Fed. Cir. Jul. 9, 2015). See *Sachs*, *supra* note 2.

The roots of the judicial exceptions to section 101 date to the 1960s, when advances in semiconductors led to great leaps forward in computing and software. Inventors sought to patent their software innovations, often by claiming processes for manipulating information and machines for performing these processes. As the machines became general-purpose computers, and the software became essential to performing tasks on those computers, the PTO began rejecting some software patent applications under section 101 as claiming “nonstatutory subject matter.”<sup>23</sup>

By 1972, one such patent rejection had made its way to the Supreme Court, and in *Gottschalk v. Benson*, 409 U.S. 63 (1972), the Court upheld the PTO’s rejection of a process claim as unpatentable subject matter under section 101.<sup>24</sup> Six years later in *Parker v. Flook*, 437 U.S. 584 (1978), the Court rejected another software patent, noting that even though Mr. Flook had satisfied the language of section 101 by claiming a new and useful “method [that] is a ‘process’ in the ordinary sense of the word,”<sup>25</sup> it was nonetheless “unpatentable subject matter under § 101.”<sup>26</sup> Additionally, the Court clarified that the first prong of section 101 is dispositive of the second, and a patent that fails to claim eligible subject matter is invalid *without further investigation* into the “conditions and requirements” of the Patent Act as articulated in sections 102, 103, 112 and so forth.<sup>27</sup>

### 1. “Inventive Concept”

*Flook* took the judicial exceptions one step further by introducing the requirement that in a patent application claiming subject matter labeled by an opposing party as one of the judicial exceptions, the application “cannot support a patent unless there is some other **inventive**

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<sup>23</sup> *Benson*, 409 U.S. at 72 (citations omitted); *In re Prater*, 415 F.2d 1393, 1398 (C.C.P.A. 1969).

<sup>24</sup> *See Benson*, 409 U.S. at 72–73.

<sup>25</sup> *Parker v. Flook*, 437 U.S. 584, 588.

<sup>26</sup> *Id.* at 595 n.18.

<sup>27</sup> *Id.* at 588.

concept in its application.”<sup>28</sup> Mr. Flook had pointed out that the “inventive concept” requirement was essentially a test of nonobviousness, but the Court disagreed, saying that the “inventive concept” test was entirely within the eligible subject matter prong of section 101 and not the “conditions and requirements” prong that included section 103 obviousness.<sup>29</sup>

Between 1972 and 2010, the Supreme Court heard five section 101 cases—all were appeals from denials of patent applications on section 101 grounds by the PTO.<sup>30</sup> The last of these section 101 cases was *Bilski v. Kappos*, 561 U.S. 593 (2010), in which the Court upheld the invalidity of software method claims under the “abstract ideas” judicial exception.<sup>31</sup>

### B. Two Steps: *Mayo* And The Inventive Concept Test

After *Bilski*, section 101 eligible subject matter invalidity defenses became commonplace in patent litigation, and in 2012, the Supreme Court expanded the scope of its section 101 jurisprudence beyond *ex parte* PTO rejections when it decided *Mayo Collaborative Services v. Prometheus Laboratories*, 132 S.Ct. 1289 (2012). The case in *Mayo* involved a section 101 invalidity claim arising out of litigation over an issued patent for the treatment of Crohn’s disease.<sup>32</sup> Relying on *Flook*, the Supreme Court invalidated the patent and outlined the two-step Inventive Concept Test for section 101 eligible subject matter in which: (1) if a patented process focuses on the use of a natural law, then (2) the court must look for “other elements or a combination of elements, sometimes referred to as an ‘inventive concept,’ sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law itself.”<sup>33</sup> The decision in *Mayo*

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<sup>28</sup> *Id.* at 594 (emphasis added). The judicial exception in play in *Flook* was a “natural phenomenon.” *Id.*

<sup>29</sup> *See Flook*, 437 U.S. at 595 n.18.

<sup>30</sup> *See Bilski v. Kappos*, 561 U.S. 593 (2010), *Diamond v. Diehr*, 450 U.S. 175 (1982), *Diamond v. Chakrabarty*, 447 U.S. 303 (1980); *Flook*, 437 U.S. 584; *Gottschalk v. Benson*, 409 U.S. 63 (1972).

<sup>31</sup> *See Bilski*, 561 U.S. at 598.

<sup>32</sup> *See generally Mayo Collaborative Servs. v. Prometheus Labs.*, 132 S.Ct. 1289 (2012).

<sup>33</sup> *Id.* at 1294.



did not address “software” or the “abstract ideas” judicial exception, and many in the patent community interpreted *Mayo* to relate specifically to the judicial exception of laws of nature.<sup>34</sup>

### C. Too Many: Alice Extends The Inventive Concept Test To Software

In *Alice*, the Supreme Court reviewed an invalidity challenge—under the *abstract ideas* judicial exception—to a group of software patents that included method, system, and product claims. An *en banc* Federal Circuit had agreed that the method claims were not eligible subject matter under section 101, but the court had failed to reach a similar conclusion as to the associated system claims.<sup>35</sup> On appeal, the Supreme Court was unanimous in holding both the method and system claims invalid. Applying *Mayo*’s Inventive Concept Test, the Court concluded that Alice’s invention of a global financial trading process and system was not eligible for a patent, because “the claims at issue amount to ‘nothing significantly more’ than an instruction to apply the abstract idea of intermediated settlement using some unspecified, generic computer. Under our precedents, that is not ‘enough’ to transform an abstract idea into a patent-eligible invention.”<sup>36</sup> The court also dismissed Alice’s system and product claims as ineligible subject matter, reasoning that these claims “add nothing of substance to the underlying abstract idea.”<sup>37</sup>

Understanding that the common law test for “invention” has been replaced by nonobviousness in patent law,<sup>38</sup> then *Flook*’s common law test for an “inventive concept” should be interpreted to be a test for nonobviousness. For example, the *Mayo/Alice* two-step Inventive Concept Test asks if a patent claims potentially ineligible subject matter, then a court must ask if

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<sup>34</sup> Cf. *In re Bergy*, 596 F.2d 952, 986 (C.C.P.A. 1979) (demonstrating how a specialized patent appellate court differentiates case law based upon the underlying technologies).

<sup>35</sup> See *CLS Bank Int’l v. Alice Corp.*, 717 F.3d 1269, 1273 (Fed. Cir. 2013) (per curiam).

<sup>36</sup> *Alice Corp. Pty. Ltd. v. CLS Bank Intern.*, 134 S.Ct. 2347, 2360 (2014) (citing *Mayo* at 1297–98).

<sup>37</sup> *Alice*, 134 S.Ct. at 2361.

<sup>38</sup> See *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 16–17 (1966) (concluding that Congress had fully and completely replaced the common law test of “invention” with the statutory requirement of “obviousness” in section 103 of the 1952 Patent Act).

the claims are nonobvious in light of the judicial exception. This is a reasonable inquiry. However, the test becomes simply a matter of labeling, because once an opposing party<sup>39</sup> has labeled a patent as claiming an abstract idea, a law of nature, or a natural phenomenon, a court can follow the first prong of the section 101 analysis into patent eligible subject matter based solely upon the court's knowledge and without the findings of fact inherent to a statutory obviousness analysis.<sup>40</sup> Furthermore, the Inventive Concept Test appears to enable courts to engage in this legal inquiry in just about any pretrial motion.<sup>41</sup>

In other words, *Alice* has a case of The Terrible Twos: two prongs of section 101 that powers a two-step test that invalidates too many patents and prevents patenting for thousands more inventions. In the discussion that follows, this Paper addresses the role findings of fact can play in curing this case of The Terrible Twos.

### III. The Solution To Alice's Case Of The Terrible Twos

If *Alice* has a case of The Terrible Twos, then the only thing to do is to place *Alice* in quiet place, turn down the lights, close the curtains, and try to calm things down with some warm milk and graham crackers. There are three steps to this.

First, the force behind *Alice*'s fury is the 150 years of precedent that the Supreme Court claims to support the two prongs of section 101, especially the judicial exceptions. By defining the scope and force of this precedent, it is possible to limit the force of *Alice*'s tantrum. In Part III.A, this Paper argues that *before* 1972, the premise of the judicial exceptions did not exist for two reasons: (1) the concepts now embodied in the so-called "judicial exceptions" were discussed in *dicta*, but no case decided the issue, because (2) courts prior to *Benson* did not make the modern

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<sup>39</sup> An opposing party can either be the PTO in an *ex parte* examination of a patent application or an adverse party in patent litigation.

<sup>40</sup> See *Graham*, 383 U.S. at 17; Bohrer, *supra* note 10.

<sup>41</sup> See *Alice*, 134 S.Ct. at 2353 (chronicling that *Alice* began as a complaint for declaratory judgment by alleged infringer, CLS Bank, and the appeal was from the trial court's decision invalidating the Alice patents on summary judgment); Abe, *supra* note 9.

distinction between *patent eligible subject matter* and *patentability*. The legal force of the judicial exceptions depends on this distinction, which the Supreme Court first explained in *Benson*. As a result, the basis for the judicial exceptions to section 101 is the modern case law beginning with *Benson*, and this suggests a narrow interpretation of the judicial exceptions.

Second, *Alice* is not exactly playing nicely with the other children—specifically, the Supreme Court appears to interpret the ICT as requiring no findings of fact, and *Alice* is steamrolling through the courts, turning judges into *de facto* patent examiners. In the fourteen months since *Alice* was decided, courts have reviewed over 285 patents on section 101 and have invalidated 173 of these patents in the process.<sup>42</sup> Therefore, as a legal question, the evidence so far punctuates the warning in *Mayo* for a narrow reading of the judicial exceptions to section 101, because “too broad an interpretation of this exclusionary principle could eviscerate patent law.”<sup>43</sup> The solution for this is to narrow the interpretation of the ICT and to harmonize the law behind the ICT with the rest of patent law—a sort of “closing the curtains” that would make for a cozier situation. Part III.B discusses how there is considerable foundation for an interpretation that would treat *Alice* and the ICT as a question of law based upon subsidiary findings of fact.

Third, a quiet snack of warm milk and graham crackers could provide instruction on how to define those findings of fact. By looking to the origins of the “inventive concept” language, we see that *Alice* and the ICT require a *quasi-nonobviousness* test. Part III.C discusses how section 103 and *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), provide an outline for the types of findings of fact that could assist courts and patent examiners in applying the Inventive Concept Test in order to decide on the overarching question of patent validity.

#### A. Turn Down The Lights On The Judicial Exception Doctrine

The Inventive Concept Test determines whether a patent claims a judicial exception or statutory subject matter, and in the second step of the test, a court or patent examiner asks

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<sup>42</sup> See Sachs, *supra* note 2.

<sup>43</sup> *Mayo Collaborative Servs. v. Prometheus Labs.*, 132 S.Ct. 1289, 1293 (2012).

whether the patent claims are obvious in light of the asserted judicial exception. In order to harmonize the Inventive Concept Test with the rest of patent law, it is important to first place the judicial exception doctrine in context. This Paper argues that only a handful of modern cases underpin the judicial exception doctrine, and as a result, the ICT should be applied narrowly and in harmony with the rest of patent law.

Beginning with *Benson*, the Supreme Court created a body of case law defining the judicial exceptions to section 101. However, the cases before *Benson* all pre-date the 1952 Patent Act, rely on principles of invention that were replaced by nonobviousness in the modern statute, cite to *dicta*, or were decided on patentability grounds and not eligible subject matter. For example, the Supreme Court has often discussed the idea that “a principle is not patentable,”<sup>44</sup> but at no point before *Benson* has the Court ever decided a case on those grounds and explained *why*. This is important, because a principle could not be patentable for at least two reasons: (1) because it is nonstatutory subject matter, *or* (2) because any claims to a “principle” would fail the conditions of patentability that include novelty, utility, nonobviousness, and enablement.<sup>45</sup> Before *Benson*, the *dicta* in Supreme Court decisions seems to suggest that the latter reason would prevail, with no mention of the concept of nonstatutory subject matter. Moreover, after *Benson*, the Court never weighed these two alternatives or explained why it is preferable to create “judicial exceptions” to a statute instead of allowing the statute to do the work.<sup>46</sup>

Since *Benson*, the Court has continued to explain the precedent by acknowledging that while the judicial “exceptions are not required by the statutory text, they are consistent with the

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<sup>44</sup> *Le Roy v. Tatham*, 55 U.S. 156, 176 (1852).

<sup>45</sup> *See Arrhythmia Research Tech. v. Corazonix Corp.*, 958 F.2d 1053, 1061 (Fed. Cir. 1992) (Rader, J., concurring) (“I too conclude that the ‘459 patent claims patentable subject matter — not on the basis of a two-step post-Benson test, but on the basis of the patentable subject matter standards in title 35. Rather than perpetuate a nonstatutory standard, I would find that the subject matter of the ‘459 patent satisfies the statutory standards of the Patent Act.”).

<sup>46</sup> Actually, after citing *dicta* from century-old cases, the *Benson* court concedes the point that “one may not patent an idea,” *Gottschalk v. Benson*, 409 U.S. 63, 71 (1972), and leaves the section 101 question at that. *Id.*

notion that a patentable process must be ‘new and useful.’ And, in any case, these exceptions have defined the reach of the statute as a matter of statutory *stare decisis* going back 150 years.”<sup>47</sup> In *Benson*, the Court built its argument for the judicial exceptions by citing to *Le Roy v. Tatham*, 55 U.S. 156 (1852), *O’Reilly v. Morse*, 56 U.S. 62 (1853), *Rubber-Tip Pencil Company v. Howard*, 87 U.S. 498 (1874), *Mackay Radio & Telegraph v. Radio Corporation of America*, 306 U.S. 86 (1939), and *Funk Brothers Seed Co. v. Kalo Inoculant, Co.*, 333 U.S. 127 (1948), as well as a series of nineteenth Century cases related to the patentability of processes. These cases commonly appear in modern section 101 cases. However, a little cite-checking of these cases provides a way to turn down the lights on the judicial exception doctrine by uncovering the lack of *stare decisis* in the century and a half of cited decisions.

### 1. *Dictum* Because Never Decided On § 101 Grounds

One of the earliest cases cited to explain the judicial exceptions is *Le Roy v. Tatham*,<sup>48</sup> which seemingly states the axiom that “a principle is not patentable.”<sup>49</sup> Unfortunately this quote is simply a recitation that the parties had stipulated to language<sup>50</sup> that had originated in the jury instructions.<sup>51</sup> This language is *dictum*, because “[t]he question [of the patentability of a principle] . . . was not in the case”<sup>52</sup> and therefore the Court never decided the question of the patentability of a principle.

Another case, *Mackay Radio & Telegraph v. Radio Corporation of America* is equally important precedent for the Supreme Court’s rationale for the judicial exceptions to section

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<sup>47</sup> *Bilski v. Kappos*, 561 U.S. 593, 594 (2010).

<sup>48</sup> *See Alice Corp. v. CLS Bank Int’l.*, 134 S.Ct. 2347, 2354 (2014); *Mayo*, 132 S.Ct. at 1293; *Bilski*, 561 U.S. at 594; *Diamond v. Diehr*, 450 U.S. 175, 185 (1982); *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980); *Parker v. Flook*, 437 U.S. 584, 589 (1978); *Benson*, 409 U.S. at 67.

<sup>49</sup> *Le Roy*, 55 U.S. at 174–75.

<sup>50</sup> *Id.* (“It is admitted, that a principle is not patentable.”).

<sup>51</sup> *Id.* at 174 (internal quotation marks omitted) (citing the trial court’s jury instructions) (“That the discovery of a new principle is not patentable, but it must be embodied and brought into operation by machinery, so as to produce a new and an useful result.”).

<sup>52</sup> *Id.* at 177.

101.<sup>53</sup> In *Mackay Radio* the Court announced the enticing principle that “a scientific truth, or the mathematical expression of it, is not patentable invention[.]”<sup>54</sup> However, this principle is *dictum*, because the Court then “assume[d], without deciding the point, that this advance was **invention** even though it was achieved by the logical application of a known scientific law to a familiar type of antenna.”<sup>55</sup> In *Mackay Radio*, the court found the infringement analysis dispositive of the case and never decided the underlying validity of the patent.

## 2. Other Grounds

The Supreme Court has explained its basis for the judicial exceptions to section 101 by citing to cases decided on other grounds. For example, *Le Roy* is a case about novelty and jury instructions.<sup>56</sup> In addition, *O’Reilly v. Morse* is a case about patentability—namely the enablement of claims by the specification, which today would fall in section 112 of the Patent Act.<sup>57</sup>

One case explains itself clearly as focusing on novelty, but *dictum* gets in the way. The Supreme Court has frequently cited *Rubber-Tip Pencil Company v. Howard* as standing for the proposition that there is a judicial exception to patent eligible subject matter.<sup>58</sup> However, the decision in *Rubber-Tip Pencil* juxtaposes *dictum* with the decision, “[a]n idea of itself is not patentable, but a new device by which it may be made practically useful is. The idea of this patentee was a good one, but his device to give it effect, though useful, **was not new.**”<sup>59</sup> Here, the Court seems to suggest that “an idea” is not patentable, because a patent claim based upon “an idea” would fail either the novelty or utility requirements, but we will never know the reasoning

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<sup>53</sup> See *Mayo*, 132 S.Ct. at 1294, *Diehr*, 450 U.S. at 188.

<sup>54</sup> *Mackay Radio & Telegraph v. Radio Corp. of Am.*, 306 U.S. 86, 94 (1939).

<sup>55</sup> *Id.* at 94 (emphasis added).

<sup>56</sup> See *supra* note 52.

<sup>57</sup> See *infra* note 65; *CLS Bank Int’l v. Alice Corp.*, 717 F.3d 1269, 1327 (Fed. Cir. 2013) (Newman, J., concurring in part and dissenting in part).

<sup>58</sup> See *Alice Corp. v. CLS Bank Int’l.*, 134 S.Ct. 2347, 2355 (2014); *Diehr*, 450 U.S. at 185; *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972).

<sup>59</sup> *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. 498, 507 (1874) (emphasis added).

behind the Court’s idea, because the Court declared the patent invalid for lack of novelty. Yet, this *dictum* from *Rubber-Tip Pencil* continues to resurface as justification for what would ostensibly be the exact opposite proposition from patentability<sup>60</sup>—namely that ideas are not patentable, because they are nonstatutory subject matter.<sup>61</sup> *Le Roy* also includes similar language about novelty and utility and is also used for the same contrary purpose.<sup>62</sup>

### 3. Multiple Layers of *Dicta*

The most common citations explaining the judicial exceptions to section 101 encompass multiple layers of *dicta*. For example, *O’Reilly v. Morse* is commonly cited<sup>63</sup> as a “landmark decision . . . [that stands for] “the rule that a scientific principle cannot be patented.”<sup>64</sup> However, the cited language in *O’Reilly* is *dictum*, because the Court decided the case on different grounds, declaring Morse’s famed claim eight invalid for lack of enablement in the specification.<sup>65</sup> This so-called “rule” in *O’Reilly* is based upon a citation to *dictum* in *Le Roy*, in which the Court asserted that *Le Roy* stood for the rule that the inventor “was not entitled to a patent for [a] newly-discovered principle or quality in lead; and that such a discovery was not patentable.”<sup>66</sup> The cited language from *Le Roy* is *dictum*, because the Court never decided the

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<sup>60</sup> In the modern patent statute, novelty is a condition of patentability, 35 U.S.C. § 102 (2011), and yet, the first prong of section 101 requires that patent eligible subject matter be “new and useful,” 35 U.S.C. § 101 (1952). It is unclear whether a lack of novelty is solely an issue of patentability or if it is also a failure to claim patent eligible subject matter. *See* discussion *infra* Part III.B.2.b).

<sup>61</sup> *See Alice*, 134 S.Ct. at 2355; *Diehr*, 450 U.S. at 185; *Parker v. Flook*, 437 U.S. 584, 598 (1978) (Stewart, J., dissenting); *Benson*, 409 U.S. at 67.

<sup>62</sup> *See supra* note 51.

<sup>63</sup> *See Alice*, 134 S.Ct. at 2354; *Mayo Collaborative Servs. v. Prometheus Labs.*, 132 S.Ct. 1289, 1293 (2012); *Bilski v. Kappos*, 561 U.S. 593, 649 (2010) (Stevens, J., concurring); *Bilski*, 561 U.S. at 659 (Breyer, J., concurring); *Diehr*, 450 U.S. at 187–88; *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980); *Flook*, 437 U.S. at 592; *Benson*, 409 U.S. at 68.

<sup>64</sup> *Flook*, 437 U.S. at 592.

<sup>65</sup> *O’Reilly v. Morse*, 56 U.S. 62, 119–20 (1853) (“We presume . . . that no patent could have issued on such a specification. Yet this claim can derive no aid from the specification filed. It is outside of it, and the patentee claims beyond it.”).

<sup>66</sup> *O’Reilly*, 56 U.S. at 117 (citing *Le Roy v. Tatham*, 55 U.S. 156, 174 (1852)).

issue, as it was not before the court.<sup>67</sup> In *Tilghman v. Proctor*, 102 U.S. 707 (1880), the Court relied on the *dictum* in *O'Reilly* to conclude that there was an altogether different outcome in that case, and “[t]he eighth claim of Morse’s patent was held to be invalid, because it was regarded by the court as being not for a process, but for a mere principle.”<sup>68</sup> Subsequent citations to these layers of *dicta* extend and amplify the errors inherent to the original citations.

#### 4. Pre-1952 Cases Do Not Translate

Many cases that predate the 1952 Patent Act do not translate effectively, and some are downright confusing in light of modern statutory language. Most notably, “prior to the Patent Act of 1952 the words ‘invention,’ ‘inventive,’ and ‘invent’ had distinct legal implications related to the concept of patentability which they have not had [since].”<sup>69</sup> In *Graham*, the Court concluded that section 103 of the 1952 Patent Act had replaced the common law requirement of “invention” with statutory “nonobviousness.”<sup>70</sup>

The reason for this is relevant to *Alice* and the ICT, because in the 1940s, the Supreme Court expanded patent law doctrine, and in 1952, Congress changed the statute to reel in a series of the Court’s decisions. Vestiges of these 1940s cases have formed the basis for *Alice* and the Inventive Concept Test.

##### a) *Cuno And The “Flash of Genius” Test*

The Supreme Court first articulated a test for “invention” in *Hotchkiss v. Greenwood*, 52 U.S. 248 (1851), when the Court invalidated a patent for a doorknob, because “no more ingenuity or skill [was] required to construct the knob in this way than that possessed by an ordinary mechanic acquainted with the business[.]”<sup>71</sup> *Hotchkiss* established the common law requirement

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<sup>67</sup> See *supra* note 52.

<sup>68</sup> See *Tilghman v. Proctor*, 102 U.S. 707, 726 (1880) (citing *O’Reilly v. Morse*, 56 U.S. 62, 117–18 (1853)).

<sup>69</sup> See *In re Bergy*, 596 F.2d 952, 959 (C.C.P.A. 1979).

<sup>70</sup> See *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966).

<sup>71</sup> *Hotchkiss v. Greenwood*, 52 U.S. 248, 265 (1851).



of “invention,” which the Supreme Court expanded further in *Cuno Engineering Corp. v. Automatic Devices Corp.*, 314 U.S. 84 (1941) to include the altogether new and different requirement of *genius*, “the new device, however useful it may be, must reveal the *flash of creative genius*, not merely the skill of the calling.”<sup>72</sup>

Courts applied variations of the “flash of genius” test in a series of cases throughout the 1940s,<sup>73</sup> and by 1943, the National Patent Planning Commission observed that the patent system was plagued by “the lack of a definitive yardstick as to what is invention.”<sup>74</sup> The Commission proposed that the “patentability of an invention sh[ould] be determined by the objective test as to its advancement of the arts and sciences.”<sup>75</sup>

By the end of that decade, Justice Jackson wrote “I doubt that the remedy for such Patent Office passion for granting patents [that it should not have] is an equally strong passion in [the Supreme] Court for striking them down so that *the only patent that is valid is one which this Court has not been able to get its hands on.*”<sup>76</sup>

#### b) Congressional Response To The Flash of Genius Test

Congress took note of the controversy surrounding *Cuno* and the *flash of genius* test of invention and incorporated the recommendations of the National Patent Planning Commission into a legislative process that involved patent attorneys, bar associations, and companies.<sup>77</sup> The

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<sup>72</sup> *Cuno Engineering Corp. v. Automatic Devices Corp.*, 314 U.S. 84, 90–91 (1941) (emphasis added) (citations omitted).

<sup>73</sup> See *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147 (1950); *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1 (1946); *Cuno Eng’g Corp. v. Automatic Devices Corp.*, 314 U.S. 84 (1941).

<sup>74</sup> REPORT OF THE NAT’L PATENT PLANNING COMM’N, H.R. Doc. No. 78-239, at 10 (1943).

<sup>75</sup> *Id.*

<sup>76</sup> *Jungersen v. Ostby & Barton Co.*, 335 U.S. 560, 572 (1949) (Jackson, J., dissenting) (emphasis added).

<sup>77</sup> See generally *Patent Law Codification and Revision: Hearings on H.R. 3760 Before the Subcomm. No. 3 of the H. Jud. Comm.*, 82nd Cong. 30 (1951) (Statement of Henry R. Ashton, Representing the National Council of Patent Law Associations).

legislative history for the 1952 Patent Act explained that the resulting section 103<sup>78</sup> “paraphrases language which has often been used in decisions of the courts, and the section is added to the statute for uniformity and definiteness.”<sup>79</sup> The authors of the Act, P. J. Federico, Giles S. Rich, and Paul Rose<sup>80</sup> made oblique reference to *Cuno*, but the purpose of section 103 is otherwise clear: “[t]his section should have a stabilizing effect and minimize great departures which have appeared in some cases.”<sup>81</sup>

Rich later clarified that the last sentence of section 103<sup>82</sup> was written specifically to overturn *Cuno*<sup>83</sup> and that “[t]he use of the term ‘invention’ was, in fact, carefully avoided with a view to making a fresh start, free of all the divergent court opinions and rhetorical pronouncements about ‘invention.’”<sup>84</sup>

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<sup>78</sup> 1952 Patent Act, Pub. L. No. 82-593. 66 Stat. 798 (“§ 103 Conditions for patentability; non-obvious subject matter. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title if the difference between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.”).

<sup>79</sup> S. Rep. No. 82-1979, at 2393, 2400 (1952).

<sup>80</sup> See *Patent Law Codification and Revision: Hearings on H.R. 3760 Before the Subcomm. No. 3 of the H. Jud. Comm.*, 82nd Cong. 30 (1951) (Statement of Henry R. Ashton, Representing the National Council of Patent Law Associations) (“It also seems appropriate to record here our thanks to the officers and members of the legislative committees of our associations and other individuals who have worked so diligently, and finally to thank Messrs. [P. J.] Federico, [Giles S.] Rich, and [Paul] Rose without whose untiring and invaluable help the work of the coordinating committee could not have been carried on.”).

<sup>81</sup> *Patent Law Codification and Revision: Hearings on H.R. 3760 Before the Subcomm. No. 3 of the H. Jud. Comm.*, 82nd Cong. 38 (1951) (Statement of P.J. Federico, Examiner-in-Chief, U.S. Patent Office).

<sup>82</sup> See *supra* note 78.

<sup>83</sup> Giles S. Rich, *The Vague Concept of “Invention” as Replaced by Sec. 103 of the 1952 Patent Act*, 46 J. PAT OFF. SOC’Y 855, 867 (1964).

<sup>84</sup> *Id.* at 864–65 & n.21.

c) *Case In Point: Funk Brothers*

One case that emphasizes the difficulty in applying a pre-1952 to modern case law is *Funk Brothers Seed Co. v. Kalo Inoculant, Co.*, 333 U.S. 127 (1948), which is commonly cited as standing for the “§ 101 inquiry,”<sup>85</sup> even though the Court invalidated the patent, because “that aggregation of species fell short of **invention** within the meaning of the patent statutes.”<sup>86</sup> If we believe section 103, *Graham*, and the legislative history of the 1952 Act, then *Funk Brothers* is a case about obviousness.

However, the Court in *Benson* points to a particular passage in *Funk Brothers* as persuasive “[H]e who discovers a hitherto unknown phenomenon of nature has no claim to a monopoly of it which the law recognizes. If there is to be invention from such a discovery, it must come from the application of the law of nature to a new and useful end.”<sup>87</sup> This language reflects similar concepts discussed earlier in the *dicta* in *Le Roy* and *Rubber-Tip Pencil* and other cases<sup>88</sup> and is confusing, because it appears to also support the idea that a *law of nature* cannot be patented unless it is embodied in a patent claim that satisfies the patentability requirements of novelty and utility.

It is difficult to translate *Funk Brothers* beyond the 1952 Patent Act, because it employed the common law language of “invention,” which Congress replaced with a statutory scheme for nonobviousness. *Funk Brothers* appears to be a case about nonobviousness, but given that the case has been cited in a number of different ways, it is difficult to be certain.

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<sup>85</sup> *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S.Ct. 2107, 2117 (2013).

<sup>86</sup> *Funk Bros. Seed Co. v. Kalo Inoculant, Co.*, 333 U.S. 127, 131 (1948) (emphasis added).

<sup>87</sup> *Gottschalk v. Benson*, 409 U.S. 63, 67–68 (1972) (internal quotations omitted) (citing *Funk Bros.*, 333 U.S. at 130).

<sup>88</sup> *See supra* Part III.A.2.

## 5. *Benson*—The Modern Precedent

In the 1972 *Benson* decision, the Supreme Court upheld the PTO’s denial of a patent application for claiming nonstatutory subject matter. The Court discussed the ideas in the cases outlined *supra*, explained its rationale, and articulated the rule that “[p]henomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.”<sup>89</sup>

The innovation in *Benson* is the shift in how the Court treats abstract ideas, laws of nature, and natural phenomena. Before *Benson*, the Court said in *dicta* that such things are not patentable—but it was never clear why, and even in *Funk Brothers*, the Court seems to suggest that these things are neither novel nor useful. In *Benson*, the Court took a different approach and said that these things are in opposition to “patent eligible subject matter” and are not disposed of in traditional tests for patentability.<sup>90</sup>

*Benson* is the first time the Court articulates a concern that a patent application *might not* fail a test of patentability. The Court acknowledges that the patent application claims a process that is both *new* and *useful*, and then contemplates *what might happen* if the patent were to issue, especially in the form of preemption of ideas, principles, and other useful applications of mathematical formulas.<sup>91</sup> Here, the Court sees itself as the backstop between an overly broad patent application and the public interest.

Nonetheless, since *Benson*, the Court has been very clear about how the judicial exceptions fit into section 101—abstract ideas, laws of nature and natural phenomena are not patentable, because they are not patent eligible subject matter. The rule of *Benson* is here to stay,

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<sup>89</sup> *Benson*, 409 U.S. at 67.

<sup>90</sup> See *In re Prater*, 415 F.2d 1393, 1398 (C.C.P.A. 1969) (enumerating the PTO examiner’s arguments in the alternative rejecting the patent claims on both section 101 subject matter grounds and on patentability grounds). *Prater* demonstrates that there are two possible ways to address the question, and in the cases before *Benson* it was by no means a foregone conclusion that the section 101 eligible subject matter route would prevail. *Id.*

<sup>91</sup> See *Benson*, 409 U.S. at 72.

and even if one were to persuade a court that the Supreme Court’s historical precedent for the judicial exceptions to section 101 does not exist,<sup>92</sup> that would still leave the eight modern cases<sup>93</sup> decided under the judicial exception doctrine. Given the Supreme Court’s recent unanimity in invalidating patents under the judicial exceptions,<sup>94</sup> it would be nearly impossible to convince the Court to overturn this modern precedent.

## 6. The Judicial Exception Doctrine: Conclusion

The Supreme Court has argued that there is long-standing precedent supporting the idea of judicial exceptions to section 101 of the Patent Act. A review of these citations has uncovered many layers of *dicta* and a lack of decision on the question of whether principles, mathematical formulas, abstract ideas, and laws of nature are either: (a) patentable or (b) statutory subject matter. The cases before the 1952 Patent Act appear to suggest in *dictum* that these types of subject matter are not patentable, because claims to these things would fail for the statutory reasons of patentability, which were lack of novelty and utility.<sup>95</sup> Also, it is difficult to translate pre-1952 cases to modern patent law, because Congress substantively changed the requirements of patentability in the 1952 Act.<sup>96</sup>

The Inventive Concept Test is a two-step inquiry for a court or a patent examiner to use when evaluating whether a patent claims patent eligible subject matter or if the patent claim is

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<sup>92</sup> See discussion *supra* Parts III.A.1–4.

<sup>93</sup> See *Alice Corp. v. CLS Bank Int’l.*, 134 S.Ct. 2347 (2014), *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S.Ct. 2107 (2013), *Mayo Collaborative Servs. v. Prometheus Labs.*, 132 S.Ct. 1289 (2012), *Bilski v. Kappos*, 561 U.S. 593 (2010), *Diamond v. Diehr*, 450 U.S. 175 (1982), *Diamond v. Chakrabarty*, 447 U.S. 303 (1980), *Parker v. Flook*, 437 U.S. 584 (1978), *Benson*, 409 U.S. 63.

<sup>94</sup> See *Alice*, 134 S.Ct. 2347; *Myriad*, 133 S.Ct. 2107; *Mayo*, 132 S.Ct. 1289; *Bilski*, 561 U.S. 593.

<sup>95</sup> See generally *Hotchkiss v. Greenwood*, 52 U.S. 248 (1851) (creating the common law requirement of “invention”).

<sup>96</sup> See *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 12 (1966) (“The Act sets out the conditions of patentability in three sections. An analysis of the structure of these three sections indicates that patentability is dependent upon three explicit conditions: novelty and utility as articulated and defined in § 101 and § 102, and nonobviousness, the new statutory formulation, as set out in § 103.”).

directed at nonstatutory subject matter. Such nonstatutory subject matter would take the form of a “judicial exception” such as: an abstract idea, a law of nature, or a natural phenomenon. The basis for the ICT is the doctrine of judicial exceptions to section 101 of the Patent Act; however, the judicial exception doctrine rests on a very small footprint of case law that consists of eight cases starting with the 1972 *Benson* decision. The first five cases, from *Benson* through *Bilski*, originated in PTO rejections of patent claims, and the last three cases, *Mayo*, *Myriad*, and *Alice*, arose out of litigation over issued patents. For procedural reasons, the latter three may be distinguishable from the first five.<sup>97</sup> Either way, this small foundation for the exceptions gives courts a way to turn down the lights on the judicial exception doctrine and to narrowly interpret the ICT to be in harmony with the rest of patent law.

### B. Pulling The Curtains: Harmony Suggests Findings of Fact

In *Mayo*, the Supreme Court suggested narrowly interpreting the judicial exceptions to section 101, because “[t]he Court has recognized, however, that too broad an interpretation of this exclusionary principle could eviscerate patent law.”<sup>98</sup> A narrow reading of the judicial exceptions would treat *Alice* and the ICT as a question of law based upon subsidiary findings of fact, because there is considerable foundation for such an approach in patent law. It is well understood that “the ultimate question of patent validity is one of law”<sup>99</sup> and that other questions related to patent validity such as novelty,<sup>100</sup> nonobviousness,<sup>101</sup> and enablement<sup>102</sup> are all *questions*

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<sup>97</sup> There are numerous reasons on which one could distinguish these last three 101 cases. For example, the PTO applies broadest reasonable interpretation (BRI) standard for claim construction, which is different than the standards for district court. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005).

<sup>98</sup> *Mayo*, 132 S.Ct. at 1293.

<sup>99</sup> *Graham*, 383 U.S. at 17; *see Mahn v. Harwood*, 112 U.S. 354, 358 (1884) (articulating that the patentability of an invention is a question of law).

<sup>100</sup> *See* 35 U.S.C. § 102 (2011).

<sup>101</sup> *See* 35 U.S.C. § 103 (2011); *Graham*, 383 U.S. at 17.

<sup>102</sup> *See* 35 U.S.C. § 112 (2011); *Cephalon, Inc. v. Watson Pharm., Inc.*, 707 F.3d 1330 (Fed. Cir. 2013) (“Enablement is a question of law that we review without deference, based on underlying factual inquiries that we review for clear error.” (citations omitted)).

*of law* that include underlying findings of fact. For example, *Graham* explains that the legal question of obviousness relies on “several basic factual inquiries.”<sup>103</sup>

Within patent law, there are two principles that defy the common principle of a legal question with underlying findings of fact: claim construction and utility. Claim construction is a question of law<sup>104</sup> that *may contain* factual findings, though factual findings are not always necessary in order for a court to construe patent claims.<sup>105</sup> Moreover, utility is another part of the section 101 patent eligible subject matter prong that is a question of fact that courts test according to a PHOSITA standard.<sup>106</sup>

In the past, these findings of fact have been caught up in the dispute over the two-pronged interpretation of section 101—critics have pointed out that the section 101 Inventive Concept Test first articulated in *Flook* duplicates the section 103 obviousness inquiry.<sup>107</sup> Obviousness is the starting point, because *Flook* relies on the term “inventive concept” and cites to pre-1952

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<sup>103</sup> *Graham*, 383 U.S. at 17.

<sup>104</sup> *See* *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996) (holding that patent claim construction is a question of law).

<sup>105</sup> *See* *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S.Ct. 831, 835 (2015) (acknowledging that claim construction may include subsidiary findings of fact, which are reviewed for clear error *if* a trial court engages in findings of fact when construing claims).

<sup>106</sup> *In re Swartz*, 232 F.3d 862, 863–64 (Fed. Cir. 2000) (before the PTO, utility is a question of fact that requires a “showing that one of ordinary skill in the art would reasonably doubt the asserted utility.”).

<sup>107</sup> *See* *Parker v. Flook*, 437 U.S. 584, 600 (1978) (Stewart, J., dissenting) (arguing that the Court had struck a “damaging blow at basic principles of patent law by importing into its inquiry under 35 U.S.C. § 101 the criteria of novelty and inventiveness.”). *See also* *In re Bergy*, 596 F.2d 952, 959 (C.C.P.A. 1979) (critiquing *Flook* for similar reasons).

cases,<sup>108</sup> even despite warnings to the contrary<sup>109</sup> and the decision in *Graham*, which explained that Congress had replaced the common law test for “invention” with statutory obviousness.<sup>110</sup>

Although Congress created a test for *nonobviousness*, that neither eliminates nor explains the differences between the Inventive Concept Test in the first prong of section 101 and the statutory test for nonobviousness in the second prong of section 101. The natural tendency is to interpret that in the 1952 Patent Act, Congress intended to have a single test for *nonobviousness*, but the two-prong interpretation of section 101, which dates to the 1972 *Benson* decision, did not exist when Congress last spoke on this subject. Therefore, Congress has only spoken as to nonobviousness as a condition of patentability, and the door is open for a *quasi-nonobviousness* analysis for patent eligible subject matter as described in *Mayo* and *Alice* by the ICT.

This is a very small opening, and the way to pull the curtains on *Alice*'s case of The Terrible Twos is to harmonize the Inventive Concept Test with the rest of patent law by defining the test as a legal question that includes subsidiary findings of fact.

### 1. Defining “Harmony”

In the modern section 101 cases, the Supreme Court has attempted to reconcile each new case with the prior ones by requiring “an examination of the particular claims before us in light of the Court’s precedents.”<sup>111</sup> However, this has led to an inwardly focused body of case law in which the Court has sought to explain multiple layers of *dicta* from earlier cases in the context of

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<sup>108</sup> *Flook*, 437 U.S. at 594 (“Even though a phenomenon of nature or mathematical formula may be well known, an **inventive** application of the principle may be patented. Conversely, the discovery of such a phenomenon cannot support a patent unless there is some other **inventive** concept in its application.” (emphasis added)).

<sup>109</sup> See, e.g., *In re Bergy*, 596 F.2d 952, 959 (C.C.P.A. 1979).

<sup>110</sup> See *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966). *Graham* then identifies that “the § 103 condition . . . lends itself to several basic factual inquiries[:]. . . the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.” *Id.*

<sup>111</sup> *Mayo Collaborative Servs. v. Prometheus Labs.*, 132 S.Ct. 1289, 1294 (2012).



the modern judicial exception doctrine.<sup>112</sup> As discussed above, cases such as *O'Reilly v. Morse* have become the touchstone of the judicial exception doctrine, despite the fact that the Court invalidated Morse's claim eight for lack of enablement, which is a condition of patentability that falls under the second prong of the Court's current interpretation of section 101.<sup>113</sup> Not only does this approach lead to recursive and nonsensical outcomes,<sup>114</sup> it has also led the Supreme Court to disruptive application of the Inventive Concept Test.

An alternative form of harmony would be between the judicial exceptions doctrine and the rest of patent law, specifically the other requirements of section 101 as well as the conditions of patentability. Within section 101, utility suggests a question of fact, and outside of section 101, there are numerous questions of law that incorporate subsidiary findings of fact.

## 2. Section 101: Novelty and Utility

In addition to defining the statutory categories of invention, section 101 specifically requires that patent eligible subject matter be "new and useful."<sup>115</sup> While the Supreme Court has yet to clarify which prong of section 101 encompasses the novelty and utility requirements, the Court acknowledged in *Bilski* that the "exceptions are not required by the statutory text, [but] they are consistent with the notion that a patentable process must be 'new and useful.'"<sup>116</sup>

An interpretation that novelty and utility are conditions of patentability does not correspond with the statutory text, because the statute uses these two adjectives twice to describe the statutory categories. The judicial exceptions doctrine is based upon the Court's

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<sup>112</sup> See, e.g., *Flook*, 437 U.S. at 589-92.

<sup>113</sup> See discussion *supra* Part III.A.3.

<sup>114</sup> On one hand, the Supreme Court says that its interpretation of section 101 completely splits the analysis between: (a) the judicial exceptions to patent eligible subject matter, and (b) patentability, see *Flook*, 437 U.S. at 595 n.18, and on the other hand, the Court explains the judicial exceptions by borrowing *dicta* from cases decided on patentability grounds, see *id.* at 590-92.

<sup>115</sup> 35 U.S.C. § 101 (1952).

<sup>116</sup> *Bilski v. Kappos*, 561 U.S. 593, 594 (2010).

interpretation that there are things that are *not within* these statutory categories. Therefore, there should at least be an aspect of these principles that is contained within the Court’s first prong of its interpretation of section 101. However, the statute itself clarifies conditions of novelty in section 102, which is a condition of patentability in the second prong of the Court’s interpretation of section 101, meaning that *novelty* spans patent eligible subject matter *and* patentability. This leaves utility as the only other part of the statutory requirement of patent eligible subject matter that is wholly within section 101.

If the judicial exception doctrine as implemented in the Inventive Concept Test is consistent with the novelty and utility requirements, then the ICT should invoke similar types of questions. In addition, were the Court to seek guidance from the utility requirement, the ICT would be a question of fact. However, if the Court were to look to the novelty requirement, the ICT would most likely be a question of law with subsidiary factual findings.

*a) The Utility Requirement—Question of Fact*

Under section 101, utility is a question of fact that is tested according to the perspective of whether “one of ordinary skill in the art would reasonably doubt the asserted utility.”<sup>117</sup> The precedent behind the utility requirement is almost entirely from circuit courts, and the Supreme Court has not heard a utility case since 1966.<sup>118</sup> Furthermore, the case law does not suggest an ongoing dispute over the utility requirement or the PHOSITA standard that the PTO applies during patent examination. This latter requirement—of a hypothetical objective standard of the person having ordinary skill in the art—exists elsewhere within patent law, namely nonobviousness. Such a practice would suggest that the ICT, which defines another part of the first prong of section 101, should be a wholly factual inquiry that should incorporate a PHOSITA standard.

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<sup>117</sup> *In re Swartz*, 232 F.3d 862, 863–64 (Fed. Cir. 2000).

<sup>118</sup> *See Brenner v. Manson*, 383 U.S. 519 (1966).

b) *The Novelty Requirement*

The section 101 novelty requirement is more challenging, because the “conditions and requirements” of the Patent Act also defines statutory novelty in section 102. According to the Supreme Court’s split interpretation of section 101, the constraint in *Bilski* that the judicial exceptions are consistent with section 101 novelty would suggest that there is a separate and distinct aspect of novelty under section 101 that is different than the statutory inquiry within section 102. However, further on in *Bilski*, the court explains that novelty is simply a requirement of section 102 and fits within the second prong of the Court’s interpretation of section 101.<sup>119</sup>

This explanation leaves many questions unanswered, because novelty is part of the same “new and useful” language in section 101 that also includes the utility requirement, and utility is contained wholly within section 101. Furthermore, the utility requirement in the first prong of section 101 corresponds to the enablement requirement<sup>120</sup> under section 112(a)<sup>121</sup> in the second prong. This would suggest that there is a parallel construction between the two prongs of section 101, with the factual question of utility in within the first prong and the legal question of enablement in the second prong.

Following this structure, the second prong of 101 includes section 102 statutory novelty, which is a question of law. This would suggest that there is an aspect of novelty within the first prong of section 101 that is distinct from section 102 and that embodies a factual question.

Without answering the question of whether a section 101 novelty requirement exists beyond section 102’s statutory novelty, the “new” language in section 101 could incorporate both requirements and would therefore be a legal question with underlying findings of fact as defined by section 102. Such an interpretation would further support the argument that the Inventive Concept Test should encompass subsidiary findings of fact.

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<sup>119</sup> See *Bilski*, 561 U.S. at 594.

<sup>120</sup> See *In re Swartz*, 232 F.3d at 863.

<sup>121</sup> 35 U.S.C. § 112(a) (2011).

c) *Analysis*

A court could have several choices available in determining how to reconcile the novelty and utility requirements of section 101 with the judicial exception doctrine. First, a court could explain that novelty and utility are not part of the first prong of section 101, which would require for the Supreme Court to engage in a detailed formal interpretation of section 101 to explain how the “new and useful” language does not apply to patent eligible subject matter. This would be a challenging task. Second, a court could decide that novelty and utility are part of the first prong of section 101 and that either novelty or utility determines whether the ICT is a factual or a legal question. To decide that novelty governs would suggest a legal question with factual underpinnings that would harmonize with other tests within patent law, but this conclusion would require a court to address the question of section 101 novelty, which is a logical outcome of the two-pronged interpretation of section 101.

A court could also conclude that novelty and utility are part of the first prong of section 101 but that neither explains the governing law/fact distinction. This could free the court to find another justification for the ICT to be a question of law supported by findings of fact or for the ICT to be a strictly legal question that may include findings of fact. However, the Inventive Concept Test, the doctrine of judicial exceptions, and the two-pronged interpretation of section 101 are wholly within the domain of the Supreme Court, and it is difficult to predict how the Court would analyze the question of how to harmonize the ICT with the rest of patent law.

3. *PHOSITA At A Minimum*

It is possible to draw some corners around how the Inventive Concept Test would harmonize with the rest of patent law. Several of these point to factual inquiries into the standard of a person having ordinary skill in the art.

a) *Utility*

The test for utility asks the question of whether a person “having ordinary skill in the art” (PHOSITA) would find a patent claim to be useful.<sup>122</sup> Utility is contained entirely within section 101 and defines a factual inquiry inherent to patent eligible subject matter.

b) *“Inventive Concept” And Nonobviousness*

As a modern test for “invention” or “significantly more,” the ICT is a test for *quasi-nonobviousness* that necessitates a factual inquiry into a PHOSITA standard. As section 103 and *Graham* show, in the modern patent statute “patentability is dependent upon three explicit conditions: novelty and utility as articulated and defined in § 101 and § 102, and nonobviousness, the new statutory formulation, as set out in § 103.”<sup>123</sup>

The purpose of the test for nonobviousness was to create an objective standard based upon the common law test of invention. In the 1952 Act, Congress defined this objective standard in terms of what a “person having ordinary skill in the art” would have known “at the time the invention was made.”<sup>124</sup> Because Congress replaced the common law requirement of *invention* with *nonobviousness*, a modern common law test based upon the common law requirement of *invention* should incorporate standards similar to *nonobviousness*. However, because the ICT is a test for patent eligible subject matter and not for patentability, the two-pronged interpretation of section 101 would imply a nonobviousness-like standard that would be similar to, but would not necessarily be the same as the statutory requirement. Therefore, regardless of the details of a potential *quasi-nonobviousness* standard, the Inventive Concept Test should apply a standard that includes a PHOSITA analysis.

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<sup>122</sup> See *In re Swartz*, 232 F.3d at 863-64.

<sup>123</sup> *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 12 (1966).

<sup>124</sup> 35 U.S.C. § 103 (2011).

### c) Enablement

Enablement is a condition of patentability that asks whether a patent specification “enable[s] any person skilled in the art . . . to make and use the [invention], and . . . set[s] forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.”<sup>125</sup> While this falls squarely in the second prong of section 101 and does not directly relate to the Inventive Concept Test for patent eligible subject matter, it provides additional context for the application of a PHOSITA standard within the ICT.

### C. Warm Milk And *Graham* Crackers Outline Factual Findings

The final step in resolving *Alice*'s case of The Terrible Twos is a snack of warm milk and *Graham* crackers, which provides us for an outline for how to conduct findings of fact in a *quasi-nonobviousness* inquiry such as the one in the Inventive Concept Test.

In light of *Mayo* and *Alice*, the Supreme Court appears to assume that the Inventive Concept Test does not involve a *quasi-nonobviousness* inquiry, and no additional findings of fact are necessary to determine whether a claim that potentially addresses a judicial exception is obvious in light of that exception. However, there is a strong argument that the ICT incorporates a PHOSITA standard, and harmony with the rest of the Patent Act would suggest that the Inventive Concept Test is factual in other way, though it is not yet a given that *Graham* outlines the appropriate scope or questions. And yet, *Graham* provides a sound basis for the factual inquiries necessary to address the Inventive Concept Test.

The judicial exceptions to section 101 of the Patent Act are premised on a body of modern case law, beginning with *Benson*—this is a total of eight cases that support the Supreme Court's reading of section 101 to include new and useful processes, machines, products, and compositions of matter that are nonetheless nonstatutory. Because, the legal basis for this

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<sup>125</sup> 35 U.S.C. § 112(a) (2011).

modern premise is limited to these few cases and is not supported by the claimed “150 years” of *stare decisis*, the judicial exceptions must be interpreted very narrowly.

A narrow interpretation of the judicial exceptions leads to a narrow interpretation of the Inventive Concept Test, which is a tool for determining whether a patent claim is directed at a quasi-nonobvious improvement of a judicial exception. The ICT exists within the first prong— patent eligible subject matter—of section 101, and therefore the section 103 nonobviousness principles should not apply wholesale to the ICT, because section 103 is part of the second, patentability prong of section 101, and the Supreme Court has explained that the two prongs of section 101 are distinct from each other.

## 1. PHOSITA

Nonetheless, *Graham* provides an excellent starting point for defining the findings of fact necessary to determine whether a patent or patent application claims subject matter that is nonobvious in light of a judicial exception. Both the ICT and *Graham* necessitate a point of view for the analysis—a “who?” for the test—in both, the “who” is a person having ordinary skill in the art (PHOSITA). As discussed above, utility is a PHOSITA analysis contained wholly within the first prong of section 101, and the *quasi-nonobviousness* nature of the ICT suggests the need for a PHOSITA as well. In *Alice*, there is no identification of the PHOSITA or what this person would have known at the time of filing.

## 2. Time Of Filing/Priority Date

Section 103 fixes the analysis at the time of filing of a patent application, and this is the standard that should apply to the ICT, because it would be nonsensical to expect a patent to satisfy the conditions of the ICT at some random point in time in the past or future. The filing of a patent application is the point in time when an inventor constructively reduces his or her invention to practice.

In *Alice*, the earliest patent at issue was filed in 1993 and claimed priority to a provisional patent application filed in 1992,<sup>126</sup> but the Court did not constrain the ICT to what was known as of the priority date. Instead the Court glibly applied what was known in 2014 and concluded that the claims from 1993 were obvious in light of “the abstract idea of intermediated settlement”<sup>127</sup> This is a textbook example of hindsight obviousness, because the *Alice* Court makes absolutely no effort to factor in whether “intermediated settlement” was even a known concept as of the priority date of the application. There are numerous possible outcomes here, and one could have been that in 1992, “intermediated settlement” was unknown in the financial industry, and *Alice* invented the idea. Another could have been that it was widely known and that the patent claims are obvious in light of known prior art. Without including this question in the ICT, we simply do not know what happened.

### 3. Applying The *Graham* Factors To The ICT

Beyond PHOSITA and an analysis at the time of filing, *Graham* outlines the following factual questions for nonobviousness: “the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.”<sup>128</sup>

#### a) Scope And Content Of The Prior Art

First, the term “prior art” is probably not appropriate, because the judicial exceptions are abstract ideas, laws of nature, and natural phenomena—the first factual question should probably define the nature and the extent of the judicial exception asserted. Instead of “art,” a party asserting a judicial exception should explain what was known about a given exception at the time of filing. For example, if the asserted exception were an abstract idea, then it would stand to

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<sup>126</sup> See U.S. Patent No. 5,970,479 (Filed May 28, 1993).

<sup>127</sup> *Alice Corp. v. CLS Bank Int’l.*, 134 S.Ct. 2347, 2352 (2014).

<sup>128</sup> *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966).



reason that the party asserting that a patent or patent application claims an abstract idea would also carry the burden to define the abstract idea and its known boundaries at the time of filing.

In *Alice*, the Supreme Court made little effort to define the abstract idea and its boundaries beyond calling it “intermediated settlement.” The Federal Circuit gave this question slightly more treatment, and relied on *Alice*’s expert.<sup>129</sup> Perhaps *Alice* is not the best example here, because it was decided on summary judgment after expert testimony, but it is troubling that both courts treated “intermediated settlement” as a concept understood by all with little need of additional explanation.

#### b) Differences Between The Prior Art And The Claims At Issue

The second *Graham* inquiry makes sense if one were to replace the term “prior art” with “judicial exception.” With the moving party carrying the burden on the first question, it becomes far easier for a given patent claim to compare what is known about a given judicial exception with each individual claim in the patent or patent application. Again, this is a disciplined analysis, and even in *Alice*, the court chose a “representative method claim”<sup>130</sup> from one patent to use in the Inventive Concept Test and to invalidate method, system, and product claims across four different patents in the family.<sup>131</sup>

#### c) The Level Of Ordinary Skill In The Pertinent Art

The third *Graham* question, the knowledge level of the PHOSITA, would translate directly to the Inventive Concept Test. In *Alice*, only the Federal Circuit decision makes reference to a PHOSITA analysis with respect to claim construction, but the court discarded such an analysis, because the parties agreed to a limited claim construction sufficient for the section 101 patent eligible subject matter test on summary judgment.<sup>132</sup>

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<sup>129</sup> See *CLS Bank Int’l v. Alice Corp.*, 717 F.3d 1269, 1292-93 (Fed. Cir. 2013).

<sup>130</sup> *Alice*, 134 S.Ct. at 2359.

<sup>131</sup> *Id.* at 2352 & n.1.

<sup>132</sup> See *CLS Bank*, 717 F.3d at 1275.

#### 4. Other Factors

Reviewing *Alice* in light of the *Graham* factors, it is apparent that at summary judgment there may be enough of a record and enough factual findings at such a point to perform the Inventive Concept Test. Yet, without those findings, the ICT appears to be rudderless. Section 103 and *Graham* provide guidelines for how to apply a PHOSITA analysis based upon the time of filing to the ICT. Furthermore, *Graham* and the body of section 103 jurisprudence establish concepts—such as *prima facie* and hindsight obviousness<sup>133</sup>—that could readily apply to the Inventive Concept Test.

However, opponents to factual findings in the ICT could argue that engaging in such findings will not change the eventual outcome of the ICT as applied to software patents. And while this may be true in some cases, especially when the ICT is applied at summary judgment or later, this criticism misses the point that Congress intended section 103, as described in *Graham*, to be an objective test for nonobviousness that could be uniformly and consistently applied across courts and the PTO.

As a strictly legal inquiry, the ICT has already proven to be challenging for courts to apply, because the test appears to rely on the court’s knowledge and ability to interpret patent claims. It is also uncertain what evidence is required for a court to perform the ICT or determine whether a court should take judicial notice of relevant facts.<sup>134</sup> The challenge expands significantly at the PTO, where more than 9,000 patent examiners<sup>135</sup> can apply the ICT when rejecting patent claims as failing to claim eligible subject matter. However, if the ICT were interpreted to include subsidiary findings of fact, then patent examiners would issue section 101 rejections citing relevant “art” and other evidence to explain what *Alice* currently appears to

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<sup>133</sup> MPEP 2142 Legal Concept of *Prima Facie* Obviousness (9<sup>th</sup> ed. Rev. 11.2013, Mar. 2014).

<sup>134</sup> See Bohrer, *supra* note 10.

<sup>135</sup> Dennis Crouch, *USPTO’s Swelling Examiner Rolls*, PATENTLYO (Nov. 30, 2014), <http://patentlyo.com/patent/2014/11/usptos-swelling-examiner.html>.

allow as an assertion. Such an approach would yield—as with nonobviousness—consistent and predictable results.

Of course, if the Inventive Concept Test were to hinge on underlying findings of fact, it might also require claim construction that would potentially place the ICT to a point either after claim construction or *enough agreement* as to construction to enable a court to decide on summary judgment. Were the Inventive Concept Test to require findings of fact and potentially claim construction, then it would no longer be a threshold test, and perhaps the two-prong interpretation of section 101 might not make sense, either. These are open questions, but the factual findings necessary for a court or a patent examiner to perform the Inventive Concept Test, would most likely change the profile of the judicial exceptions themselves.

While warm milk and *Graham* crackers will not categorically resolve a case of The Terrible Twos, these things work in conjunction with the other steps to define a manageable path forward for *Alice*.

#### IV. Conclusion

The Inventive Concept Test is a common law tool for a court or a patent examiner to use to determine whether a patent or patent application claim is nonobvious in light of an abstract idea, a law of nature, or a natural phenomenon. The legal basis for the Inventive Concept Test is the body of modern Supreme Court case law supporting the judicial exception doctrine, which articulates that there are new and useful processes, machines, products, and compositions of matter that are nonstatutory and are therefore not patent eligible subject matter under section 101 of the Patent Act.

In articulating the judicial exception doctrine, the Supreme Court cites “150 years” of *stare decisis* that stands for the proposition that principles, abstract ideas, laws of nature, and mathematical formulas cannot be patented. These citations are mired in layers of *dicta* in cases often decided on other grounds, and in some of the high profile cases, the question of whether a

principle is patentable was never at issue. One famous case, *O'Reilly v. Morse* is cited as key precedent for the judicial exceptions to section 101, but *O'Reilly* was famously decided on patentability grounds. Furthermore, most of the *dicta*, were one to cite it, appears to suggest that before 1972, the Supreme Court believed that *a principle* was not patentable, because patents claiming *a principle* would fail the tests of novelty and utility—the tests of patentability at the time.

In *Benson*, the Supreme Court struck upon a new interpretation of section 101 that distinguished between patent eligible subject matter and patentability. Paired with this new interpretation was the judicial exception doctrine, in which the Court said that a new and useful process, machine, article of manufacture, or composition of matter could nonetheless be nonstatutory subject matter if a patent claim was directed at an abstract idea, law of nature, or natural phenomenon.

The Inventive Concept Test is a tool for determining whether a patent claims nonstatutory subject matter. The Supreme Court first articulated the ICT in *Flook*, applied it to a law of nature in *Mayo*, and extended it to apply to software in *Alice*. In the fourteen months since the *Alice* decision, courts have invalidated over 200 software patents, and the patent office has slowed the issue of many types of software patents, and in some technology areas, software patenting has all but ended.

*Alice* has a case of The Terrible Twos. The Supreme Court's two-pronged interpretation of section 101 had led to the judicial exceptions to the statute, which the two-step Inventive Concept Test is used to find. However, the application of the ICT has invalidated too many patents and prevented patenting for many more inventions. As a result, this Paper has argued that it is time to calm *Alice* down in three steps.

Step 1 is to limit the power of the judicial exceptions to section 101 by clarifying the legal force behind the judicial exception doctrine. The judicial exceptions did not exist until 1972 when the Supreme Court decided *Benson*. The cases cited as 150 years of *stare decisis* never decided the

question of judicial exceptions, and almost all of the cited text is *dicta*, so aside from the modern cases, there is no historical basis for the judicial exception doctrine. As a result, the judicial exceptions carry limited force.

Step 2 is to harmonize the Inventive Concept Test with the rest of patent law. Many section 101 cases seek harmony with other section 101 cases, but the harmony here is between the ICT and the conditions of patentability. Currently, courts apply the ICT as a strictly legal test, but this is exceptional in patent law, where numerous subsidiary findings of fact are necessary for courts to decide on the ultimate legal questions of patent claim construction and patent validity.

Step 3 draws the Inventive Concept Test closer towards the factual findings of *Graham* and section 103 nonobviousness, because the ICT is a test for “invention,” which is a common law principle that *Graham* explains was replaced by section 103 in the 1952 Patent Act. The factual findings may not be identical to section 103, but they should likely be similar: identifying a PHOSITA, determining the PHOSITA’s knowledge level, defining the nature and extent of the judicial exception, and evaluating the differences between a claimed invention and the judicial exception at a given point in time. Also, section 103 case law provides a sound foundation to establish *prima facie* cases and to eliminate the troublesome issue of hindsight analysis.

Taken together, these steps provide a potential solution to *Alice*’s case of The Terrible Twos. There is plenty of foundation in patent law for these types of findings of fact, and given the limited precedent behind the judicial exceptions, it is time for a court to consider the nature and scope of these factual inquiries.