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**Topic**  
**Should the process of creating an invention  
or work determine its protectability as an intellectual  
property?**

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# Should the process of creating an invention or work determine its protectability as an intellectual property?

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## I. INTRODUCTION

In a world where each country espouses its own peculiar understanding on different subject areas of law, the uniformity that globally exists in the regulation of intellectual property (IP) is quite welcome. This consistency in the legislative treatment of IP is due largely to the Agreement on Trade-Related Aspects of Intellectual Property<sup>1</sup> (TRIPS)<sup>2</sup>. TRIPS sets the minimum standards which the signatory countries must provide for in their patent laws, and also provides certain principles to be followed in the recognition of copyright in works. It has ensured that the signatory countries now have a common understanding of the parameters to be considered in determining whether a creation deserves protection as an IP. The boundaries for the grant of IP protection are thus universally defined, and it is rare to see old boundaries eliminated or new boundaries created<sup>3</sup>.

It is in the context of these clearly defined boundaries that the theme of this essay must be considered. The essay advances two immediate questions. *First*, it asks whether the process of the creation of an invention should be included as one among the parameters evaluated for grant of patent protection. *Second*, it questions whether the process involved in the creation of a work, should have any bearing on the subsistence of copyright in the same. From a common grammatical understanding, the term process refers to all the activity that is undertaken in the course of creating an invention or a work.

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<sup>1</sup> Effective 1<sup>st</sup> January, 1996.

<sup>2</sup> There are currently 158 signatories to the Agreement.

<sup>3</sup> Margo A. Bagley, *The New Invention Creation Activity Boundary in Patent Law*, 51 Wm. & Mary L. Rev. 2, 577, 579 (2009).

Under the TRIPS regime, it is apposite to note that the abovementioned questions have absolutely no role to play as parameters in the determination of the grant of IP protection. For the grant of patent protection, the TRIPS agreement clearly lays down three distinct criteria which must be satisfied by patent applicants. Article 27 of the agreement states that patents will be made available for inventions, provided that - (i) They are new; (ii) They involve an inventive step, and; (iii) They are capable of industrial application. Thus, the research involved in the creation of the invention, which includes field trials, draft plans and empirical studies, is *not* a criterion that is evaluated. Similarly, the activity preceding the creation of a work is *not* a factor considered in determining its status as a work in which a copyright vests. Thus, the theme of the essay questions whether there is any purpose to be served or benefit to be derived by the incorporation of these additional criteria, *over and above* the IP criteria currently recognized.

In order to have a meaningful debate under the main theme of the essay, it is first necessary to define and contextualize the import of the term 'process'. This is a necessary exercise because the 'process' involved in the making of any creation can be scrutinized on several counts. For the sake of argument, if a patent examiner were to consider the process involved in the creation of a patent, he could evaluate it in terms of the level of innovation and ingenuity involved. He could also evaluate it on the parameter of the time invested in the research for the invention. Further, he could evaluate it on the basis of propriety of the methods used.

This essay will view the pre-creation process from the vantage point of the propriety in the methods used in the research and development of creations. As per this interpretation, the debate evolves into a question of whether IP authorities should concern themselves with the morality and legality of such methods. This is one of the emerging issues of IP policy confronting nations of the world today. India, for example, has considered a patent application over a drug that can be created only by using the morally-objectionable process of digging up graves, in order to procure skeletal remains which constitute raw-material for the drug<sup>4</sup>. In America, the thriving pornography industry enjoys copyright protection, despite allegations by stars of their coercion and abuse in the making of such films.<sup>5</sup> Further, numerous nations are now addressing the issue of the legality of procuring biotechnological matter used in creating products and processes.<sup>6</sup>

In this essay, the author's respond to the debate by contending that the propriety of pre-creation activity involved in the making of creations should indeed be considered a factor in determining the protectability of creations. Through Chapters II and III, the authors argue that if illegal and immoral acts are established to be *directly and proximately* involved in the creation of a work or an invention, such a creation should be denied IP protection. This proposition is premised on the understanding that

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<sup>4</sup> Shamnad Basheer, *Grave Diggers, "Immoral" Patents and the NBRA*, *Spicy IP* (Jul. 30, 2008), <http://spicyipindia.blogspot.in/2008/07/grave-diggers-immoral-patents-and-nbra.html>.

<sup>5</sup> Ann Bartow, *Pornography, Coercion and Copyright Law 2.0*, 10 *Vanderbilt Journal of Entertainment & Technology Law* 4, 799, 818 (2008), [http://www.jetlaw.org/wp-content/journal-pdfs/Bartow\\_FINAL.pdf](http://www.jetlaw.org/wp-content/journal-pdfs/Bartow_FINAL.pdf).

<sup>6</sup> South Africa for instance, made disclosure of origin of biotechnological material a pre-requisite to patenting by way of the Patents Amendment Act, 2005. Brazil and China have incorporated a similar change to their patent laws.

improper conduct at the stage of creation must be curbed, and that the IP regime can be used to encourage parties to comply with domestic laws, and the societal notions of morality. In Chapter IV, the authors outline the immediate problems that can be anticipated if a model of scrutiny of pre-creation activity by governmental regulators is adopted. In Chapter V, the authors propose amendments to the current IP law set-up observed in most countries, in the hope that the new model of pre-creation activity checks can be sustained, and can function in an efficient and robust manner.

## II. BRINGING PRE-CREATION ACTIVITY INTO PATENT LAW

The grant of protection to creations, which are the fruits of illegal or immoral research, is a limitation of the current IP regime. The authors seek to establish that there exists a genuine need to reconsider this pedantic approach of IP law and policy.

In this chapter, the author's will first expound the current tests of patentability to analyse whether they encompass any pre-creation activity. Next, the authors will discuss contemporary examples where creation activity has been marred by *immoral* acts, making a compelling case for expanding the scope of scrutiny under the morality exception to patentability. Lastly, the current regime will be analysed to determine if there exists a check on *illegal* acts in the process of creating an invention.

### A. PATENTING CRITERIA IN THE STATUS QUO

A patent is granted over an invention only after the patent office is satisfied of its novelty, industrial application and presence of an inventive step. The office then checks whether the invention falls within a prohibited list of un-patentable subject matter.

The test of novelty evaluates whether there is any 'prior art' *i.e.* any prior work that describes the invention in question with a certain degree of specificity.<sup>7</sup> In case the invention is indeed previously referred to in any material disclosed to the public, the creation will not satisfy the requirement of being 'novel'. The criterion of 'inventive step' mandates that the creation demonstrate some technical advancement or economic significance over prior art.<sup>8</sup> Finally, on meeting both requirements, the invention must be proved to be capable of industrial application *i.e.* capable of being used or made in an industry.<sup>9</sup>

These requirements reveal that the entire patenting process concerns itself only with the period *after* the product has been made. Any activity involved in the process of making the invention is not envisaged under the said criteria. The logical corollary that follows is that pre-creation activity cannot determine patentability at this stage of the scrutiny conducted by the assessing authority.

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<sup>7</sup> N.R. SUBBARAM, PATENT LAWS: PRACTICES AND PROCEDURES, 41 (2<sup>nd</sup> edn, 2007).

<sup>8</sup> Patents Act, 1970, § 2(1)(j).

<sup>9</sup> The Indian Office of Controller General of Patents, Designs and Trademarks, *Manual of Patent Office: Practice and Procedure*, 80

After the conclusion of the first stage, patent authorities check that the invention does not fall within a certain class of creations, prohibited as per the policy considerations of the granting state. One such exception to patentability includes inventions the use of which is contrary to morality.<sup>10</sup> Several cases have demonstrated that the morality exception in Indian law and the patent laws of other countries are now being creatively interpreted to cover pre-creation activity. This has signalled a shift from the relatively pedantic scrutiny that the three criteria pose.

### *B. INVENTION CREATION UNDER THE MORALITY EXCEPTION*

While analysing an invention under the morality exception, the patent office determines whether exploitation of the invention contravenes relevant notions of morality. Section 3(b) of the Indian Patents Act, 1970 (**‘the Act’**) excludes patentability where the invention is:

an invention the primary or intended use or commercial exploitation of which could be contrary to public order or morality [...].” [Emphasis supplied]

It is evident that the morality exception applies only if the *use* of the product results in an immoral end, such as a device which facilitates picking of locks.<sup>11</sup> There are inventions however, whose use is morally sound, but the creation process is marred by immorality. If literally construed, the morality exception quoted above would fail to cover such cases, leaving pre-creation activity unchecked. Patent offices have, however, liberally interpreted such clauses to widen the scope of scrutiny of patents.

In India, the patent office has denied protection to a medicine prepared from skeletal remains dug up within a week of burial. It considered this use of skeletal remains for profit motives to be against the mores of Indian society.<sup>12</sup> Although the decision does not guarantee a similar interpretation in the future, it possibly signals a shift from the narrow reading of the morality exception.

The European Patent Office (EPO) has come out with decisions of a similar vein. The European Patent Convention (EPC) contains a morality exception clause in Article 53(a) that is similar to Section 3(b) of the Act. In a notable case, the EPC considered the morality exception when a patent application was filed by the Wisconsin Alumni Research Foundation (WARF). The application sought to patent primate embryonic stem cells.<sup>13</sup> The EPC observed that the process of the creation of such a cell line necessarily involved the destruction of human embryos. This led to the question of whether the invention would contravene Article 53(a), EPC and Rule 28(c) of the Implementing Regulations to the EPC, which bar the commercial *use* of human embryos on moral grounds.

The EPO denied a patent over the invention, holding it to violate the aforementioned laws. Though the immoral act of destroying embryos was committed at the stage of invention creation, the EPO reasoned that *use* of the patent included the immoral

<sup>10</sup> TRIPS, Art. 27(2)

<sup>11</sup> V.K. AHUJA, LAW RELATED TO INTELLECTUAL PROPERTY RIGHTS, 401 (2007).

<sup>12</sup> Basheer, *supra* note 4.

<sup>13</sup> Case T1374/04, WARF/Stem cells (Boards of Appeal of the European Patent Office, Apr. 7, 2006).

creation of the product.<sup>14</sup> The result of this interpretation is that the obvious distinction between invention creation and use of the invention has been fundamentally altered, by interpreting the former to be a subset of the latter. This position was extended in *Oliver Brüstle v. Greenpeace e.V.*<sup>15</sup>, where the applicant contested the charge of immorality on the ground that the destruction of human embryos had to be undertaken only once, following which a lineage of stem cells could be produced. The EPO held that even this solitary act of immorality would render the product unpatentable.

The authors advocate that countries should emulate such a wide interpretation of the morality exception. Such a move will have two-fold benefits. *First*, it will ensure that no person will gain commercial benefit from his wrongdoing. *Second*, it will disincentivise inventors from committing immoral acts during the creation of the invention.

### C. ILLEGAL ACTS IN INVENTION CREATION

The stage of research of a product involves multiple tasks. For instance, a glass manufacturer intending to produce a novel oleophobic screen will engage in procuring material, hiring experts for research, conducting product trials and disposing the waste created. This creation activity may interface with several legislations, including labour and environment laws, and laws pertaining to the sourcing of raw materials. In the *status quo*, if the inventor violates an applicable law in making his invention, the specific law will apply sanctions on his wrongdoing, but the patentability of the invention will be unaffected.

This lacuna has meant that the process of researching for inventions is replete with instances of gross illegalities. Developing countries have suffered many instances of biopiracy, where corporations patent drugs developed from illegally procured materials.<sup>16</sup> Further, there may possibly be cases where the effluents from research on chemicals may be dumped in rivers, violating environmental laws. Granting patents to inventions that originate from such illegal conduct is farcical. It would amount to giving a benefit to an inventor if he breaks the law to create a product. A chemical company, for instance, may be prepared to pay a million dollars in fines for wilfully violating certain environmental regulations, if it thinks it can reap tens of millions later from a patent it is developing concurrently.<sup>17</sup> This means that there is little motivation to comply with laws during the process of creating an invention.

It is necessary thus, that the patent regime must make adherence to other domestic laws a factor in determining patentability. Such a change is not completely

<sup>14</sup> *Id.* ¶ 39. See also Bagley, *supra* note 3, 596.

<sup>15</sup> Case C34/10, *Oliver Brüstle v. Greenpeace e.V.* (Grand Chamber, Oct. 18, 2011), ¶49.

<sup>16</sup> Gillian N. Rattray, *The Enola Bean Controversy: Biopiracy, Novelty and Fish and Chips*, 1 Duke Law and Technology Review 1-8 (2002), <http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1049&context=dlt> r.

<sup>17</sup> Dan Markel, *Can Intellectual Property Law Regulate Behavior? A 'Modest Proposal' for Weakening Unclean Hands*, 113 HARV. L.R. 6 1503, 1516 (2000).

unprecedented. Developing nations interested in protecting their biotechnological material from being misappropriated have added greater rigours to the patent process.<sup>18</sup> Countries like Brazil, China and India have introduced disclosure of origin requirements, and now mandate permission from specialised administrative bodies prior to filing.<sup>19</sup> Following from the example of biotechnological patents, pre-creation scrutiny must be considered a factor for all other kinds of patents.

### III. A NEED FOR THE EVALUATION OF THE PROCESS OF CREATION OF WORKS IN DETERMINING PROTECTABILITY

There exists a similar rationale for advocating the evaluation of pre-creation activity for both the patent and the copyright regime. As regards works which have been established as being created by the commission of illegal or immoral acts, the authors contend that copyright in these works should *not* be recognized. Granting IP protection to a work which is the result of improper activity would have the effect of condoning such activities, and would lead to the inequitable conclusion that a person may indulge in improper conduct in the creation of a work, and yet be given the benefit of enjoying monopoly rights over that work.

To illustrate, consider a painter who shoots an endangered animal in a forest, and uses the blood of the animal to create a painting. The killing of the animal violates certain wildlife laws, and the painter is subsequently arrested and convicted for his criminal offence. A question that immediately arises is whether the painter enjoys copyright over the painting he has created. Under the current regime, a copyright is viewed as an inherent right which arises whenever a literary, dramatic, musical or artistic work is expressed in a tangible form.<sup>20</sup> The only requirements that must be fulfilled for recognition of copyright in the work are that (i) the work must originate from the author and (ii) the work must be fixed in a particular medium.<sup>21</sup>

Additionally, court decisions across jurisdictions impose a requirement of creativity which varies according to the kind of work in question.<sup>22</sup> Applying the abovementioned principles of copyright, it is evident that the painting in question would be entitled to copyright protection, right from the point of its coming into existence. The recognition of copyright in the painting goes against the fundamental legal principle that '*one cannot benefit from one's own wrongdoing*'<sup>23</sup>, and is an eventuality which should be avoided. Similar efforts have been made to prevent criminals from benefitting from their crimes in the USA. In several states of the USA, legislation commonly referred to as 'Son of Sam' statutes authorize the state to confiscate money earned by criminals from the publicity of their crimes.

Considering the above, the authors contend that the copyright office should be conferred the powers of pre-creation scrutiny. This is beneficial as the copyright

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<sup>18</sup> See Nuno Pires de Carvalho, *Requiring Disclosure of the Origin of Genetic Resources and Prior Informed Consent in Patent Applications Without Infringing The TRIPS Agreement: The Problem and The Solution*, 2 WASH. U. J.L. & POLY 371 (2000).

<sup>19</sup> See for e.g. India's Biodiversity Act, 2002, §6(1).

<sup>20</sup> LIONEL BENTLY & BRAD SHERMAN, *INTELLECTUAL PROPERTY LAW*, 92 (3<sup>rd</sup> ed., 2009).

<sup>21</sup> *Id.* at 91.

<sup>22</sup> *Feist Publications Inc. v. Rural Telephone Service Co.*, 499 U.S. 340 (1991).

<sup>23</sup> RONALD DWORKIN, *TAKING RIGHTS SERIOUSLY*, 23 (3<sup>rd</sup> ed., 2005).

office will be able to assist the police authorities in addressing issues of law enforcement. In this manner, one governmental agency can assist the legitimate purposes of another. For example, if photographs taken in contravention of anti-paparazzi statutes<sup>24</sup> are denied copyright, photographers will be less inclined to violate the said laws, being unable to gain exclusive commercial rights over their pictures.

Some may argue that there is no need to deny copyright to a creator engaging in illegal conduct, because the creator would be penalized in accordance to the laws of the land. This argument fails to appreciate the potential benefits to society if additional powers of scrutiny are granted to the copyright office. The copyright offices' powers of denial of copyright would act as a deterrent to unlawful and immoral activity. This would stop IP from contributing, even remotely, to improper conduct.<sup>25</sup>

While there may be a consensus of the theoretical correctness of the abovementioned arguments, doubts can be raised of the practical necessity of the grant of the additional powers to governmental authorities. Empirically speaking, the authors believe that there are several instances which point towards the necessity of the conferment of such powers under the copyright regime. A prominent example is that of the grant of copyright to the pornographic movie 'Deep Throat' in the USA. The producers of the movie were granted a copyright despite allegations that Linda Boreman, who played a major part in the movie, was beaten and coerced to perform sexual acts.<sup>26</sup> On a similar note, it is not difficult to conceive of instances where the owners of copyright over literary, dramatic or artistic works, violate employment laws or criminal laws, in their relationship as employers of the actual author of the works. A case may also arise where the copyright office learns that narcotic substances were *actually* used by the protagonist of the film, in a scene where the protagonist is shown to *depict* the use of the drugs.

The abovementioned examples demonstrate that there exists a compelling case for the extension of the powers of pre-creation activity scrutiny to the copyright regime as well. Such an extension of powers of the copyright office cannot be viewed as unprecedented or unreasonable, for national judiciaries already demand that copyright and patent holders comply with certain laws and policies, specifically antitrust law and the prohibition against fraud on the government.<sup>27</sup>

#### IV. PROBLEMS ASSOCIATED WITH SCRUTINY OF INVENTION CREATION ACTIVITY

While the argument for inclusion of pre-creation activity checks in determining protectability is attractive, such an inclusion may not be feasible in the current set-up.

<sup>24</sup> See for e.g. the Act of September 29, 1998, Ch.1000, 1998 Cal. Legis. Serv. 5952 (West) and the Protection from Personal Intrusion Act, H.R. 2448, 105<sup>th</sup> Cong. (1997).

<sup>25</sup> Markel, *supra* note 17.

<sup>26</sup> *Deep Regrets*, 57 People 17, May 6,

2002, <http://www.people.com/people/archive/article/0,,20136919,00.html>.

<sup>27</sup> Markel, *supra* note 19 at 1507.

A simple grant of powers of scrutinizing pre-creation activity given to the patent and copyright office will be unworkable and inefficient. If the legislature of a country wishes to include pre-filing compliance checks as part of its patent and copyright regime, it must adequately address the concerns which are expected to arise.

The most fundamental concern pertaining to the proposed model is that of uncertainty in the grant of patents and recognition of copyright in works. The patent regime in particular requires certainty to encourage research for new inventions.<sup>28</sup> With patent law already viewed as possessing a high incidence of subjectivity, to add a ground for rejection of patents which is inherently difficult to define and codify, may disincentivise research. When the patent office deliberates on whether the research involved in the creation of an invention is illegal or immoral, there is bound to be a high degree of discretion involved. The concept of morality in particular is viewed as having standards capable of variable interpretation. The determination of the extent of these standards by the patent office will only add to the subjectivity in the patent process, diminishing its predictability and certainty.

There is a separate set of problems that arise when one considers the revocation of patents on the grounds of illegality in research. It is easy to harbour the mistaken belief that a determination of the illegality of pre-creation activity is far easier than that of its immorality. The *first* of the impediments is that of determining the corpus of laws, a violation of which will be deemed sufficient to revoke a patent application. This is a problematic issue, for it would be difficult for the legislature to comprehensively enumerate a set of laws for this purpose. The *second* problem that arises is about the transgression of certain statutory obligations, which are reasonably viewed as minor or ancillary in nature, and for which there is a minor penalty to be paid. Is it prudent to revoke the patent of an individual who has violated a rule under an environmental law statute, the punishment for which is only a minor fine?

The *third* problem that needs to be considered is that of establishing the nexus between the illegal act and the creation of the invention. Even if the creator of an invention is convicted of a crime, it needs to be established that he committed the crime *in the course of* the creation of his invention. As an example, consider that a scientist researching on a drug that improves stamina in human beings is found to violate certain animal testing laws. If he subsequently applies for a patent, he may take the defence that the violation of animal testing laws took place for a separate drug he was attempting to create, and not for the drug in question. To determine the causal link between a proven illegal act and research for a patent is an investigative task, which may extend beyond the competence of the patent office.

The *fourth* and probably the most serious of concerns raised in this context, is that of the delay that can be caused in the patent process by appeals against the applicant's criminal conviction. If an applicant wishes to secure a patent, under the new model he would have to certify before the patent office that he has no criminal law convictions against him connected to the patent application. If the applicant has been convicted of a crime before the court of first instance, he may appeal the order before a higher court. No action on the patent filing can take place during the pendency of the appeal,

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<sup>28</sup> Michael Meehan, *Increasing Certainty and harnessing Private Information in the U.S. Patent System: A Proposal for Reform*, STAN. TECH. L. REV. 1 (2010).

as the patent office will be compelled to wait for a final determination on the matter by the courts of law. This final determination might take several years, during which time the patent application will be in abeyance. Thus, the new model has the potential to cause severe delays to the patent process.

## V. A CONCLUDING LOOK AT AN IDEAL IP REGIME

In providing the modalities for a smooth functioning of the new regime, due regard must be given to maintaining a balance between the public utility in granting a patent, and denying the same owing to infractions. The authors propose that improper pre-creation activity should be scrutinized only after making certain changes outlined below, which address this balance.

### A. IMMORAL ACTS IN PATENTING

Immoral acts at the pre-creation stage, as has been noted, can be covered by the current regime by holding that the act of creation is the first exploitation right from being granted a patent. By bringing invention activity within the purview of using the invention, morality exceptions that are prevalent in patent regimes across the world can play a role in checking such acts. Even if the immoral act is not directly connected to the final exploitation of the product, patent authorities have creatively interpreted the same to preclude patentability of the final product. This interpretation must be emulated across jurisdictions to ensure uniformity in practice.

### B. ILLEGAL ACTS IN PATENTING

Making compliance with laws a factor in determining patentability of a product will deter patent seekers from infringing laws in the bid to create a product they can exploit. However, the regulatory approach must incorporate several checks. *First*, the policy of the patent office must be rooted in certainty, which is necessary to incentivize creativity. *Second*, the patent office must limit the denial of patents to those cases where the law violated is of a sufficiently vital nature so as to deny patent for deviations from the same. To deny patentability for minor offences would disregard the sensitive balance.

Laws governing biotechnological material demonstrate how the legislature can practically tie compliance of domestic laws to IP protection. The Biodiversity Act, 2002 mandates approval of the National Biodiversity Board before filing a patent application.<sup>29</sup> In the case that the Board refuses approval, the applicant must approach the High Court.<sup>30</sup> If permission is eventually refused, the patent office will reject the application. Tying the two regimes together ensures adherence to norms governing the use of biotechnological material, while simultaneously avoiding subjecting an applicant to the vagaries of a subjective determination by the patent office. The selection of the particular laws to be linked with the patent act must be at the discretion of Parliament. It may do so by considering the frequency or importance of

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<sup>29</sup> Biodiversity Act, § 6(1).

<sup>30</sup> Biodiversity Act, § 52.

infractions that usually occur in a particular area of law, say environmental law, while creating inventions or works.

This model may well face the aforementioned problem of delays owing to appeals. Further, it is possible that judicial officers under particular statutes may excessively delay the grant of compliance certificates. It is imperative therefore that a model that relies on an acknowledgement of compliance must lay down a timeline for granting or denying permission, as well as for any appeals from denial.

### C. CHANGES IN IP PROCEDURE

Apart from making changes external to patent laws, certain changes *within* the regime are necessary as well. Most jurisdictions provide a mechanism for both, opposition to a grant of patent as well as revocation of a patent already granted.<sup>31</sup> However, pre-creation activity is not a permissible ground of challenge under these procedures. Thus, the scope of challenge under these mechanisms must be widened. This would mean individuals and the government can assist the patent office in detecting pre-creation infractions.

Additionally, while providing specifics of the invention to the patent office, a patent seeker can be mandated to declare that he has complied with all necessary laws and moral norms in the process of making the invention. In case such a declaration or compliance certificate is false, the same must be challengeable under the umbrella of revocation or opposition to the grant of a patent.

While there are strong reasons for pre-creation activity for works to be scrutinised, there are inherent impediments to facilitating the same. It is practically difficult to conceive a model whereby the copyright office can conclusively determine whether a work is an outcome of improper activity. This is so, as owing to the very nature of copyright, the process involved in the creation of a work is not documented, unlike in a patent system. Under the patent regime, the application for a patent gives insight into the process that went into creating the invention. Considering these constraints, the authors advocate that clear and established cases of infractions if brought to the notice of the copyright office, should be penalised by revocation of copyright protection. To prevent misuse of the model, infringers of copyright should be barred from raising these claims as a defence to infringement.

The benefits of reworking the IP regime to analyse pre-creation activity are numerous. While the model suggested to effectuate the same is theoretically attractive, making it a common minimum standard across nations is an onerous task. Developing nations have an interest in operating a liberal IP regime to ensure relentless innovation. This will act as an impediment to a more stringent system. Further, it is difficult for patent offices to check legal and moral compliances for an invention that is made in a different state. Beset with such difficulties, a complete incorporation of pre-creation activity into IP law remains a reform of the distant future.

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<sup>31</sup> See Patents Act, 1970, §§ 25, 64.