

Is Traditional Knowledge Digital Library A Success?

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This paper aims to analyze the performance of Traditional Knowledge Digital Library (TKDL) in the protection of traditional knowledge and the interests of the indigenous people. The core of the paper is to analyze the various problems which are associated with TKDL. These problems are divided into five broad groups, these groups are Problem of treating traditional knowledge as property, Substantive Legal Problems, Procedural Problems, Problem of the Closed Access Model and lastly the Economic problems. Of all these problems the first one is against the idea of TKDL itself while the others are trying to find fault with the structure and working of TKDL. After analyzing all these problems the conclusions which emerge are that there is a need to find a balance between utilization of resources for the protection of the rights of the traditional communities so that they are empowered to ensure that their knowledge is not abused and utilization of resources for a TKDL because this database will play an important role in protection of the rights of the traditional communities once its shortcomings have been overcome.

Keywords: Traditional Knowledge Digital Library, Council of Scientific and Industrial Research, World Intellectual Property Organization, International Patent Classification, United States Patent and Trademark Office, Traditional Knowledge Resource Classification, Traditional Knowledge Classification Taskforce, TKDL Access Agreement, patent, biopiracy

The lack of proper and accessible documentation about traditional knowledge has been a cause of great disadvantage for the indigenous people who have nurtured and preserved that knowledge for a long period of time. Industrialists and scientists from across the world have taken benefit of this deficiency and continue to do so because they have the excuse of saying that there does not exist any prior art which can legally prevent them from coming up with inventions, especially in the pharmaceutical field, which are heavily reliant on traditional knowledge. It has been stated that the main reason for the exploitation of traditional knowledge, also known as bio-piracy, is that even in the cases where certain form of documentation is available in those cases also there arises the problem of the documents being in local languages like Urdu, Tamil, Sanskrit etc., making it very difficult for the patent examiners to have access to these documents and also to perform their work efficiently.¹ The tipping point was the patent which had been granted in USA for the wound healing properties of turmeric. This was the point from which the active development of the Traditional Knowledge Digital Library better known as TKDL started.¹

As a consequence TKDL was set up as collaboration between Council of Scientific and Industrial Research, The Ministry of AYUSH and The Office of the Controller General of Patents, Designs and Trade Marks (CGPDTM) in the year 2001. It was an innovative administrative step which was first of its kind. Since then it has documented and translated a huge amount of traditional knowledge into the five international languages, i.e., English, French, German, Spanish and Japanese. This was made possible by the use of a classification tool called the Traditional Knowledge Resource Classification (TKRC).¹ As of now there are nine patent offices in the world which have access to India's TKDL such as, The European Patent office, US Patent Office, Japanese Patent Office, UK Patent Office, German Patent Office, Intellectual Property Office, Australia, Canadian Patent Office, India Patent Office and Chile Patent Office.¹

In this paper the veracity of some of the positive feedbacks on TKDL are analyzed following the problems associated with TKDL. These problems are divided into five broad groups: treating traditional knowledge as property; substantive legal problems; procedural problems; closed access model; and lastly the economic problems.

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TKDL: A Ray of Hope

TKDL has been considered to be quite helpful as far as its application in Europe is taken into consideration. It is claimed that in its initial couple of years only TKDL was able to help in rejecting 36 patent applications and up till 2015 out of 189 traditional knowledge in the European Patent Office, 17 were rejected, 30 were deemed withdrawn, 31 were abandoned and 21 were accepted. The remaining 90 applications were under consideration around 2016.² As one can see from the numbers, TKDL does not seem to have an outstanding success considering the fact that a great number of patent applications were undecided till 2016 and that too for a long period of time.³ Although, a look at the EPO website does show that most of them have been resolved as of now but as mentioned below there is at least one application which was filed in 2008 but was under scrutiny until recently.⁴ Also, it seems appropriate to state at this point that the applications which were withdrawn should not be considered as a victory for TKDL, because there are cases where these withdrawn applications go for re-examination and patent is granted.⁵

It has been posited by the architect of Traditional Knowledge Digital Library, Mr. V K Gupta, that TKDL has helped in bridging the language gap by translating traditional knowledge available in local languages like Tamil and Arabic into internationally recognized languages like French, English, Spanish, Japanese, German. Consequently, over 0.226 million ancient formulations have been converted into 34 million A4 size pages worth of data which is helping the patent examiners in ensuring that no one is capable of taking undue advantage of locally preserved and nurtured traditional knowledge.⁵ The claim is that this conversion has been done at zero direct cost. The argument being that in the absence of TKDL the complete process of patent revocation is quite long drawn (five to seven years) and expensive (US\$ 0.2-0.6 millions).⁶ Although, it does strike one that no data is presented to substantively show that TKDL is actually less time consuming and expensive. While there is some evidence against the claimed efficiency of TKDL, there being applications which have been filed as early as 2008 and have not been finalized till now, going even beyond the seven year stated for pre-TKDL time period.⁷

Other than this, there has been assertion about the highly effective classification tool, TKRC as

mentioned above. This tool has been modelled on World Intellectual Property Organization's (WIPO) International Patent Classification (IPC). TKRC is considered to be extremely valuable as it has divided knowledge related to Siddha, Yoga, Ayurveda and Unani into as many as 27,000 sub groups.⁶ In addition to having classified traditional knowledge (TK) on its own, TKRC has also helped in bringing about reforms to the IPC. Prior to 2005, IPC had only one sub group amongst its 8 sections of 70,000 sub-divisions each which catered to medicinal plants. India raised this issue and as a result a Traditional Knowledge Classification Taskforce was formed, having representation from China, United States of America, European Union, Japan and India. As a result IPC now has 207 sub-groups which cater to medicinal plants and it was also agreed that the 27,000 sub-groups of TKRC will be linked to IPC.⁶ A general summation of the impact would be that TKDL as a whole turns TK into its modern correlation make it easier for patent examiners to conduct a search for relevant prior art.⁸

From the above, it seems that other than some problems of efficient implementation, TKDL as an idea has been of significant importance considering its huge contribution in bringing traditional knowledge within the mainstream, making it accessible at a worldwide scale. The problem is that the manner in which TKDL has documented the TK is considered to be a wrong treatment of traditional knowledge at the grass root level. In addition to this, there are some other material objections to the manner in which TKDL is operating as of now and the manner in which patent offices across the world are responding to it. These problems are elaborated further in the coming sections of the paper.

Problem of Traditional Knowledge being Treated as Property

It is known that indigenous people are quite against the idea of their traditional knowledge being considered to be some sort of property or commodity. It is their belief that the knowledge which they acquire from their interaction with nature, is a gift which nature has given to them and they do not agree to the idea that such knowledge could be alienated in favor of one person or one body as such. Traditional knowledge being a gift of nature, it can never be completely alienated from either nature or the local community which has preserved it, the usage of such knowledge should be only in a manner which is

deemed to be fit by nature and the local community or else it would be nothing less than exploitation.⁹

Another strand to this argument is the idea of the western conception of law being used to take away the knowledge which has been cultivated by the indigenous people. The current intellectual property regime is compared with the idea of Terra Nullis to show how that principle was used in colonial times to take over the indigenous lands and how the current regime places traditional knowledge in the public domain and then claims property rights over it.⁹ With this background, when TKDL relies on the intellectual property framework of patents protection for stopping the exploitation of TK, then that is not deemed to be acceptable by the indigenous communities because this framework fails to understand the fact that TK is not a commodity or any kind of property which belongs to a private person.¹⁰ TK is something which belongs to the whole community who use it with all due respect to nature. What the indigenous people want is that instead of imposing alien legal formulations on them it would be much better if protection is granted to them which ensure that they are self-sufficient and thus are capable of flourishing on their own i.e. they seek a right of self-determination.⁹ Now, if we take a look at what TKDL is trying to achieve, we observe that traditional knowledge is simply being recorded in an accessible format in order to ensure that no one tries to assert a 'property' claim over such knowledge. Thus, this digital instrument is trying to ensure that traditional knowledge stays out of the patent framework rather than become a part of that framework. These statements make it seem that indigenous people are worried unnecessarily, but that is not true. The manner in which the legal procedure works in different countries has a great impact on the manner in which the data provided by TKDL is used by the patent examiners of that country. So, in a situation where the patent examination procedure is not capable enough to understand the nuances of traditional knowledge then in those cases it might so happen that an unfair patent is granted.¹⁰ This will be discussed in greater detail in the coming sections. In such a situation, it is quite possible that an empowered indigenous community would be better equipped to protect its own rights by going to court.

In addition to the arguments above, it has also been argued that the manner in which TKDL has documented the traditional knowledge does not take

into account the fact that this knowledge and its details are connected to a certain context and type of application, and TKDL simply documents all the information.¹¹ The modern obsession of turning all this knowledge into some sort of commodity or property has led to the knowledge being deconceptualized and thus the traditional knowledge loses its essence because of its detachment from the community and nature.¹¹ Here again we get an opinion that instead of spending resources on this unnecessary documentation of resources it would have been better if the resources were used for better preservation of existing traditional texts.¹¹ Since we are talking about the waste of resources it seems apt to mention here that in a lot of cases the patent offices rely firstly on modern scientific literature to object to patent claims rather than on Indian traditional knowledge.¹²

Still, there should not be a complete rejection of the idea of TKDL, considering that it is inherently trying to prevent the traditional knowledge from being treated as property. It is important here that we try to improve the defects rather than capitalize on them and reject the whole idea. It is true that the indigenous people have their moral values and sentiments attached with traditional knowledge, but they should understand that TKDL is just trying to help.

Substantive (Legal) Drawbacks

As mentioned in the previous section, there might be certain issues with functioning of foreign legal systems that might lead to exploitation of TK despite of genuine effort being put in to protect TK by way of TKDL. A major legal problem is that there is a lack of a unified understanding of 'prior art' as a result of which the data documented by TKDL is not accepted as prior art by the United States Patent Office.¹⁰ The reason for this is the fact that there are two standards for defining prior art in the United States. These standards are the Pre-America Invents Act standard and the Post America Invents Act standard. The definition of prior art as under the Pre-America Invents Act does not allow the citations listed in TKDL to be cited as prior art.¹⁰ The complete substitution of this standard by the Post-America Invents Act standard will not happen up till the 15 March 2034.

The question to be asked at this juncture is that 'How big a problem is this, if it is limited to one country?' If we are to give an answer based on the

idea of morality and the rights of the indigenous people, then it is absolutely a problem even if one patent is being granted for an invention which makes use of traditional knowledge. It has already been elaborated in the previous section that TK is not a commodity and no one person can claim absolute control or ownership over it. Sticking to this principle, makes it obvious that it is not an argument that only the legal system of the USA is causing a problem. Otherwise, if we are to decide on the basis of utilitarian grounds then it will seem that indigenous communities outside the USA are not getting hurt very significantly as such because the patents granted will not have any practical effect on their practice and usage. Still, this argument will not hold for the indigenous communities which live within the territory of the USA. It is true that the current discussion is about the problems which are associated with TKDL and so it is not directly our concern to ensure the welfare of other communities but it is also important that we take a general principled stand rather than taking a selfish stand.

In addition to this, there is another legal problem which is associated with TKDL. The problem here is that it is being argued that the whole documentation process of traditional knowledge has taken place without giving due respect to the copyright law.¹² When this issue was brought with the CSIR, it came up with the response that this traditional knowledge, related to Unani, Ayurveda and Siddha, dated back to around 2500 BC under such circumstances it cannot be said that the modern copyright law should be applicable in order to protect them.¹³ This logic sort of defeats their own purpose, since at present by making TKDL what they are doing is bringing the traditional knowledge within the ambit of the modern patent law. Another criticism which has been given to this response is that going by this logic it will be beyond the domain of the modern copyright law to provide protection to any books which deal with historical facts because the contents of that book belong to a time over which the modern copyright law does not have any jurisdiction as such.¹⁴

The idea of copyright over the books which have been digitized for the purposes of TKDL is further elaborated by the argument that since certain efforts have been put into the translation and compilation of information while making these books then it is completely valid to say that these books have copyright protection. Even if we consider the

Judgement in the case of *Eastern Book Company v C B Modak*¹⁵ which requires the exercise of creativity and application of skill and judgement, then also we can say that a compilation of ancient knowledge so that it makes sense to the people by indulging in translations when required, does seem to satisfy the requirements of the Judgement. If only CSIR would have given attention to this it is possible that the consequent royalties would have further encouraged to work and research more on traditional knowledge.¹⁴

Procedural Drawbacks

The major procedural drawback is that most of the patent examiners have not been trained adequately to identify TK as prior art. An example for the same can be the situation where the USPTO (The United States Patent and Trademark Office) granted patent over the use of Aloe Vera for the purpose of treating dry eyes, in this case the only distinguishing or novel aspect was that chlorinated water was used instead of using just clean water.¹⁶ It is a clear representation of the lack of competency of the patent examiner. It is true that as a part of the agreement which grants a particular patent office the access to TKDL, it is required that CSIR (Council of Scientific and Industrial Research) should train the patent examiners so that they can use the TKDL search tools and examination processes.¹⁷ Still, it has been asserted that faults as the one mentioned above occur because the patent examiners lack the skill and competency.¹⁰ This then leads to a question, that if the competency of the patent examiner is an issue then why should TKDL get blamed, maybe it will take some time for the patent examiners to acquire the required skills but that does not mean that the whole idea of TKDL is at fault. This lack of competency will surely have an impact on the grant of patents in general and should not be held as a problem specific to TKDL.

A similar procedural issue which needs to be brought to the fore is that there is a lot of discretion that rests with the patent examiners when it comes to deciding a patent claim.¹⁸ Studies have concluded that in the patent claims which involves patent examiners with a greater experience have a tendency to grant patents without exhaustively dealing with the available prior art and have a greater rate of granting patents in general.¹⁹ Other than this, there have been claims that patents have been granted just after the first official examination of the claim.¹⁹ One thing which needs to be kept in mind is that all these issues

which have been stated above are mainly with respect to USPTO, but as explained above that fact should not make the problem any smaller. Now, this behavior can be explained as an obsession with efficiency and the fact that the pay which the patent examiners receive depends on the number of patent claims they are able to clear.²⁰ This is not a practice which is associated with the European Patent Office, so isn't it possible that if the USPTO changes its methods and decided to give a fixed pay and made the patent examiners liable if a patent had been granted unscrupulously then in that case maybe the possibility of unfair patents being granted can be overcome.

This current disposition of the patent examiners gets furthermore problematic by assertions that applicants do not search for prior art and leave it to the patent examiners to conduct this research, who don't have a definite stand as to the prior art status of TKDL.²¹ Thus, there is the problem that there is no uniformity as to what is accepted as prior art by patent examiners across the board even within one particular legal regime, unlike the lack of uniformity which has been discussed above.¹⁰ A suggestion which has been made to improve the overall situation is that it should be made mandatory to provide the geographical origin of the knowledge on the basis of which a particular patent is being claimed.²² This would help the patent examiners to narrow down their sample space within which they have to conduct their search for prior art and consequently their need for efficiency will also be satisfied.

Further, elaborating on procedural drawbacks, in a particular case a claim was made over a variety of Pistachio (*Pistachia terebinthus*) as a medication for curing cancer but TKDL had information on another variety known as the *Pistachia vera*.²³ Here, the TKDL data itself had been produced unscrupulously, the exact plant which was being used in this medication could not be identified by the experts because the formula in the ancient texts was too old and despite of that TKDL authorities gave a formulation of their own. This formulation given by TKDL authorities was obviously not the right formulation and hence there was no prior art evidence to stop the grant of patent. Also the claimant was claiming that books dealing with the subject were not publicly available and hence there was no possibility of verification and also since TKDL is not publicly accessible it wasn't possible for the applicant to do any form of verification. Although, such

unavailability is actually a problem but in the present case, the Rajasthan Unani Medical College and Hospital, Jaipur did provide public access to the requisite text.⁵ Another point which is required to be noted with respect to this case is that, it was claimed by the applicant that there was mistranslation of information as stated in the book. However, it was not just mistranslation, but a case of making up of information. It is important for CSIR to deal with such deficiencies, if you are trying to put up a database which aims to protect the ancient knowledge then in that case it is important that the correct information is being put up. Thus, it becomes important to have a review mechanism in place which will ensure that in future patents are not granted with such laxity.¹⁴

Closed Access Model

Although, in the Pistachio case, the relevant prior art was actually available in the public domain but that does not erase away the problem that TKDL does in reality follow a closed access model. The authorities have tried to justify basing the TKDL on a closed access model by arguing that it was required to ensure the overall security of India's Traditional Knowledge.²⁴ This is tackled by the argument that the contractual restrictions which are imposed by the TKDL Access Agreement are very strict in nature.²⁵ Further, various other security measures like encryption are being employed along with the use of intrusion detection tools.¹⁷ If all this is present then it is viable that TKDL follows an individual account system, where there can be a tracking of the person who is accessing the digital library. If there is an account of all those who are able to access, and a system which doesn't allow access to a non-member then it seems to be a strong enough security against any misuse of traditional knowledge. Another fear which has been expressed is that if TKDL is publicly accessible then it will lead to patent claims being tweaked in such a manner that it doesn't seem to match a prior art.²⁶ The response which has been given to this is that irrespective of public access tweaking of patent claim does still happen.²⁷ The point here is not about a yes or no situation, it is about the degrees because it is possible that when the TKDL follows a close access model then in that case there are possibly lesser cases of tweaking and possibly a larger number of cases when we follow a public access model. Still, in such circumstances the solution

doesn't seem to be to stay with the closed access model, a better solution should be to improve the competency of the patent examiners so that there are a lesser number of cases of claim tweaking which move past them.

Going beyond the security concern, it has also been argued that the current closed access model of TKDL inhibits any innovator from doing a thorough research of the available prior art before coming to any conclusion about the innovativeness of her or his own idea.²² All in all, this model leads to a very exclusivist regime where access to TKDL is limited to a select group of patent examiners.²⁸ From the manner in which these problems have been worded, it seems that there is a belief that if innovators have an access to information on prior art related to traditional knowledge, they may step back and will not attempt to get a patent. This implication along with their idea that tweaking will happen to get patents seems to suggest that people will try to dodge the law any way, and in such circumstances it is better to respect the people's right to information rather than placing excessive restrictions upon them.

Further, when questions were raised for justifying the legal basis of adopting a closed access model by means of an RTI, the response given was an extract from a cabinet meeting which was held in 2006. The extract simply said that approval has been granted to the request of confidentiality.¹³ The RTI reply had no reasoning as such and this becomes problematic when a so much depends on this particular decision. Certain views have also been expressed that in absence of a parliamentary instrument, this label of confidentiality cannot be bestowed.²⁹ Finally, it is also important to take note of the argument which has been presented by Dr. Vandana Shiva that because of the TKDL being based on a closed access model it has denied the Indian people of the right to know about their own heritage.³⁰ Along with this, it has been argued by Shamnaad Basheer that when such a huge amount of resources is being invested into this initiative then in that situation it does not seem right that all those resources are being limited to be used just for the purpose of preventing patent.²⁴ The argument being that such a comprehensive database should be utilized for conducting further scientific research and should not be shuttered away merely as a procedural tool. This argument is further strengthened by the fact that even the scientists who are working for CSIR do not have access to TKDL for the sake of conducting any further research.²⁹

Economic Problems

The presentation of this problem is partially in conflict with the earlier argument about how the deficiency in the legal standards of USPTO should not be ignored. This happens because this section proceeds upon moral and objective grounds while those arguments had a strong moral basis. Still, in order to present the whole picture which will help in an overall improvement of the system, it is important that all the arguments are presented.

Now, the economic criticism of this whole process of protecting traditional knowledge in foreign jurisdictions is that the patents which are being granted there will not have any impact as such within the Indian territory. So, under such circumstances it is a waste of resources to engage in legal battles because of a "misplaced sense of pride in our past glory".¹² Further, in most of the cases in which the patents had been revoked the reason for revocation was that certain objections had already been raised on the basis of modern scientific literature and reliance wasn't actually placed on any traditional knowledge database as such. Also, in cases where an applicant had withdrawn his or her application there is no evidence as such to prove that this withdrawal happened because of TKDL.¹²

Another economic criticism is that TKDL had invested a lot of resources in verifying a number of foreign applications to get an assurance that these applications are not based on traditional knowledge which is originating from India. This whole process would have made some sense if the verification had been focused on the applications which had some economic value for India i.e., the granting of the patent would have led to economic loss either to Indian citizens or either to the Indian state. Up till 2017, the situation has been such, that no patent application of economic significance has been stopped because of TKDL, while between 2002 and 2012 a sum of around rupees 15 crore has been spent on the whole enterprise.¹² The point here is not just about the money which has been spent on the whole process, the point is that when this is all juxtaposed with other problems of the database being not open and of the database not being accurate then it appears that the whole scheme has made use of the resources in a manner which is questionable.

Conclusion

After all the discussion we have a set of opinions as to what has to be done in order to ensure that TKDL

becomes actually effective or beneficial in nature. It is true that when we discussed the criticism about traditional knowledge being treated as property, then at that time the conclusion seems to be that instead of investing excessive amount of resources into creating a database within the property framework it would be better if resources are employed for the upliftment and development of the indigenous communities so that they can make a better use of traditional knowledge on their own. The suggestion also being that if these communities are empowered then they can use the law to protect themselves without any excessive legal intervention. As mentioned above this should not lead to a conclusion that TKDL as a whole should be rejected, an attempt should be made to ensure that both these protective forces work in harmony.

Under the substantive legal problems, two distinct suggestions emerge for improving the efficacy and legitimacy of the TKDL system. For efficacy it is important that there should be a standardized understanding of the term prior art across the various legal systems. While with respect to legitimacy the requirement is that copyright over the data which has been digitized under TKDL should be given due respect, the royalties which will accrue to the people who compiled/translated the traditional knowledge in the first place will help them in furthering research on traditional knowledge. This way both TKDL will gain legitimacy and there will be impetus for further study.

In procedural problems, there is a need to improve the competency of the patent examiners, and this should not be limited to traditional knowledge related patents. There are certain specific pointers, like there is a need to ensure that documentation for the purpose of TKDL is done with the utmost sincerity in order to ensure that information confusion is not created because of things like, poor translation. Also, the applicant should have an extra obligation of informing about the geographical origin of the information on the basis of which her or his invention has been developed. One final suggestion from the procedural critics is that the pay of the patent examiners should not be dependent on the number of applications cleared and that they should be held accountable if a patent has been granted unscrupulously. Another related change is that, there should be accurate record as to the cases in which the patent application has been substantively affected due to an intervention which was based on the information derived from TKDL.¹⁴

TKDL being based on a closed access model, it is strongly suggested that it should be opened up for public access as that will help scientists to further their research and will also help applicants to know about the prior art in the field which they are working. Security concerns have been raised but they can be dealt with.

Lastly, the economic critique was simple, that resources should be better managed. The practical impact of a certain patent should be analysed and only after that a challenge should be posed to it. This is the only other problem after the one about traditional knowledge being treated as property where one finds an inclination that TKDL as a whole was a bad idea. Cumulatively, it doesn't seem that it is practically reasonable to suggest the scrapping of TKDL. It will be best if all the suggestions are incorporated after a sincere feasibility analysis. Also, as suggested above in addition to TKDL (not in place of it) efforts should be made for the upliftment of the indigenous communities so that they are capable of self-determination

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