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"Like Taking Candy from a Baby": A Comparative Analysis of The Standard of Non-Obviousness in The Patent Law and Practice of The United States, Europe and Azerbaijan

Abstract

Unsatisfied with the standards of novelty and utility in front of the developing technology, the patent laws started to endorse a new standard which is 'non-obviousness'. The non-obviousness standard is aimed at the elimination of simple, therefore, doable innovations invented in science or technology from patent protection, thus has an undeniable importance. However, the application of the position of the person having ordinary skill in the art may yield to various approaches in the patent practice. The current practice in the Law on Patents of Azerbaijan Republic, particularly the Article 7(6) has brought the view of the specialist working in the same field of the invention to the center of the examination of non-obviousness. In contrast, the practice in the United States and Europe introduces a different notion of the PHOSITA mainly in the case law. This article is going to discuss the said provision in the light of the comparative law and practice and recommend on the revision of the Law on Patents in this regard.

Annotasiya

İnkişaf edən texnologiyanın fonunda yenilik və faydalılıq standartlarının yetərsizliyi patent qanunvericiliyini 'ixtira səviyyəliliyi' adlanan yeni bir standartın axtarışına sövq etmişdir. İxtira səviyyəliliyi elm və ya texnologiyada bəsit, ona görə də asanlıqla yaradıla biləcək ixtiraları patent hüququnun mühafizəsindən kənarlaşdırmaqla mühüm əhəmiyyət kəsb edir. Buna baxmayaraq, mövcud bilgilər məcmusunda ortalama qabiliyyətli şəxsin mövqeyinin tətbiqi praktikada bir-birindən fərqli yanaşmalara gətirib çıxara bilər. Azərbaycan Respublikasının Patent haqqında Qanunu ilə formalaşan praktika, o cümlədən Qanunun 7.6-cı bəndi ixtira səviyyəliliyinin qiymətləndirilməsi üzrə prosedurunun mərkəzinə ixtira ilə eyni sahədə çalışan mütəxəssisi qoyur. Halbuki, ABŞ və Avropadakı təcrübə, xüsusilə presedent hüququ vasitəsilə ortalama qabiliyyətli şəxs anlayışını fərqli məzmunda başa düşür. Bu məqalə sözü gedən bəndi müqayisəli hüquq və praktikanın işığında müzakirə edir və bu mənada Patent haqqında Qanun üçün labüd dəyişikliklər barədə tövsiyələrini verir.

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Mündəricat

Introduction

An innovation demands effort. Looking through the latest patentability standards, this statement can easily be justified. But was it always like that? In the earlier times when people were trying to satisfy their needs in an easier way, they started to invent some device. Sparking as a result of personal or group needs, people began to work on inventions that would benefit mankind. Mostly the innovations in the 17th and 18th centuries were examined for their novelty and utility. However, the years brought more

sophisticated inventions which were constructed on the prior art. Non-obviousness is what the new patent system looks for to eliminate easy developments from patent examinations.

In the U.S. and European patent laws, an invention is obvious, if it may have been thought by the person having an ordinary skill in the art (PHOSITA) with a reference to the prior art. However, in Azerbaijani law, this concept has been described in a little more differently. According to the Law on Patents, if an invention is not obviously coming out of the existing knowledge for **a specialist working on the same field**, it is considered non-obvious. It is clear from the definition above that the difference between the laws originates from the status of the PHOSITA or the specialist of the same field. Being an ultimately subjective standard discussed in the judicial decision, the impact of the language of the laws used to depict the PHOSITA should not be discarded.

Although the specialist of the same field is a general explanation of the PHOSITA in both the U.S. and the European patent practice, the language of the Law on Patents of Azerbaijan Republic comes up with a restrictive provision. Firstly, the PHOSITA's employment status as a specialist can excessively increase the level of skills anticipated by this hypothetical person, while the judicial interpretation takes the practitioner of the same field in most cases in the U.S. Secondly, the requirement of 'the same field' can put the patent examiners under the duty of working on the similarity between two fields of science or technology. It may in turn yield to further workload for the examiners. In this respect, we are going to study the standards for the examination of non-obviousness in all three countries within a comparative study in this article. For this purpose, we are going to dedicate a special consideration to the difference between PHOSITA and a specialist, in order to envisage potential results of evaluation of their positions.

Part I will touch the ways the patent laws around the globe and the international patent systems evolved through the centuries and give a clue about how the invention and the patent vary from each other.

Part II will explain four criteria often referred to in the patent examination phases, including non-obviousness. For the purpose of this article, other standards of patentability will be analyzed together with non-obviousness comparatively.

Part III will be devoted to the examination phase of non-obviousness, especially to the prior art and the PHOSITA. In the light of the U.S. case law and the European regulations, Article 7(6) of the Law on Patents of Azerbaijan Republic will be discussed and necessary recommendations will be introduced for its revision.

I. The concept and development of patents

A. An invention or a patent: is that the question?

According to the Cambridge Dictionary, an invention is *'something or the way of doing something that has not been made, designed or created before'*; *'patent, on the other hand, is the official legal right provided to the inventor in order to make or sell the invention for a specific number of years'*.[1] World Intellectual Property Organization (WIPO) defines the patent as an intellectual property right granted to a product or a process that either introduces a new manner of performing something or present a new technical solution to a problem.[2] Patents can be provided to brand-new inventions or incremental improvements developed upon previous inventions. In both cases, the patentee has the right to exclude third parties to commercially make, utilize or sell the invention without the permission of the owner. When compared with incremental growth patents, invention patents requires more research and development effort[3], know-how and innovation[4].

The difference between an invention and a patent should be established well because in most cases, they can be confused by people. While a patent is an intellectual property right and therefore, always intangible, an invention can either be tangible as a brand-new product or intangible as a process.

The fundamental aim of the patent system is to provide inventors with rewards.[5] It ensures that there is an incentive in society for making innovations which in turn leads to social progress. This incentive can be provided by the government as well; however, the patent system is based on private decision-making which is expected to be better and more efficient in the long-run.[6] From the microeconomic perspective, firms use patents for a couple of strategic purposes such as making a profit from royalties[7] and protecting their products from imitation by competitors.[8]

[1] Cambridge Dictionary, https://dictionary.cambridge.org/dictionary/english/ (last visited June 19, 2018).
[2] World Intellectual Property Organization, http://www.wipo.int/patents/en/ (last visited June 19, 2018).
[3] Bin Guo and Peng Ding, *Invention or Incremental Improvement? Simulation Modeling andEmpirical Testing of Firm Patenting Behavior under Performance Aspiration*, 102 Decision Support Systems 32, 32 (2017).
[4] Robert D. Dewar and Jane E. Dutton, The *Adoption of Radical and Incremental Innovations: An Empirical Analysis*, 32 Management Science 1422, 1423 (1986).
[5] Richard Gilbert, Carl Shapiro, *Optimal Patent Length and Breadth*, 21 RAND Journal of Economics 106, 106 (1990).
[6] Polk Wagner, *The Patent Theory*, Week 3 Intellectual Property Law and Policy EdX course, (2018).
[7] Bongsun Kim, Eonsoo Kim, Douglas J. Miller and Joseph T. Mahoney, *The Impact of the Timing of Patents on Innovation Performance*, 45 Research Policy 914, 917 (2016).
[8] Guo and Ding, *supra* note 3, 32.

B. Early History And Development Of Patent Rights

A patent is an intellectual property right granted for the innovative inventions that ignite the rapid breakthrough in science and technology. Patent rights have not always resembled today's patents. In the earlier times, patents contained simply legible documents to describe what is patented. However, as the years went by, inventions started to get more complex and the patents replaced their simple character with detailed and sometimes complicated wordings. While the first patent was issued in England, under the Statute of Monopolies in 1624, the increasing applications for patent rights from early 17th and 18th centuries required an international cooperation and the establishment of common standards for patentability.[9]

But the first patent rights, no doubt, goes even to the ancient times when people tried to materialize and control[10] new knowledge in patents. These patent rights mainly occurred in the form of privileges or franchises in most cases in the absence of patent laws.[11] Decisions by the judges like in the U.S in 1641 or royal decrees in England had been the main determinative of patent rights before early patent laws entered into force.[12] After the introduction of the Statute of Monopolies and King Elizabeth's subsequent forced signature for the approval, patent rights omitted any other alternatives that had existed before.[13] The term for the patent was 14 years. The patent system of those ages was truly complicated and required a lot of expenditure. Meanwhile, the specially designated council was responsible for the patent litigations instead of courts, so that it took lots of time and effort to develop new rules for patentability and adapt the system to the latest challenges.[14]

The similar trend could be observed in other European countries, more accurately in France and Italy. One of the notable granted inventions was introduced by Galileo Galilei in Italy in 1594 for the irrigation machine which functioned better and cheaper. In his patent application, the invention was characterized as the fruit of his own labor and *'common property of everybody'*.[15] Moving from this notion of *'fruits of someone's own labor'*, there exists a discussion over the natural-right character of patent rights supported mostly

[9] Hitesh Chopra and Sandeep Kumar, *Intellectual Property Protection and Rights: Historical and Current Perspective*, 6:5 International Journal of Pharmacy and Pharmaceutical Sciences 572, 572-573 (2014).
[10] Atalay Berk Damgacıoğlu, *Patent Sistemlerinde Buluş Basamağı Kriterinin Değerlendirilmesi*, Uzmanlık Tezi, Türk Patent Enstitüsü Patent Dairesi Başkanlığı, 9 (2011).
[11] Not coincidentially, the early deeds to endorse someone's patent rights used to be defined as **'letter of patent'**. *See*, Adam Mossoff, *Rethinking the Development of Patents: An Intellectual History – 1550 – 1800*, 52 Hastings Law Journal 1255, 1259 (2001).
[12] Bernard F. Garvey, *History of United States Patents and Present Day Norm of Patentable Inventions*, 5 Miami Law Quarterly 541, 541 (1951).
[13] Worth Wade, *History of the American Patent Incentive System*, 44 Journal of the Patent Office Society 67, 67 (1962).
[14] Damgacıoğlu, *supra* note 10, 15.
[15] P.J. Federico, *Origin and Early History of Patents*, 11 Journal of the Patent Office Society 292, 294-295 (1929).

by Hugo Grotius, Pufendorf and John Locke. Without delving into the specific sides of 'social contract theory' which exerts the social contract between the inventor and the state over the patent, we would like to remind that the initial incentive for granting patent rights to the individuals came from the desire of the crowns to advance their wealth by monopoly rights.[16]

The patent rights in the U.S. started to evolve quite differently, in comparison with Europe but holding some ties with the preceding system.[17] Certainly, the main reasons were the decolonization of the U.S after the War of Independence and most importantly, the acceptance of patent rights as inherent rights of inventors.[18] This approach appeared in the first article of the U.S. Federal Constitution which approves inventors' patent rights *'to promote the progress of science and useful arts'*.[19] The result of this development - §101 of the U.S. Patent Act came with a broad protection for patent rights without delimitating the exceptions.[20] With the help of judicial decisions, the threshold of patent protection and standards have been ascertained in *common law* countries.

Today more and more types of patentable objects and process have been introduced. In addition to inventions which are the most popular type of patentable objects, patent applications in this era can consist of industrial designs, computer software if embedded in a particular technology, surgical procedures, and even plants.[21] Patent rights are and have always been territorial in nature and valid within the boundaries of the region in which it has been granted. Regulations and procedures regarding the patent prosecution and enforcement vary across countries. Major patent offices around the world include European Patent Office (EPO), United States Patent and Trademark Office (USPTO), Japanese Patent Office (JPO), and China's State Intellectual Property Office (SIPO). However, there is an international treaty called the Patent Cooperation Treaty (PCT) which allows getting international protection in more than 150 member countries without a need to apply separately for patent protection.[22] International intellectual property system aims to harmonize the patent laws worldwide and establish the cooperation between states.[23] The protection brought by the international conventions and the obligations of states support not only the local patent

[16] Mossoff, *supra* note 11, 1257-1258.
[17] William M. Hindmarch, *A Treatise on the Law Relating to Patent Privileges, for the Use of Inventors*, 3 Forum 1, 15 (1875).
[18] Damgacıoğlu, *supra* note 10, 16.
[19] Wade, *supra* note 13, 67.
[20] Dennis D. Crouch and Mitchell L. Terry, *The History and Future of E-commerce Patents*, 7 Landslide 13, 14 (2015).
[21] William W. Fisher, *The Growth of Intellectual Property: A History of the Ownership of Ideas in the United States*, 4 (1999), https://cyber.harvard.edu/people/tfisher/iphistory.pdf (last visited 25 November 2018).
[22] WIPO, http://www.wipo.int/pct/en/pct_contracting_states.html (last visited June 19, 2018).
[23] H.V. Sandhya, *A Critical Study of Harmonization of Patent Law and Its Impact on Indian Legal System*, Karnatak University Department of Law 1, 104 (2013).

applicants but foreigners in the light of the *'national treatment'* standard. Together with the *'right of priority'*, this standard has been undertaken by 177 states under the Paris Convention on the Protection of Industrial Property (Paris Convention).

In Azerbaijan, the development of the patent system was inconsistent during the Soviet era which did not recognize the private property constitutionally at all. Since its independence in 1991, most laws on commerce and intellectual property were adopted. The establishment of the Patent Licensing Committee in 1993 and its successor, the Committee on Standardization, Meteorology and Patent in 2001 were two necessary steps to surmount administrative hurdles. Since 1995, Azerbaijan is a member of the World Intellectual Property Organization (WIPO), and most of its administered treaties, such as the Paris Convention and the PCT.[24] The legal basis enables the current Patent and Trademark Center to receive e-applications and work with them efficiently. However, more difficulties exist in the adaptation process to the latest international standards, and patent law is not an exception.

II. The conditions for patentability in the United States, Europe and Azerbaijan

A. Novelty

The novelty requirement in patent laws had been one of the earliest criteria before the non-obviousness was introduced to the respective legislations. The main idea behind this standard is to reward innovations.[25] This reward in patent laws is embodied in the form of monopoly rights because an inventor contributes to society with something never done before.[26] As it is sufficient to check the novelty of an invention or a process, the mere comparison between the claimed subject matter of the patent application and the prior art will be the essence of novelty.

1. The United States

In the U.S. patent law, the examination of this standard encompasses three phases; firstly, the referred prior art should **predate** the claimed invention, secondly, there should be **a strict identity** between two subject matters, and

[24] Azərbaycanda Patent Sistemi – 25 İl, Azərbaycan Respublikası Əqli Mülkiyyət Agentliyi Patent və Əmtəə Nişanlarının Ekspertizası Mərkəzi, http://patent.gov.az/?sid=132 (last visited 26 November 2018).

[25] B.N. Roy, *Novelty and Obviousness in Patent Law*, 3 Journal of Intellectual Property Rights 59, 59 (1998); *Novelty and Reduction to Practice: Patent Confusion*, 75 Yale Law Journal 1194, 1195 (1966).

[26] Tun-Jen Chiang, *Defining Patent Scope by the Novelty of the Idea*, 89 Washington University Law Review 1211, 1217 (2012).

finally, the referred prior art should **be disclosed in detail** to enable the PHOSITA to perceive it sufficiently.[27] In order to qualify a prior art, the previous invention should be set in the public domain; in other words, it should be known or used by others but in restrictive terms, by being reduced to practice. It is not a *sine qua non* condition for the patentee to hear about the prior art.[28] This provision in the §102(a) of the U.S. Patent Act puts aside the ideas of any invention which can be held known to someone and is read as known or used prior arts in practice.[29] The use or disclosure of the invention by the inventor which may otherwise enable others to know the claimed subject matter is excluded from the prior art. In Azerbaijani patent law, this exception is limited to 12 months.

In order to assess the novelty, the embodiment of an invention is crucial, because the patent law does not consider ideas as the prior art.[30] However, an embodied prior art is *per se* insufficient, because it should be disclosed to the public which brings this closer to the standard of disclosure.

2. Europe

Concerning the European patent law, the common conventions regulating the harmonization of domestic patent laws across Europe and the community patents have a necessary impact. The same procedure can be observed in the European trademark law and practice. Despite the EPC influenced the development of the common patent practice throughout Europe, the standard of novelty is more or less similar to its U.S. version. However, the EPC accepts unpublished European patent applications as a prior art, in spite of their invalidity for the assessment of the inventive step.[31] Under Article 52 of the EPC, the novelty requirement is pictured in the 'new patents', and *'the discoveries, scientific theories, and mathematical methods'* are indisputable prior arts which can never turn to be novel.[32]

3. Azerbaijan

The patent laws in former countries of the Soviet Union sparked considerably after 1991 when all of 15 countries gained their independence.[33] Likewise, Azerbaijan adopted its Law on Patents in 1997. With the impact of the international and regional patent conventions, the definition of the

[27] Sean B. Seymore, *Rethinking Novelty in Patent Law*, 60 Duke Law Journal 919, 923-924 (2011).
[28] Damgacıoğlu, *supra* note 10, 4.
[29] Edward C. Walterscheid, *Novelty & the Hotchkiss Standard*, 20:2 The Federal Circuit Bar Journal 219, 227-228 (2010); *Novelty and Reduction to Practice: Patent Confusion*, *supra* note 25, 1195.
[30] Chiang, *supra* note 26, 1218.
[31] Iain C. Baillie, *Where Goes Europe – The European Patent*, 58 Journal of the Patent Office Society 153, 164 (1976).
[32] Marco T. Connor and Lin Yasong, *How to Get Patent Protection in Europe*, 90 Journal of Patent and Trademark Office Society 169, 176 (2008).
[33] Richard P. Beem, *Patent Developments in Eastern and Central Europe and the Former Soviet Union*, 78 Journal of the Patent and Trademark Office Society 483, 484 (1996).

patentable subject matter in Azerbaijan contains similar wordings with other Commonwealth of Independent States (CIS) countries.

According to Article 7(2) of the Law on Patents, one of the conditions for patentability is the novelty.[34] The Law on Patents refers to the state of art in Article 7(3) to assess the novelty standard on the filing date of the claimed patent application. Irrespective of the territorial character of patent rights, the state of art means the existing accessible knowledge all around the world.[35] Again quite similarly to the U.S. patent law, the disclosure of the essence of the invention by the inventor or the applicant or any person who explicitly or implicitly received such information from them is not a prejudice to the novelty of the invention, if disclosed within 12 months' period prior to the filing date, in accordance with Article 7(5) of the Law on Patents. Unlike the European practice, the Azerbaijani patent law disregards unpublished patent applications for the prior art examinations.[36] The burden of proof here lies upon the inventor or the applicant themselves.

B. Disclosure

The main goal pursued through patent laws is not restricted to the protection of the efforts of individuals, but more than that, to foster the stability of an innovation and improvement in science and technology. To reach this goal, patent laws find it crucial to promote the disclosure of patented inventions and be a stimulus for others to further contribute to the development.[37] Otherwise, it would be completely unfair to charge patent infringers for infringing an undisclosed patent.

Imagine a guy who invents a flying car as a result of his continuous studies and efforts in his garage. If the inventor decides to keep the flying car secret and flies in his car around the house in a rural area, he will not be entitled to receive a patent. The reason here is that an invented subject matter and the technical information needed for further development should be disclosed. Because inventions are not developed for private use. Preventing unnecessary duplications of patented inventions[38], this standard creates new prior arts which help develop other innovations. By the application of this standard, the patentee can reach necessary donors for their inventions too. This requirement brings patent laws closer to the copyright that encourages the share of knowledge.[39] The disclosure standard is necessary to be able to exclude others from any right to the claimed invention.

[34] The Law of the Republic of Azerbaijan on Patent art.4, 312-1Q (1997).
[35] Azərbaycan Respublikasında Əqli Mülkiyyət Hüquqlarına Dair Bələdçi, 25; Roy, *supra* note 25, 61.
[36] *See* the similar legal rule in Indian patent law. Roy, *supra* note 25, 62.
[37] Roy, *supra* note 25, 59.
[38] Jeanne C. Fromer, *Patent Disclosure*, 94 Iowa Law Review 539, 550 (2009).
[39] Colleen V. Chien, *Contextualizing Patent Disclosure*, 69 Vanderbilt Law Review 1849, 1851 (2016).

Nevertheless, the descriptions commonly used in patent applications are vaguely worded to be a legal document. Thus, a patent application with its complicated wording in detail is disputed to be categorized as a source of information. This description can also vary from the area of science and technology depending on their predictability.

In order to be considered disclosed, a patent should be brought to the attention of the public. In the U.S. patent law and practice, testing the disclosure standard of any patent has been laid down in the case law, basically, in two steps. Firstly, it is recommended that the examiner should seek the fact that the patent applicant possesses **the best mode to practice the invention** at the filing date, and secondly, they **disclose the required best mode** in the patent application to enable the PHOSITA to use it without any undue experimentation.[40]

The disclosure as a patentability standard is a mandatory condition in some jurisdictions, whereas, in some other countries, the laws just suggest the disclosure to the applicants.[41] In the Law of Azerbaijan on Patents, the standard of disclosure has not been listed among the conditions of patentability of inventions. To clarify, Article 7 of the Law on Patents does not explicitly mention the disclosure of patents. However, according to Article 13(5) of the said law, neither the employer nor the employee shall disclose the subject matter of an invention, a utility model or an industrial design until the submission of a patent application. In addition, Article 27 sets out the requirements for a patent application among which the patentee is expected to insert a clear description of an invention or a utility model disclosing its subject matter completely and necessary for use. In this regard, non-observance of this requirement in patent applications shall result in the invalidity of an invention in Article 37 of the Law on Patents.

Taking all these provisions *in toto*, it can be concluded that the disclosure standard has been implicitly mentioned as a condition for patentability in the Law of Azerbaijan on Patents.

C. Utility

The utility standard *inter alia* usually lacks enough attention in patent laws. The standard to calibrate the scale of the usefulness of any invention has not been widely discussed in the academia.[42] The main reason for this issue

[40] Alan J. Devlin, *The Misunderstood Function of Disclosure in Patent Law*, 23 Harvard Journal of Law and Technology 401, 409-410 (2010).

[41] Thomas Henninger, *Disclosure Requirements in Patent Law and Related Measures: A Comparative Overview of Existing National and Regional Legislation on IP and Biodiversity*, Dialogo Centroamericano sobre Medidas Relacionadas con la Biodiversidad y el Sistema de PI, Costa Rica, 4 (2009).

[42] However, it should be acknowledged that the impacts of this standard on the patent system and its adventure since when it was first introduced in many legal systems, particularly in the United States have not been miniscule. There were times in the U.S., for example, like in the cases of *Schultze v. Holtz* in 1897 and *Brewer v. Lichtenstein* in 1922 when the courts were debating over the potential

probably lies in its flexible character and the application of the *de minimis* rule in most cases.[43] Although it is axiomatic that in order to patent an invention, it must be able to demonstrate some benefits to society, the utility of an invention can change from one case to another.[44] This requirement should never be subject to a narrow interpretation, merely because of the universal purposes of the patent system. The aim of the international patent system is to promote new inventions and contribute to science. Patent law, for this purpose, aims to protect every single invention from the fields of technology[45] and science. Thus, in general, everything is patentable; but the statement is always besieged by legal limitations. This general rule for patent rights is reminded in Article 27.1 of the TRIPS Agreement as well.

Interestingly enough, in the legal doctrine, there is a view which supports the protection of non-useful inventions as well as a part of useful arts. According to *Risch*[46], while non-useful inventions cannot be protected in trade due to the absence of usefulness, they are still a step forward in science, so they deserve a protection. The utility of an invention barely means its potential benefits to society acquired through disclosure. Thus, this requirement should be understood in relation to the previously discussed standard of disclosure to the public.

While the extent of the utility has yet to be determined, the term used for the utility varies in some jurisdictions, for example, it is called *'industrial applicability'*[47] in Europe. Together with the bare meanings of each term in miscellaneous jurisdictions, the utility means a benefit for the society. The question again centers on the extent of the utility standard. Are we looking for a minimal or maximal benefit to the society as a whole?

1. The United States

The boundaries of this standard, therefore, have been set down by the laws and court practice in different countries. For instance, in the U.S., this requirement has been brought by §101 of the Patent Act. The U.S. Patent Office evaluates this requirement under two headlines established by law; **substantial** and **specific utility**.[48] The examination of substantial utility is so strict that the law requires the acquired public benefit and urges the applicant

utility of gambling devices and denying the patent registration of such inventions, just because their incompliance with public morals. Jay Erstling et al., *Usefulness Varies by Country: The Utility Requirement of Patent Law in the United States, Europe and Canada*, 3:1 Cybaris - An Intellectual Property Law Review 1, 2 (2012); Michael Risch, *Reinventing Usefulness*, 2010 Brigham Young University Law Review 1195, 1204 (2010).

[43] Sean B. Seymore, *Making Patents Useful*, 98 Minnesota Law Review 1046, 1048 (2014).

[44] *Id.*, 1050.

[45] WIPO – World Intellectual Property Organization, WIPO Intellectual Property Handbook: Policy, Law and Use, 18 (2nd ed. 2008). ('WIPO Intellectual Property Handbook')

[46] Risch, *supra* note 42, 1200.

[47] Independent from the terminology issues, we will use the term 'utility' generally through the article, and the term 'usefulness' as a synonym in some parts.

[48] Erstling et al., *supra* note 42, 5-6.

not to lean on future researches and potential benefits. The second headline examines this requirement from the most specific context, which means that the applicant should be as concrete as possible in the application and prefer specific wordings to describe the scope of the benefits of an invention.

The legal doctrine divides the usefulness into three groups, in comparison with the two categories endorsed by law discussed above. These groups contain **operable**, **practical** and **commercial usefulness**. To compare with the legislative criteria set down in the Patent Act, the first two groups match substantiality and specificity respectively. However, commercial usefulness which narrowly explains the usefulness by referring to a commercial use is not an actual requirement nowadays. When this requirement was sought in the U.S. patent examinations, even the patentability of guns was endangered like in the case of *Fuller v. Berger* in 1903, solely because of their incompatibility with public morals.[49] Although today commercial usefulness is out of the examination of the U.S Patent Office and many other authorities in other states, Article 27.2 of the TRIPS Agreement permits state parties to insert such a restriction into their respective laws.[50]

2. Europe

In Europe, despite the practical difference in the terminology, the scope of the standard of the industrial applicability is relatively identical with the practice in the U.S. Article 57 of the EPC establishes that the invention is patentable if it can be made or used in any kind of industry.[51] The meaning of the industry, in this regard, is interpreted quite widely that it also includes agriculture[52]. The inclusion of the industrial applicability as a condition for patentability helps us ensure the repeatable production and exclude inventions with a mere aesthetic and natural character.[53] Finally, in the EPC, business methods are dismissed from the patent protection system. Business methods can be summarized as the combination of several economic rules but not engaged with laws of physics or biology.[54] Business methods do not include any technological step forward either.

The EPC expressly dismisses the patentability claims for computer software *per se* under Article 52. However, in Europe, as we mentioned above, the standard of industrial applicability is interpreted so widely that if a computer software is applied in the solution of technical issues[55], it will be patentable. Because the European patent system wants to encourage

[49] Risch, *supra* note 42, 1204.
[50] WIPO Intellectual Property Handbook, *supra* note 45, 18.
[51] Erstling et al., *supra* note 42, 10.
[52] Sivaramjani Thambisetty, *Legal Transplants in Patent Law: Why Utility is the New Industrial Applicability?*, 49:2 Jurimetrics 155, 157 (2009).
[53] John R. Thomas, *The Post-Industrial Patent System*, 10 Fordham Intellectual Property Media & Entertainment Law Journal 3, 7 (1999).
[54] *Id.*, 53-54.
[55] *Id.*, 52.

industrial development, even though a computer software cannot be patented solely, its useful application in technology shall be protected.

3. Azerbaijan

In Azerbaijan, the industrial applicability of inventions is regulated by Article 7.3 of the Law on Patents. Regarding the terminology used in Azerbaijan, the law prefers to articulate both industrially applicable and useful inventions. Thus, in this term, the very provision can be characterized as a combination of American and European approaches. However, significant differences exist between these systems. Among the three groups of industrial applicability mentioned above, the law accepts all, therefore, the examination of patent applications will also focus on the commercial usefulness. The last paragraph of Article 3 of the Law on Patents establishes that

*If a commercial use of an **invention**, a utility model or an industrial design contradicts with public order, humanism and moral principles and causes a serious harm on the environment, the protection of plants and human and animal life and health, they shall not be granted a patent and their use shall be prohibited. [emphasis added]*

Apparently, the Azerbaijani law not only prevents the registration of such inventions but goes further by prohibiting their use. This feature is absolutely different from similar laws of the U.S and Europe. In addition, it is obvious from the concept of the patents systems that the U.S. law focuses on the use of an invention in any field of industry, while the European law seeks the applicability which means that if an invention can be made in any field of industry, that will satisfy the condition. Unlike these differences, the Azerbaijani law remains a combination of both conceptions. According to Article 7.7 of the Law on Patents, the industrial applicability requirement shall be satisfied if an invention is able to be made **or** used in any field of industry and agriculture.

From our point of view, the term commonly used in Europe describes the standard of usefulness better, if we take the industry from a wider perspective. It means that an invention shall demonstrate practical implications and not obsess with pure theories. Aside from the positive effects of the search for practical inventions on the improvement of science and technology, a competitive market is also the main beneficiary. To illustrate, there is an eternal competition over the introduction of best and high-quality products in markets and companies fight with each other to win this battle and sell more, even in pre-production phases. The more patents are obtained rapidly, the stronger capacity is available for the use of the patentee company. That's why companies would be extremely willing to register patent rights for inventions which only have a theoretical background or consist of pure ideas. However, in contrast, the expectations of science and technology are entirely

realistic that they want inventions already in hand. For this reason, the patent laws aim to protect practical inventions, and the application of the standard of utility or industrial applicability is a perfect method to preclude theories.

D. Non-obviousness

Coming finally to the last condition for patentability which is the gist of our research at the same time, it must be held that the condition of non-obviousness is a common reason why many patent applications fail. The non-obviousness of any patent application requires that the invention becomes a result of the inventor's skills. In other words, if an invention is obvious, it may have been thought by the PHOSITA with a reference to the prior art.[56] This standard, together with the PHOSITA was first introduced in the seminal case of *Hotchkiss v. Greenwood*[57] in the U.S.[58] Here for a better picture of the condition of non-obviousness, we should draw a line between the condition of novelty discussed above and the non-obviousness itself.

While referring to the novelty, a patent examiner is much more certain with their task. An examiner should only look up in the existing prior art to evaluate the novelty of an invention. On the other hand, they should examine the possibility of the introduction of the invention by the PHOSITA, in order to reach a conclusion about the non-obviousness. The latter one is quite uneasy that it has no well-established formula to cite.[59] The non-obvious invention has something more than a novel invention – one step forward from the prior art.[60]

Nonetheless, the condition of non-obviousness should not be considered totally abstract or groundless; otherwise, the law could not regulate the rules for its application. It is quite perceivable from the description above that the reference to a prior art and the position of the PHOSITA are two essential components of an examination. For this reasons, it is necessary to understand an existing prior art and the capability of an ordinary person for having a better image of non-obviousness. For example, an idea of one-click shopping

[56] James Boyle and Jennifer Jenkins, Intellectual Property: Law and the Information Society Cases and Materials, 743 (3rd ed. 2016).
[57] Hotchkiss v. Greenwood, 52 U.S. 248 (1850), https://supreme.justia.com/cases/federal/us/52/248/ (last visited 06 December 2018).
[58] Matthew Herder, *Demythologizing PHOSITA – Applying the Non-obviousness Requirement under Canadian Patent Law to Keep Knowledge in the Public Domain and Foster Innovation*, 47:4 Osgoode Hall Law Journal 695, 703-704 (2009); Miriam Divya Williams and T.K. Bandyopadhyay, *An Analysis of Obviousness Standard in Patent Law – U.S. and Indian Perspective*, Rajiv Gandhi School of Intellectual Property Law 1, 3 (2015).
[59] Although in the U.S. case law, there is a milestone case, such as *Graham v. John Deere Co.* that is going to be discussed below, and sets down the criteria for the assessment of the non-obviousness in the legislative framework, it is difficult to come up with a certain formula for the non-obviousness. Unlike the novelty standard, the wording used to describe the non-obviousness in most legislations is unclear and always needs judicial interpretation.
[60] Damgacıoğlu, *supra* note 10, 5.

patented by Amazon.com was disputed enough in the legal doctrine.[61] Because in the presence of a database of the users' shipping and billing addresses, the one-click shopping technique was allegedly obvious.[62] Taking our example for a more clear explanation of obviousness, the idea of the one-click shopping is allegedly obvious, because the PHOSITA would have simply thought about that.

The rationale for the application of this condition on patent examinations, historically speaking, derive from the insufficiency of conditions of novelty and utility. Non-obviousness means everything to patent laws because it is directly related to its object and purposes. By applying the non-obviousness, a state can easily eliminate easy and doable inventions from patent examinations and award those which brings a notable breakthrough.[63] Additionally, as the law grants a patent monopoly to a patent owner, the condition of non-obviousness is applied meticulously to require a high level of innovative activity[64]. Even though this sort of monopoly is time-limited, the law cannot take a risk to grant such a monopoly for simple inventions without any innovative character.

Unlike the deep differences in the concept of utility in the U.S and the EPC, Article 56 of the EPC and §103 of the U.S. Patent Act establish similar descriptions of non-obviousness by putting the PHOSITA right in the middle of patent examinations. However, again the EPC uses a different term for non-obviousness – *'inventive step'*.[65]

In contrast, the Law of Azerbaijan Republic on Patents establishes a different approach to the non-obviousness of inventions. Article 7.2 of the Law on Patents places the non-obviousness among other conditions for patentability. The law seeks an inventive step like the practice in Europe. According to Article 7.6 of the Law on Patents:

If an invention is not obviously coming out of the existing knowledge for ***a specialist working on the same field****, it is considered non-obvious.*

This wording explains the possible application of the position of a specialist who has been working in the same field, to define the likeliness of an invention as regards the state of art. The patent law in Azerbaijan limits the subjective standard merely to the specialist of the same field. In the legal doctrine, there is a view[66] which construes the notion of 'the specialist' as the experts of patent offices, just because they are able to do research and well-

[61] Jeanne C. Fromer, *The Layers of Obviousness in Patent Law*, 22:1 Harvard Journal of Law and Technology 75, 86 (2008).
[62] Crouch and Terry, *supra* note 20, 16.
[63] Fromer, *The Layers of Obviousness*, *supra* note 61, 75-76.
[64] Stanley Lai, *The Future of Inventive Step in Patent Law*, 24 Singapore Academy of Law Journal 599, 599 (2012).
[65] Kotaro Kageyama, *Determining Inventive Step or Non-obviousness for a Patent Requirement in View of the Formation Process of an Invention*, 7 Beijing Law Review 238, 241 (2016).
[66] S.S. Allahverdiyev, Əqli Mülkiyyət Hüququ, 315 (2006).

equipped to act as an expert in these fields. However, we completely disagree with this restrictive explanation of the provision. The replacement of the PHOSITA with an expert, no doubt, will increase the amount of granted patents in Azerbaijan improperly. This view will be discussed in more detail in the last part of our research.

III. The examination of non-obviousness in the United States, Europe And Azerbaijan

During the examination of non-obviousness, it is important to review prior arts. The concept of existing prior arts here comprise not only similar inventions but well-known arts[67], the existing knowledge in technology and science or the state of art, which everybody has ever heard of. In other words, an invention can be examined in comparison with more than one prior arts. This review process in most jurisdictions starts with the interpretation of a patent application.[68] In this stage, patent examiners try to percept what makes this application inventive without discussing it with the inventor. However, patent offices struggle to make this test as objective as possible by checking the non-obviousness of an invention in the absence of the obviousness of an invention. Basically, if an invention is not easily thinkable given the existing knowledge and prior arts in the following field, it will be non-obvious, therefore inventive. In one of the prominent cases examined in the United Kingdom, Lord Russell of Killowen defined this criterion as ***'superior to what had gone before'***[69].

It is worth to recall the practice of the evaluation of non-obviousness in the U.S. which is outlined in the seminal case of *Graham v. John Deere Co.*[70] in 1966. The U.S. Supreme Court listed four categories for examination in this case, which included the determination of the closest existing prior arts[71], finding out differences between the claimed and existing inventions, thinking about the level of an ordinary skill in the claimed invention and finally, the examination of the objective evidence. The test introduced by this case is entirely factor-based[72], which, in the end, declares obvious patent applications invalid, in case they fail to meet these factors.

[67] Kageyama, *supra* note 65, 243.
[68] Hazel Moir, *An Inventive Step for the Patent System?*, The Australian National University Center for Policy Innovation 1, 3 (2012).
[69] Paul Abel, *The Inventive Step*, 26 Journal of the Patent Office Society 494, 495 (1944).
[70] Graham v. John Deere Co., 383 U.S. 1 (1966), https://supreme.justia.com/cases/federal/us/383/1/ (last visited 2 December 2018).
[71] Most patent offices do also look for the technical problem solved by the claimed invention in relation to the identification of the prior art. Arnie Clarke and Jack Shepherd, *EPO: Inventive Step - The Most Effective Patent Killer*, 262 Managing Intellectual Property 37, 37 (2016).
[72] Matthew Faga, *Non-obviousness: The Fulcrum of Combination Patent Validity*, 85:2 Denver Univerisity Law Review 485, 490 (2007).

A. Prior Art

In the practice established by the EPC, the prior art is made known to the public[73] by use or other means of written or oral descriptions, before the filing date of the European patent application.[74] Apparently, **only early publications** are considered in terms of the EPC, however, it should not be discarded that **early applications** for patentability can be taken into account to examine novelty.[75]

The concept of the prior art in Article 54 of the EPC is quite broad that it does not eliminate any kind of invention merely because of their inventors' age, language or home country.[76] The European practice **excludes the secret prior art** from the patent examinations of the inventive step.

To compare from the American perspective, according to the first and second sentences of §102 (a) of the U.S. Patent Act, the prior art comprises each invention published before the effective filing date of the patent application[77], plus secret prior art which is applied before the following date but disclosed or published afterward.[78] It marks the difference between two laws and practice in the U.S. and Europe that the latter never allows the examination of the secret prior art in terms of the non-obviousness.

In one of the notable cases that described the concept of non-obviousness by referring to the prior art, the *Smith v. Hayashi*[79] examined by the Federal Circuit in the U.S., the court discussed if the Hayashi's use of vitreous selenium as a replacement of the phthalocyanine in the electrophotography was obvious.[80] According to the court's view, as far as both phthalocyanine and selenium are considered photoconductors in the electrophotography, the use of the latter was obvious, thus could not be patented. In this case, the prior art is not only the invention claim of the Smith, which was briefly the use of phthalocyanine but also its similar use with selenium.[81] The use of selenium as a photoconductor was known in the electrophotography, that's why no one can patent it after the Smith's invention.

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[73] Allahverdiyev, *supra* note 66, 314.
[74] Assessment of Inventive Step under the EPC (2010), 6, http://www.bardehle.com/uploads/tx_toco3bardehle_files/Inventive_Step_en.pdf (last visited 13 July 2018).
[75] *Id.*, 6.
[76] Chih-Hao Chou, *Comparative Analysis of Inventive Step/Non-obviousness Standard and Case Study Thereof – from the Aspect of 'the Problem To Be Solved'*, 25 IIP Bulletin 1, 2 (2016).
[77] *Id.*, 2.
[78] This practice is mentioned as *'whole-contents approach'*, and its main difference from *'prior-claim approach'* is that the secret prior art or the patent application should be disclosed to be considered. C. Douglass Thomas, *Secret Prior Art –Get Your Priorities Straight!*, 9:1 Harvard Journal of Law & Technology 148, 150 (1996).
[79] Smith v. Hayashi, 209 USPQ 754 (1980).
[80] The U.S. International Trade Commission, In the Matter of Certain Integrated Circuits, Processes for Making Same and Products Containing Same, 31 (August 2003).
[81] John H. Barton, *Non-obviousness*, 43 IDEA – The Journal of Law and Technology 475, 481 (2003).

The examination of non-obviousness in terms of the prior art is straightforward when compared to the subjectivity brought by the PHOSITA. The prior inventions are at least accessible through the internet or databases. The classified database of most patent and trademark offices could help the examination of this criterion[82] via their well-established store of patented inventions.

B. The PHOSITA[83]

In any patent examination, the view seen through the PHOSITA's eyes is highly vital. Because the level of non-obviousness is scaled by giving a consideration to what the PHOSITA thinks of the claimed invention. Unlike trademark examinations in which the level of knowledge expected from an average customer is sought, the PHOSITA is not an ordinary person but in contrast, a skilled person who can give an input with regard to the obviousness in question. However, the definitions given to this category of persons vary in different jurisdictions.

In the EPC, the PHOSITA is a skilled practitioner with average knowledge in the field of science or technology, the invention refers to at the relevant filing date.[84] The notion of the PHOSITA is closely interrelated with the state of art and it establishes a threshold to determine where the general common knowledge in the relevant field lies.[85] **'The problem and solution approach'**[86] commonly practiced in Europe checks if the solution of the problem is obvious to the PHOSITA compared to the state of art.

Apparently, in order to qualify the PHOSITA, one is not required necessarily to work in the relevant field but possess the needed average skills in the U.S. and Europe. This category should exclude, for example, technology nerds[87] or innovators, and those who have already gained an exceptionally high amount of knowledge and skills as a researcher or an inventor in the same field of the claimed invention. The PHOSITA in the European practice is not required to acquire inventive capabilities.[88] In cases when an invention demands a multidisciplinary approach for a technical solution or a travel from

[82] Homer J. Schneider, *Non-obviousness, the Supreme Court, and the Prospects for Stability*, 60 Journal of the Patent Office Society 304, 310 (1978).
[83] The term PHOSITA is an abbreviated form of the *'person having an ordinary skill in the art'* which is commonly preferred in the legal doctrine.
[84] Chou, *supra* note 76, 4.
[85] Kageyama, *supra* note 65, 241.
[86] Fouad H. Darras and Chen Liu, *Introducing the "Person Having Ordinary Skills in the Art" (PHOSITA) into pharmaceutical Patent Prosecution at the EPO and the USPTO Introducing Person Having Ordinary Skills in the Art*, Social Science Research Network 1, 9 (2017).
[87] However, in the initial judgments in the U.S., the PHOSITA was perceived as the nerds who knew everything in the state of art but did not combine them tactfully to develop an invention. *See*, in detail, Brenda M. Simon, *Rules, Standards and the Reality of Obviousness*, 65:1 Case Western Reserve Law Review 25, 40 (2014).
[88] Assessment of the Inventive Step under the EPC, Bardehle Pagenberg, 5, http://www.bardehle.com/uploads/tx_toco3bardehle_files/Inventive_Step_en.pdf (last visited 06 December 2018).

technical to non-technical realms, the PHOSITA will be assumed to be a person who has such a multidisciplinary background. The creativity is what marks the difference between the PHOSITA and the inventors.[89]

Turning to the U.S. patent law and practice, the notion of the PHOSITA is relatively same with the understanding of the EPC. In general, the U.S. practice prefers the **'teaching-suggestion-motivation' approach**[90] which in turn focuses on something in the prior art which is inclined to suggest the claimed invention to the PHOSITA. However, the *KSR case*[91] decided by the U.S. Supreme Court attributed a new character to the PHOSITA, which is elaborated as **'ordinary creativity'** in the legal doctrine.[92] The level of creativity does not reach, however, the level of the inventor's creativity, but the ordinary one. The Court simplified this definition by giving an example of pieces of a puzzle, thus, looked for the PHOSITA's ordinary ability to combine multiple patents and complete the puzzle.[93]

From our point of view, although the European practice avoids making reference to the creative PHOSITA, the PHOSITA should not be deprived of their creative skills, unless it is required in the same way as a researcher or an inventor. The level of ordinary creativity, therefore, should not be interpreted excessively. Otherwise, most patentable inventions may fail when they encounter with the creative PHOSITA to whom many articles are obvious. The more skills the PHOSITA possesses in their suitcase, the less likely an inventor can defeat obviousness.[94] The PHOSITA should be deemed ordinarily skilled in the relevant field[95] but this high bar should not equalize the PHOSITA with a researcher who seeks inventions in their daily work. The skill bar owned by the PHOSITA should be set quite carefully because the shorter bar would conversely let more and more trivial innovations be patentable. This could be seen in the case when the decision-makers themselves play the role of the PHOSITA[96], because these examiners of patent offices or judges do not mostly enjoy the needed ordinary skills in relevant fields. The word 'ordinary' should be seen as a key to determine the level of skills of the PHOSITA to avoid creativity.

The filing date should in all cases be the determining time for the PHOSITA.[97] The reason for its importance is related to the disclosure of a

[89] Chou, *supra* note 76, 4.
[90] Darras and Liu, *supra* note 86, 9.
[91] KSR International Co. v. Teleflex Inc. et al., 550 U.S. 398 (2007), https://www.supremecourt.gov/opinions/06pdf/04-1350.pdf (last visited 02 December 2018). (KSR case).
[92] Jonathan J. Darrow, *The Neglected Dimension of Patent Law's PHOSITA Standard*, 23:1 Harvard Journal of Law & Technology 227, 228 (2009); Chou, *supra* note 76, 4.
[93] KSR case, *supra* note 91, 5.
[94] Boyle and Jenkins, *supra* note 56, 767.
[95] Darrow, *supra* note 92, 233.
[96] Rebecca S. Eisenberg, *Obvious to Whom? Evaluating Inventions from the Perspective of PHOSITA*, 19 Berkeley Technology Law Journal 885, 888 (2004).
[97] *Id.*, 888.

patent application. As soon as the patent becomes disclosed which happens certainly after the filing date, the PHOSITA – whoever they are, will be fully aware of the invention and it will be fully obvious.

Apart from the skills possessed by the imaginary PHOSITA in the patent examinations, the specifications assigned to the state of art in different fields can influence the PHOSITA's predictions. This issue has been discussed in the doctrine in the light of the classification by the U.S. Supreme Court, concerning the predictability of arts. The judicial practice still tends to consider computer science as a **predictable art** and accepts the level of PHOSITA higher than **unpredictable arts** like biotechnology. As the Supreme Court insists on its old case law to determine if a particular field of science or technology is predictable, this view is critiqued in the doctrine.[98]

The Law of Azerbaijan Republic on Patents does not give an explanation to the PHOSITA. Article 7(6) of the Law on Patents mentions **'the specialist working on the same field'** to describe the PHOSITA. While the meaning of the term used is close to the PHOSITA's commonly accepted understanding, the PHOSITA is a clearer description than the specialist who is working on the same field.

In the legal doctrine of Azerbaijan, 'the specialist' is interpreted in the way to comprise the persons with average knowledge working on the field the invention belongs to, and refer to the experts of patent offices.[99] Although we agree that the examination of the PHOSITA's position is highly subjective, the PHOSITA or the specialist as mentioned in the Law on Patents can never be read as the experts of patent offices, merely because of their professional background, specialization, work experience or research skills. The doctrinal view cited above is mistaken by assigning 'the specialist' status to the patent examiners, just because the PHOSITA is a legally constructed hypothetical person to scale the non-obviousness, rather than real persons who work at patent offices.

In conclusion, the PHOSITA should always be seen as ordinarily skilled in the relevant field selected among those other than the decision-makers and the persons with ordinary skill in the relevant field. The level of knowledge and skills stored in the PHOSITA's mind should not be found too broad as to encompass everything, despite the fact that technology and internet today have widened the scope of information and most importantly, eased their accessibility.[100]

C. Secondary Considerations

In the patent laws, although the prior art and the view of the PHOSITA are of importance, other factors may also be taken into account for the

[98] Boyle and Jenkins, *supra* note 56, 767.
[99] Allahverdiyev, *supra* note 66, 315.
[100] Simon, *supra* note 87, 38-39.

determination of non-obviousness. These factors comprise the commercial success of the invention, the *de facto* need in the society for the relevant innovation, and an easy acceptance by the public. Given the fact that these factors can be laid on the table to prove the non-obvious character of the disputed invention, they shall never be deemed merely determinative.[101]

The examination of secondary considerations for the non-obviousness of the claimed invention is mainly preferred in the U.S. practice.[102] The increasing commercial success of the invention supposedly reveals that the invention was non-obvious at the time it was introduced because otherwise, it would simply be rejected by the public. But from our perspective, such evidence should only be seen complementary to the other main list of evidence which contains the prior art, the PHOSITA and finally, the predictability of the invention standing in the PHOSITA's shoes. If the commercial success of an invention was satisfactory for proving non-obviousness, most companies would invade the patent application system of patent offices merely relying on their accomplishment.

Conclusion

While the standards of novelty and utility satisfied the examination of the patent applications before, new standards such as non-obviousness became a need to examine developing art after the inventions started to be built on the prior art. This condition, if applied properly, helps state authorities grant patent rights to worthy candidates and award inventors for their intellectual labor. The invention should be considered obvious if there is no boom – anyone could have come up with such a "good" idea. Non-obviousness sparks the development of new Eureka.

The examination standards of non-obviousness in the U.S. and Europe have been much more advanced than Azerbaijan. This examination process should encompass the identification of prior art and the position of the PHOSITA. However, the predetermined classification of the arts based on their predictability can pose a bias in the mind of the decision-makers. Thus, instead of prejudging the arts, it would be more effective to do a case-to-case analysis and come to a proper conclusion about the predictability of the invention by the PHOSITA.

Article 7(6) of the Law on Patents of Azerbaijan Republic needs to be revised in this regard. To have an ordinary skill in the art and to work on the same field are two different phenomena, thus, the latter obviously limits the scope of persons to their employment status. Because working in the same field as the claimed invention as a specialist is not the only way to gain enough

[101] Herder, *supra* note 58, 709.
[102] David J. Abraham and Shinpo-Sei, *Japanese Inventive Step Meets U.S. Non-obviousness*, 77:7 Journal of the Patent and Trademark Office Society 528, 529 (1995).

insight to predict the invention. A person who is not working in that field but in some way related to the field of the invention can be imagined for the examination as well. The PHOSITA should never be attributed to patent examiners or judges *in personam* but examined by them. What's more, the definition in the Law on Patents looks for the similarity between two fields of science or technology which means further work burden.

Thus, the non-obviousness in Article 7(6) needs to be revised to comprise 'the person having ordinary skill in the art' and be understood as an average practitioner from the relevant field of the invention, other than creative inventors or researchers.