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## The Governance Framework of Open Access Repositories in Greece

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By Nikos Koutras

### I. INTRODUCTION

Scholars argue that open access repositories (OARs) can work as an additional tool to boost networking among institutions. Greece, in its quest for boosting networking amongst its institutions, should consider taking steps to expand its open access practice.<sup>1</sup> This paper compares the Greek open access practice to the European governance framework. This paper is divided into three parts. The first part assesses how the Greek regulatory system operates and clarifies the necessary process for a statute to be introduced in Greece. Furthermore, in this part also assesses Greek law (constitution and specific local regulations) because it introduces the concept of freedom of information. Therefore, there is a link between information and knowledge, which supports my argument that access to

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<sup>1</sup> The open access practice appeared as a response to the rapid growing prices of scholarly and scientific journals. See Jean-Claude Guédon, *The "Green" and "Gold" Roads to Open Access: The Case for Mixing and Matching*, 30 SERIALS REV. 315 (2004). Mainly, librarians were concerned about the high prices of journals while there was restricted access due to constrained economic means. Gradually, such concern has evolved, and issues related to access have been extrapolated from issues associated with costs. Additionally, Guedon argues that open access has been focusing on articles, more than journals because of a few reasons: a) scientists as readers tend to pay more attention to articles; b) online publishing maintains the journal titles mainly for branding reasons; and c) the very dynamics of the open access practice have also contributed to offer greater prominence to the articles as a unit (p. 320). More specifically, open access became a movement after a meeting in Budapest in December 2001, organized by the Information Program of the Open Society Institute. That meeting witnessed a vigorous consideration about definitions, tactics, and practices, and out of this discussion emerged two approaches. First, existing journals find a way to transform themselves into open access publications, or open access journals are created. Second, authors and/or institutions 'self-archive' published peer review articles or a combination that then becomes the equivalent of published, peer-reviewed articles.

information is imperative to acquire new knowledge.<sup>2</sup> This part also analyzes the Greek copyright regime, exploring how information can be disseminated.

The second part of this paper examines the Greek Copyright Act in particular, as well as how the latest developments in European Directives influence the Greek Copyright Act.<sup>3</sup> The local regulations of European Union (EU) member states should be aligned with Directives issued by the European Commission. This part also argues that, in order to become a member of the European Union (EU), states' local regulations should be aligned with Directives issued by the European Commission as required by European treaties. This statement supports my argument that OARs and gradual growth of open access practice in Greece is potentially desirable. It follows discussion about the emergence of open access practice in Greece. It also discusses when open access was introduced and norms on which open access is based.

The final section of this article examines several surveys conducted by Greek scholars that analyzed the status and progress of Greek OARs. This examination supports my argument that long-term perspectives and future potential uses can emerge for Greek OARs. Access to knowledge is crucial for the flourishing of knowledge economies.<sup>4</sup> Informational resources and data are major knowledge assets.<sup>5</sup> These knowledge assets should be as open as efficiency and justice allow.<sup>6</sup>

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<sup>2</sup> See generally J.E. ROWLEY & RICHARD J. HARTLEY, ORGANIZING KNOWLEDGE: AN INTRODUCTION TO MANAGING ACCESS TO INFORMATION (2008).

<sup>3</sup> Konstantia Katsouli, *Lucasfilm v. Ainsworth: Comments in the Light of Greek Copyright Law*, 8 J. INTEL. PROP. L. 226, 230 (2013).

<sup>4</sup> See generally ZOLTAN J. ACS ET AL., THE EMERGENCE OF THE KNOWLEDGE ECONOMY: A REGIONAL PERSPECTIVE (3d ed. 2013).

<sup>5</sup> David Collings, SMART TALENT MANAGEMENT: BUILDING KNOWLEDGE ASSETS FOR COMPETITIVE ADVANTAGE, 397-99 (Vlad Vaiman & Charles Vance eds. Volume 39(3) 2010).

<sup>6</sup> See Nick Bontis, *Assessing Knowledge Assets: A Review of the Models Used to Measure Intellectual Capital*, 3 INT'L J. MGMT. REVS. 41, 45 (2001).

## II. ASSESSMENT OF THE GREEK LEGAL SYSTEM

### A. An Explanation of the Greek Legislative System

It is appropriate to note several facets of the Greek legislative system. The Greek government's willingness to regulate is illustrated through both the laws it passes and the system itself.<sup>7</sup> During the Greek Parliament process, legislators propose and discuss new regulations. Based on that process the Greek government introduces policies to enhance social welfare.<sup>8</sup> The Parliament develops new institutions and procedures, giving each the financial resources needed to accomplish their respective goals. However, recommendations and proposals for new legislation can be produced by Ministers, other government representatives, or assembly people from different political parties that are not currently in the government.<sup>9</sup>

The Greek Ministries are the main government bodies responsible for passing legislation. Each Ministry has a specific focus and passes legislation within that focus area. For example, the Ministry of Finance develops monetary policy for Greece. Additionally, new legislation is introduced through the following process: initially, the Minister involved with a new regulation assigns its construction to a Pro-Legislation Committee (PLC).<sup>10</sup> This committee drafts a plan for the regulation to be considered prior to discussion in the Parliament. The next stage of the legislative process is consideration of the plan by the Greek Central Committee for Legislations

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<sup>7</sup> See generally VICTOR EHRENBERG, *THE GREEK STATE* (Routledge Library Editions: Political Science Volume 23 2013) (1960).

<sup>8</sup> Villy Tsakona, *Irony beyond criticism: Evidence from Greek parliamentary discourse*, 2 PRAGMATICS & SOC'Y 57,59-61 (2011).

<sup>9</sup> See generally George Andreou, *EU Cohesion Policy in Greece: Patterns of Governance and Europeanization*, 11 SOUTH EUR. SOC'Y & POL. 241 (2006); see also Themistokles Lazarides, *Corporate Governance Legal and Regulatory Framework's Effectiveness in Greece: A Response*, 19 J. FIN. REG. & COMPLIANCE 244 (2011).

<sup>10</sup> See generally Nikos Alivizatos & Pavlos Eleftheriadis, *SOUTH EUROPEAN BRIEFING - The Greek Constitutional Amendments of 2001*, 7 SOUTH EUR. SOC'Y & POL. 63-71 (2002).

(GCCL), which falls under the General Administration for the Greek Government.<sup>11</sup> The GCCL also makes recommendations on the proposed plan from the PLC before its submission to the Parliament for further discussion, as is required by Arthro 75(3) Synt. Arthro 75(1) Synt. also states that the draft plan should attach a list of justifications and objectives for the regulation. After this stage, the draft plan is presented by the President of Parliament in order to be considered among political parties, Parliament Departments, and the Standing Committees.<sup>12</sup> The Standing Committee should consider legal provisions that facilitate information access and exchange. The founding principle of the Greek Copyright Act is analyzed below. The principle comes from Arthro 16 Synt. and the Nomos 4009/2001.

*B. Provisions that Facilitate Access to Information: Arthro 16 Synt. and the Nomos 4009/2011*

Arthro 16 Synt. states that education is provided free in state institutions and that private universities are prohibited. Scholars argue that Arthro 16 Synt. is an outdated law with social costs.<sup>13</sup> However, Arthro 16 Synt. introduces the importance of education regarding knowledge and its connection to access of information.<sup>14</sup>

Additionally, Arthro 16 Synt. is part of the second section of the Constitution, which establishes the rights of citizens, such as individual and social rights. The first and second subsections, addressed below, refer to education and highlight the significance of the fact that access to

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<sup>11</sup> See generally Stratos Patrikios & Michalis Chatzikonstantinou, *Dynastic Politics: Family Ties in the Greek Parliament, 2000–12*, 20 SOUTH EUR. SOC'Y & POL. 93–111 (2015).

<sup>12</sup> 2008 SYNTAGMA [SYN.] [CONSTITUTION] 72.

<sup>13</sup> See generally George Psacharopoulos, *The Social Cost of an Outdated Law: Article 16 of the Greek Constitution*, 16 EUR. J. L. & ECON. 123 (2003).

<sup>14</sup> See generally HEIDI COLLINS, ENTERPRISE KNOWLEDGE PORTALS: NEXT-GENERATION PORTAL SOLUTIONS FOR DYNAMIC INFORMATION ACCESS, BETTER DECISION MAKING, AND MAXIMUM RESULTS (2003).

information furthers knowledge. Specifically, these subsections state the following:

Arthro 16(1) Synt.: Art and science, research and teaching shall be free and their development and promotion shall be an obligation of the State.<sup>15</sup>

Arthro 16(2) Synt.: Education constitutes a basic mission for the State and shall aim at the moral, intellectual, professional and physical training of Greeks, the development of national and religious consciousness and at their formation as free and responsible citizens.<sup>16</sup>

This legislation illustrates that the dissemination of information is the overarching objective for the Greek educational system. It also indicates that open access should be a part of both the educational process and the acquisition of new knowledge. This statement furthers my argument that open access should be utilized as a tool to provide Greek citizens with equal opportunities to improve access to knowledge assets.

Education is a crucial instrument for knowledge enhancement, intellectual creation and dissemination of information in the context of Greek copyright laws.<sup>17</sup> The Nomos 4009/2001 is associated with the Greek Copyright Act 2121/1993 and illustrates the need for access to information in order to improve teaching methods.<sup>18</sup> Articles 3(1) and 4(1, 2 and 3) of the Nomos 4009/2011 clarify that the necessity of sharing, exchanging, and disseminating information should be built into the Greek educational curriculum. In addition, both articles highlight the significant role of

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<sup>15</sup> See 2008 SYNTAGMA [SYN.] [CONSTITUTION] 16(1).

<sup>16</sup> *Id.* at 16(2).

<sup>17</sup> See generally Eleni Sianou-Kyrgiou, *Social Class and Access to Higher Education in Greece: Supportive Preparation Lessons and Success in National Exams*, 18 INT'L STUD. SOC. EDUC. 173 (2008).

<sup>18</sup> See generally Dionisia Kallinikou, *License Contracts, Free Software and Creative Commons in Greece*, in FREE AND OPEN SOURCE SOFTWARE (FOSS) AND OTHER ALTERNATIVE LICENSE MODELS 227–34, [https://link.springer.com/chapter/10.1007/978-3-319-21560-0\\_11](https://link.springer.com/chapter/10.1007/978-3-319-21560-0_11) [<https://perma.cc/SG9P-JL6C>] (last visited Nov. 8, 2017).

universities and academia in terms of the exchange, dissemination, and sharing of information in order to gain knowledge.

Article 3(1)

1. Through Higher Education Institutions (Universities, Technical Educational Institutions, Colleges and Institutes of Technology) the academic freedom is established for further research and improved methods of teaching as well as a freely exchange and dissemination of information, notions and views...<sup>19</sup>

Article 4(1, 2, and 3)

1. The overarching objective for the Higher Education Institutions is to: a) promote, produce and transmit knowledge through research and teaching and efficient use of information resources. Higher Education Institutions should also prepare students to become able to apply such principles and values in a professional level and help them to grow Greek arts and culture...

2. For education purposes, Higher Education Institutions should aim to: a) emphasize in high level and comprehend education, aligned with arts and science requirements as well as aligned with international scientific practices...

3. For the fulfillment of purpose, Higher Education Institutions are organized and operate under regulations and practices to ensure compliance and protection in principles such has: a) access to educational resources, freedom of research and improvements for teaching method...<sup>20</sup>

These Articles illustrate that access to information resources equips Greek citizens with new knowledge and should therefore be a required component of the educational infrastructure of Greece.<sup>21</sup> These articles support my argument that the Nomos 4009/2011 is the foundation of access

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<sup>19</sup> FEK A' 89/ 11.04.2014

<sup>20</sup> *Id.* at 4256.

<sup>21</sup> See generally Elisa Makridou et al., *Open Educational Resources and Freedom of Teaching in College Education in Greece: Rivals or Fellows?* RESEARCHGATE (2012), [https://www.researchgate.net/publication/272019955\\_](https://www.researchgate.net/publication/272019955_) [<https://perma.cc/CWR7-J3H8>].

to information resources and clarify that universities have a significant role in sharing, disseminating, and exchanging information.

After an examination of the Greek legislative system and specific legal provisions, which introduced freedom of information and the importance of access to information resources for education purposes, the following section discusses examines the Greek Copyright Act.

### *C. Foundations of Greek Copyright Act*

The emergence of the Internet and the digital revolution has brought several issues to the forefront. The Internet determines an online framework for individuals to interact, based on networks through which exchange of information is convenient.<sup>22</sup> The Internet is a system that enhances human cognition, cooperation, and communication.

Scholars argue that Gutenberg's invention of the printing press fundamentally changed the procedure through which knowledge can be created, exchanged, and shared.<sup>23</sup> Online publication and digital networking are the contemporary equivalent of the printing press, as argued in Jeremiah Dittmar's article 'Information Technology and Economic Change: The Impact of The Printing Press'.<sup>24</sup> Because of web-enhanced teaching and learning, scholars now talk about learning as a measure of improved student participation.<sup>25</sup>

University campuses have created their own network environments by providing students with access to computers.<sup>26</sup> Such technological

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<sup>22</sup> See generally Sareh Aghaei et al., *Evolution of the World Wide Web: From Web 1.0 to Web 4.0*, 31 INT'L J. WEB & SEMANTIC TECH. 1 (2012).

<sup>23</sup> See generally ALEXANDER HARS, FROM PUBLISHING TO KNOWLEDGE NETWORKS: REINVENTING ONLINE KNOWLEDGE INFRASTRUCTURES (2003).

<sup>24</sup> Jeremiah E Dittmar, 'Information Technology and Economic Change: The Impact of The Printing Press' (2011) 126(3) *The Quarterly Journal of Economics* 1133.

<sup>25</sup> See generally Daniel Churchill, *Educational applications of Web 2.0: Using blogs to support teaching and learning*, 40 BRIT. J. EDUC. TECH. 179–83 (2009).

<sup>26</sup> See Charles Crook, *The Campus Experience of Networked Learning*, in NETWORKED LEARNING: PERSPECTIVES & ISSUES 293 (1st ed. 2002); see generally Geoffrey C.



advancements have provoked the need to modernize university structures and facilities. Administrators and academic authority have faced the significant issue of whether a new library can add value to the educational enterprise and reinforce campus-based learning.<sup>27</sup>

What is more, the open access movement is growing and would allow free access to information with no restrictions on reuse. The use of scientific research that is cited in educational literature and news is often restricted by publishers who require authors to sign over their rights and surrender their control over what is done with the published work.<sup>28</sup> The information revolution has given open access practice a chance to be adapted and become a norm for copyright law designation. This furthers my argument that open access could potentially be tailored to copyright law without changing the standards of copyright. Therefore, the following section examines the Greek Copyright Act.<sup>29</sup>

### III. EXAMINATION OF GREEK COPYRIGHT ACT (NOMOS 2121/1993)

Greek law concentrates on the copyright proprietor, who is a central concern in terms of intellectual protection. This discussion highlights the central objective of the Greek Copyright Act, which is to protect a copyright owner's interests.<sup>30</sup> Professor Maria Bottis (School of Information and Informatics, Ionian University, Greece) argues that a creator's rewards and

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Bowker et al., *Toward Information Infrastructure Studies: Ways of Knowing in a Networked Environment*, in INTERNATIONAL HANDBOOK OF INTERNET RESEARCH 97 (2010).

<sup>27</sup> See generally R. DAVID LANKES, *THE ATLAS OF NEW LIBRARIANSHIP* (1st ed. 2011).

<sup>28</sup> Aileen Fyfe, 'Information Revolution: William Chambers, the Publishing Pioneer' (2006) 30(4) *Endeavour* 120.

<sup>29</sup> For the purposes of this section the term 'Greek Copyright Act' refers to Nomos 2121/1993 which was amended by Nomos 2435/1996 (Ar. 3 and 10), Nomos 2557/1997 (Ar. 8), Nomos 2819/2000 (Ar. 7), Nomos 3057/2002 (Ar. 81) and Nomos 3207/2003 (Ar. 10(33)).

<sup>30</sup> See generally APOSTOLOS MANTHOS, ΠΙΝΕΥΜΑΤΙΚΗ ΙΔΙΟΚΤΗΣΙΑ (Nomiki Bibliothiki 2015).

affiliated rights should be the primary consideration in copyright law.<sup>31</sup> Scholars also claim that the ‘creator’s right’ is a crucial element of the Greek Copyright Act, and its overarching objective is to clarify that IP rights should focus on creator’s role.<sup>32</sup> Yet another interesting argument regarding the basic objective of the Greek Copyright Act is found within several provisions. For example, one provision concerns the protection of moral rights, which establishes a reward to the creator. Below, a brief analysis of the Greek Copyright Act is provided.<sup>33</sup>

The first article of the Greek Copyright Act clarifies the purpose of copyright and what is being copyrighted. Authors shall have a copyright in an eligible work, which includes, as exclusive and absolute rights, the right to exploit the work (economic right) and the right to protect their personal connection with the work (moral right).<sup>34</sup> In addition, a work is considered unique when it shows minimum degree of creativity.<sup>35</sup>

Under the Greek Copyright Act, no specific regime exists for copyright registration. Particularly, Article Two states that the rights are vested in the author of a work upon creation of the work, without having to resort to any formality.<sup>36</sup>

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<sup>31</sup> Maria Canellopoulou-Bottis, ‘Participation in Intellectual Property issues - Interpretation of the Greek Copyright Act No. 2121/ 1993, titled in Greek ‘Συμμετοχή Στο Πνευματική Ιδιοκτησία-Ερμηνεία Ν. 2121/1993’ (SSRN Scholarly Paper ID 2625548, Social Science Research Network, 2009)

<sup>32</sup> Dionisia Kallinikou, *Regulations for Intellectual Property and Relevant Rights in Greece* (Sakkoulas, 2007).

<sup>33</sup> Anna Fragkou and Vasiliki Strakantouna, ‘Libraries and the Role of Copyright Exceptions and Limitations in the Contemporary Academic Environment’ (at the 4th International Conference on Information Law, Thessaloniki, Greece, 2011).

<sup>34</sup> Dimitrios Serenidis, *Προσβολές της πνευματικής ιδιοκτησίας στα ψηφιακά δίκτυα* (Nomiki Vivliothiki Group ed.; 1 edition, 2010).

<sup>35</sup> DIONISIA KALLINIKOU ET AL., *INTELLECTUAL PROPERTY IN GREECE*, p. 152 (Wolters Kluwer Law & Business; 2<sup>nd</sup> edition, 2014).

<sup>36</sup> Nomos 2121/ 1993 Ar. 2.

The Greek Copyright Act has been amended ten times,<sup>37</sup> which furthers my argument that this area of intellectual property is gradually expanding.<sup>38</sup> For example, international agreements are expanding intellectual property – specifically, Australia’s and the United States’ Free Trade Agreement (FTA).<sup>39</sup> This bilateral agreement will greatly impact Australia’s intellectual property framework. Australia is required to pass a form of the World Intellectual Property Organization (WIPO) Copyright and Performances and Phonograms Treaties providing for additional rights for intellectual protection, such as trademarks.<sup>40</sup>

To conclude, continuous technological growth brings new concepts that are relevant to online creation (such as online posts, videos, photos, etc.) and thus online creations should be protected. Therefore, international context plays a crucial role for national context. International agreements on IP have side effects on national policies and national regulation making. The ratification mentioned above shows that international context plays a crucial role for local legislation in Greece. In other words, European legislation (such as directives and regulations) are significant for European member states; hence, these are impacts that should be considered to influence national regulations. Greece, as a European member state, has similar abiding obligations. The interconnections between European legislation and the Greek Copyright Act are examined below.

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<sup>37</sup> It has been amended with: Nomos 2435/ 1993, Nomos 2188/ 1994, Nomos 2196/ 1994, Nomos 2435/ 1996, Nomos 2459/ 1997, Nomos 2557/ 1997, Nomos 2819/ 2000, Bill 3049/ 2002, Nomos 3057/ 2002 and Nomos 3316/ 2005.

<sup>38</sup> David Lea, *The Expansion and Restructuring of Intellectual Property and Its Implications for the Developing World*, 11 ETHICAL THEORY & MORAL PRAC. 37, 48 (2008).

<sup>39</sup> See generally Ralph Fischer, *The Expansion of Intellectual Property Rights by International Agreement: A Case Study Comparing Chile and Australia's Bilateral FTA Negotiations with the U.S.*, 28 LOY. L.A. INT'L & COMP. L. REV. 129 (2006).

<sup>40</sup> See generally PHILIPPA S. DEE, THE AUSTRALIA–US FREE TRADE AGREEMENT: AN ASSESSMENT I (2005).

*A. European Directives and Greek Copyright Act: Interconnections*

The European directives provide directions for national laws and basic norms for their structure. The Greek Copyright Act contains articles that illustrate the interconnection between European legislation and local regulations in member states. This means that the directives introduce provisions that should be considered. Such legal provisions are as follows:

1. Article 2(3) applies Council Directive 91/250/EEC concerning legal protection of computer programs. Specifically, this Directive provides directions concerning creations that constitute computer programs. Such creations are those that encompass a form of expression regarding computer software. However, rationales and principles that establish a component for computer software should not be considered for copyright protection under this article.<sup>41</sup>

2. Article 3(1) shall constitute implementation of Council Directive 92/100/EEC regarding the rental and lending right and certain rights in relation to copyright. These articles introduced the creator's/author's exclusive right to (a) rent their work directly or indirectly, partially or entirely, via any means, (b) lend their work, and (c) lend a copy of their work to the public through any sales point or by using a variety of such means.

3. Article 68(1) added in the application of the Council Directive 93/98/EEC for harmonizing the term of protection of copyright and certain related rights. This Directive provides a framework of copyright protection for the following works: (a) such protection has been expired and (b) fail to article 2(3) of this statute or past certain related rights.

4. Article 3(3) added in implementation of Directive 96/9/EC of the European Parliament and of the Council on the legal protection of

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<sup>41</sup> The Council of the European Communities, 'Council Directive 91/ 250/ EEC of 14 May 1991 on the Legal Protection of Computer Programs' <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31991L0250:EN:HTML>>.

databases. This Directive highlights the copyright owner's exclusive right on his or her database, which was not previously highlighted. More specifically, the copyright owner has the exclusive right to: (1) provide temporary or permanent reproduction of information enclosed in the database through means either partially or as a comprehensive project; (2) translate, modify, change, add, remove, or make other relevant changes to his or her database; and (3) disseminate or distribute the database or its copy to the public.<sup>42</sup> This fact supports my argument that European legislation is quite helpful in terms of improving copyright protection.

5. Article 46(2) is added in application of Directive 2001/29/EC and its article 5(3) regarding the harmonization of certain aspects of copyright and related rights in the information society. Particularly, the Directive refers to exceptions or limitations to reproduction and public communication rights. The article clarifies that the right to reproduce or publicly communicate a creation can benefit people with a disability when rights of reproduction are associated with their disability, of a non-commercial nature, and to the extent required by the specific disability.<sup>43</sup> The exceptions and limitations shall only be applied in certain special cases that do not conflict with a normal exploitation of the work or other subject matter and do not unreasonably prejudice the legitimate interests of the right holder.

Greece should enact legislation that European member states have, which stems from European directives, as well as European regulations.<sup>44</sup> These interconnections show that a consensus between local and international

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<sup>42</sup> Els J Kindt, *Privacy and Data Protection Issues of Biometric Applications: A Comparative Legal Analysis* (Springer Science & Business Media, 2013).

<sup>43</sup> European Parliament and Council, 'Directive 2009/28/EC of the European Parliament and of the Council of the 23 April 2009 on the Promotion of the Use of Energy from Renewable Sources and Amending and Subsequently Repealing Directives 2001/77/EC and 2003/30/EC'

<[http://www.nezeh.eu/assets/media/fckuploads/file/Legislation/RED\\_23April2009.pdf](http://www.nezeh.eu/assets/media/fckuploads/file/Legislation/RED_23April2009.pdf)>.

<sup>44</sup> See generally MIREILLE M. M. VAN ECHOU, HARMONIZING EUROPEAN COPYRIGHT LAW: THE CHALLENGES OF BETTER LAWMAKING (2009).

agreements is crucial for harmonization in this area among European member states. Protection should be provided regardless of whether infringements happen online or not.<sup>45</sup> If copyright infringement is reflected from national laws in the European continent, protection should be available. It follows that European Directives provide an “umbrella” of protection for European citizens to be regarded as creators and authors.<sup>46</sup>

The Greek Copyright Act provides clarifications regarding the content of online creations.<sup>47</sup> Because online content is original data and information and not classified as part of the prior art base, it should be protected under the same legal provisions as copyrighted works.<sup>48</sup> Copyright protection should extend to new materials that are capable of being produced online with ease. Therefore, the Greek Copyright Act can provide protection for potential online infringements. Furthermore, this is a potential link for creating a consensus among universities, associated OARs, and creators of content hosted by these OARs. Such agreements can be useful and show that open access supports the sharing of copyrighted creations.

#### IV. THE EMERGENCE OF OPEN ACCESS IN GREECE

The publishing, sharing, and exchange of information remained quite stable until the beginning of 2000.<sup>49</sup> At the time, the telecommunication

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<sup>45</sup> See generally Alexandra Giannopoulou, *Copyright enforcement measures: the role of the ISPs and the respect of the principle of proportionality*, 3 EUR. J. OF L. & TECH. 1 (2012); See generally STEPHEN FISHMAN, *THE COPYRIGHT HANDBOOK: WHAT EVERY WRITER NEEDS TO KNOW* (4th ed. 2014).

<sup>46</sup> See generally Monica E. Antezana, *The European Union Internet Copyright Directive as Even More Than It Envisions: Toward a Supra-EU Harmonization of Copyright Policy and Theory*, 26 B.C. INT'L & COMP. L. REV. 415 (2003).

<sup>47</sup> See generally Hazel Hall & Dianne Graham, *Creation and recreation: motivating collaboration to generate knowledge capital in online communities*, 24 INT'L J. OF INFO. MGMT. 235, (2004).

<sup>48</sup> See generally MATTHEW COLLINS, *THE LAW OF DEFAMATION AND THE INTERNET* (3d ed. 2011).

<sup>49</sup> See generally Rosanna Breen et al., *The Role of Information and Communication Technologies in a University Learning Environment*, 26 STUD. HIGHER EDUC. 95, (2001).

infrastructure in Greece had been improved with the financial support provided from the European Commission for national projects.<sup>50</sup>

On October 26, 2007, the European Commission approved an Operational Program for Greece for the period from 2007 to 2013.<sup>51</sup> The program, titled Digital Convergence, involved community support for Greek regions that are eligible under the Convergence objective.<sup>52</sup> Community assistance through the European Regional Development Fund amounts to some 860 million euros, which represents approximately 4.2 percent of the total European financial support that was invested in Greece under the Cohesion Policy from 2007 to 2013.<sup>53</sup>

The report of the National Strategic Reference Framework (NSRF) for the period 2007 to 2013 illustrates that Greece uses information and communication technologies (ICT) to a lesser extent than the other European member states.<sup>54</sup> Indeed, ICT made no significant contribution to the country's productivity or Greek citizens' quality of life.<sup>55</sup> Part of this NSRF is constituted by the operational program titled "Digital Convergence." The basic scope of Digital Convergence is to emphasize

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<sup>50</sup> See generally NEILL NUGENT & MARK RHINARD, *THE EUROPEAN COMMISSION* (Palgrave Macmillan 2015) (2001).

<sup>51</sup> European Commission, *Operational Programme 'Digital Convergence'* (2007) Regional Policy [http://ec.europa.eu/regional\\_policy/en/atlas/programmes/2007-2013/greece/operational-programme-digital-convergence](http://ec.europa.eu/regional_policy/en/atlas/programmes/2007-2013/greece/operational-programme-digital-convergence) [<https://perma.cc/3CAY-DTEQ>].

<sup>52</sup> See generally Petros Iosifidis, *Digital Convergence: Challenges for European Regulation*, 9 JAVNOST - THE PUBLIC 27, 32 (2002).

<sup>53</sup> See generally John Bachtler & Irene McMaster, *EU Cohesion Policy and the Role of the Regions: Investigating the Influence of Structural Funds in the New Member States*, 26 ENV'T & PLAN. C: GOV'T & POL'Y 398, 418 (2008).

<sup>54</sup> See generally VALÉRIE SCHAFFER & BENJAMIN G. THIERRY, *CONNECTING WOMEN: WOMEN, GENDER AND ICT IN EUROPE IN THE NINETEENTH AND TWENTIETH CENTURY* (2015).

<sup>55</sup> See generally Xia Liu et al., *The Use of ICT in Preschool Education in Greece and China: A Comparative Study*, 112 PROCEDIA – SOC. & BEHAV. SCI. 1167, 1176 (2014); see also Maria Ntaliani et al., *Citizen e-Empowerment in Greek and Czech Municipalities*, in *E-DEMOCRACY – CITIZEN RIGHTS IN THE WORLD OF THE NEW COMPUTING PARADIGMS* 124, 133 (S. Katsikas & A. Sideridis eds., 2015).

developmental directions and particularize strategies, means, and interventions towards an effective and sustainable use and growth of ICTs in Greece. The overarching purpose of Digital Convergence is to contribute to the convergence of Greece with the rest of the European member states, introducing ICT in a greater extent to Greece.<sup>56</sup> Here, introducing ICT means increased use of ICT by enterprises, streamlined procedures in the public sector, and increased use of digital applications in public administration to improve citizens' life quality.<sup>57</sup>

Furthermore, the NSRF for the period between 2007 to 2013 highlights that the overarching goal of the Digital Convergence is to contribute to the digital convergence of Greece with the rest of the European Union using ICT.<sup>58</sup> The program's priorities include, among other things, improved productivity with increased use of the ICT, improvement of citizens' daily life, and technical assistance for ICTs.<sup>59</sup>

In addition to the European program and financial support, open access has been developed.<sup>60</sup> Consequently, the process of the dissemination of

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<sup>56</sup> See generally Dimitrios Buhalis & Ourania Deimezi, *E-tourism developments in Greece: Information communication technologies adoption for the strategic management of the Greek tourism industry*, 5 TOURISM & HOSPITALITY RES. 103 (2004).

<sup>57</sup> See generally Florence Nameere Kivunike et al., *Perceptions of the role of ICT on quality of life in rural communities in Uganda*, 17 INFO. TECH. DEV. 61 (2011); see also Marc-Eric Bobillier Chaumon et al., *Can ICT improve the quality of life of elderly adults living in residential home care units? From actual impacts to hidden artefacts*, 33 BEHAV. & INFO. TECH. 574 (2014).

<sup>58</sup> María Rosalía Vicente & Ana Jesús López, *Patterns of ICT Diffusion across the European Union*, 93 ECON. LETTERS 45, 48 (2006).

<sup>59</sup> See generally Vedat Coskun et al., *A Survey on Near Field Communication (NFC) Technology*, 71 WIRELESS PERS. COMM. 2259 (2013); see also MANUEL CASTELLS, COMMUNICATION POWER (3d ed. 2013).

<sup>60</sup> See generally Petros Kostagiolas & Christina Banou, *Managing Expectations for Open Access in Greece: Perceptions from the Publishers and Academic Libraries*, RESEARCHGATE (2007), [https://www.researchgate.net/publication/28807187\\_Managing\\_Expectations\\_for\\_Open\\_Access\\_in\\_Greece\\_Perceptions\\_from\\_the\\_Publishers\\_and\\_Academic\\_Libraries](https://www.researchgate.net/publication/28807187_Managing_Expectations_for_Open_Access_in_Greece_Perceptions_from_the_Publishers_and_Academic_Libraries) [<https://perma.cc/BN8R-8VT9>].



information has escalated.<sup>61</sup> Since the settlement of Greece, several hundred magazines and journals have been publishing and the work of Greek researchers, authors, and creators, including scientific publications, adoption of peer review procedures, new e-journals, online printed versions, immense digitization of journals, etc.<sup>62</sup>

The National Documentation Center (NDC) created the first online database for printed doctoral theses; ARGO and IATROKTEK, the first online databases in 90's, and the first digital repository, was introduced by the University of Crete in 1997.<sup>63</sup> Since then, there has been an ongoing effort towards modernization with a beneficial impact that stems from European financial support to Greek academic libraries.<sup>64</sup> Greek academic libraries entered into this new era through these databases, digital repositories, participation in European projects, and collaboration with other European libraries.<sup>65</sup>

Open scientific initiatives in Greece have been part of the country's strategy for Digital Convergence.<sup>66</sup> Major actors in these initiatives are the NDC; the Greek institution for the aggregation, documentation,

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<sup>61</sup> See generally Panos Georgiou & Fiori Papadatou, *Open Access in Greece*, in OPEN ACCESS IN SOUTHERN EUROPEAN COUNTRIES 39 (2010).

<sup>62</sup> See generally Colin Simmons & Nicos Leandros, *Printing and Publishing in Greece: 'flexibility' and the process of innovation, 1979–1991*, 20 BYZANTINE & MODERN GREEK STUDIES 142 (1996).

<sup>63</sup> See generally Gregory Karvounarakis & Sarantos Kapidakis, *Submission and repository management of digital libraries, using WWW*, 34 COMPUTER NETWORKS 861 (2000).

<sup>64</sup> Ifigenia Vardakosta & Sarantos Kapidakis, *Geographical Collections in Greek Academic Libraries: Current Situation and Perspectives*, E-LIS (2011), <http://eprints.rclis.org/16169/> [<https://perma.cc/8S8C-UG2J>].

<sup>65</sup> See generally Ifigenia Vardakosta & Sarantos Kapidakis, *Geospatial collection development policies in academic libraries: a worldwide research*, E-LIS, <http://eprints.rclis.org/16096/> [<https://perma.cc/ATZ7-EQNG>] (last visited Nov. 8, 2017); Britta Woldering, *The European Library: Integrated Access to the National Libraries of Europe*, ARIADNE (2004), <http://www.ariadne.ac.uk/issue38/woldering> [<https://perma.cc/GM62-D3LA>] (last visited Nov. 8, 2017).

<sup>66</sup> See generally RAE EARNSHAW & JOHN VINCE, *DIGITAL CONVERGENCE - LIBRARIES OF THE FUTURE* (Springer Science & Business Media 2007).

preservation, dissemination, and reuse of scientific, technological and cultural e-content; the Hellenic Academic Libraries Link (HEAL-Link); the Greek Research and Technology Network (GRNET); and the Greek Universities Network (GUNET).

Nevertheless, the most important effort towards modernization was carried out through financial support provided by the European Commission for National Projects.<sup>67</sup> Specifically, such funding was used to address the creation of new services provided by university libraries in Greece.<sup>68</sup> During this period of digital advancement, the HEAL-Link foundation<sup>69</sup> and the first Digital Library for grey literature, called Artemis, were created.<sup>70</sup> Both of these examples rely on the operation of OARs for disseminating information. In addition, these examples show the significance of using OARs to disseminate information from institutions, such as annual reports, technical plans, research projects, white papers and materials, and research produced by institutions outside of commercial or academic publishing channels.<sup>71</sup>

Open access in Greece has developed gradually.<sup>72</sup> Currently, authors argue that the management of OARs is developing in a beneficial way and

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<sup>67</sup> See MICHELLE CINI & NIEVES PÉREZ-SOLÓRZANO BORRAGÁN, *EUROPEAN UNION POLITICS* (5th ed. 2016).

<sup>68</sup> See generally Alexandra Papazoglou & Eva Semertzaki, *Changes and developments in Greek libraries*, 19 *ELECTRONIC LIBR.* 158 (2001).

<sup>69</sup> See generally Kristiina Hormia-Poutanen et al., *Consortia in Europe: Describing the Various Solutions through Four Country Examples*, 54 *LIBR. TRENDS* 359, (2006).

<sup>70</sup> See June Abbas et al., *Middle School Children's Use of the ARTEMIS Digital Library*, in *PROCEEDINGS OF THE 2ND ACM/IEEE-CS JOINT CONFERENCE ON DIGITAL LIBRARIES* 98-105, [http://delivery.acm.org/10.1145/550000/544239/p98-abbas.pdf?ip=66.194.72.55&id=544239&acc=ACTIVE%20SERVICE&key=70F2FDC0A279768C%2ED8008EC87258DCE0%2E4D4702B0C3E38B35%2E4D4702B0C3E38B35&\\_acm\\_=1519170663\\_b1e6dacd4a50374ee4a39c12ce0ab1c8](http://delivery.acm.org/10.1145/550000/544239/p98-abbas.pdf?ip=66.194.72.55&id=544239&acc=ACTIVE%20SERVICE&key=70F2FDC0A279768C%2ED8008EC87258DCE0%2E4D4702B0C3E38B35%2E4D4702B0C3E38B35&_acm_=1519170663_b1e6dacd4a50374ee4a39c12ce0ab1c8) (last visited Nov. 1, 2017).

<sup>71</sup> See generally C. Claeys et al., *Initiatives promoting seamless care in medication management: an international review of the grey literature*, 35 *INT'L J. CLINICAL PHARMACY* 1040 (2013).

<sup>72</sup> Nikos Koutras, Elisa Makridou & Iliana Araka, *Institutional open access repositories in college education: a proposal for their role in open educational resources in Greece*,

can measure up against equivalent OARs abroad.<sup>73</sup> Therefore, to illustrate this point, a comparison of Greek OARs and Italian OARs is examined below.

Italy was selected for comparison because there is a program that Italy has been involved with from 2007 to 2013, which Greece has monitored.<sup>74</sup> This program forms a substantial part of the NSRF and its subdivision European Territorial Cooperation Program concerning digital convergence in Europe.<sup>75</sup> One of its overarching objectives is to improve accessibility to sustainable information networks and services provided by communication frameworks, such as OARs.<sup>76</sup> In this context, emphasis has been on increasing the effectiveness of information sharing and dissemination through OARs.<sup>77</sup>

The Italian Wiki on Open Access initiative was passed in 2008 and boosted open access and improved access to informational resources.<sup>78</sup> The basic scope of this wiki is to introduce the main concepts of open access and affiliated terms to further disseminate information about Italian projects

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in VALUES & FREEDOMS IN MODERN INFORMATION LAW & ETHICS 1139, 1144 Nomiki Vivliothiki Group ed., 2014).

<sup>73</sup> Elisavet Chantavaridou, *Open Access and Institutional Repositories in Greece: Progress so Far*, 25 OCLC SYSTEMS & SERVICES: INT'L DIGITAL LIBR. PERSP. 47, 59 (2009).

<sup>74</sup> *Towards an Open Access Italian network*, RESEARCHITALY (Nov. 8, 2013), <https://www.researchitaly.it/en/news/towards-an-open-access-italian-network/> [<https://perma.cc/J2JL-8PWQ>].

AUTHOR COMPLETELY CHANGED THE CITE FOR THIS FOOTNOTE  
<sup>75</sup> BIRGIT SCHMIDT & IRYNA KUCHMA, IMPLEMENTING OPEN ACCESS MANDATES IN EUROPE: OPENAIRE STUDY ON THE DEVELOPMENT OF OPEN ACCESS REPOSITORY COMMUNITIES IN EUROPE 91(2012).

<sup>76</sup> Elisavet Chantavaridou, 'Open Access and Institutional Repositories in Greece: Progress so Far' (2009) 25(1) *OCLC Systems & Services: International digital library perspectives* 47.

<sup>77</sup> Rowena Cullen & Brenda Chawner, *Institutional Repositories, Open Access, and Scholarly Communication: A Study of Conflicting Paradigms*, 37 J. ACAD. LIBR. 460, 462 (2011).

<sup>78</sup> Marco Chiandoni, *A landmark ruling for Italian open-access – but will it change anything?* 52 INT'L RAILWAY J. 16, 17 (2012).

and best practices that will lead towards the promotion of open access initiatives in Italy. The Italian L. 112/2013 and the Nomos 4305/2014, which introduce open access to publicly-funded research outcomes, are evidence of a possible turn towards a more balanced approach to intellectual property that more accurately weighs public and private proprietary interests.

Scholars argue that librarians, researchers and early adopters in universities, and research centers have been engaged with spreading information about open access issues within repositories and relevant projects.<sup>79</sup> It is also argued that no national financial support has been issued for open access initiatives, and the Italian Parliament has not provided a recommendation of funding for this area. However, the conference on Open Access to Scholarly Literature, held in Messina in 2004, and the Messina Declaration agreement are among thirty academic institutions engaging in the principle of open access to scholarly literature in Italy.<sup>80</sup> Accordingly, Gargiulo argues that this declaration has committed undersigned institutions towards a more beneficial distribution of scholarly content through open access.<sup>81</sup> The example of OARs in Italy show that OARs can also be seen as a means towards digital divergence in Europe, which increases information dissemination and sharing. As the efforts regarding the use of OARs in Greece are quite significant, the next section discusses the status and progress of Greek OARs.

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<sup>79</sup> Maria Cassella, 'Institutional Repositories: An Internal and External Perspective on the Value of IRs for Researchers' Communities' (2010) 20(2) *LIBER Quarterly* 210.

<sup>80</sup> Conference delegates, 'Italian Declaration Supporting the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (Messina Declaration)' <<http://www.aepic.it/conf/Messina041/viewappendix6d21.pdf?id=49&ap=1&cf=1>>.

<sup>81</sup> Paola Gargiulo, *Open Access in Italy: Achievements and Future Prospects*, 34 *INT'L J. LEGAL INFO.* 377 (2006).

## V. THE STATUS AND PROGRESS OF GREEK OARS

This section gives an overview of the status of Greek OARs. It also presents the basic components of Greek OARs using charts and tables as follows: (1) the platform used (such as Dublin Core, D Space, and so forth); (2) access to their database; and (3) regulations in terms of registration. Accordingly, these tables clarify the most common online platform in use, as well as whether full or restricted access is permitted and whether end-users are obligated to register in order to be able to gather information. There is also analysis and examination of online surveys conducted in 2013 and 2015, which focused on end-users' attributes regarding the open access repository of the Ionian University in Corfu, Greece. This section argues for the integration of Greek OARs into one OAR which has specific access regulations and provides an environment that is user-friendly.

Repositories conform to an internationally agreed upon set of technical standards.<sup>82</sup> It follows that they expose the metadata and bibliographic details (such as authors' names, institutional affiliation, date, titles of the article, etc.) of each item in with the same basic way. In other words, they are "interoperable." The common protocol to which they conform is called the Open Archives Initiative - Protocol for Metadata Harvesting (OAI-PMH).<sup>83</sup> The contents of all repositories are then indexed by web search engines such as Google and Google Scholar, producing online databases that are freely accessible. As the status of self-archiving steadily increases, the practice of open access will represent an increasingly large proportion of scholarly literature.<sup>84</sup>

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<sup>82</sup> Robert Tansley, 'Building a Distributed, Standards-Based Repository Federation: The China Digital Museum Project' (2006) 12(7/8) *D-Lib Magazine* <<http://www.dlib.org/dlib/july06/tansley/07tansley.html>>; Aikaterini-Maria Sourouni et al, 'Towards the Government Transformation: An Ontology-Based Government Knowledge Repository' (2010) 32(1) *Computer Standards & Interfaces* 44.

<sup>83</sup> Carl Lagoze & Herbert Van de Sompel, *The making of the Open Archives Initiative Protocol for Metadata Harvesting*, 21 *LIBR. HI TECH* 118, 119 (2003).

<sup>84</sup> Stevan Harnad, *Open Access: A Green Light for Archiving*, 487 *NATURE* 302 (2012).

There are several definitions for the concept of open access repository that differ in their specifics. There are scholars who argue that an open access repository would host, manage, preserve, and provide access to the whole research output of the institution, namely PhD and related postgraduate theses, dissertations, reports, data sets, and specific versions of institutions' staff publications.<sup>85</sup> From 2000 to 2010, open access repositories were developed through Greek academic libraries.<sup>86</sup> During this period, and particularly from 2005 to 2010, the Technology and Education Sciences Institute (TEI) of Athens made the first effort to establish an open access repository.<sup>87</sup> However, this attempt yielded poor results because of the lack of content contributions.<sup>88</sup> In 2011, the Department of Library Science and Information Systems of TEI in Athens took over leadership of the project, titled TEI of Athens library: growth of digital services, which currently operates through the Digital Plan Program, financed by the European Union.<sup>89</sup> In accordance with this framework, the new repository anticipates collecting and publishing online work of faculty members, student theses, dissertations, and educational material. Further, it incorporates a major collection of other institutes' archives.<sup>90</sup>

Georgiou and Papadatou, notable scholars in the field concerning OARs in Greece, argue that OARs should follow specific regulations surrounding access and protection.<sup>91</sup> The lack of uniformity in registration and use hampers the effectiveness of the dissemination of information. To fully

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<sup>85</sup> Nikos Koutras and Maria Bottis, 'In Search for One Sole Repository in Greece: Adventures and Solutions for an Integration of Repositories Towards Bridging the Digital Divide' (2014) 4(2) 119.

<sup>86</sup> Claudine Xenidou-Dervou, *Consortial journal licensing: experiences of Greek academic libraries*, 29 *INTERLENDING & DOCUMENT SUPPLY* 120, 122 (2001).

<sup>87</sup> Alexandros Koulouris et al., *Institutional Repository Policies: Best Practices for Encouraging Self-Archiving*, 73 *PROCEDIA – SOC. & BEHAV. SCI.* 769, 770 (2013).

<sup>88</sup> *Id.*

<sup>89</sup> *Id.*

<sup>90</sup> *Id.*

<sup>91</sup> Georgiou, *supra* note 61 at 139.

realize the full potential of such repositories, there must be implementation of a common Greek policy in the usage and registration of OARs.

Table 1: Status of Greek OARs for Content, Registration, and Access to the Full Content

Greek OARs						
Repository	Type of content	Platform	Access to the full content		Registration	
			Yes	No	Required	Not required
Nemertes <sup>92</sup>	Digitized bachelors and masters dissertations, doctoral theses, scientific publications	DSpace	✓			✓
Euruka <sup>93</sup>	Online database of intellectual production (from scientific,	DSpace		✓	✓	

<sup>92</sup> NEMERTES, <http://nemertes.lis.upatras.gr/jspui/> [<http://perma.cc/6HYT-PHYK>] (last visited Oct. 4, 2017).

<sup>93</sup> EURUKA, <http://eureka.lib.teithe.gr:8080/> (last visited Mar. 3, 2018).

	academic, historic and administrative aspect) of the Technological Educational Institute of Thessaloniki					
NTUA, University of Athens <sup>94</sup>	Bachelors and masters dissertations, PhD theses and digitized material (books and magazines) from NTUA's library	DSpace		✓	✓	
Pandektis <sup>95</sup>	Major digital collections of Greek history and civilization. The collections have been developed by the Institute of Neohellenic	Open Source Software	✓			✓

<sup>94</sup> DIGITAL LIBR. NAT'L & KAPODISTRIAN UNIV. ATHENS, <http://efessos.lib.uoa.gr/greylit.nsf/> [<http://perma.cc/S96L-HKSE>] (last visited Oct. 4, 2017).

<sup>95</sup> PANDEKTIS, <http://pandektis.ekt.gr/pandektis/> [<http://perma.cc/6C6C-8LUV>] (last visited Oct. 4, 2017).



	Research, the Institute of Byzantine Research, and the Institute of Greek and Roman Antiquity					
Pergamos <sup>96</sup>	Historical Archive of the University of Athens, Folklore Collection, Theatrical Collection, and K. A. Psachos Music Library Collection.	Open Source Software	✓			✓
Helios <sup>97</sup>	Digitized archives of Documentation Centre, Institute of Biology and Biotechnology, Institute of Medical	Open Source Software	✓		✓	

<sup>96</sup> PERGAMOS, <https://pergamos.lib.uoa.gr/uoa/dl/frontend/index.html> [<http://perma.cc/JF6S-6HWJ>] (last visited Oct. 4, 2017).

<sup>97</sup> HELIOS, <http://helios-eie.ekt.gr/EIE/> [<http://perma.cc/D8GZ-5WB8>] (last visited Oct. 5, 2017).

	research studies, Institute of theoretical and applied chemistry, Educational events					
Anemi <sup>98</sup>	Rich collection of digitized material related to Modern Greek Studies	Keystone		✓	✓	
Okeanos <sup>99</sup>	Hellenic Centre for Marine Research	Dspace	✓		✓	
'IKEE' <sup>100</sup>	Digital archives of collections of scientific works	Invenio v 1.2.1.17		✓	✓	
Psepheda, University of Macedonia <sup>101</sup>	Digitized archives of scientific journals, publications, music data,	Dublin Core		✓	✓	

<sup>98</sup> ANEMI, <http://anemi.lib.uoc.gr> [<http://perma.cc/FM3K-TYN6>] (last visited Oct. 5, 2017).

<sup>99</sup> OKEANOS, <https://okeanos-dspace.hcmr.gr/> [<http://perma.cc/RYU7-445P>] (last visited Oct. 5, 2017).

<sup>100</sup> IKEE, <http://ikee.lib.auth.gr/> [<http://perma.cc/D4MZ-5NU3>] (last visited Oct. 5, 2017).

<sup>101</sup> PSEPHEDA, <http://dspace.lib.uom.gr/> [<http://perma.cc/FLK7-D8J3>] (last visited Oct. 5, 2017).

	bachelors and masters dissertations, doctoral theses					
'Psifiothiki' <sup>102</sup>	Dissertations and scientific publications produced by members of the Aristotle University of Thessaloniki	Invenio v 1.2.1.17		✓	✓	
Foss <sup>103</sup>	Reports, presentations, digital collections, conference proceedings, studies, videos, and photos. The repository's organized digital environment also offers advanced navigation and	Open Source Software		✓	✓	

<sup>102</sup> PSIFIOTHIKI, <http://digital.lib.auth.gr/> [<http://perma.cc/6TP9-8HJE>] (last visited Oct. 5, 2017).

<sup>103</sup> FOSS, <http://repository.ellak.gr/> [<http://perma.cc/CWV6-5BTN>] (last visited Oct. 5, 2017).

	search functions					
Acropolis Educational Resources, Acropolis Museum <sup>104</sup>	Educational resources produced by the Information and Education Department of the Acropolis Restoration Service. These resources dynamically support representation and interpretation of the past. Teachers, students, and families can explore the repository and enrich their classroom teaching with visits to the Archaeological Site and	Open Source Software	✓			✓

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<sup>104</sup> ACROPOLIS, [http://repository.acropolis-education.gr/acr\\_edu/](http://repository.acropolis-education.gr/acr_edu/) [<http://perma.cc/4SJ8-5N5H>] (last visited Oct. 5, 2017).

	the Acropolis Museum					
Parthenon Frieze, Acropolis Museum <sup>105</sup>	Collection of digitized material and archives regarding the artistic work of Frieze	DSpace	✓			✓
Ergani <sup>106</sup>	Documented archival material that presents 200 years of local history, culture, and entrepreneurialism in north-eastern Aegean	DSpace		✓	✓	
National Archive of PhD Theses <sup>107</sup>	A rich collection of Greek students' doctoral theses in Greek and universities abroad	Open Source Software	✓			✓

<sup>105</sup> FRIEZE, <http://repository.parthenonfrieze.gr/frieze/> [http://perma.cc/B9RA-DAX4] (last visited Oct. 5, 2017).

<sup>106</sup> ERGANI, <http://www.ergani-repository.gr/ergani/> [http://perma.cc/W3LE-2KJS] (last visited Oct. 5, 2017).

<sup>107</sup> NAT'L ARCHIVE OF DOCTORAL THESES, <https://phdtheses.ekt.gr/eadd/> [http://perma.cc/67Q7-WHD8] (last visited Oct. 5, 2017).

Ionian University Repository <sup>108</sup>	80.000, 700 magazine titles, more 3.500 audio-visual records	PHP-Nuke	✓		✓	
Public Digital Library of Serres <sup>109</sup>	Digitized material, books, collections, newspapers, etc.	Open Source Software	✓			✓
Public Digital Library of Livadia <sup>110</sup>	Rare collections and a variety of texts of local and nationwide interest (history, literature, and poetry)	Open Source Software	✓			✓
Digital Library 'E-Dull' <sup>111</sup>	Published material and studies produced in the Operational Programme 'Education and Lifelong	Open Source Software	✓			✓

<sup>108</sup> *Library and Information Center website of the Ionian University*, IONIAN UNIV., <http://iup.ionio.gr/> [<http://perma.cc/82V7-UFVB>] (last visited Oct. 5, 2017).

<sup>109</sup> DIGITAL LIBR. SERRES, <http://ebooks.serrelib.gr/serrelib/> [<http://perma.cc/V94K-RKQJ>] (last visited Oct. 5, 2017).

<sup>110</sup> DIGITAL LIBR. LIVADIA, <http://ebooks.liblivadia.gr/liblivadia/> [<https://perma.cc/QT6Z-JD6R>] (last visited Oct. 5, 2017).

<sup>111</sup> DIGITAL LIBR. EUR. OPERATIONAL PROGRAM, <http://repository.edulll.gr/edulll/> [<http://perma.cc/URQ2-69P9>] (last visited Oct. 5, 2017).

	Learning?					
The Argo <sup>112</sup>	Bibliographic resources and content searching facilities for librarians, scientists, educators, and students	ABEKT Z39.50 web gate v4.0	✓			✓
E-Locus <sup>113</sup>	The material is organized in collections, and until now it consisted of graduate, postgraduate, and doctoral dissertations issued at the University of Crete, study guides of the University Departments, and technical reports	Keystone	✓			✓
'Hellanicus' <sup>114</sup>	Digital	CDS		✓	✓	

<sup>112</sup> THE ARGO, [<http://argo.ekt.gr/Argo/ArgoENU.html>] (last visited Mar. 3, 2018)

<sup>113</sup> E-LOCUS, <http://elocus.lib.uoc.gr/index.tkl> [<http://perma.cc/J9UN-7KD6>] (last visited Oct. 5, 2017).

	collections of the Aegean University	Invenio v 0.99.1				
'Pandimos' <sup>115</sup>	Digital Library of the Panteion University	Fedora		✓	✓	
Anaktisis <sup>116</sup>	Digital archives, scientific journals, bachelors and masters dissertations of Technological Educational Institute of Western Macedonia	Eprints 3.0		✓	✓	
'Olympias' <sup>117</sup>	Digital collections of the Library of the University of Ioannina	Dspace	✓			✓
'Dione' <sup>118</sup>	Digital collection of	ELIDOC		✓	✓	

<sup>114</sup> HELLANICUS, <http://portal.lib.aegean.gr/> (last visited Mar. 3, 2018).

<sup>115</sup> PANDEMOS, <http://pandemos.panteion.gr> [<http://perma.cc/27LX-C2B4>] (last visited Oct. 5, 2017).

<sup>116</sup> ANAKTISIS, <http://anaktisis.teiwm.gr/> [<https://perma.cc/Q9QU-PQ63>] (last visited Oct. 5, 2017).

<sup>117</sup> OLYMPIAS, <http://olympias.lib.uoi.gr/jspui/> [<http://perma.cc/HF4J-3BSK>] (last visited Oct. 5, 2017).

<sup>118</sup> DIONE, <http://dione.lib.unipi.gr/xmlui/> [<https://perma.cc/U4L5-EMB7>] (last visited Oct. 5, 2017).



	undergraduate, postgraduate dissertations, and doctoral theses by students and research scholars of the University of Piraeus					
Foundation of Simitis, Former Prime Minister <sup>119</sup>	Biographical archives, photos, and documentation	Open Source Software		✓	✓	
‘Kosmopolis’ <sup>120</sup>	Digitized journals on philosophy	Open Journals System 2.1.1.0		✓	✓	

It is evident that there are a variety of Variety of software platforms used to operate Greek OARs.<sup>121</sup> Some researchers have reported low awareness and usage of OARs.<sup>122</sup> Swan and Brown examined the perceptions of open

<sup>119</sup> CONSTANTINOS SIMITIS FOUND., <http://repository.costas-simitis.gr/sf-repository/>. [http://perma.cc/GFV3-9L28] (last visited Oct. 5, 2017).

<sup>120</sup> KOSMOPOLIS, <http://kosmopolis.lis.upatras.gr> [https://perma.cc/9BDS-K3R7] (last visited Oct. 5, 2017).

<sup>121</sup> Ioannis Trohopoulos et al., *Harvesting metadata of Greek institutional repositories in the context of EuropeanaLocal*, VERIA CENT. PUB. LIBRARY (2009), <http://users.teiath.gr/akoul/pubs/ecdl2009.pdf> [https://perma.cc/6EVW-RYWA].

<sup>122</sup> Nikos Koutras, Elisa Makridou & Iliana Araka, *Institutional Open Access Repositories in College Education: A proposal for their role in Open Educational Resources in Greece*, 4<sup>TH</sup> INTERNATIONAL CONFERENCE ON NEW HORIZONS IN EDUCATION, 605, 607-613 (2012).

access and self-archiving in a survey of 1,296 researchers.<sup>123</sup> While 49 percent of respondents had self-archived their papers in repositories or websites, the remainder had not.<sup>124</sup> Of those who had not yet self-archived, 71 percent were unaware of open access and self-archiving.<sup>125</sup> In another study of OARs, Smith et al. collected data from Cornell's DSpace to calculate descriptive statistics. In the same study, eleven faculty members were interviewed for a deeper understanding of their attitudes and behaviors.<sup>126</sup> DSpace had 2,646 pieces of information (e.g. articles, books, theses, manuscripts, maps) as of October 2006, categorized into 196 collections, of which almost thirty percent contained no materials.<sup>127</sup> Further, of 519 unique contributors, nearly fifty percent uploaded only a single item, reinforcing the finding that faculty members lack both the knowledge and the motivation to use institutional repositories.<sup>128</sup>

Many Greek OARs have the common trait of following the same copyright regulations involving access to information.<sup>129</sup> Generally, Greek OARs are distinguished by a specific set of instructions and guidelines regarding full text accessibility.<sup>130</sup>

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<sup>123</sup> Alma Swan & Sheridan Brown, *Open access self-archiving: An author study*, COGPRINTS (2005), <http://cogprints.org/4385/> [<https://perma.cc/NTU8-KLHX>].

<sup>124</sup> *Id.*

<sup>125</sup> *Id.*

<sup>126</sup> MacKenzie Smith et al., *DSpace: An Open Source Dynamic Digital Repository*, 9 D-LIB MAG. (2003), <http://www.dlib.org/dlib/january03/smith/01smith.html> [<https://perma.cc/QW7X-X8BB>].

<sup>127</sup> Robert Tansley et al., *The DSpace Institutional Digital Repository System: Current Functionality*, IEEE COMPUTER SOC'Y 87, 90 (2003).

<sup>128</sup> Smith et al., *supra* note 132.

<sup>129</sup> See generally GREGORY ZORZOS, A QUICK GUIDE TO GREEK COPYRIGHTS LAWS 85 (2014).

<sup>130</sup> Dimitrios A. Koutsomitropoulos et al., *The Use of Metadata for Educational Resources in Digital Repositories: Practices and Perspectives*, D-LIB MAG. (2010), <http://www.dlib.org/dlib/january10/kout/01kout.html> [<https://perma.cc/SH3Y-Y9U5>].

This section focuses on Directive 96/9/EC of the European Parliament and Council,<sup>131</sup> which protects databases by forbidding users from printing or storing archives of a database.<sup>132</sup> Through European initiatives, research projects, and directives, interest regarding the growth of OARs in Greece has steadily increased.<sup>133</sup> Accordingly, information ought to be gathered, and access to it should not be restrained by unjust legal rules or bureaucracy.<sup>134</sup> Consequently, OARs play a significant role in effectively supporting scholarly communication and the dissemination of information.<sup>135</sup>

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<sup>131</sup> The first category of protection specified by the Directive is copyright. The Directive states in Article 3 § 1 that: ‘databases which, because of the selection or arrangement of their contents, constitute the author’s own intellectual creation shall be protected as such by copyright’. This was apparently an attempt to produce some consistency between the copyright systems of the member states, which had differing levels of ‘originality’ required for a work to qualify for copyright protection. Article 3 § 1 continues that: ‘no other criteria shall be applied to determine their eligibility for that protection’ proposing that any database which an intellectual production of its author is enjoys copyright protection. However, there are restrictions and thus article 3 § 2 stipulates that: ‘the copyright protection of databases provided for by this Directive shall not extend to their contents and shall be without prejudice to any rights subsisting in those contents themselves’ Namely, while you may enjoy copyright protection for the selection or arrangement of the facts you have chosen, you will not enjoy database copyright protection for the facts themselves. This could seemingly lead to unexpected consequences in a situation where, for instance, an author invents characters and their dates of birth, storing the results in a server or collection of data; although the arrangement of name and birthday could only take one or two conceivably effective shapes, that shape might receive protection as a database, while the original facts contained within would not. See also *The British Horseracing Board Ltd and Others v. William Hill Organization Ltd* Case C-203/02. as an interpretation case study.

<sup>132</sup> *Id.*

<sup>133</sup> See NIKOS KOUTRAS, EDUCATIONAL RESOURCES AND DIGITAL REPOSITORIES OF OPEN ACCESS: AN ALTERNATIVE EDUCATIONAL METHOD OF INFORMATION ACCESS (2013).

<sup>134</sup> Nikos Koutras and Maria Bottis, ‘Institutional Repositories of Open Access: A Paradigm of Innovation and Changing in Educational Politics’ (2013) 106 *Procedia - Social and Behavioral Sciences* 1499.

<sup>135</sup> Karen M. Albert, *Open Access: Implications for Scholarly Publishing and Medical Libraries*, 94 J. MED. LIBR. ASS’N 253, 258 (2006).

Critical barriers regarding online digital materials are related to a series of legal issues and to the modern legislative regime of open licensing that formulates this type of data resource.<sup>136</sup> Open access infrastructure and its applications are quite familiar in Greece. Yet institutions and corporations, which already preserve and protect their databases based on old-fashioned regulations, are not aligned with contemporary trends and ongoing technological developments.<sup>137</sup> However, this weakness may be sorted out by using Creative Commons licenses, which provide access and intellectual protection in accordance with the author's choice.<sup>138</sup> Regardless of the aforementioned negative trait within the contemporary Greek copyright regime, there is the widespread idea that an effective co-existence between open access and copyright law is possible.<sup>139</sup>

Thus, partnerships among institutional repositories in the Greek academic community seeming inevitable, there remains the question of whether there should be an agreement, or a form of mutual commitment, regarding database protection and internal dissemination of information. Moreover, as there may be copyright protection on content belonging to the institution another question worth asking is whether the use rights of data archives can be redefined and reconsidered regarding the relevant issues of protection.

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<sup>136</sup> Brian Fitzgerald, *Open Content Licensing (OCL) for Open Educational Resources*, OECD 3 (2007), <http://www.oecd.org/edu/cei/38645489.pdf> [<https://perma.cc/PP7P-VEK6>].

<sup>137</sup> See generally Stephen Pinfield, *A Mandate to Self-Archive? The Role of Open Access Institutional Repositories*, 18 J. SERIALS COMMUNITY 1, (2005).

<sup>138</sup> SIMONE ALIPRANDI, CREATIVE COMMONS: A USER GUIDE (Ledizioni 2011) (2010).

<sup>139</sup> See Frank Mueller-Langer & Richard Watt, *Copyright and Open Access for Academic Works*, 7 REV. ECON. RES. COPYRIGHT ISSUES 45, 46 (2010); John C. Newman & Robin Feldman, *Copyright and Open Access at the Bedside*, 365 NEW ENG. J. MED. 2447, (2011).

### *A. Analysis of Surveys Conducted Regarding Greek OARs*

#### 1. Online Survey for Academia's Awareness Regarding Open Access: OARs Bring Potentials Towards Scholarly Communication Enhancement

Open access practice and OARs in Greece constitute new scientific currents in terms of scholarly communication.<sup>140</sup> In contemporary times, additional opportunities for access to scientific data furthers the dissemination of research results while reducing the expenses for access and publishing.

A 2012 online survey conducted by Makridou et. al. studied the extent to which Greek academics were aware of OARs. It also gauged the role and importance of OARs to academics. The questionnaire was constructed in the same way as the questionnaire presented by the Organization for Economic Co-operation and Development (OECD) in 2007.<sup>141</sup> The questionnaire was addressed to the academic community of Greece as a whole and consisted of thirteen questions. The 489 responses spanned a multitude of scientific fields and academic levels from twenty-five out of the thirty-eight universities in Greece. Relevant analysis of research findings follows below.<sup>142</sup>

The first few questions were about the personal details, the respondents' affiliation with the examined University, and their areas of expertise. The table below reflects the answers for the first question, which addresses respondents' participation and their engagement or involvement with open

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<sup>140</sup> Alexia Dini Kounoudes, Petros Artemi & Marios Zervas, *Ktisis: Building an Open Access Institutional and Cultural Repository*, DIGITAL HERITAGE 504 (2010), [http://link.springer.com/chapter/10.1007/978-3-642-16873-4\\_41](http://link.springer.com/chapter/10.1007/978-3-642-16873-4_41) [<https://perma.cc/AS7J-FFSQ>].

<sup>141</sup> Ilkka Tuomi, *Open Educational Resources: What They Are and Why Do They Matter*, OECD 3 (2006), [http://www.meaningprocessing.com/personalPages/tuomi/articles/OpenEducationalResources\\_OECDreport.pdf](http://www.meaningprocessing.com/personalPages/tuomi/articles/OpenEducationalResources_OECDreport.pdf) [<https://perma.cc/8C2Y-GJS3>].

<sup>142</sup> Nikos Koutras, *Open Access Repositories: An Open Access Tool for Wider Access to Knowledge* (Macquarie, 2018), under publication.

access initiatives or projects. The overwhelming percentage of negative responses (82 percent) illustrates that open access practice is not well known, and Greek academics are not familiar with many of the OA initiatives.

Table 3<sup>143</sup>

Participation – Open Access initiative or project	Valid percent
Yes	18%
No	82%

The following question was about the creation of OARs by Greek respondents, and whether they do or do not create OARs. Their responses show that there is great concern regarding open access practice, but there is potential for greater engagement with OARs.

Table 4<sup>144</sup>

Creation of OARs	Valid percent
No, not at all	28%
Yes, to a limited extent	50%
Yes, extensively	22%

The next question refers to Greek academics’ views regarding obstacles or impediments to the creation of OARs. Apparently, they consider that basic impediments for such creation consist of: a) lack of interest concerning new or alternative methods for teaching and pedagogical methods, and b) lack of administrative support.

Table 5

Discipline (expertise)	Lack of information	Lack of	Lack of equipment	Lack of interest in	Lack of a model for	Lack of administration
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<sup>143</sup> Collings *Supra* note 5.

<sup>144</sup> *Id.*

	about OAR creation and use	time		new pedagogical methods	open content initiatives	support
Humanities and Arts	✓	✓	✓			✓
Social and Economic Sciences		✓	✓			✓
Business Administration and Management	✓		✓	✓	✓	✓
Natural Sciences, Mathematics, and Informatics		✓		✓		
Mechanics and Engineering				✓		✓
Earth Science, Agriculture and Veterinary	✓			✓		
Health Sciences						✓
Other				✓	✓	

Another issue stems from the research findings stems from the research findings of the next survey question, which asked whether Greek academics consider OARs to be of paramount importance. The question assesses Greek academics' beliefs regarding potential uses and benefits associated

with the use of OARs. The following table illuminates how various academics rate such importance.

Table 6<sup>145</sup>

Discipline	Gain access to best possible resources	Promotion of scientific research and publicly open activities	Reducing costs for students	Reducing costs of course creation for the University	Outreach to special-skilled people	Becoming independent from publishers	Creation of more flexible educational material
Humanities and Arts	Of little importance	Neutral	Neutral	Of little importance	Neutral	Neutral	Neutral
Social and Economic Sciences	Very important	Very important	Neutral	Very important	Very important	Neutral	Neutral
Business Administration and Management	Important	Neutral	Neutral	Neutral	Very important	Unimportant	Very important
Natural Sciences, Mathematics and Informatics	Important	Of little importance	Unimportant	Neutral	Unimportant	Of little important	Neutral
Mechanics and Engineering	Very important	Very important	Very important	Very important	Important	Neutral	Very important

<sup>145</sup> Eliza Makridou, Iliana Araka and Nikos Koutras, 'Open Educational Resources and Freedom of Teaching in College Education in Greece: Rivals or Fellows?' in *Honorary Volume for Evi Laskari, in the proceedings of the 5th International Conference of Information Law and Ethics (ICIL)* (NB Production, 2012) 605, 608.



Earth Science, Agriculture and Veterinary	Neutral	Neutral	Important	Very important	Very important	Important	Important
Health Sciences	Unimportant	Of limit importance	Of little importance	Unimportant	Of little importance	Unimportant	Neutral
Other	Important	Important	Of little importance	Neutral	Unimportant	Very important	Very important

From the above information, it can be concluded that many Greek academics are only partially aware of OARs and their importance in terms of publishing, sharing, and information exchange. Due to this, there is room for change. These findings further my argument that the Greek academic community has the potential to become a crucial actor in information dissemination using OARs. However, concerted efforts are required to make intellectual arguments for the value of OARs, provide practical help in terms of constructing OARs, and train the consumers (namely, academics and current students) to use them effectively.

Therefore, it follows that the greater use of OARs is also fundamentally linked to how well the OARs are designed as software and whether they are user friendly or not. In the following section, I rely on a survey I conducted earlier whose findings are very relevant for this paper.

## 2. Online Surveys for the OAR of the Ionian University, 2013 and 2015

Most Greek OARs operate on the DSpace software platform.<sup>146</sup> Certainly, Greek OARs' shapes are not based on specific online platforms,

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<sup>146</sup> However, there are several suitable on-line platforms such as ARNO, CERN document server software, e-prints, DARE, SHERRA, ROMEO, e-scholarship

and thus there are influences in relation to interoperability.<sup>147</sup> This fact led me to explore the extent to which and OAR associated with a Greek university can be of assistance to the academic community under such a software platform. I also studied whether its users are satisfied with its use and the services received. I conducted an online survey to investigate the institutional repository of the Ionian University that applies the DSpace software platform.

The online survey was sent to registered members of institutional repositories, such as undergraduates, postgraduates, academic staff, and external academic fellows. The survey was sent as a URL in an email to registered members, and consisted of three multiple choice questions, plus one question concerning the member’s affiliation. Sixty-nine responses were received out of 681 registered members. The main objectives of this survey were to determine registered members’ level of knowledge about the digital platform of the OAR of the Ionian University, to illustrate its publicity and their attitudes in relation to this repository, to define frequency of its use by registered members, and to explore registered members’ contentment as a means of online information resource.

Table 7 gathers information about registered members and their affiliations. It is worth mentioning that there are crucial divergences among affiliation-level percentages. Therefore, it seems that undergraduates were far more interested in participating in the online survey, which focused on the University OAR, than other affiliated categories of people.

Table 7 – Affiliation<sup>148</sup>

Answers:	2013	2015
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repository. See also Michael Robinson, *Promoting the Visibility of Educational Research through an Institutional Repository*, 35 SERIALS REV. 133, 133–37 (2009).

<sup>147</sup> Nikos Koutras & Maria Bottis, *In Search for One Sole Repository in Greece: Adventures and Solutions for an Integration of Repositories Towards Bridging the Digital Divide*, 4 AM. INT’L J. CONTEMP. RES. 119, 121 (2014).

<sup>148</sup> Koutras, above n 142, 139.

Undergraduates	76.19%	70.21%
Postgraduates	14.29%	15.96%
Academic staff (Professors, Lecturers, Tutors)	4.76%	7.45%
Administrators	3.17%	1.6%
External Fellows	1.59%	5.78%

The first question (table 8) concerns registered members' views regarding the popularity of the Ionian University OAR. Its outcome shows positive perspectives in relation to the issue of popularity by giving the overwhelming percentage of 85.07 percent of the respondents (in subtotal).

Table 8 – Popularity<sup>149</sup>

Answers:	2013	2015
Not well-known	14.93%	17.35%
Quite well-known	37.31%	37.76%
Well-known (adequate)	38.81%	34.69%
Well-known (more than adequate)	8.96%	10.2%

Question three (table 9) was about whether the respondents use or do not use the OAR. More than half of the respondents answered “enough” and “quite enough.” However, 31.34 percent responded “no, not at all.”

Table 9 – Usage<sup>150</sup>

Answers:	2013	2015
No, not at all	31.34%	29.59%
Yes, enough	35.82%	31.63%
Yes, quite enough	23.88%	29.59%

<sup>149</sup> *Id.* at 140.

<sup>150</sup> *Id.*

Yes, very much	8.96%	9.18%
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The last question (table 10) indicates registered members’ satisfaction from the services provided, as there were no negative responses, indicating that the Ionian University OAR operates in a proper and effective manner for its users.

Table 10 – Satisfaction<sup>151</sup>

Answers:	2013	2015
Not satisfied	0%	0%
Satisfied (enough)	22.39%	22.45%
Satisfied (quite enough)	47.76%	46.94%
Satisfied (much)	23.88%	26.53%
Absolutely satisfied	5.97%	4.08%

As part of discussion regarding the infrastructure of Greek OARs, it should be mentioned that if an end-user wants to access an OAR, he or she should devote substantial time and effort and needs to have the series of user names and passwords, as these are needed for many of the Greek OARs. Additionally, there are OARs that operate with different software that requires a repetition for registration regarding the same user and sometimes a separate registration process to gain access to sub-databases. For instance, the University of Athens has two repositories, “NTUA” and “Pergamos,” operating under DSpace and Open Source Software platforms, respectively.<sup>152</sup> For the “NTUA” repository, users should remember their username and password to fully access repository’s content, material, and archives, while “Pergamos” repository users can fully access its content without a password or username.<sup>153</sup> The museum of Acropolis is similar in

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<sup>151</sup> *Id.* at 141.

<sup>152</sup> See generally JULIO GONZALO ET AL., RESEARCH AND ADVANCED TECHNOLOGY FOR DIGITAL LIBRARIES (2006).

<sup>153</sup> George Pyrounakis, Mara Nikolaidou & Michael Hatzopoulos, *Building Digital Collections Using Open Source Digital Repository Software: A Comparative Study*, 4 INT’L J. DIGITAL LIBR. SYSTEMS 10 (2014).

that it has two different repositories.<sup>154</sup> The museum's 'Acropolis Educational Resources' and 'Parthenon Frieze' repositories operate under Open Source Software and DSpace, respectively.<sup>155</sup>

## VI. CONCLUSION

There is growing literature and discussion about OARs. A well-known OAR scholar, Raym Crow, argues that institutional repositories could be seen as contributing factors in "a new disaggregated model" of scholarly publishing,<sup>156</sup> one that may help to weaken the monopolistic power of the traditional academic journal system over scholarly communication. Other scholars argue that, through developing and maintaining institutionally defined, scholarly, and interoperable repositories,<sup>157</sup> institutions can increase their visibility and prestige by centralizing the intellectual work of their members, thus enabling researchers to find relevant materials more easily.<sup>158</sup>

Kathleen Shearer, another renowned scholar in the field of OARs, identified potential factors that need to be considered for repositories to be successful, including input activity, disciplines, advocacy activities, archiving policies, copyright policies, content type, staff support, quality control policies, software, and use.<sup>159</sup>

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<sup>154</sup> Alexandra Stara, *The New Acropolis Museum: A Triumph of Sophistry*, 1348 ARCHITECTURAL REV. 24, 25 (2009).

<sup>155</sup> Koutras, *supra* note 133.

<sup>156</sup> Raym Crow, *The Case for Institutional Repositories: A SPARC Position Paper*, RESEARCH ON INSTITUTIONAL REPOSITORIES: ARTICLES & PRESENTATIONS 4, 6 (2002).  
Sparc Senior Consultant, ARL Bimonthly Report 223

<sup>157</sup> *Id.* at 16.

<sup>158</sup> Claire Creaser et al., *Authors' Awareness and Attitudes Toward Open Access Repositories*, 16 NEW REV. ACAD. LIBRARIANSHIP 145, 148 (2010).

<sup>159</sup> Kathleen Shearer, *Institutional Repositories: Towards the Identification of Critical Success Factors*, 27 CAN. J. INFO. & LIBR. SCI. 1, 5 (2003).

In a study of attitudes and behaviors, twenty-one researchers from Cranfield University were interviewed.<sup>160</sup> Interviewees considered it crucial to share their work. However, the majority of those interviewed were not aware that OARs could provide a framework of communication. Additionally, the majority of those that were aware of the existence of OARs were not using them. Xia found researchers to be increasingly aware of open access, but only at a very basic level, with insufficient comprehension of participation in open access initiatives, suggesting that increased awareness alone may not be adequate for the faculty in terms of incentives for additional use of OARs.<sup>161</sup>

Nicholas et al. investigated the scientific researchers' perceptions of OARs.<sup>162</sup> In particular, they examined 1,685 survey responses obtained from faculty members and students who had been registered in the Institute of Physics Publishing.<sup>163</sup> Based on this survey, 63.7 percent of respondents had deposited their research outcomes in a repository, and that 44.1 percent had specifically used OARs.<sup>164</sup>

A survey conducted at a medium-sized university provides information on other perspectives of OARs and interaction with affiliated members. This survey investigates members' perceptions and attitudes concerning OARs. According to the results of the survey, there were positive perceptions of OARs among 52.9 percent and negative perceptions among 47.1 percent.<sup>165</sup> In general, although there are some variations across

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<sup>160</sup> Sarah Watson, *Authors' Attitudes to, and Awareness and Use of, a University Institutional Repository*, 20 SERIALS 225, 226 (2007).

<sup>161</sup> Jingfeng Xia, *A longitudinal study of scholars' attitudes and behaviors toward open-access journal publishing*, 61 J. AM. SOC'Y INFO. SCI. & TECH. 615, 620 (2010).

<sup>162</sup> David Nicholas et al., *Digital Repositories Ten Years On: What Do Scientific Researchers Think of Them and How Do They Use Them?* 25 LEARNED PUB. 195, 202 (2012).

<sup>163</sup> *Id.* at 197.

<sup>164</sup> *Id.* at 198.

<sup>165</sup> Fatih Oguz & Shimelis Assefa, *Faculty Members' Perceptions towards Institutional Repository at a Medium-Sized University: Application of a Binary Logistic Regression Model*, 63 LIBR. REV. 1, 8 (2014).

disciplines and institutions,<sup>166</sup> there appears to be a growing rate of participation on behalf of authors in constructing OARs, but there is potential for further development in the future.<sup>167</sup>

From my point of view, there is an emerging necessity for Greek OARs to operate under copyright regulations in order to access content. Such a notion can be placed in the discussion regarding a potential copyright enhancement by integration of open access practice. However, this does not necessarily mean a change of copyright standards. Lessig advocates for a new approach regarding access to copyrighted works.<sup>168</sup> He argues that copyright law has not kept up with technological growth and is in fact holding it back. To Lessig, the Internet-enabled world and new information online environment has led us to a new creation culture. More than just an observer, he has been engaged with new approaches to copyright protection and he founded Creative Commons Licenses, a San Francisco-based non-profit. This non-profit organization helps many companies and end-users navigate the uncharted fields between full copyright and public domain. It could also be the starting point for establishing positive future perspectives in terms of sharing while remaining protected.<sup>169</sup> Lessig's views about a new approach for copyright protection supports my argument that it could be beneficial if the current framework for copyright protection in Greece followed such approach. In other words, there should be a connection between Greek copyright law and open access, although not necessarily a change of copyright standards.

Furthermore, simple instructions could be provided to users to recruit them as contributors of each repository for enhancing interaction with users.

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<sup>166</sup> Cullen, *supra* note 77.

<sup>167</sup> Bo-Christer Björk et al., *Anatomy of Green Open Access*, 65 J. ASS'N INFO. SCI. & TECH. 237, 247 (2014).

<sup>168</sup> See also LAWRENCE LESSIG, REMIX: MAKING ART AND COMMERCE THRIVE IN THE HYBRID ECONOMY (Penguin 2009).

<sup>169</sup> LAWRENCE LESSIG, FREE CULTURE: THE NATURE AND FUTURE OF CREATIVITY 211 (Penguin 2005).

In accordance with the online survey presented above, students are particularly keen on using a repository, and they are satisfied with its services. Ionian University's repository software is user-friendly and not characterized by restrictions; thus, it is a good example of functionality of operation.

In this regard, construction of one sole repository from Greek academic institutions would face seemingly insurmountable political objections, confront non-governmental groups with interests, and deal with separate disputes with regards to financial support. Nevertheless, anticipating beneficial prospects towards diminishing inequalities concerning information and communication technologies (ICT) and broadening possible means of communication dictate that the integration of Greek OARs into one OAR is imperative. In other words, Greek government ought to create funding sources, which should be part of in the state budget regarding educational issues on an annual basis.

Moreover, Greek authorities should simplify integrated repository use and make it as user-friendly as possible by eliminating registration (passwords, etc.) and broadening access opportunities. Taking everything into consideration, this would be a courageous "step" towards knowledge for the citizenry in Greece. Thus, the integration of Greek OARs, which requires that interoperability be applied and implemented religiously, has a potential to bring efficient options regarding the sharing, exchange, and dissemination of information through open access. The assessment of the governance framework for OARs in Greece determines the need of their integration for efficiency and a beneficial balance between the competing interests of copyright owners and end-users.

Access to knowledge is crucial for the flourishing of knowledge economies, which form the economies of the future. Informational resources and data are major knowledge assets. These knowledge assets should be as open as efficiency and justice allows.



European legislations and initiatives, such as directives, regulations, and research projects, aim to improve European citizens' skills towards a knowledge economy based on information.<sup>170</sup> In the context, OARs' role is of paramount importance and should be part of this knowledge economy, and they should provide equal opportunities to access information resources. Moreover, in terms of urban competitiveness of the European economy, Greek government, in collaboration with educational institutes (such as primary schools, universities, colleges, technology educational institutes, and libraries) should play a crucial and more comprehensive role in the Greek society in terms of information dissemination. Thus, the need to harmonize publishing and sharing policy emerges.

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<sup>170</sup> Fernando Hervás Soriano & Fulvio Mulatero, *Knowledge Policy in the EU: From the Lisbon Strategy to Europe 2020*, 1 J. KNOWLEDGE ECON. 289, 291 (2010).