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The Science Behind Software Ownership

In today's ever-evolving world of computer science, programmers are quickly and efficiently sharing their created data with each other and are even using other's data for personal inspiration. With this in mind, it is important to realize the potential dangers behind this style of working. Although sharing created programs and using the ideas of others on the internet comes without a monetary cost, the cost of ethics may be in question. Therefore, it is important to understand the definition and implementation of copyright laws.

According to Copyright.gov, they state, "Copyright is a form of protection grounded in the U.S. Constitution and granted by law for original works of authorship fixed in a tangible medium of expression. Copyright covers both published and unpublished works (2016)". This actively demonstrates that any piece of created data should fall underneath the umbrella of governmental copyright. The particular reason for this circumstance is because registration for copyright protection is not applied for by the creator, it is inherently associated with any created program (Copyright in General, 2016, para. 5). So, if any piece of work is protected through copyright, when does this process occur? According to Copyright.gov, they say, "Your work is under copyright protection the moment it is created and fixed in a tangible form that it is perceptible either directly or with the aid of a machine or device (Copyright in General, 2016, para. 6". Well, thanks to version control software like GitHub, Mercurial, and BitKeeper, the sharing of computer programs has been made easy and accessible. So, what does this mean for

computer science, and the exchange of created data, like programs and scripts? The argument that the single ownership of created programs will hinder the free exchange of ideas over the Internet is logical. However, copyright still remains, the safest means of reimbursing creators while still cultivating a sizeable degree of creative self-sufficiency. Therefore, the case to rid digital society of copyright is not the best method of solving this complication. Instead, copyright ought to be delineated and well-defined in conjunction with its constitutive objective. According to Neil Netanel, he states, "copyright is a limited grant designed to foster the expressive diversity and citizen autonomy required for democratic governance, and that copyrights, term of protection should be determined with that objective in mind"(para. 145). Therefore, the use of copyright should be aimed towards the notion of creative freedom, rather than creative restriction, while also working parallel with constitutive attributes and statutes.

With every case of copyright comes the ability for the software creator to implement a software license agreement. A software license agreement allows the creator to determine when or how the software can be used and the subsequent restrictions corresponds with the software. There are five major license agreements: public domain, permissive, Lesser General Public License (LGPL), GPL, and proprietary. Each hold different weight in how they determine the integrity of created data. First, public domain is the least restrictive, stating that anyone can copy or modify the code regardless of how it is changed. Second, permissive contains minimal requirements towards the integrity of their created data, meaning it can be changed within the restrictions given. This is most used within open-source programs. Third, LGPL allows you to connect to open-sourced data within your program. If you only linked your program to an LGPL library can allow you to run it as a proprietary agreement; however, if you modify any piece of code, writing it as an LGLP is required. Fourth, GPL is associated with LGPL, although it shows

greater restriction towards created data, requiring that it be used for personal use only. Fifth, proprietary is the most restrictive license agreement, implying that all rights are reserved toward the created program or software. If I were to ever use any of the license agreements, it would have to be LGPL. The reason for this being, it is the most moderate of the agreements, balancing restrictive and passive in the most efficient way possible. Using the LGPL, I would be able to allow users to become creative and build off of my piece of code, while also holding them to the credibility standards needed on behalf of my program. Having more than one could be an option, however I find that each license agreement would work best in achieving its goal by enforcing its standards alone, without the possibility of an effected outcome. In the end, using the LGPL style of agreement would work best in administering requirements for code authenticity, while also allowing users of the program to be innovative with their potential designs.

While having all of these standards for accountability is important, in the end, data integrity comes down to one single factor, the user. Users have the ability to change or alter data that is available for them from the Internet, some with predetermined intention and some without. For each user, the best way to handle a situation in which you need to reference created programs would be first, to do your research. Find out what type of agreement this software is under and if it is even plausible to reference it. Next, would be to give credit to the creator, always. After that, make sure to always use the data in way that is beneficial to you and society. Never use programs created by others for negative reasons or with malicious intent. These three steps matter, in the fact that in following them, the freedom and creativity of the Internet can continue to thrive for generations to come.

Works Cited

Besek, June M. "The Digital Millennium Copyright Act Is Effective." *Copyright Infringement*,

    edited by Roman Espejo, Greenhaven Press, 2009. Opposing Viewpoints. *Gale In*

    Context: Opposing Viewpoints,

    link.gale.com/apps/doc/EJ3010595226/OVIC?u=chazsu_main&sid=OVIC&xid=68437a

    83. Accessed 12 Feb. 2021. Originally published as "The DMCA Should Not Be

    Significantly Changed," *IP Law & Business*, vol. 3, no. 1, 10 Jan. 2003.

Butland, Nicholas C., and Justin J. Sullivan. "Pirate Tales from the Deep (Web): An Exploration

    of Online Copyright Infringement in the Digital Age." *UMass Law Review*, vol. 13, no. 1,

    2018, p. 50+. *Gale In Context: Opposing Viewpoints*,

    link.gale.com/apps/doc/A533005372/OVIC?u=chazsu_main&sid=OVIC&xid=69d33131

    . Accessed 14 Feb. 2021.

Mulligan, Deirdre, et al. "The Digital Millennium Copyright Act Is Not Effective." *Copyright*

    Infringement, edited by Roman Espejo, Greenhaven Press, 2009. Opposing Viewpoints.

    Gale In Context: Opposing Viewpoints,

    link.gale.com/apps/doc/EJ3010595227/OVIC?u=chazsu_main&sid=OVIC&xid=9eba675

    d. Accessed 12 Feb. 2021. Originally published as "Unintended Consequences: Seven

    Years Under the DMCA," *Electronic Frontier Foundation*, The Samuelson Law, and

    Technology & Public Policy Clinic, 2006.

Netanel, Neil Weinstock. "Copyright and a democratic civil society." *Yale Law Journal*, vol.

    106, no. 2, 1996, pp. 283-387. *Gale In Context: Opposing Viewpoints*,

    link.gale.com/apps/doc/A19009697/OVIC?u=chazsu_main&sid=OVIC&xid=4d21677c.

    Accessed 10 Feb. 2021.