Resource Review

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References

Baase, S. (2012). *Gift of Fire: Social, Legal, and Ethical Issues for Computing Technology*, 4th Edition.

Our textbook, while not directly associated with the topic of 3D printing, has many core values and concepts presented that help provide a basis for justly understanding and developing reasoning behind core values and points associated with the topic choice. For instance, in order to solidify concepts about a controversial topic choice such as 3D printing, the textbook provides pertinent information related to ethics, rights, laws, intellectual property, and so on. It is important to study and understand some vital information about these notions in order to better form a well-rounded, more complete piece of research.

Bryans, D. (2015). Unlocked and Loaded: Government Censorship of 3D-Printed Firearms and a Proposal for More Reasonable Regulation of 3D-Printed Goods. *Indiana Law Journal*, *90*(2), 901-934.

This article is very specific in nature due to the fact it focuses mainly on detailing one particular issue. This issue is the battle for censorship and regulation as it pertains to gun creation and ultimately control via 3D printing. There is one particularly notable and infamous case where a gun was designed and ultimately 3D printed and then quickly received backlash from the government until the maker was ultimately forced to discontinue his idea and production despite extreme efforts to fight for the right to intellectual property. This article recaps that case, and provides a platform for discussing what is reasonable regulation and when does this start to encroach on technological advancement that could be introduced through something as limitless as 3D printing.

Grace, J. (2014). The End of Post-Sale Confusion: How Consumer 3D Printing Will Diminish the Function of Trademarks. *Harvard Journal Of Law & Technology*, *28*(1), 263-287.

This is a very lengthy report which focuses on the impact 3D printing may have on the function of trademarks. Essentially it is predicted that since so many things can be created from a 3D printer, and since this technology will eventually become common place at the disposal of consumers, the need for traditionally manufactured and distributed products will decrease. This is an important factor to consider in both the legal and economic realms. How will consumers using raw materials to create what they need rather than go out and buy the finished product impact these two realms? Trademarks will be a heavy point of contention in a future dominated by 3D printing, so it is important to understand the implications and effects these may present when 3D printing.

Hansen, L. K., & Stephensen, J. L. (2015). (In)tangible Arguments about Play, Creativity, and the Political Economy of 3D Printing: The Free Universal Construction Kit. *Triplec (Cognition, Communication, Co-Operation): Open Access Journal For A Global Sustainable Information Society*, *13*(1), 112-135.

While this text deals with many facets of 3D printing all around (such as art, design, “toys,” creativity) and at points as an argumentative approach, it still does highlight some key points pertaining to my sections of the paper. Details, analysis, and opinion are provided in sections that relate to political and economic aspects, intellectual property, and the “right” to 3D print. It is precisely these areas that make up my sections of the report, so critical information to contribute towards these areas is essential in fully presenting an accurate picture of what’s entailed in 3D printed in regards to political and legal influences, as well as economic questions and considerations.

Petrick, I. J., & Simpson, T. W. (2013). 3D Printing Disrupts Manufacturing. *Research Technology Management*, *56*(6), 12. doi:10.5437/08956308X5606193

A big point of contention for 3D printing and the technology’s effect on economics is the implications it has on manufacturing. Namely, 3D printing shifts from a physical (manual labor) to mental standpoint in terms of manufacturing. It will no longer be mass numbers of laborers that wins a war for production and manufacturing capability, but rather those with scientific training and the know-how to directly apply these principles to additive manufacturing, such as engineers. This article contends that 3D printing removes many preexisting barriers that currently exist in traditional manufacturing (such as cost and time) and by doing so a complete and total shift – a revolution – is on the horizon in the form of 3D printing.

Urbonaitė, G., Kibirkštis, E., & Miliūnas, V. (2013). 3D Print Technologies Analysis. *Mechanika*, 244-247.

This article serves as a more broad and general look at “3D Technologies,” specifically its applications via 3D printing. Although the article is not very long in length and does specifically reference some aspects of the technology and how it’s relevant to the author’s home country of Lithuania, there are still some important general points of the technology all gathered up and listed here. This article personally helps me have a better, broader understanding of the research topic which will help influence my writing, and there is also information here that could be very helpful to others in the group who are writing about sections such as “description of the technology and associated science” and “historical development and context of the technology.”

Use of diagrams and even bullet lists are helpful in quickly gaining an understanding of how the technology works and what some of its most practical applications may be.