Sailing the High Seas:
A Christian Exploration of Piracy

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1 Introduction

1.1 Background Information

> [T]hat ideas should freely spread from one to another over the globe, for the moral and mutual instruction of man, and improvement of his condition, seems to have been peculiarly and benevolently designed by nature, when she made them, like fire, expansible over all space, without lessening their density at any point, and like the air in which we breathe, move, and have our physical being, incapable of confinement or exclusive appropriation. Inventions then cannot, in nature, be a subject of property. *Thomas Jefferson* [1]

It is generally accepted that piracy is an illegal activity, but what is often overlooked is the legitimate role that piracy plays in a variety of contexts. When it comes to subverting oppressive regimes, for instance, the tools that piracy provides are indispensable and for protecting the interests of consumers from predatory business practices, the abilities of piracy are unmatched.

Needless to say, with every unregulated system comes abuse and piracy is no exception. On top of that, piracy, on an individual level, is extremely difficult to combat because of the immaterial nature of the items that would need to be protected. Ideas flow freely between people especially when the Internet is involved, so stopping this flow becomes an exponentially more difficult problem the more people have the restricted data. The ease with which ideas propagate lead people like Thomas Jefferson to claim that they are "incapable of confinement or exclusive appropriation." Consequently, two parties form: those that support piracy for its free and open spread of all information and those that see piracy as a threat to the further advancement of technology and ideas.

Before proceeding further into the issue of piracy, it is important to have a grasp of what piracy means insofar as how this paper interprets it. The dictionary defines piracy as "the unauthorized use of another's production, invention, or conception especially in infringement of a copyright." While this covers the technical definition of piracy, this paper elects to utilize a more wholistic definition. Piracy not only includes the unauthorized use of someone's work,

but it includes the tools and techniques that are commonly used to accomplish this task such as torrent trackers, VPNs, and torrent clients.

As a Christian, how should one approach such a tool and how can it be utilized for the betterment of God's kingdom? In the paper that follows, piracy will be analyzed through a number of lenses, culminating in a Christian response to this issue. In doing so, the hope is that the reader attains a fresh, wholistic understanding of the potential value of piracy.

1.2 Thesis/Argument

Piracy should not be hastily thrown aside. Piracy is an excellent tool for disseminating information, services, content, &c. that may not have been available any other way.

2 Arguments For Piracy

As mentioned above, even though piracy is illegal, there is still merit to the tools of piracy and the values behind them. The merits of piracy can be divided into three realms: equal access to information, governance, and privacy.

2.1 Equal Access

At its core, piracy is primarily concerned with accessing information of all kinds, regardless of whether someone is authorized to access that information or not. This is what piracy is best at and, contrary to popular belief, it is not always a bad thing.

Take the restricted access to academic journal articles, for instance. Many academic journals require all readers to pay not an insignificant sum to access research articles that could contain insight that is valuable to the human race as a whole. Because of the high cost of entry, certain groups are automatically excluded from reading and building upon the research that has already been done. John Barlow puts the situation eloquently in *Selling Wine Without Bottles: The Economy of the Mind on the Global Net* when he says, "I am not comfortable with a model which will restrict inquiry to the wealthy." [1] In the case of academic journal articles, why shouldn't anyone be able to better themselves by consuming quality research articles? All humans should be allowed to continue to learn more about God's creation without being bound by their financial status. Just as how someone can go to the library and checkout any book that tickles their fancy, they should be freely able to learn from the ongoing research of our world. Of course one should recognize that not all information is safe or helpful to be freely available on the internet, but that is a topic for a later section.

A more concrete instance of where paywalls can be directly harmful to the human race is with regards to medical research. Till et al. stresses how important access to medical research is in their article *Who is pirating medical literature? A bibliometric review of 28 million Sci-Hub downloads.*

> Access to the medical literature is essential for both the practice of evidence-based medicine and meaningful contribution to medical sciences. Nonetheless, only 12% of newly published papers are freely accessible online, and, as of 2014,

> only 3 million of the 26.3 million articles indexed on PubMed were available on the site's repository of free materials, PubMed Central. Access to paywall-protected literature remains primarily through institutional subscriptions. Such subscriptions are costly and many struggle to afford access. The result is a disparity in access to the medical literature, particularly for those in low-income and middle-income countries (LMICs). [2]

According to Till et al. the high subscription cost to access medical journal articles means that those in less advantaged countries cannot afford access to the material, which is detrimental to the furthering of medical sciences. In light of this, it should come as no surprise that "Nearly 1 million articles published by medical journals are downloaded on Sci-Hub each month." [2] Piracy enables the less fortunate countries to access valuable medical data that is essential to furthering medical research for the human race. In such a specific case as this, it should not be controversial to conclude that piracy is a good thing.

Medical journals are not the only source of information that can sit behind a paywall. Sometimes, as in the previous case, there is information that one might argue is unjustly kept away from the common man. What one considers to be unjust is subjective, but the idea is that piracy is a tool that consumers can employ to fight systems that they deem to be unjust. Without piracy, one might have to roll over and accept their limited access or resort to a more extreme and likely illegal approach. To put it another way, piracy acts as a check on businesses to discourage them from integrating unpopular, anti-consumer practices into their business model. When a consumer wants to purchase something and they cannot afford it, they might start to look for alternative way of obtaining it. But, when they can afford it and they think it is fairly priced, they will purchase it. Thus, piracy is often where tech-savvy persons turn to when they need something that they feel is exorbitantly priced, but is not often utilized when they feel the purchase is worthwhile. This way, piracy acts as a safeguard for consumers when they feel they are being taken advantage of by predatory business practices.

2.2 Governance

Given that piracy is an illegal usage of another person's conception, it has much to say in the way of governance and intellectual property laws. The tools of piracy provide the means of subverting an oppressive regime and call into question the legitimacy of intellectual property laws.

Having a very firm grip on what citizens can see on the internet is one of the key characteristics of a despotic government. Such governments know that if they can control the flow of information on the Internet, it becomes much easier to keep the populace under control. The government's imposing of restrictions on the Internet is clearly seen when "Tunisia significantly ramped up its already aggressive blocking of specific websites in response to unrest that would ultimately unseat its government." [3] Even more extreme is when governments shutdown the internet entirely to quickly cease the spread of information. This is exactly what happened on January 28, 2011 in Egypt: "Almost simultaneously, about 3,500 individual Border Gateway Protocol routes [...] were withdrawn on orders from the Egyptian government, cutting the country off from the rest of the world and bringing internal

communication to a halt." [3] Fortunately, as already mentioned earlier, piracy excels at spreading information even when there are those that do not want it spread. BitTorrent is a peer-to-peer file sharing protocol that is often used when pirating content on the Internet. A peer-to-peer protocol, by its very nature, does not require a centralized server to store all the files that are to be shared. Instead, the source of the file is each person who has the file downloaded. What this means for those under the rule of an oppressive government is that they can spread information to others in such a way that the government cannot easily block its source. Pieces of the information are sent to the one downloading the file from everyone who had the file. There is no single source of the information that the government can block to stop the spread. By a similar token, there are peer-to-peer instant messaging applications that do not require an internet connection to function; you need only be in the vicinity of other people that the message can hop through to get to the destination. Both of these tools, in the context of piracy, facilitate the illegal spread of information, but in the context of a despotic government, can be employed to subvert their attempts at quelling the dispersal of information that could be harmful to their rule.

Regarding piracy and intellectual property laws, it is clear that the two are at odds with one another. That being said, it is worth examining whether IP laws accomplish what they seek to do: encourage innovation. Mark Lemley presents an argument against IP laws when he writes,

> [IP] intervenes in the market to interfere with the freedom of others to do what they want in hopes of achieving the end of encouraging creativity. If we take that purpose out of the equation, we are left with a belief system that says the government should restrict your speech and freedom of action in favor of mine, not because doing so will improve the world, but simply because I spoke first. [4, p. 1339]

To put it differently, intellectual property laws are based on the assumption that in restricting who is allowed to have certain information, they are encouraging creativity when, in reality, creativity does not always come first. IP laws are supposed to make people want to work hard to get a good idea that they can have exclusive ownership of, but having exclusive rights to an idea stifles further innovation. Under this system, only the owner has the right to make changes. In fact, it seems that there would be more creativity without IP laws. If everything was open to scrutiny and replication, there is bound to be some improvement eventually because of all the people that could have a hand in making it better. If a big streaming platform were to forfeit one of their IPs to the public, there is no telling what kind of content could be created. In this way, piracy could allow for the incremental improvement and scrutiny of conceptions, thus making them better.

2.3 Privacy

It would be remiss to discuss the tools of piracy without mentioning virtual private networks (VPNs) and Tor, formerly known as the onion router. Commercially available VPNs allow internet users to route their traffic through another machine on the internet before connecting to the final destination host. What this means to the user is that their traffic appears to be coming from another IP address than the one for their home network. Since IP addresses

are associated with geographical locations, a VPN can also mask a user's location from bad actors. However, VPNs are not a perfect solution to privacy. The company hosting the virtual private network is entrusted with all the user's internet traffic, so the company should not be left susceptible to cybersecurity attacks or coercion from government entities that might compromise someone's privacy online. In general, the user should have confidence in the VPN provider that their information will not be misused.

In the context of piracy, a VPN enables users to bypass firewalls that block access to certain locations on the internet and they are employed in combination with the BitTorrent protocol to protect one's identity when they are connecting to seeders or leechers. When used responsibly, a privacy-conscious VPN provider is quite the boon to internet users in countries that oppress certain people groups. As long as the VPN itself is not compromised, a user's true identity can stay hidden. In the case of a missionary in a hostile environment, a VPN might enable them to bypass the restrictions that prevent them from accessing certain online editions of the Bible. Ultimately, VPNs have the ability to be a tool for good in situations where access to information is limited and where one might be persecuted if their identity were to be discovered on the internet.

In the same vein as a VPN is Tor. Tor is a service that allows users to browse the internet without anyone but themselves knowing both the source and destination of a connection. Unlike a VPN, there is no central company that can see who is connecting to what destination; the only person who knows that is the one using the service. The Tor Project writes, "[t]he goal of onion routing was to have a way to use the internet with as much privacy as possible, and the idea was to route traffic through multiple servers and encrypt it each step of the way." [5] Tor not only provides privacy, it gives users total anonymity. Similar to using a VPN, connecting to the Tor network before browsing the internet makes it near impossible for observers to see what sites someone is accessing and for the site to see where the request is coming from. The potential applications for near-perfect anonymity on the internet are innumerable. Those living under oppressive governments can bypass censorship to reach the truth and Christians can anonymously access the Bible online in restrictive countries, just to name a few.

As a side note, there are instances where pirated software can be more privacy-oriented than the paid version. Sometimes the pirated version is "cracked" to remove certain digital rights management (DRM) tools that often run background tasks unbeknownst to the user. These background tasks often leak bits of information about the user in order to validate that they are legitimate owners of the software. By collecting information about users, a business invades the privacy of its user base. However, pirated and cracked software does not have such DRM because it needed to be removed to allow it to be freely distributed. Thus, when it comes to software that contains aggressive DRM, piracy offers better security by default. Unfortunately, some pirated software introduces malicious code, a subject that will be explored in the next section.

3 Arguments Against Piracy

While piracy enables free access to information and content, it is crucial to faithfully and charitably explore the potential dangers and economic implications associated with this prac-

tice. The arguments against piracy are not easy, nor should be, easy to dismiss. This paper will focus mainly on the ethical and economical concerns that the use of piracy introduces into society.

3.1 Access to Dangerous/Illegal Content

Piracy has been associated with unrestricted access to information and content. As previously discussed, this aspect of piracy provides the means for those in need to access information that would otherwise be unavailable to them; similarly, piracy can thus provide avenues to bypass governmental restrictions on public information. This same benefit, however, becomes a strong argument against piracy when what is distributed is dangerous or illegal content.

3.1.1 Criminality of the Seeder and Leecher

This paper has focused on a more wholistic definition that encompasses the tools, techniques, motivations, and content, but the motivations and content that are involved in piracy should not be ignored. Piracy does involve a form of theft and dissemination of an individual's or organization's intellectual property. Piracy, thus can and most often does violate laws in most jurisdictions. Piracy, when it uses torrenting, involves both the seeder and the leecher (or the uploader and downloader, if not using torrenting). Depending on the legislation of the country in question, the leecher may or may not be found guilty of a crime, but this is complicated by the global context of digital piracy.

In the United States, the downloader/streamer/leecher are generally considered offenders that could be subject of fines or even criminal charges. The severity of the penalties of piracy in these cases pose a major argument against the use of piracy, at least in the United States or nations where the individual downloading can be found guilty of a crime. "Fair use" and statutes of limitations may alleviate penalties, but repeat offences may also lose one's favor in these cases. [6]

3.1.2 Malware

The intersection of trust and computing is not a new topic. Ken Thompson, the creator of the Unix operating system, made this the topic of his Turing Award lecture. In his lecture, he poses the question, "to what extent should one trust a statement that a program is free of Trojan Horses? Perhaps it is more important to trust the people who wrote the software." [7, p. 761] With piracy, however, we add an additional actor in this chain of trust. Thompson's lecture focuses solely on the developer-to-user relationship of trust, with the assumption of an open-source project. Thompson, thus, comments on how "[s]uch blatant code would not go undetected for long. Even the most casual perusal of the source of the C compiler would raise suspicions" [7, p. 763] When piracy is the method of distribution, however, the assumption of equality between the source code and the delivered software does not hold. The pirated software may have been tampered with, and the user has no simple way to detect changes in the file(s) without doing some (often) complicated forensic work. Although anti-malware tools may mitigate these issues, the problem of trust still holds, and

the anti-malware tools are not perfect. The character of the seeder must be questioned, and it already stands on shaky ground if the legality of their actions speaks for their moral compass and trustworthiness.

Piracy may openly distribute dangerous illegal content, but arguably the larger threat is the dangerous content that remains undisclosed. Piracy circumvents mainline distribution channels that may incorporate secure policies of data integrity, authenticity, and privacy. There are piracy tools and sites that provide some ways to vet the authenticity of a user based on the user's previous history and relationship with the piracy community. For example, ThePirateBay, one of the most popular pirating sites, displays the status or class of their users and holds these users to higher standards in order to retain trust with the site's end users. [8] Nevertheless, not all sites provide these metrics or warnings for the average end-user. Instead, the burden is often on the end-user, and it is not unfair to assume that the average person would not be able to analyze downloaded software for malware.

The relationship between piracy and malware distribution is not just a theoretical argument against the use of piracy. Although research has remained rather theoretical in this area, some researchers have performed empirical studies to find a stronger link between more prevalent use of piracy and malware presence. The study by Mezzour et al. reveals that piracy is not equal around the globe, and it poses serious problems especially for people in poor countries where piracy is widespread. Although they hypothesized, like other researchers, that "cyber criminals would target rich countries because the monetary benefit of compromising rich people's computers is higher ," [9] but they found that, "surprisingly, poor countries in Sub-Saharan Africa because of the low cost of attacking computers in this region." [9] Mezzour et al. conclude that, due to the high correlation between piracy and malware, one of the policy implications is that Sub-Saharan Africa requires reducing piracy to combat the spread of malware.

3.1.3 Illegal content

Piracy, as discussed above, provides a way to distribute illegal content. This content is not always beneficial to society; research articles, art, movies, &c. are not the only sorts of content that a pirate may distribute. Piracy opens the door for questionable and illegal content that may be harmful to society or national security.

3.2 Economic

Piracy, as a theft, also causes real harm to businesses. The act of piracy does involve stealing and distributing content from creators and organizations that invested time, money, and effort into the content. In this sense, piracy is stealing from the individuals' revenue and the government's tax revenue. [10]

> According to Gould and Gruben (1996), IPRs protection stimulates economic growth if it is accompanied by a policy of trade liberalization. By encouraging initiatives to innovate, IPRs protection may influence the economic growth of an open country. Park and Ginarte (1997) found that IPRs protection affects economic growth indirectly by stimulating the accumulation of factors of production such as physical capital and R&D capital. [11]

Piracy, therefore, discourages innovation in the capitalist marketplace.

4 Christian Response

A Christian response to piracy should honestly take into account both sides of the debate. As shown above, piracy does have some merit to it. Christians have to admit that piracy-promoting tools do enable equal access for those in need, but, at the same time, we must recognize that the human nature is not perfect, but is full of evil thoughts (Matthew 15:19). Our human corruption manifests itself in many ways through our lives and actions, but, as explored in this paper, it also presents itself in the software we share. Our deceitful hearts (Jeremiah 17:9) make it hard to trust the software we download, but reckless use of piracy ignores advice and is therefore the way of the fool where people fall (Proverbs 12:15, 11:14).

On the one hand, a Christian use of piracy should be respectful of authority. We are called to do this regardless of punishment, but as a matter of conscience (Romans 13:4–5). We are to exercise our freedom respectfully and not as a cover-up for evil (1 Peter 2:13–7). In other words, we should consider both the consequences we may incur and the image we portray carefully before making a conclusion about the practice of piracy. A proper consideration of privacy should not ignore the serious ramifications and associations that come with it.

On the other hand, piracy, when used properly, is able to be used for good causes that serve God rather than men (Acts 5:29). Academic articles, especially from medical journals, are crucial for the development of humanity and the saving of lives. In these cases, when capitalist motivators impede these greater goods, one should not turn a blind eye, but instead we should remember the poor and those in need (Proverbs 19:17, 22:9, 15:11; Galatians 2:10). Cases like these present valid concerns in which piracy appears to provide a viable solution to the problems brought about by human greed.

5 Conclusion

In closing, piracy and its related tools are not as cut and dry of an issue as one might initially be led to believe. On one hand, piracy facilitates the spread of illegal goods and services. Pirated software from an untrusted source may also contain malware and the act of piracy itself, from one perspective, takes business and money away from companies. On the other hand, piracy can be a powerful force for good. It assists in the dissemination of information that is dangerous to oppressive regimes and it ensures that people of all financial backgrounds can access and contribute to valuable research for the benefit of everyone. More generally, the goal of piracy is to keep information free and open to everyone; in that regard, it promotes equality of access to human thoughts.

5.1 Final Thoughts / Responses

By far, one of the most common arguments raised against piracy, as highlighted previously, is that piracy steals money from businesses because it demotivates people from paying for their products and services. While this may be true in many cases, the reality is a little more nuanced. Someone who chooses to pirate a product rather than purchase it may not

have bought the product in the first place if piracy was not an option. On top of that, if someone really enjoys using the pirated version of a piece of software, they might choose to pay for the legitimate version of it to support the developers and get new updates faster. Even if the user refuses to pay for software, distributing the pirated version of software helps popularize it. When something gets really popular, people want to try it and that leads to more people who might decide to support the company who develops it by purchasing the real version.

Regardless of the potential benefit of piracy, businesses still see it as a clear threat to their bottom line and try their best to protect their intellectual property at the expense of the consumer's open access to information.

> Of additional concern is the fact that by making [Intellectual Property] theft a national security threat without being clear about what actually constitutes intellectual property, not only does the U.S. government create a new reason for a militarized Internet, but it also sets the stage for companies to assert that a range of other activities from file sharing to producing counterfeit DVDs threaten national security and require further state intervention. [12, p. 264]

With how advanced piracy technology has become and how it will continue to improve, it will not be going away anytime soon. With that in mind, Christians should make an effort to seek the ways in which the tools of piracy enable the spread of the Gospel and how it can be used as a salt and a light to those in less fortunate places—fellow Christians and unbelievers alike.

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