

# **Open Source Ethics**

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## **Introduction**

After more than 6000 years of continued musing, thinking, arguing, and fighting over how to properly live an ethical life on an individual and/or community basis, I am sorry to report that there still exists no consensus. Of the variety of theories proposed over time, some of the more prominent include Aristotle's influence on virtue ethics, which offers some excellent insights such as his call to moderation in all things, but is also thoroughly unsatisfying, because it requires that we figure out what the proper virtues are, which no one can ever seem to agree upon. There are ethical systems attached to world religions in both the Eastern and Western traditions, but obviously none of these are entirely sufficient because no one religion is universally acknowledged to be the one true religion; and yet each of these systems seems to have accrued sound wisdom and viable practices over years and years of implementation and revision. The work of Immanuel Kant, which has been vital to the founding of liberalism, is often acknowledged as a key turning point in ethical progress, due to innovation through the categorical imperative and the attached suggestions for living an ethical life by conceptualizing each individual person is universally legislating their actions and determining the acceptability of those maxims by use of reason alone. At the same time, however, it becomes more difficult to accept this theory as it is presented when one acknowledges that Kant himself clearly stated a lack of interest in the actual impact of this theory, instead adhering to his idea that slowly over history, "in the fullness of time," humanity would slowly reach the kingdom of ends he had envisioned. While John Stuart Mill had good intentions, his utilitarian ideals are far too easily subordinated into

advocating the suffering of the minority for the benefit of the majority, which makes it very difficult to accept as intrinsically valuable ethical system.

All of the aforementioned examples and more instances beyond them are well summarized in one of Dr. Martin Luther King Junior's most famous letters, *Paul's letter to American Christians*:

But America, as I look at you from afar, I wonder whether your moral and spiritual progress has been commensurate with your scientific progress. It seems to me that your moral progress lags behind your scientific progress. Your poet Thoreau used to talk about "improved means to an unimproved end." How often this is true. You have allowed the material means by which you live to outdistance the spiritual ends for which you live. You have allowed your mentality to outrun your morality. You have allowed your civilization to outdistance your culture. Through your scientific genius you have made of the world a neighborhood, but through your moral and spiritual genius you have failed to make of it a brotherhood. So America, I would urge you to keep your moral advances abreast with your scientific advances.<sup>1</sup>

This is a strong condemnation, but seemingly for good reason: while openly allowing for the possibility that there exists no one right method of ethical life, it seems that none of the options available offer a truly satisfactory method of living an ethical life at both the individual and communal levels. In many of the ethical systems that currently exist, a common cause of problems within those systems seems to be difficulties in properly allocating importance to the individual versus the group, or at the very least being able to adjust in particular instances. By comparing the issue of moral advances with scientific advances, Dr. King seems to implicate that there can be scientific improvements to the field of ethical theory, and this rings true given our experiences. One of the key texts used in this philosophical exposition is Stone's Anatomy of Evil, which is an intricate use of science to attempt to understand one of the oldest moral categories, "evil."

The aforementioned issue of individual versus group importance within ethical conduct was eloquently described in an entirely different academic arena by Eric Raymond, author of the highly influential *The Cathedral and The Bazaar*<sup>2</sup> during the 1990s, although morality was not the intended focus of his work. He was a member of the development team of the early Internet browser Netscape, and he published this work in order to expound upon the differences between open- and closed-source software development. Very generally, Raymond explained closed source software development to function like a cathedral, in that a sequestered, small band of wizened wizards or potent practitioners of magic were the only ones privy to the causes and design behind the functions of a given product (for example, Microsoft Internet Explorer).<sup>3</sup> On the other hand, he described open-source software development like a colorful bazaar, where everyone in the community is given the option to choose from all possible venues, thus exponentially increasing the quality of the final product (for example, the successor to Netscape, Mozilla Firefox browser). While this publication is acknowledged within the software community is foundational to the later blossoming of the open-source movement, this piece is rarely referred to were even considered related to the field of ethics. This is unfortunate, because as this paper will contend, much of human suffering and misery can be traced to the arrogance of an individual or group which thinks that their belief system is closed source and therefore above censure, or perhaps more accurately in this case, "editing" by other individuals or groups.

While drawing on the lessons and wisdom of previous ethical systems, this paper will seek to set up a more satisfying system of ethical behavior than its predecessors by explicating what "Open Source Ethics" consists of, and what it seeks to achieve. This is no small task, because amongst other assumptions, this paper will challenge the Cartesian claim that human beings are reason engines, a foundational assumption of Western philosophy for centuries. Following in the footsteps of pivotal liberal theologian Reinhold Niebuhr, this paper will follow his lead when he pronounced:

As if anyone ever came to any significant issue in history with "clean hands"! As if any nation which enforces peace within its boundaries had clean hands! As if any court which arbitrates between contending social forces were pure in its impartiality! Does not every court stand upon a particular sociological locus and is not its impartiality partly a genuine achievement of statecraft and partly a pretension?... Ever since the 18th century modern secularists have been trying to find the specific causes of social sin and to eliminate them. Injustice was supposed to be caused solely by unjust governments or by faulty economic organization of society, or by human ignorance....<sup>4</sup>

This excerpt, from one of his influential books on the need for the United States to enter the Second World War, succinctly explains that understanding human beings as rational actors alone is necessary, but not nearly sufficient. This is in direct contradiction of the work of John Rawls, whose Original Position attempts to set up exactly that theoretical guiltless vantage point from which an idealized justice might be derived.<sup>5</sup> His opposition to starting with "clean hands" points to a different reality entirely; one where each individual and group must start where they currently are, with whatever they currently have, and work their way forwards as best they can. Instead of pretending that reason can allow us to craft a perfect system of justice in one fell swoop, Niebuhr feels that our inherent partiality as human beings means that any changes for the better shall only come incrementally over the course of time, as the by-product of vigorous public critique and

counter-critique. Along these lines, a different approach from the idealized secularist outlook will be constructed, via several stages of examination.

First, it is necessary to give a genealogy of the open source software movement, focusing specifically on several of the notable definitions of "open source" given; from this genealogy, four major open source ideals will be drawn to be used for setting up Open Source Ethics. The second section of this paper shall serve as the philosophical exposition of Open Source Ethics, and will consist of 6 subsections: 1) painting a portrait of how an individual human being functions, using a combination of Weber and Kierkegaard; 2) using the work of Scott Gustafson to understand society as a collection of individual human beings, and negating morality in favor of ethics; 3) an explanation of which aspects of James' Pragmatism apply in this case, as a useful method of understanding how the actions and reactions of that society of individual human beings might function; 4) reference to the work of Dr. Michael H. Stone as a method of attempting to understand culpability for actions we might deem "evil;" 5) deriving the Four Principles of Open Source Ethics from both the preceding sections and the earlier core values of open source ideology; and 6) determining who should participate in the process, and when. Finally, with the Four Principles in place, a single case study will be used, considering the Banality of Evil versus the Banality of Good and how this juxtaposition clearly demonstrates the importance of Open Source Ethics, and a justification for only needing one case study will be given as the last component of this philosophical journey.

## A Genealogy of Open Source

In the span of a few short decades, computers have gone from the province of the Defense Advanced Projects Research Agency (DARPA) of the United States Department of Defense and affluent universities, a relatively small group, to necessity in every aspect of life for many people in the contemporary world. Along the way, there've been a variety of methods of programming that have come and gone, but of interest to this paper is what can widely be described as the open-source movement. This is a very generalized term, but there is a clear progression of events that led to its current form as described by the industry standard, the Open Source Definition, which is maintained and regulated by the Open Source Initiative (OSI). As the history portion of their website explains,

the prehistory of the Open Source Initiative includes the entire history of UNIX, Internet free software, and the hacker culture. OSI was formed as an educational, advocacy, and stewardship organization at a cusp moment in the history of that culture. The immediate chain of events that was to lead to the formation of OSI began with the publication of Eric Raymond's paper *The Cathedral and The Bazaar*.<sup>6</sup>

Of the aforementioned historical stages, it is necessary to explain the formation of hacker culture, drawing on the work of author Stephen Levy; it is also necessary to explain the content and intention of Raymond's publication. After gathering and understanding of these important aspects of the open-source movement, it will be possible to explain what the Open Source Definition consists of and seeks to convey. This in turn will allow for short look at several specific implementations of this concept in the software world, the purposes of illustrating what the open-source movement is capable of achieving. That said, is first and foremost necessary to help illustrate open-source by offering a short definition of its binary opposite, closed source, and the associated terms in this lexicon.



In both open source and closed source, the word "source" has a very specific meaning: the programming language which underlies and remains hidden beneath the visual aspects of a piece of software that is being used. That is to say, even if the software user perceives both visual and textual aspects to the software, these are the elements of the software they are meant to see and use, rather than the underlying structure undergirding the software (the "source code"). The appellation open or closed is meant to explain whether the source code is legally allowed to be modified by the end-users and the original programmers (and therefore "open"), or if it is only legally allowed to be modified by the original programmers (and is therefore proprietary, or "closed"). As previously mentioned, open source software is a newer idea emanating from the older closed source software movement, when closed source was the only type of software available. Armed with this basic understanding of what closed source code involves, it is now possible to examine the historically important hacker culture mentioned by OSI, making use of the research done by Stephen Levy.

In his book Hackers: Heroes of the Computer Revolution, author Stephen Levy spends 400 pages accomplishing several complicated goals in an eloquent, compelling, and straightforward way. First and foremost, his book represents the vehicle by which the term "hacker" entered the public discourse, which was a feat that hackers themselves had not managed to accomplish. Oddly enough, the story Levy tells begins in 1959, at the Tech Model Railroad Club (TMRC) of the Massachusetts Institute of Technology. While following the story of one freshman, he gives the etymology of the word "hacker" as follows:

This latter term [hack] may have been suggested by ancient MIT lingo-the word "hack" had long been used to describe the elaborate college pranks that MIT students would regularly devise, such as covering the dome that overlooked the campus with reflecting foil. But as the TMRC people use the word, there was serious respect implied. While someone might call a clever connection between relays a "mere hack," it would be understood that, to qualify as a hack, the feat must be imbued with innovation, style, and technical virtuosity. Even though one might self-deprecatingly say he was "hacking away at The System" (much as an ax-wielder hacks at logs), the artistry with which one feat was recognized to be considerable. The most productive people working on Signals and Power [S&P] called themselves "hackers" with great pride.<sup>7</sup>

Given the focus of the TMRC, the aforementioned System referred to the enormous model train circuitry board in their club room, with intricate papier-mâché and replica trains running on top of the tables, but the Signals and Power of the electronics being hidden away under the tables. This etymology only covers one word, but it identifies an early trend in hacker culture that continues to this day: a passionate love for misspelling words, creating slang, amalgamating phrases, and any other manner of incorrect grammar *ad nauseum*. This is a trend will be apparent in later stages of the development of open source. At Levy's etymology and history of the word "hacker" suggest, the people drawn to the S&P part of the club where the math and science prodigies of their respective high schools who had a fascination, or perhaps even vocational calling, in some field that combined the mechanisms of engineering with the logarithms of mathematics.

Levy goes on to tell the tale of brilliant freshmen and sophomores watching in envy and jealousy as less talented graduate students in engineering went to use IBM computers that had strict schedules for their use, due to their enormous cost. Each of these Model Railroad hackers were eventually granted time to spend getting to know a new computer that arrived (the TX-0 made by the Lincoln Lab, an affiliate of MIT) by a

lenient new professor.<sup>8</sup> Against the expectations of societal norms, and mathematics professors, these hackers would spend much of their time thinking up programs to write, and then sneaking onto the list of users for the TX-0 in order to try out their ideas. Of any number of examples, one stands out as an exemplar: a hacker decided to do his engineering homework in a slightly more complicated matter than usual, involving dozens of hours and 3000 lines of code to make a multimillion dollar "computer perform the function of the calculator across 1000 times less."<sup>9</sup> Quite pleased with the irony of the situation, this student decided to name this program Expensive Desk Calculator, and managed to receive a zero as his grade, because the professor could not conceive of the possibility that computer would properly function as the calculator.<sup>10</sup> To even the most casual user of the computer today, this anecdote sounds ridiculous to the point of being a falsehood: it does not seem reasonable to accept that a professor of engineering at MIT would turn down homework done on a calculator program for computer, as even the most basic of computer programs today have extensive built-in functions dealing with math.

Before Levy continues with the rest of his book dealing with hackers of the 1960's, 1970's, and 1980's, he labels this initial band of hackers at MIT True Hackers, and associates with them an explicit Hacker Ethic, which he lists as follows (and can be found with the other approaches to open source in Appendix I):

- 1) Access to computers - and anything which might teach you something about the way the world works - should be unlimited and total. Always yield to the Hands-On Imperative [the ability of any hacker to try and improve any system]!<sup>11</sup>
- 2) All information should be free.<sup>12</sup>
- 3) Mistrust Authority - Promote Decentralization.<sup>13</sup>
- 4) Hackers should be judged by their hacking, not bogus criteria such as degrees, age, race, or position.<sup>14</sup>
- 5) You can create art and beauty on a computer.<sup>15</sup>

6) Computers can change your life for the better.<sup>16</sup>

Although there are interesting back stories each of the six points that Levy describes in detail, the fourth point about nondiscrimination genuinely merits an anecdote from his work. The son of a professor at MIT, Peter Deutsch was 12 years old when he first wandered into the TX-0 room on campus. He would watch graduate students struggling with their programs, and make remarks such as

"Your problem is that this credit is wrong over here..." and the self-important grad student would go crazy - *who is this little worm?* [emphasis original] - and start screaming at him to go out and play somewhere. Invariably, though, Peter Deutsch's comments would turn out to be correct. Deutsch would also brazenly announce that he was going to write better programs than the ones currently available, and he would go and do it.<sup>17</sup>

The True Hackers, then, took their meritocracy very seriously and made no exceptions, if they even let a 12-year-old kid into the group. From this list and its source in the original True Hackers, Levy goes on to describe what the aforementioned OSI history mentions as the history of UNIX and culture. That said, the later developments he tracks are merely variations on this original six themes. As Levy summarizes in the afterword to his work,

These ideas [about hacking as a positive idea] began to flow beyond the computer industry and into the culture at large. As I learned while writing *Hackers*, the ideals of my subject could apply to almost any activity one pursued with passion. Burrell Smith, the designer of the Macintosh computer, said it as well as anyone in one of the session that the first Hacker Conference: "Hackers can do almost anything and be a hacker. You can be a hacker carpenter. It's not necessarily high-tech. I think it has to do with craftsmanship and caring about what you're doing."<sup>18</sup>

The other possibility, of the Hacker Ethic and its derivatives reaching beyond the computer industry into the "Real World," as Levy refers to it, seems to be an apt description of the intentions of this philosophical expedition.

Having performed a brief survey of the essential hacker culture that informed and shaped the progression of the free software movement before it had any title as such, it is now possible to consider in-depth the meaning and significance of one of the works mentioned in the introduction: Eric Raymond's *The Cathedral and The Bazaar*. The publication itself, in its current form, is an open-source piece of literature. At the top of the webpage it lists the copyright information as "permission is granted to copy, distribute, and/or modify this document under the terms of the Open Publication License, version 2.0."<sup>19</sup> Underneath this open-source copyright, he has a table of the revisions he has made his work, which in computer science might be more accurately called a change log: a collection of changes made to a body of work with the dates when the changes were put into effect. As such, before even getting into the body of the work, it's clear that Raymond is serious about this open-source software movement that he helped elucidate. The first section of his paper deals with where he derived the title for his work: "the most important software needed to be built like cathedrals," he explains, "carefully crafted by individual wizards or small bands of mages working in splendid isolation, with no beta to be released before time."<sup>20</sup> To be explicit, in computer science the "alpha" release refers to the earliest release of an idea or piece of unfinished software to a select group of testers, whereas the "beta" release refers to the release of a piece of unfinished software to a comparatively larger group of testers. This conception of the Cathedral was representative of corporation such as Microsoft or Apple, where employees are conceptualized as the only properly outfitted individuals to work on piece of software before its release, and specifically in those cases operating systems such as Windows and Mac OS, respectively.

In contrast, Raymond explains, the Linux operating system is also a world-class operating system, but it was developed using an entirely different guiding philosophy. He summarizes the creator of Linux and his philosophy as follows:

Linus Torvald's style development- release early and often, delegate everything you can, be open to the point of promiscuity - came as a surprise. No quiet, reverent cathedral-building here - rather, the Linux community seemed to resemble a great babbling bazaar of differing agendas and approaches (aptly symbolized by the Linux archive sites, who'd take submissions from *anyone* [emphasis original]) out of which a coherent and stable system could seemingly only emerge by a succession of miracles. The fact that this bazaar style seemed to work, and work well, came as a distinct shock. As I learned my way around, I worked hard not just at individual projects, but also at trying to understand why the Linux world not only didn't fly apart in confusion but seemed to go from strength to strength at a speed barely imaginable to cathedral-builders.<sup>21</sup>

This definition of opposing terms is how Raymond enters into his story of testing Torvalds' style on a smaller scale: the development of a defunct program called popmail via open source means into a hugely successful program called fetchmail. To elaborate on a previous point, as time has marched forward, hackers' love of odd grammatical structures continues: there is a list of other candidates besides popmail including "fetchpop, PopTart, get-mail, gwpop, pimp, pop-perl, popc, popmail and upop," none of which are especially intuitive or clear to an outsider. The details of his experiences go beyond the bounds of this section, but is worth reproducing what he calls "aphorisms about open-source development" here, as both the comparison to the preceding Hacker Ethic as well as the Open Source Definition that would derive from his work. His list of 19 aphorisms are reproduced here in the order that he originally gave them:

- 1) Every good work of software starts by scratching a developer's personal itch.
- 2) Good programmers know what to write. Great ones know what to rewrite (and reuse).

- 3) "Plan to throw one away; you will, anyhow." (Fred Brooks, *The Mythical Man-Month*, Chapter 11)
- 4) If you have the right attitude, interesting problems will find you.
- 5) When you lose interest in a program, your last duty to it is to hand it off to a competent successor.
- 6) Treating your users as co-developers is your least-hassle route to rapid code improvement and effective debugging.
- 7) Release early. Release often. And listen to your customers.
- 8) Given a large enough beta-tester and co-developer base, almost every problem will be characterized quickly and the fix obvious to someone.
- 9) Smart data structures and dumb code works a lot better than the other way around.
- 10) If you treat your beta-testers as if they're your most valuable resource, they will respond by becoming your most valuable resource.
- 11) The next best thing to having good ideas is recognizing good ideas from your users. Sometimes the latter is better.
- 12) Often, the most striking and innovative solutions come from realizing that your concept of the problem was wrong.
- 13) "Perfection (in design) is achieved not when there is nothing more to add, but rather when there is nothing more to take away." - Antoine St. Exupery
- 14) Any tool should be useful in the expected way, but a truly great tool lends itself to uses you never expected.
- 15) When writing gateway software of any kind, take pains to disturb the data stream as little as possible—and *never* throw away information unless the recipient forces you to!
- 16) When your language is nowhere near Turing-complete, syntactic sugar can be your friend.
- 17) A security system is only as secure as its secret. Beware of pseudo-secrets.
- 18) To solve an interesting problem, start by finding a problem that is interesting to you.
- 19) Provided the development coordinator has a communications medium at least as good as the Internet, and knows how to lead without coercion, many heads are inevitably better than one.<sup>22</sup>

While this is a lengthy list, each of the items on it are useful to examine for their applicability to the blossoming sense of open source being established in this section.

From this list, Levy's call to "always yield to the Hands-On Imperative" can clearly be seen as the basis for aphorisms 1, 2, 3, 4, 5, 6, 8, 14, and 18. Nearly every aphorism on the list above is derived from the call to "mistrust authority - promote

decentralization." Aphorisms 7, 10, 11, 12, and 19 are all variations on the theme of a hacker meritocracy of Levy, because Raymond is calling for anyone involved in open source development to allow for the fact that someone beneath them hierarchically very well might have a better idea or method of implementing a portion of the code, he suggests that openness about this will yield greatly increased productivity, as well as a better end product. Aphorisms 9, 15, 16, and 17 are fairly technical suggestions, and along with number 13's reference to Saint-Exupery, all seem to fit under the umbrella of the contention that working on a computer can be beautiful art: they are tips to inform more eloquent method of coding at the individual level, and more efficient overall software once the individual contributions are put together. Along the path of constructing this list of aphorisms about open-source developers, Raymond is refreshingly honest: when explaining his rationale for the aphorism "Good programmers know what to write. Great ones know what to rewrite (and reuse)," he openly states that one of the most important traits of great programmers is constructive laziness, noting that "it's almost always better to start from a good partial solution than from nothing at all."<sup>23</sup>

Raymond proceeds to refine his definitions of the Cathedral and the bazaar, again referring to the work of Linus Torvalds closely. He proclaims the existence of Linus' Law, which simply holds that "given enough eyeballs, all bugs are shallow."<sup>24</sup> Using this Law, he differentiates between the two methods of software development further:

In Linus's [sic] Law, I think, lies the core difference underlying the cathedral-builder and bazaar styles. In the cathedral-builder view of programming, bugs and development problems are tricky, insidious, deep phenomena. It takes months of scrutiny by a dedicated few to develop confidence that you've winkled them all out. Thus the long release intervals, and the inevitable disappointment when long-awaited releases are not perfect.<sup>25</sup>



The closed-circuit rational elitism of the Cathedral or closed source method of software programming begins to become clear when considered in this way. Just because a small group of individuals has been assigned to work on a given software project as "the experts," they are not necessarily going to be able to write perfect code, nor will they be able to catch and remove all of the bugs as such small group. In contrast, Raymond explains that

In the bazaar view, on the other hand, you assume that bugs are generally shallow phenomena—or, at least, that they turn shallow pretty quickly when exposed to a thousand eager co-developers pounding on every single new release. Accordingly you release often in order to get more corrections, and as a beneficial side effect you have less to lose if an occasional botch gets out the door.<sup>26</sup>

From this second description of the bazaar, the nature of the so-called "shallow bugs" becomes more clear: rather than being deep-rooted problems that very few people are even attempting to fix, there are symptoms of problems that thousands of eyes looking for, and thousands of other eyes will then seek to fix. The underlying principle he credits with the success of Linus' Law and his methods for creating/maintaining Linux is the Delphi Effect, which he explains as the 30 year old discovery of sociologists "that the averaged opinion of a mass of equally expert (or equally ignorant) observers is quite a bit more reliable a predictor than the opinion of a single randomly-chosen one of the observers."<sup>27</sup> Looking at one of the authoritative sources on the Delphi Effect, his paraphrase is accurate:

Delphi may be characterized as a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem.<sup>28</sup>

Having masterfully demonstrated the differences between the Cathedral and the bazaar with this comparison will and the supporting evidence presented by the Delphi Effect

while clearly stating his allegiance to what at that time was known as Torvald's method of development, Raymond's ideas were ready to be released to the public, and almost immediately had much more than the fact that he ever could've imagined: the open sourcing of the Netscape Navigator web browser, and the attached creation of the expression "open source software."

Eric Raymond presented his paper in September of 1997, and less than five months later, and his ideas enacted in a very public and momentous way: Netscape's decision to open-source their web browser. As per the history given by the OSI:

The 'open source' label was invented at a strategy session held on February 3rd, 1998 in Palo Alto, California. The people present included Todd Anderson, Chris Peterson (of the Foresight Institute), John "maddog" Hall and Larry Augustin (both of Linux International), Sam Ockman (of the Silicon Valley Linux User's Group), Michael Tiemann, and Eric Raymond... They brainstormed about tactics and a new label. "Open source," contributed by Chris Peterson, was the best thing they came up with.<sup>29</sup>

Several days later, this formula was unveiled at a press conference and instantly raised up by a banner by advocates of Linux and other types of software which had instinctively progress towards the open source ideal over time, but had never had a unified method of referring to their philosophy. From the series of contentions in the Hacker Ethic, to the aphorisms of the Bazaar Approach to coding, another cycle of rebirth had taken place; this time as a list of 10 criteria making up the aforementioned Open Source Definition (OSD). In addition to the ideals which had sprung forth from previous generations of hackers, the OSD went beyond merely requiring that the code be open source, but also that the distribution of said code adhere to certain guidelines.

That list<sup>30</sup> included the following terms, some of which require additional details:

- 1) Free Redistribution
- 2) Source Code
- 3) Derived Works
- 4) Integrity of the Author's Source Code
- 5) No Discrimination Against Persons or Groups
- 6) No Discriminations Against Fields of Endeavor
- 7) Distribution of License
- 8) License Must Not Be Specific to a Product
- 9) License Must Not Restrict Other Software
- 10) License Must Be Technology-Neutral<sup>31</sup>

Criteria 1 requires free redistribution, which simply means that parts or all of the software license as open source can be reused in any other software. The second criteria, and vital to this paper, the license obviously requires that the software's underlying code be available or "open source," specifying:

The program must include source code, and must allow distribution in source code as well as compiled form. Where some form of a product is not distributed with source code, there must be a well-publicized means of obtaining the source code for no more than a reasonable reproduction cost preferably, downloading via the Internet without charge. The source code must be the preferred form in which a programmer would modify the program. Deliberately obfuscated source code is not allowed. Intermediate forms such as the output of a preprocessor or translator are not allowed.<sup>32</sup>

For purposes of clarity, the source code mentioned means the underlying code that allows the program to work, whereas the compiled code is actually the software itself as it runs. Similarly, the other requirements listed clearly define open source as meaning the simplest, most clear version of the source code is easily accessible and available to any interested party, without any gimmicks that might prevent an interested party from fully understanding how the program was constructed and subsequently modify it as they see fit. Criteria 3 is the obvious continuation: a requirement that derived works from the original source code be licensed open source as well is necessary to keep progressive

iterations of a piece of software open source. Preserving the integrity of the author's source code upon the request is the fourth criteria, and is a legalistic outlet for the underlying egotism fueling the work of programmers that has been acknowledged and even embraced by the Hacker Ethic, Raymond's theory of open source, and more generally, most aspects of social human life, where individuals like to receive acknowledgment for their contributions. The method by which this works is that the authors original code is kept as is, and then has associated patch files with additions and modifications; all of the code is viewable at the same time albeit in separate portions, and then functions as a unified piece of software once the program is run.

The first four criteria of the OSD each hint at the prior history described above, but it is with the fifth and six criteria that direct ties to the original Hacker Ethic of 1959 become clear: criteria 5 prohibits discrimination against persons or groups, and criteria 6 prohibits discrimination against fields of endeavor. By fields of endeavor, the intention is to avoid having open-source software designed for use in the medical field, for example, be prohibited from being used in the financial field (an easy example would be that these are software written to help keep patient records easily accessible could turn out to be an excellent basis for a program intended to keep stockholders' records easily accessible). This is one of the most fundamental views of the True Hackers: a calm and collected irreverence towards the given "intended" purpose or use for anything, be it software or hardware. Criteria 7 is a strongly legalistic requirement, requiring that the open-source licensing stay attached to the program no matter how many times it is redistributed. The final three criteria are somewhat recursive; that is to say, they require open-source

licensed programs to be open source in their outlook. Criteria 8 requires that even if a hacker intended use a small portion of the program is open source, the entirety of the open source license will still apply to that smaller component. Criteria 9 requires a certain tolerance from open-source programmers: if the CD being released with 10 programs is made up of nine proprietary, closed source programs, the 10th program which is licensed under the OSD can still be released alongside them. This is historically understandable, given that at first, many desired tasks to be performed by software could only be enacted by proprietary software, with small pieces of open-source programs running alongside them. Finally, the 10th criteria requires that the license be technology-neutral; that is to say, that even if a hacker wrote an excellent program for desktop computers that would monitor the temperature of the hard drives and an open-source license for it as a desktop program, there would intentionally be no legal way to stop another hacker from adapting that program for use on a laptop computer. Thus, these 10 short rules set up in industry-standard for a method of software programming that has its roots in nearly 4 decades of open sourcing the ideals of open source.

From these three influential entries into the history of the open source ideology, there are several major ideals which can be derived. First and foremost, the ideal that anything and everything can be improved for the better stands out, which is a very culturally-American way of approaching the world. From this initial point, which all proponents of open source agree upon, there is a divergence in specific beliefs, but additional ideals can be found. It seems that an open source system relies heavily upon both the free flow of information to all parties, as well as a viable communications

network, such as the Internet: this is necessary if interested parties are going to be able to acquire the current code, make their changes, and then submit it back to everyone else. In a related way, the necessity of distributing information to all developers seems to indicate an equality of developers, with the caveat that they are only judged on their ability to hack; the inherent equality as individuals will be the lesson used later in this paper. Also related to these ideals is that of decentralization, which stands to reason: if all individuals are equal, and everyone is equally able to receive and post information, placing more power in the hands of some central authority will only serve to slow down or even ruin the process of open sourcing software. From this general sentiment of the ideals of "open source," it is now possible to begin the second section of this paper, the methodical Exposition of Open Source Ethics itself.

## **Exposition of Open Source Ethics**

### *Introduction*

Having examined the genealogy of the open source software movement, and derived a working sense of what "open source" means, it is now possible to begin outlining the open source ethical system. Prior to explaining the particulars of the system itself, an additional set of definitions must be furnished, of its components. It is important to admit from the outset that, in the spirit of open source software, this exposition is not going to cover every possible eventuality and be perfect in its application; quite the opposite, it is openly admitted that the structure being put together here is an imperfect one, but perhaps a structure that can demonstrate the value of the process of open source ethics nonetheless. Amongst other elements, the nature of

individual human beings will be considered by using and then modifying the understanding of Søren Kierkegaard; similarly, both the traditional mechanism by which this individual human being enters into societal living, as well as Scott Gustafson's compelling critique of that mechanism, will be entertained. From this compound understanding of human society as a collection of individuals, the Pragmatism of William James will be erected as the backdrop for this human society to be measured against, and that measurement will take the form of the seminal work of Dr. Michael H. Stone, The Anatomy of Evil. These two works, used to examine human actions and reactions, will be the conceptual foundation of the tenets of an Open Source Ethics, obviously drawing heavily upon the previously-derived definition of "open source."

#### *A Portrait of the Individual Human Being*

In the Western tradition of philosophy, and as corollaries, economics and politics, individual human beings are understood to be "rational engines." These different disciplines use different lexicons: political science posits constituents voting upon their personal interests; economic theory is largely based upon the sentiment of a self-interested consumer with unlimited wants; and philosophy involves different thought experiments for, by, and about rational engines: inputting certain stimuli into the brain of a rational being will mechanistically yield certain outcomes, on the basis of reason. Many philosophers and theologians have disputed this claim in different ways, but in this case it is the work of Søren Kierkegaard which will be considered. In his Fear and Trembling, he pseudonymously tells the tale of the Binding of Isaac (Genesis 22:1-24) several different times, all in an attempt to understand the inexplicable faith of Abraham.

For purposes of clarity, the Binding of Isaac is the Biblical tale of God demanding that Abraham sacrifice his son Isaac on Mount Moriah; this is complicated further in that Isaac was promised to Abraham and then born under miraculous circumstances, to parents far too old to conceive. Abraham is told to take Isaac with him as ordered, and then at the last moment, immediately before he is going to sacrifice his beloved son, an angel of God commands him to stop; Abraham then sees a ram entangled in nearby bushes, provided by God as the actual vehicle of sacrifice.

Theological exegesis aside, Kierkegaard gives us those scenarios, wherein he tries to understand how Abraham might have felt about the commands of God, which are seemingly of sinister nature. He leaves us to consider these possibilities, and enters into a long explanation as to the types of human beings in his understanding: the slave of the finite, representative of the majority of humanity; the Knight of Infinite Resignation; and the elusive Knight of Faith. The example he gives makes clear his intentions:

A young lad falls in love with a princess, and this love is the entire substance of his life, and yet the relation is such that it cannot possibly be realized, cannot possibly be translated from ideality into reality.<sup>33</sup>

The slave, he explains, would respond: "that kind of love is foolishness; the rich brewer's wife is just as good and solid a match."<sup>34</sup> This highlights what he understands to be the slave of the finite in his analogy: the majority of human beings, for whom acting on the basis of reason is the best they are capable of achieving. The Knight of Infinite Resignation would react differently, by keeping his love for the princess internally, without ever needing to see her; as Kierkegaard holds, "he has grasped the deep secret that even in loving another person one ought to be sufficient to oneself. He is no longer



finitely concerned about what the princess does, and precisely this proves that he has made the move infinitely."<sup>35</sup> The final consecutive step in this series is that of the Knight of Faith: Kierkegaard explains that while this Knight follows the Knight of Infinite Resignation is accepting that he must keep his love internally, as he will never reasonably be able to actualize his love,

He makes one more movement even more wonderful than all the others, for he says: Nevertheless I have faith that I will get her-that is, by virtue of the absurd, by virtue of the fact that for God all things are possible.<sup>36</sup>

So the Knight of Faith, against all odds, is still willing to believe on the basis of faith beyond reason that he will successfully actualize his love for the princess. As Kierkegaard later explains, there are very few if any Knights of Faith in history, nor can they be discerned if they do indeed exist.

With this system that relies upon imagery from the chivalry of medieval Europe, Kierkegaard presents an interesting account of how the traditional Western philosophical understanding of human beings as rational engines alone is unsatisfying. In the spirit of open source, it seems that Kierkegaard's system might be expanded to present a more fully fleshed-out illustration of the nature of an individual human being. Kierkegaard clearly sets up a hierarchy wherein the use of reason is seen to be indicative of normality, whereas "faith is no aesthetic emotion but something far higher; it is not the spontaneous inclination of the heart but the paradox of existence."<sup>37</sup> To present the same viewpoint using very different imagery, consider a railroad system. Weber, as recently retranslated by Patrick Jackson, claims that

Not ideas, but material and ideal interests, directly govern the actions of human beings. Yet very frequently the 'world images' that have been created by 'ideas'

have, like switchmen, determined the tracks along which the dynamic of interest has moved such action.<sup>38</sup>

The thoughts of a rational being are much like trains, traveling along networks of rails that constrain the destinations and manner in which the trains may travel. Within this metaphor, Kierkegaard's Knight of Faith accepts that many of his thoughts do not have rationally viable outcomes, that is to say they are unable to travel to his intended destinations as the tracks do not extend that far. At the same time, however, the Knight of Faith still believes that his thoughts, or trains, will still reach his intended destinations nevertheless. It is difficult to explain using any metaphor because as Kierkegaard admits, it is within the realm of the absurd.

That said, the use of this metaphor is worthwhile: a comprehensive explanation of the nature of an individual human being requires that we ask ourselves "why was the railroad track laid out as it was?" Exiting the metaphor and entering back into philosophical language, we need to ask ourselves "if faith represents moving a hierarchical step higher than reason, what occupies the hierarchical step beneath reason, and what can we label that region?" It is important to note from the outset that the language "beneath reason" relies heavily upon the commonly-held legal notion that human beings are not fully rational and responsible until they are adults (whatever that age may be). It seems that although Kierkegaard disallows for any sizeable presence of Knights of Faith in the world, it is precisely by acting on the virtue of the absurd, or via faith, that the tracks of thought operating behind our reason can be altered in any way. This faith, leaping beyond our reason entirely, is strong enough to allow us to completely rework the tracks of our thought in a way that is normally next to impossible. This faith,

much like Abraham's faith in the eyes of Kierkegaard, is a "teleological suspension of the ethical. As the single individual, he became higher than the universal."<sup>39</sup> By moving hierarchically beyond the universal momentarily into the realm of faith, that individual can now reconsider the lowest part of the hierarchy, the tracks upon which their reason operates.

The Kantian notion of liberalism provides an excellent illustration of one method of understanding human beings as rational creatures: he wrote that liberalism represented the most enlightened form of government, and that adds other peoples of the world were able to see the virtues of liberal democracy, they would slowly use their reason (which is the same reason use by individuals within the liberal democracy) to move towards the same form of government. In this way, Kant figured that eventually, all of the states in the world would coexist peacefully, having used their reason to reach the same conclusions.<sup>40</sup> This understanding of both international politics and the manner in which reason operates are clearly representative of a very Western bias; they are after all from the canon of Kant. Examine for a moment the very expression "Western bias," which can be rephrased "an inclination towards the Western pattern of thinking." This simple example illustrates the point well initially, and will allow for an examination of how societies function in terms of modes of thinking. After that consideration, it will be possible to more closely consider the issue of how these tracks of reason are established, and how they function.

*A Collection of Individuals: Morality or Ethics?*

We have contended very generally that an individual person's method of reason operates on some sort of tracks of their reason, which are affected by several outside influences; the most important and first to be discussed will be that of society. All individual human beings exist as components of some societal structure, whether that means they are accepted within said structure or not. There are a variety of theories that deal with how society was formed, and why, and to what end; many of them might also apply here to great effect, but in the spirit of open source, we are trying to assemble a basic frame to work with, and shall only examine one of those approaches. Scott Gustafson, in his book Behind Good & Evil, seeks to parallel some of the work of Nietzsche, in that he seeks to outline the genealogy of morals, but from an entirely different perspective. Instead of tracing the problems of morality to religion, as Nietzsche is famous for doing, Gustafson finds the culprit behind morality to be the creation of human civilization, by human beings. He contends that the cessation of hunting and gathering in favor of agricultural-based towns and settlements led to an increase in population, while keeping the amount of food available steady.<sup>41</sup> This in turn led to the reality where the leaders of the towns would need to select who would not get food in the case of a shortage, and that the criteria for deciding differed amongst different towns and groups. As he informs us, "drawing the line separating those worthy of food from those deemed unworthy was a consequence of the central technology of the agricultural revolutions, namely, the commoditization of food," which he holds to be the initial cause of what he calls the "dominator system of morality."<sup>42</sup> From this early point, Gustafson argues, morality took on two vital flaws: a death-dealing character, and the

propensity to allow for truly horrific actions to be justified by one state, being used both against its own citizens and other states' citizens.

The claim that morality has a death-dealing character is a very strong one, but Gustafson makes a very interesting point. As he understands it,

the function of morality refers to what morality actually *does* within a given civilization. Unlike the changing and variable content of morality, the function of morality is always the same. It is universal. *Morality always separates the good ones from the bad ones* [emphasis original].<sup>43</sup>

This conception of the way in which morality functions as part of civilization fits well with the previously given explanation of how individual human beings function; different individuals and groups have different tracks to their reason, which leads them to differing conceptions of who the good ones or the bad ones are within society. It is this generalizing aspect of morality that disqualifies it from consideration in an open source system of ethics: labeling an individual good or evil is far too binary a distinction. To offer a counter example to the initial section regarding open source, it seems that morality could be regarded as a closed source approach to the problems of the world: universal labels of good or evil upon an action, an individual, or group are made by another group which is in a position of "moral authority." But this conception of moral authority is self-defeating, as it is a group claiming more perfect knowledge of the nature of the world than another group, when in reality all groups are comprised of equally imperfect human beings. And, as Rousseau cynically explained,

This is what has always forced the fathers of nations to have recourse to the intervention of heaven and to credit the gods with their own wisdom, so that the peoples, subjected to the laws of the state as to those of nature and recognizing the same power in the formation of man and of the city, might obey with liberty and bear with docility the yoke of public felicity.<sup>44</sup>

Traveling back to the initial section about open source, this is essentially what the whole idea of the Cathedral is referring to; a small group of individuals working in secret to determine "The Rules," and then not allowing anyone else to try and change it. Gustafson's dominator systems of morality are presided over in most cases by a few of Rousseau's individuals who made the rules and want to keep them that way; open source ethics will seek to break that mold.

It is important to note that Gustafson's theory deals predominantly with the character of human beings, as he closely associates ethics with a rebellion against the established, flawed system of morality. While Open Source Ethics does agree wholly with the necessity of questioning all "truths" in systems of ethics and morality, it also pairs this idea of ethics and human character with the sense that actions can have the moniker moral or immoral. This stands to reason, as the nature of anything that is open source is to take into account both methods of reaching outcomes as well as outcomes (in software, examining both the math equation as well as the answer it gives), in an effort to determine if it worked properly. Thus, the closed source nature of morality becomes clear: it is the "morally superior" group that claims the definition of morality as proprietary, and refuses to let anyone else offer any changes or suggestions, based on reason or experience. Unfortunately, enough people accepting the system gives it credibility, and thus we end up with the oft-alluded-to "blind leading the blind," from the interpersonal level up to the global level.

Changes can and do occur to the content of morality, but usually only based on the reason and/or experience of a select few. The other possibility, one that is potentially even more frightening, is the rule of the mob: the tyranny of the majority squashing the ideas of the minority under the iron-shod boots of good intentions, which always seem to lack even a tinge of understanding or informed comprehension. This possibility was part and parcel of James Madison's outlook on the American experiment: in Federalist 10, he warns us of the powers of any faction, which he defines as

a number of citizens, whether amounting to a majority or minority of the whole, who are united and actuated by some common impulse of passion, or of interest, adverse to the rights of other citizens, or to the permanent and aggregate interests of the community.<sup>45</sup>

The solution offered by Madison for this problem operates well within one government, as he holds that

to secure the public good, and private rights, against the danger of such a [majority] faction, and at the same time to preserve the spirit in the form of popular government, is then the great object which our inquiries are directed.<sup>46</sup>

And as he later argues in Federalist 51, this not going to be entirely difficult to achieve via the federalist form of government, as

whilst all authority in it [the federal republic of the United States] will be derived from and dependent on the society, the society itself will be broken into so many parts, interesting classes of citizens, that the rights of individuals or of the minority, will be in little danger from interested combinations of the majority.<sup>47</sup>

This rough example is only one of the problems that might occur within American society; the formula is the same for problems between different societies with differing morality. While this is not exactly the most cheerful of ways to represent the world, this seems to be a decent albeit simplified method of understanding many of the conflicts that have occurred, are occurring, and seem poised to occur in the future. The problems

enumerated by this section clearly point towards the need of all individuals to attempt to validate their ethical system, whether that be on a scientific basis or on the more simplistic basis of experience. This is not to claim that an individual can "successfully" test their ethical system and then be completely correct; the process of open source ethics is a continuous one, always relying on new data to further improve the system, but in the everyday life of an individual, it makes actions far easier to undertake if armed with a sense that one is operating on a decent system of ethics. That said, there are still several steps must be taken before outlining the open source system of ethics itself. The first of those is the work of a philosopher very different from Kierkegaard; William James.

#### *Open-Sourcing the Actions of Society: Pragmatism*

It cannot be denied that each human being is shaped to some degree by the environment where they are raised and live; this even holds true for philosophers. It should therefore not come as a surprise that Hegel wrote in such strong terms of praise for the state, when his paycheck came from the treasury of King Frederick William III of Prussia. Similarly, Kant was born and raised in Königsberg, the legalistic Prussian city wherein he crafted and perfected a system of morality based strongly on only adhering to principles which can be universally legislated. In the same vein, William James was amongst other things a product of his environment, 19th century America and American culture in general. As a professor, he gave a series of lectures that were later published in his book entitled Pragmatism, explains that "the pragmatic method is primarily a method of settling metaphysical disputes that otherwise might be interminable."<sup>48</sup> He later goes on to add that pragmatism



widens the field of search for God. Rationalism sticks to logic and the empyrean. Empiricism sticks to the external senses. Pragmatism is willing to take anything, to follow either logic or the senses and count the humblest and most personal experiences. She [pragmatism] will count mystical experiences if they have practical consequences.<sup>49</sup>

Given James' personal interest in religion, this example is sensible; but the point remains the same for many other types of problems of a metaphysical nature. The above formulation of the range of acceptable inputs for pragmatism, from the most complex of intellectual theories to the most simple of personal experiences, seems to indicate that pragmatism might have something to offer to the field of ethics.

Based on the work of Gustafson, holding that morality is an artificially-constructed conception of what is right and wrong by any given society, it seems that the metaphysical work of James' pragmatism might offer some insights. James understands truth and right action in a parallel way to each other:

*'the true,' to put it very briefly, is only the expedient in the way of our thinking, just as 'the right' is only the expedient in the way of our behaving. Expedient in almost any fashion; and expedient in the long run and on the whole of course; for what meets expediently all the experience in sight won't necessarily meet all farther experiences equally satisfactorily. Experience, as we know, has ways of boiling over, and making us correct our present formulas. [all emphasis original]*<sup>50</sup>

This understanding of so-called "true" knowledge and how the boiling over of experience eventually forces it to change sounds very similar to the nature of morality. The differences here between the broken system of morality and this construction of an open source ethics are two, and are both closely connected to the conception of society as a collection of individuals, as presented above. First, the pragmatic understanding that experience boils over and will cause changes to understanding over time is a good start, but merely a passive one; an open source system of ethics would instead require an active

component, in that participants would need to openly acknowledge that experience will prove their conceptions of the truth and/or the right wrong over time, and as a result be prepared to change those conceptions. This will be developed further at the end of this section, but needed to be mentioned at this point, as a derivative of James' work. Second, rather than the tyranny of the many or of the few, an open source system of ethics would need to allow these sets of experience to be freely available, so that as James puts it, even "the humblest and most personal experiences" are counted; along the lines of democratic ideals, one person has one set of experiences to add to the collective pool of experiences, of equal value to all other sets of experiences. This too will be examined further in a later section, after the exposition of open source ethics itself.

It is interesting to note that the aforementioned prominence of certain tracks of thought within any given group with an idea that James also supported, in his discussion of common sense. He holds that

our fundamental ways of thinking about things are discoveries of exceedingly remote ancestors, which has been able to preserve themselves throughout the screens of all subsequent time... In philosophy it [common sense] means... the use of certain intellectual forms or categories of thought.<sup>51</sup>

More generally though, this sense of common sense should be expanded for open source ethics based on two related differences that often occur in individuals' and groups' tracks of thought: first, differences in language, which many philosophers and anthropologists have studied for years, and determined that these cause fundamentally different approaches to the world around us. Second, it seems that these different languages and tracks of thought are what can help explain the phenomenon of humor. A successful joke, or even an unsuccessful joke, is based on the joke-teller's sense that their

interlocutor shares the same tracks of thought, and will thus find the negation/modification of ideas on those tracks humorous. This in turn can help explain why it is so incredibly difficult to transfer some jokes or pieces of humor across cultures or even individuals, as members of those cultures may share many aspects of their tracks of thought, but still come from different backgrounds, and often different languages. The effects of language upon tracks of thought, and the demonstrated differences in tracks of thought based on the mechanism of jokes both seem to indicate the need for an expansion of James' ideas of common sense, in that more than one iteration of common sense has emerged, thus demonstrating the different tracks of thought at work in this world's collection of individuals and groups.

Having examined Pragmatism both as originally presented and as it might need to be modified to help set up open source ethics, we have established a strong sense of how to properly examine the actions and reactions of individual human beings as they progress based on both experience, and their own reason, which is shaped by their particular tracks of reason. It is now necessary to turn in the opposite direction, to briefly examine a sense of how responsible individuals are for their actions or lack of action. As it can be contentious to discuss responsibility for "good" actions if there can be no easy or clear consensus on what a good action is, perhaps it will be more instructive to examine culpability for "evil" actions, which are often perceived in a much more visceral way, and thus will illustrate the point being made more clearly.

*Open-Sourcing the Causes of Action: Evil*

The seminal work of psychiatrist Dr. Michael H. Stone, the culmination of more than 40 years of work spent examining hundreds of cases of sociopaths and psychopaths, The Anatomy of Evil is simultaneously chilling and fascinating. He restricts himself to dealing with the peace-time actions of individuals who are blanketed under the term "psychopath" by the common person, as a result of performing evil actions. He also restricts himself to his own working definition of evil, saying that "for an act to be evil:"

1. It must be breathtakingly horrible;
2. Malice aforethought (evil intention) will usually precede the act;
3. The degree of suffering inflicted will be wildly excessive;
4. The nature of the act will appear incomprehensible, bewildering, beyond the imagination of ordinary people in the community. [parenthetical original]<sup>52</sup>

This seems to be a reasonable definition of evil for peacetime, although not so in wartime, as will be considered in the third section of this paper, which will examine the difficulties of defining evil in wartime, and how that fits into open source ethics. From this initial working definition, and the "common sense" psychiatry which labels "The Triad" of late adolescent bed-wetting, cruelty to animals, and fire-setting as the clearest indicators of likelihood to psychopathic action,<sup>53</sup> Stone instead works to lay out a much more nuanced and complex set of graduations of evil, while identifying different potential indicators of violent behavior that were not previously considered.

From this basic introduction as to his work, the specific cases he studies will not be referenced; they lack the analytical impact of his conclusions, for the purposes of open source ethics. From the "least" evil cases of jealousy-spawned spousal-killing, to the most heinous of cases of abuse and destruction of other human beings and children, Stone is able to tease out a series of causal relationships between their actions and a

combination of their natural preconditions and their nurturing preconditions. In this case, "nature/natural" will be referring to their genetic composition, making some individuals more prone to certain conditions or lacking those conditions, and having that trait be closely correlated to probable acts of psychopathic violence in their future; as Stone summarizes near the end of his book, "acts described as 'Evil' are often committed by schizoid sadistic psychopaths."<sup>54</sup> At the same time, "nurture/nurturing" will refer to those aspects of a childhood affected by their environment, whether that be parental influences (or lack thereof), type of community raised within, climate, and any other trait of that type; Stone's consistent example was of abusive parental figures, but he always qualified those statements by explaining in other cases, where psychopaths arose from very warm and loving homes, but the problems arose from genetic causes. To draw conclusions from these two spheres of influence in a person's actions or inactions during their lifetime, though, it is vitally important to reiterate Stone's most important conclusion, one that absolutely disqualified any system of morality from simply labeling an individual or group as inherently "evil." The idea of an inherently evil human being, which under the auspices of science might be labeled as genetically predisposed towards evil actions, are named instances of "Bad Seed" in the book, and are the subject of prolonged discussion. As Stone explains, though, inquiring as to cases of Bad Seed would be to ask if

any of them [, the psychopaths being discussed, were] raised in families and in circumstances so free of abuse, neglect, negativity, head injury, hostile cultures, and so on, that we would have to ascribe their evil actions to heredity alone. We would even have to exclude cases where the mother abused alcohol, cocaine, or other such drugs during pregnancy, or where there was fetal distress, birth complications, and other unfortunate events that could adversely affect the developing brain.<sup>55</sup>

This does not paint a convincing image of the prevalence of Bad Seed; as Stone argues, the possibility of Bad Seed actually occurring is very, very rare, and struggles to even come up with one clear example of it during the long course of his study.

As a result of this rarity, it seems that very few, if any, of the individuals we might label "evil" are truly basing their actions solely on their internal, or natural conditions. That said, though, even genetic preconditions or lack of development of the brain cannot truly be said to be the "fault" of the affected individual; their genetic development is an aspect of their being that they do not get to decide upon in any way. This in and of itself seems to indicate that culpability in the case of Bad Seed is difficult to definitively prove; it makes blame far more difficult to assign with certainty in the majority of cases, which are not even candidates Bad Seed, and are the recipients of inadequate nurturing circumstances. As a matter of fact, this situation is rendered even more complicate: Stone recounts the tale of Good Seed as he terms it, because

*Bad Seed* is of course a dreadful phrase, used in the popular language to condemn rather than to understand certain unfortunate, though dangerous, children. The phrase also tends to blind us to the realization that there are *other* children who survive prolonged parental torture, yet they emerge as healthy, integrated adults, highly valued for the benefits they bring society because of what we might metaphorically call *Good Seed*. Because of a lucky draw from the genetic lottery, these people remain resilient, invulnerable to the bad effects of abysmal parents, and are able, one feels like saying *miraculously*, to transcend the horrors of their early years. [all emphasis original]<sup>56</sup>

This outcome of his study might even be termed a pragmatic one, given the majority of history when individuals were often termed the results of Bad Seed, and thus incorrigible in their "evil" ways. Stone has examined the nuances and complexities of those

individuals we might term psychopathic in peacetime, and has thus allowed his use of reason and experience to trump prior "true" notions of the nature of those individuals.

In an equally pragmatic way, he offers concrete methods of detecting potential indicators of such outcomes in early childhood, and then offers the pragmatic sentiment that also goes against previous common sense: that

many of these [at-risk for psychopathic behavior] children, in other words, respond favorably to parents who sit down and talk with them, calmly and without rancor, about the benefits of socially acceptable behaviors and the disadvantages of offense behaviors. A young person with psychopathic tendencies who can be trained to do the right thing because it's to his advantage - even if he never *feels* in his heart of hearts to do the right thing - may over time develop habits that incline him *away* from actions that are morally wrong and violent.<sup>57</sup>

From these series of lessons learned in Stone's work, we are confronted with some uncomfortable possibilities: if indeed our deeply-influential genetic predispositions towards or away from violence are not at all under our control; and if indeed our nurturing circumstances beyond our control play a strong role in how we develop into adults; and finally if through simple reasonable discussion a parental figure can prevent a child at risk from committing evil even though they are completely predisposed towards it for causes beyond their control, with how much certainty can we actually assign ethical responsibility for actions we label as evil? Can this responsibility be assigned in full, partially, or at all? It is vital to note that people are still culpable for their actions; that said, a nuanced examination of the circumstances is the only way that we can look for other influencing factors in their actions and subsequently be prepared to try and change those factors, as demonstrated in the work of Dr. Stone. Amongst other conclusions that can be drawn from this is part of the basis for this paper's conception of society as a

collection of individuals rather than just individuals or just groups: it is far too simplistic to just paint the world one way or the other with the sweeping brush of generalizations. It seems, then, to suggest a lack of clarity when assigning ethical responsibility; from this crossroads of this paper's conception of human beings with Pragmatism and Stone's work, there can be drawn several principles of Open Source Ethics.

### *The Principles of Open Source Ethics*

The preceding discussion of how we might approach evil in a society composed on individuals yields an imperative to get at the root causes of problems, which is often a task that is officially counted as "satisfactorily completed" far, far too early, based on a mixture of limited resources, the imperfection of human beings, a limited human perspective on the world around us, and the trap represented by our various tracks of reason. This series of limitations, which are paralyzing indeed to anyone seeking to find "the whole truth" or "the complete truth," if such a thing is even accessible to human beings, should nevertheless not stop us from seeking to act more ethically whenever possible, within the bounds of this system. In essence, the point of view taken by systems of morality, that we can definitely know what is right and wrong fails to take into account the track record of humanity in correctly discerning much of anything; we are not exactly performing well.

As Madame Anne Louise Germaine de Staël wrote in her 17th century novel *Corinne*, "Tout comprendre rend très-indulgent" which can be rendered in English as "to understand everything is to forgive all."<sup>58</sup> We might not be able to know all or



understand what we experience completely, but that should not stop us from attempting to still forgive the imperfections of those around us, as we ask for their forgiveness in turn. It is here that the initial open source spirit of this paper reenters the discourse, with the formulation of the First Principle and cornerstone of Open Source Ethics (OSE): as Raymond told us, "plan to write and then rewrite." We are not going to get everything correct ever, and especially not the initial try; we should stop deluding ourselves into believing such a feat is possible, and instead embark on all tasks with the clear mindset that we are all going to make mistakes, and only by moving past them via forgiveness will the development group ("society," if you will) be able to make progress.

The Second Principle of OSE can be derived from all three of the works referenced on open source; a combination of Levy's "distrust authority - promote decentralization" and Raymond's "Treating your users as co-developers is your least-hassle route to rapid code improvement and effective debugging." Therefore, the Second Principle could be formulated as "do not allow outsiders alone to adjust the ethical settings on the actions and beliefs of your community; instead, you and those fellow members of your community should be the personally-involved developers of said community beliefs." In this case, "ethical settings" is pseudo-computing language for a purpose; it implies both that it is desirable to adjust a community's ethical understanding over time as more information becomes available, as well as that the moral appellations "good" and "evil" are meant to be adjustable, rather than so binary as they usually become. At the same time, OSE does not disallow the suggestions of outsiders to one's community; in fact, it is often the outsider which comes bearing the fresh eyes necessary

to take a less subjective look at a given situation. Instead, the implication here is that the individuals affected by a community's ethical understanding, those who live in it, necessarily have the biggest say in how it should be adjusted, based on their experiences living within that system.

It is also necessary to define "community" a bit more clearly, and explain the mechanism for stepping between levels of community on the global scale. In this situation, community can be as small as one individual person adjusting their own ethical comprehension as they think more carefully or have additional experiences; community can then scale all the way up, step-by-step, to the size of the global community, composed of all people living together in this one environment of the world. If each community, being any size on that scale, can be thought of as one unit, then consider the mechanism for aggregating smaller communal beliefs into bigger ones to be two steps; first, each small group could input their beliefs as a vote, with one vote per small community going towards the grand total which decides the expedient ethical beliefs for the larger community for the time-being. Second, if smaller communities are possess a great range and disparity of size, it is possible to simply implement a sort of direct democracy; the prevalence of cellular phones and extremely powerful computer servers could easily tabulate and calculate what the majority desires; then there could be open discussion on how to also allow for the minority method(s) to remain viable within the community. Finally, keep in mind that the global community does not have to agree about everything, nor how to view every ethical situation; the acceptable bare minimum, which in this case is a noble goal indeed, is to reach a world where different groups of

people can and do have different ethical beliefs based primarily on their tracks of reason, but also are educated from early childhood to accept different tracks as a positive, flavorful component of the human condition. This hinges heavily on the First Principle, in that those members of differing communities will also be educated to forgive themselves and others for mistakes, and be willing to approach the world as a sort of program to be improved upon.

The Third Principle of OSE is closely related to the proper implementation of the Second Principle; it intentionally departs slightly from the competitive nature of Levy's Ethic and Raymond's Aphorisms, and adheres most closely to the Open Source Definition's contentions that prevent discrimination against groups, persons, or fields of endeavor. It also goes back to a point made earlier in the second section of this paper, in that it is too simplistic to be totally an individualist or totally group-minded. Instead, this Third Principle holds that "the only acceptable treatment of human beings within OSE is as a societal collection of inherently equal individuals; any deviation towards individualism or groupism only serves to elevate some interests above others." This is in the spirit of James, with his contention that even the most humble of personal experiences must be included, as the qualification of some experiences as "more important" than others is false, as well as dangerous to a system of ethics. Some individuals might be afraid of the possibility of people misreporting their experiences, either maliciously or by accident, but that eventuality is covered within OSE: as Raymond put it, "If you treat your beta-testers as if they're your most valuable resource, they will respond by becoming your most valuable resource." To excise the technical language and be clear; if all

individuals in a community are treated as valuable developers of the ethical well-being and soundness of said community, they will be inclined to rise to meet that expectation. Even there are still groups or individuals within society that intentionally falsify their experiences, the beauty of the open source ideal comes into play again: bad code, or in this case, ethical contributions, will eventually get removed by those developers who are interested in improving the product.

The Fourth Principle of OSE is best introduced by a chilling quote from the work of Primo Levi, an Italian survivor of the Holocaust. He tells us the gist of a German poem:

Palmström, an extremely law-abiding German citizen, is hit by a car in a street where traffic is forbidden. He gets up bruised and battered and thinks about it. If traffic is forbidden, vehicles may not circulate, that is, they do not circulate. Ergo he cannot have been hit: it is "an impossible reality," an *Unmögliche Tatsache* (this is the title of the poem). He must have only dreamed it because, indeed, "things whose existence is not morally permissible cannot exist. [emphasis and parenthetical original]<sup>59</sup>

This is a sad story indeed, but not an unlikely one; one hears the echoes of that famous story of New York city, where dozens of people heard a woman being raped, but no one reacted on the premise that "someone else MUST be taking care of the problem." Reworded, they didn't act on the premise that it is impossible that no one else is helping the woman. Such famous stories are not necessarily the only source of this happening in the world around us; how many of us have stood by passively as someone is being hurt or hassled, as we cannot come to terms with the reality that something evil is happening near us? This points to the Fourth Principle, which echoes all of the sources of open source ideals in that "all information must be freely and easily available to all people, in

its most basic form." This additional caveat also draws slightly on the Open Source Definition, which stipulates that all new iterations of a piece of code must include a change-log that lists the consecutive changes to the program over time; in much the same way, it seems that only by keeping track of what is happening right now, and also a sense of what we as human beings have tried in the past can we come anywhere close to beginning to achieve that "missing moral progress" that Martin Luther King hoped for so desperately. The caveat to the Principle, requiring the information be available in its basic form, is one that does not usually appear in conceptions of open source ideals, and yet it is a vital component of OSE. So many of us turn to the news or other third party sources to learn about what is happening in the world around us; reasonably so, as we all lack the time, money, and motivation to go examine each and every aspect of the world for ourselves constantly. In fact, even if we could approach the world in such a way, it would still yield errors in our appreciation of what is happening, as we are unable to perceive everything at once. Therefore, we must merely try to make as much un-"analyzed" information available to as many people as possible; Raymond's contention that "provided the development coordinator has a communications medium at least as good as the Internet, and knows how to lead without coercion, many heads are inevitably better than one" holds true for Open Source Ethics.

It is important to note that this is by no means an endorsement of crowd sourcing, which National Public Radio succinctly defined as "a company letting consumers design and vote on their own products."<sup>60</sup> This phenomenon has received heaps of praise as well as criticism, but regardless of its supposed merits, it is anathema to Open Source Ethics.

The model is based on the word "crowd," which seems to imply that it is open source due to the participation of the group, but the model is actually set up as a way to save on costs for businesses. The central organization is the business, for example, and it asks consumers in the crowd to perform certain tasks for no pay that might influence the decisions of that company; the NPR story looks at a shoe company that crowd sourced the designs of its shoes. There are two problems here: first, rather than the development coordinator of Raymond's model, the organizer in this case is a company seeking to make profits off of the work being performed, which is far too centralized; and second, the final decisions always rest with the organizer, and are not sent back out into the development community/crowd for additional participation, which makes this more like the closed source Cathedral model than the open source bazaar model. At the same time, however, there are some excellent additions to the body of literature about this phenomenon that are quite wise in their outlook, and could provide benefits to an open source ethics. For example, the work of Clay Shirky discusses the better aspects of crowd sourcing while focusing on the potential of organizations created with organizing them. As he consistently explores throughout his book and concludes,

social tools don't create new motivations so much as amplify existing ones. This social cable [undersea Internet connection between the United States and China] connects people living in two countries; when this bundle of connections is supported by social media, the spread of news like [the 2008 earthquake in the Sichuan province of China] is effectively instant, even without mediation by government or official media.<sup>61</sup>

Open source ethics is intended to function in much the same way; rather than creating some sort of new impulse in society to improve problems of an ethical nature, it merely seeks to provide a more streamlined process by which those problems can be approached,

with a strong focus on the freedom of information and the ease of communication electronically to achieve that streamlining.

From these Four Principles: 1) embark on all tasks with the clear mindset that we are all going to make mistakes, and only by moving past them via forgiveness will society be able to make progress; 2) do not allow outsiders alone to adjust the ethical settings on the actions and beliefs of your community; instead, you and those fellow members of your community should be the personally-involved developers of said community beliefs; 3) the only acceptable treatment of human beings within OSE is as a societal collection of inherently equal individuals; and 4) all information must be freely and easily available to all people, in its most basic form, we have reached into and grasped the core of Open Source Ethics. To some veterans in the field of moral philosophy, this might seem a bare cupboard of rules indeed; how can a mere Four Principles serve any moral (or more accurately in this case, ethical) purpose? The answer to that demonstrates the simple, or one might even say artistic beauty of Open Source Ethics: it is not necessary or even acceptable to begin laying out any specific expectations for other people to meet; the entire spirit of this system is that everyone is going to be coming from their various cultures, with their different tracks of reason, and as such will end up using these 4 Principles to reach very different, yet compatible ethical adjustments in their communities.

*Who Can Participate? Who Should?*

Having given both a genealogy of the open source movement as well as laid out the Principles of Open Source Ethics, it is now possible to properly consider who is able to partake of this process, and who is best suited to do so. The early open source Hacker Ethic of Levy and its subsequent iterations were all of a radical democratic nature, but with a caveat: all individuals are welcome to participate, but will be judged on their ability to do so. This is how the computer operating system Linux functions today, as all people are welcome to use the operating system and benefit from it being free and functional, and this example will prove ideal in illustrating how the process of OSE actually should work. With the Linux operating system, anyone and everyone can download it and try to use it, but there are several different kinds of participation, each of which finds an analogue in OSE. There are many individuals who do download Linux and only leech off of the community; they use the system and benefit from the updates released, but do not contribute any assistance of their own. This is familiar: most individuals operate under one or more ethical systems in the course of their lifetime, without ever making contributions towards making the system better. From this largest section, which we might call Users, we can take the half-step towards actually participating: those users in Linux who make use of the system, and then report errors and bugs to a Linux development website, so that more advanced users can attempt to fix said errors. Similarly, in the course of life there are various types of individuals who do so, but the most easily-grasped example is that of the whistle-blower, someone who discovers some deeply unacceptable aspect of the system of ethics they operate within, and make this clear to others in an attempt to work for change. This can range from an employee of a corporation exposing illegal business actions, to a government employee exposing



corruption, to something as different as a doctor reporting the signs of domestic abuse to the local police department; anyone who notices something wrong and announces it to others who might fix it can be called a Whistle-Blowing User in OSE.

These two initial categories form the majority of users, and for good reasons; most individuals are living their lives within an ethical system, and don't have the time or patience to edit it. From here we can discuss some of the minority groups of participants within the system, again using the example of Linux. Bugs and other problems are reported to online forums and websites, and from there more experienced programmers can actually work to improve the bugs that are reported. These Problem-Solvers are in turn somewhat organized by the highest level of participant, the Development Coordinators, who don't technically force any participant at any level to do anything, but merely serve as collators of requested changes and necessary fixes, to allow the community to continue functioning. Unfortunately, these last two levels of participating don't have easy examples for ethical problems in the real world: there is no specified organization which sets out to fix these ethical problems based on the input of people living in those conditions. These are the various types of individuals who might participate in the process of open source ethics, but it begs the question: who should participate, and when?

Open Source Ethics follows in the path of Kierkegaard and his ethical works, but it cannot agree on one major point: the amount of time when one must be participating. Kierkegaard is the first of the existentialists, and as such his Knight of Faith is expected

to constantly be working to continue his elevation beyond the realm of the absurd. Unfortunately, this is a flaw to his work, as no individual can ever hope to be constantly above and beyond reason, in the realm of the absurd via faith. Open Source Ethics differs, as it openly acknowledges that the vast majority of individuals will simply be Users (to use the above system of labeling) of any given ethical system at any given time. They will be busy living their lives, and can't be expected to sit and think through all the possible causes and consequences of each and every one of their actions. Instead, if and when they feel inclined to point out some error or bug in their lives due to an ethical system, they might temporarily become a Whistle-Blowing User, but they are not expected to continue doing so to any degree of consistency. If enough people are roused out of their normal routines to mention a problem, the weight of this evidence will eventually filter up towards those individuals who might make a difference; perhaps community leaders at the Development Coordinator level, or as the scale increases, governmental policy makers. This indicates that while those individuals more dedicated to the higher levels of the Open Source Ethics process are more integral, the system by its nature disallows the establishment of some sort of priesthood of ethical tinkers.

Overall, it must be said that Open Source Ethics is not merely an intellectual exercise; it is what is already in practice, albeit without acknowledgement that it happens.

As John Dewey posited with his idea of Reconstructive Philosophy,

Philosophy is criticism; criticism of the influential beliefs that underlie culture; a criticism which traces the beliefs back to their generating conditions as far as may be, which tracks them to their results, which considers the mutual compatibility of the elements of the total structure of beliefs. Such an examination terminates, whether so intended or not, in a projection of them into a new perspective which leads to new surveys of possibilities.<sup>62</sup>

While perhaps also operating in the spirit of Dewey, Open Source Ethics is intended as a process that is actively acknowledged by as many individuals as possible, and then participated in by as many capable individuals as are interested. Perhaps it would serve this exposition well to have a stylized case study of what Open Source Ethics did bring to an individual who operated within its process, versus someone who operated within a calcified system of morality. One of these men, Adolf Eichmann, is well-known; the other, Reverend André Pascal Trocmé, is almost completely unknown. That said, their different responses to the developments of World War II make a strong case for the strength of the process represented by Open Source Ethics.

### **Case Study: The Banality of Good, and The Banality of Evil**

During the Second World War, an extraordinary pair of events happened that were at once tied to each other, and completely separate. One of these is known, as recorded in Hannah Arendt's seminal work Eichmann in Jerusalem: The Banality of Evil. The other is relatively unknown, and while Philip Hallie's work is entitled Lest Innocent Blood Be Shed, according to its content, it should really be subtitled something like "The Banality of Good," and given as a companion text to Arendt's. It is through a discussion of these two men, and how their actions succeed or fail at adhering to the ideals of Open Source Ethics, that the value of this system shall attempt to be demonstrated.

The actions of Adolf Eichmann and his ilk in Nazi Germany are well-recorded, and thoroughly discussed in a variety of forums, but Arendt's point is deeply unsettling: how can a man who was so incredibly average and otherwise "normal" become the man

in charge of knowingly organizing the trains carrying Jews to Auschwitz? The possibility of this happening will be considered in due time, but of more immediate importance is acknowledging that there was indeed a string of causes which together make a sensible background, which is not always the case. All too often, individuals reading or learning about a man like Eichmann hear the initial statement of his enormous crimes, and swiftly cease their willingness and/or capacity to understand the multifaceted causes behind those crimes, and instead demonize and thus dehumanize him, rendering his life unable to teach any lessons of value. As Arendt records, the trial in Jerusalem was very poorly-implemented, with the prosecution creating a caricature of evil who was the root cause of all Jews dying, rather than the man who by stages fell into that subordinate position. This should already begin to sound as though both Eichmann in his lifetime, and the courtroom at the end of his life, failed to bear in mind the blinding force of a closed source system of morality; Eichmann is famous for blaming his superiors for his orders, as he was just following them, but this is too certain an assignment of ethical responsibility to be viable. As Arendt holds on the topic of following orders, "it is that under conditions of terror most people will comply but *some people will not*, just as the lesson of the countries to which the Final Solution was proposed is that 'it could happen' in most places but *it did not happen everywhere* [all emphasis original]."<sup>63</sup>

From this initial failure to fit within the bounds of Open Source Ethics, Eichmann has a poor showing when compared to the Four Principles as well. Eichmann strongly adhered to the mindset of many people of that historical era; jingoism, or frothing nationalism blinded them to the possibility that their country could do anything wrong.

Compounding this situation was the famous oration of Adolf Hitler spurning him onwards, and as Arendt recounts, his own personal needs to fit into a structure of some sort; all of these aspects of Eichmann's dispositions and circumstances point to the fact that he did not approach the world with the mindset that mistakes are acceptable, and that others must be forgiven. In much the same way, Eichmann, and many other members of the Nazi party, operated under the opposite of the Second Principle of OSE; they openly allowed their ethical settings to be adjusted by outsiders, which translated to their superiors in the Nazi hierarchy, via a type of loyalty they referred to as the *Fuhrerprinzip*. Even worse, they allowed themselves to operate in a community where Jewish neighbors were not considered human; this clearly is not adherence to the Third Principle, that all human beings must be treated as inherent equals. Finally, and most disturbingly, the necessity of the free access of all to any information is demonstrated by the experiences and actions of Eichmann; he personally was quite aware of the final destination of the trains he organizes of Jewish people, and yet did nothing to act against his orders. If the information was widely-known, in other communities which had not become so warped and abhorrent, then perhaps an adjustment of ethical settings could have taken place, without the Holocaust occurring as it did. That possibility is beyond the bounds of this paper, but the point stands: Eichmann absolutely failed to adhere to any of the Four Principles; he often acted in the opposite manner. Additionally, the society he hailed from also chose to adhere to a dominator system of morality, as Gustafson describes it, where orders handed down from above become the morally-right action, and thus open the way for massive evil to occur; this is as diametrically-opposed to Open Source Ethics

as it possible, as "orders" originating from ruling human beings becoming unquestionable moral imperatives are about as closed source as it can be.

From this unsettling and maleficent bit of history, the hope-inspiring tale of Le Chambon, France may be considered for comparison, as one place where "some people did not" cave under the terror of morbidly unethical behavior. As Hallie researched, he found the tale of a small Protestant village, the descendents of Huguenots, in Southern France during the Second World War to be fascinating; a hardened veteran of studying gripping evil, Hallie recounts that the story of the Chambonnais brought tears to his eyes unexpectedly, and compelled him to look into the story more closely.<sup>64</sup> This emotional response was not without cause: this is the tale of a small village of a few thousand peasants being spurned onwards by the resident Pastor André Pascal Trocmé and his assistants in saving thousands of Jews and other refugees from the Vichy French government and their Nazi German masters. The specific detail that differentiates this tale from all of those other stories of heroism in hiding Jews is that the Chambonnais openly protected Jews: they gave a letter to the Vichy Minister of Youth, Georges Lamirand, that included the claim "we feel obliged to tell you that there among us a certain number of Jews," after explaining their disagreement with anti-Jewish policy.<sup>65</sup> Already, there is a hint here that Open Source Ethics as a process might have been at work: some individuals realized that the ethical system of Nazi-controlled Vichy France was unacceptable, and so they reported this as openly as they were able, rather than disagreeing but remaining silent. Hallie, a professor of ethics, spent an inordinate amount of time attempting to interview individual Chambonnais as to what might have caused

them to perform such ethically-good acts; bar none, their answers were disinterest in ethical language and the insistence that they were "doing what needed to be done, because no one else was going to do it."

As Hallie summarizes, Trocmé's wife Magda epitomized the ethical stance of Le Chambon with her ever-ready phrase to refugees at her door: "Naturally, come in, and come in!"<sup>66</sup> And, as though the preceding tale is not incredible enough, the small village of Le Chambon only had a handful of people killed by the Nazis or Vichy French government in 4 years of their protest and sheltering actions; and in fact, these were only by chance, and could have potentially been avoided had more care taken. That said, these were simple peasants for the most part, who had no conception of the proper form for a secret resistance movement to take; the fact that so few of them were killed is nothing short of a miracle. But besides what necessarily seems to be either divine intervention or incredibly good luck for the Chambonnais, it is worth considering whether their adherence or lack thereof to the Four Principles of Open Source Ethics had any effect on their circumstances. Given that they were led by an extremely pious and passionate Christian minister, their adherence to the sentiment of forgiveness was stronger than it otherwise may have been. They may not have openly realized or accepted that other people are going to make mistakes, but they still operated with a willingness to forgive and move forward. Their adherence to the Second Principle, of avoiding the interference of outsiders like the Nazis in adjusting their ethical values, is what made this story a reality; it is true that they had the Huguenot value of resisting government interference as a positive factor in this endeavor, but it still stands that they decided as their own

community to shelter the Jews and other dispossessed, and then openly proclaimed these ideals to their enemies. This action, of sheltering those in need, is indicative of a deep-seated belief in the inherent equality of all individuals; as Hallie recounts, the Vichy French government media outlets were aflame with anti-Jewish propaganda of all sorts, and yet this was rejected by the Chambonnais on the grounds that it treated some human beings as less valuable than others. Their ties to international groups working to save Jews signals the presence of the Fourth Principle, that information be freely available; the fact that at least some people, like the Quakers or Zionists, knew what was happening, did not spurn the Chambonnais to action. Instead, it merely served them by enabling them to connect with refugee groups in nearby Switzerland, thus enabling them to relocate those individuals they temporarily sheltered to a safer location in a neutral state.

More generally, it is important to explain that the aspects of Open Source Ethics allowing for variable participation here were at work in a truly wonderful way, as opposed to the Nazi system discussed above. Pastor Trocmé was quite clearly the Development Coordinator in this case, as the moral authority afforded him as a minister almost guaranteed his position as such. At the same time, though, his wife served as a separate and very differently-minded Development Coordinator (she was a committed atheist, amongst other differences from her husband), and yet their different fundamental approaches to the world were easily enough able to work towards the common goal of assisting those human being ruled non-beings by the state. As Hallie catalogs, different individuals in the Le Chambon community participated to varying degrees in the efforts to help those in need, and while the process of determining that helping those in need was



neither quick nor easy (the pastor first entered a very rude, closed-circuit of a village at the beginning of his installation to their church), it also clearly demonstrates the recursive nature of the process of OSE. Each and every aspect of an ethical system and the community's reactions to it can be shifted slowly and carefully, but it requires that initial open and reasonable discussion of what people consider to be in need of change, due to it seeming wrong. The recursive element functions in just this way: prior changes can and should be considered potential candidates for change and improvement at any time whatsoever, should enough qualified members of the community feel that way. And therein lies the key: the Nazis also effected changes to systems of morality during their time in power, all of which were steps towards an evil system, but they violated all of the Four Principles, and kept their procedure so closed source that dissidents were put into concentration camps; a stark comparison to the possibilities offered by an open, inclusive approach to solving ethical problems within society.

As was mentioned, only this one case study is going to be given as illustration of how Open Source Ethics might function in an approachable real-world scenario. Yet, from this one example, the perils of keeping the ethical nature of actions closed source are so clearly juxtaposed with the massive benefits to open sourcing the nature of those actions. The continuation of the field of moral philosophy, or even ethical discussions amongst common people, should be a clear indicator that no one system of morality is ever going to successfully explain everything, or fix everything, or prevent future wrongs. Quite the opposite - it seems that part of the human experience is to keep trying to improve all that we know and do with each generation, and Open Source Ethics seeks

to do this explicitly and with enthusiastic participation by all, rather than the halting way that competing systems of morality have taken us thus far. On this note, then, the only case study necessary to prove the value of this system can come to a close; people reading this should now go out and figure out how to make their own communities the next case study for Open Source Ethics!

## **Conclusion**

By examining the genealogy of the open source software movement, we were well-prepared to extract several of the most important aspects of that movement. With those key ideas in mind, we then followed the progression of ideas starting with Kirkegaard, and the nature of the individual human being, and we ended up describing both how society functions as a collection of those individual human beings, as well as how they might be inclined to take actions or subsequently react. From that pragmatic stopping point, we went a level deeper, and considered how ethical culpability might be found, but came to the conclusion that culpability is extremely difficult to assign with certainty. At that point in our journey, we could set out the Four Principles at the core of Open Source Ethics, and amongst them counted: 1) we must embark on all tasks with the clear mindset that we are all going to make mistakes, and only by moving past them via forgiveness will society be able to make progress; 2) we must not allow outsiders alone to adjust the ethical settings on the actions and beliefs of our community; instead, our community should be the personally-involved developers of our community beliefs; 3) the only acceptable treatment of human beings is as a societal collection of inherently equal individuals; and 4) all information must be freely available to all people. We took

these Principles and examined one case study with them, and found interesting results. And here, at the end, this exposition of Open Source Ethics stands with the scaffolding and temporary supports still in place, waiting for someone else to come along and improve the system they see in front of them as best they can.

## Appendix I: Varying Criterion for Open Source

### A. Stephen Levy's Hacker Ethic from *Hackers: Heroes of the Computer Revolution*

- 1) Access to computers - and anything which might teach you something about the way the world works - should be unlimited and total. Always yield to the Hands-On Imperative [the ability of any hacker to try and improve any system].<sup>67</sup>
- 2) All information should be free.<sup>68</sup>
- 3) Mistrust Authority - Promote Decentralization.<sup>69</sup>
- 4) Hackers should be judged by their hacking, not bogus criteria such as degrees, age, race, or position.<sup>70</sup>
- 5) You can create art and beauty on a computer.<sup>71</sup>
- 6) Computers can change your life for the better.<sup>72</sup>

### B. Eric Raymond's List of Aphorisms from *The Cathedral and The Bazaar*

- 1) Every good work of software starts by scratching a developer's personal itch.
- 2) Good programmers know what to write. Great ones know what to rewrite (and reuse).
- 3) "Plan to throw one away; you will, anyhow." (Fred Brooks, *The Mythical Man-Month*, Chapter 11)
- 4) If you have the right attitude, interesting problems will find you.
- 5) When you lose interest in a program, your last duty to it is to hand it off to a competent successor.
- 6) Treating your users as co-developers is your least-hassle route to rapid code improvement and effective debugging.
- 7) Release early. Release often. And listen to your customers.
- 8) Given a large enough beta-tester and co-developer base, almost every problem will be characterized quickly and the fix obvious to someone.
- 9) Smart data structures and dumb code works a lot better than the other way around.
- 10) If you treat your beta-testers as if they're your most valuable resource, they will respond by becoming your most valuable resource.
- 11) The next best thing to having good ideas is recognizing good ideas from your users. Sometimes the latter is better.
- 12) Often, the most striking and innovative solutions come from realizing that your concept of the problem was wrong.
- 13) "Perfection (in design) is achieved not when there is nothing more to add, but rather when there is nothing more to take away." - Antoine St. Exupery
- 14) Any tool should be useful in the expected way, but a truly great tool lends itself to uses you never expected.
- 15) When writing gateway software of any kind, take pains to disturb the data stream as little as possible—and *never* throw away information unless the recipient forces you to!

- 16) When your language is nowhere near Turing-complete, syntactic sugar can be your friend.
- 17) A security system is only as secure as its secret. Beware of pseudo-secrets.
- 18) To solve an interesting problem, start by finding a problem that is interesting to you.
- 19) Provided the development coordinator has a communications medium at least as good as the Internet, and knows how to lead without coercion, many heads are inevitably better than one.<sup>73</sup>

### C. The Open Source Initiative's *Open Source Definition*<sup>74</sup>

- 1) Free Redistribution
- 2) Source Code
- 3) Derived Works
- 4) Integrity of the Author's Source Code
- 5) No Discrimination Against Persons or Groups
- 6) No Discriminations Against Fields of Endeavor
- 7) Distribution of License
- 8) License Must Not Be Specific to a Product
- 9) License Must Not Restrict Other Software
- 10) License Must Be Technology-Neutral

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