

Copyleft: An Alternative to Copyright in Computer Software and Beyond

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The paper deals with the development, which has provided a new perspective towards looking at traditional copyright law, viz. the institution of copyleft. By highlighting the myriad facets of copyleft licenses (typified by the GNU General Public License, the brainchild of Richard Stallman), the author illustrates the fact that the notion of copyleft bases itself upon the institution of traditional copyright whilst aiming to eliminate many of the 'vices' that are said to plague the latter. The paper examines intricacies of copyleft licenses, focussing in detail upon the criticisms levelled against it by proponents of proprietary software (essentially, *business* versus *liberty* argument), as well as contrasting it with open source software, another crusader in the war against established copyright law. It is author's conviction that although its ambit is yet to be canvassed in a court of law, copyleft is surely a wake-up call for proprietary software manufacturers; it would encourage further research and innovation by the latter. Moreover, in order to pose a substantial challenge to copyrighted software, the bickering between the proponents of copyleft and open source software will have to cease. Significantly, copyleft licenses have of late extended to spheres beyond software as well, primarily in the arts (where licenses can be custom-made). Although it would be presumptuous to speak of copyleft as the death-knell of conventional copyright, it can surely serve as an alternative, and such a situation would only benefit society in general.

Keywords: Copyleft, copyright, General Public License (GPL), GNU project, proprietary software, source code, Free Software Foundation/ Open Source Initiative, Creative Commons Organization, Free Art License.

'...Software sellers want to divide the users and conquer them, making each user agree not to share with others. I refuse to break solidarity with other users in this way.'¹

For Richard Stallman, the rapacity of proprietary software (and the broader institution of copyright that was inextricably intertwined with it) was a good deal more than he could bear. For him (in fact, for a none-too-insignificant fraction of the populace), it was nothing to save a domineering and officious interference with freedom and liberty itself. In the words of Walter Benjamin, 'The art of our time can expect an even greater effect as it is designed to be reproducible and as it renounces favouring the original work'.² And here, it was felt, was a curious paradox—a stymieing of the very values that were envisioned to be upheld. It was in retrospect of these very circumstances that a movement took shape, one which irrespective of which side of the fence one opts to occupy, has indubitably succeeded in exposing frailties in established institutions and beliefs one could have hitherto barely imagined.

The 'public domain' counter argument to copyright is not alien to many. However, one lingering qualm

has always accompanied it, viz. that it provides a convenient route for the opportunistic to fill their coffers. They could obtain such software unrestricted, make changes, many or few, and distribute the result as a proprietary product.³ In this manner, the *raison d'être* of the public domain would be in danger of being rendered otiose. Hence, one would have to come up with another mechanism which would accomplish a like purpose, sans the aforementioned lacuna.

Initially, computer software was not the golden goose that it is today—in fact, it was often thrown in gratis with the hardware. But the scenario was to undergo a sea change with consecutive advancements in technology. As the US software industry burgeoned, bonhomie came to be replaced by secrecy.

What happened was this—source codes (a set of instructions humanly readable and hitherto released with the software for use as desired) came to be blocked by software companies, a lucrative avenue, since users would have to knock on their door each time a new feature was desired or a bug was to be exterminated.⁴ Unable to access a printer source code at the MIT computer laboratory and commanded to sign nondisclosure agreements by the Institute *vis-à-vis* his work, Stallman had had enough.⁵ He bade MIT

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goodbye in 1984, a man convinced to the core in his motto of ensuring freedom in software come hell or high water-it was now, as the cliché goes, a matter of principle for him. He wrote and distributed the GNU (which expands to 'GNU's Not UNIX!', a fallout of his vexation following the eponymous operating system having bottled up its source code) Manifesto, in which he laid down his ideals of 'free software'.⁶

The GNU General Public License (GPL) was conceived, which was the edifice of the aforementioned definition of free. A separate category was created (with the GPL as its most prominent member) and termed 'copyleft license', an ingenious play on the word copyright, precisely indicative of what Stallman resented.⁷

What began as an immediate reaction to the supposed high-handedness of AT&T (the distributors of UNIX) has in course of time assumed imposing dimensions, setting off a veritable deluge of debate and discussion. The GNU GPL, i.e. copyleft licenses, would appear to provide all virtues of the public domain minus the drawback earlier alluded to. Stallman encouraged programmers to keep software in the public domain by using copyleft and the GPL, which permits users to run, modify, copy and distribute software, provided the source code is available.⁸ The impetus behind his efforts consisted of ideas as hallowed as liberty and freedom of expression, which he believed were being held hostage by the existing regime. However, what his struggle required was a certain momentum, which was to be provided by a brilliant young Finn, Linus Torvalds. Indeed, the development of Linux in 1991 gave a new dimension to the movement, the ambit of which shall be explored in due course.

There is little dispute to the fact that software is entitled to copyright protection as a 'literary work', as per Sections 2(o) and 14 of Indian Copyright Act, 1957, Section 102(b) of the US Copyright Act, 1976, Article 10 of the TRIPS or any other like provision, albeit its very unique nature has at times proven to be a trifle difficult to reconcile with established notions of the law of copyright, what with courts in various decisions in this aspect making an effort 'to fit the proverbial square peg in a round hole'.⁹ It is in this context that the discussion has assumed significance. Although, the realm of copyleft licenses is no longer confined to the domain of computer software (as shall be seen), it cannot be gainsaid that the genesis of the movement lies here. The uniqueness of the whole

concept may be noted from the fact that the system of copyleft actually rests upon the institution of copyright, whilst attempting to rid itself of many of the fetters otherwise imposed by the latter.

What is obvious is that the system of copyleft (in fact, the broader idea of open source software in general) has resulted in clamours of dissent voiced by the proprietary software industry (led naturally by Microsoft).¹⁰ However, an important impediment to the widespread success of the movement would be the ideological schism that exists amongst the various categories of open source software, with the result that a truly concerted endeavour to strike at the very roots of the established ideals, which support proprietary software, has not quite materialized.¹¹ However, as the following study shall seek to illustrate, what has been achieved is by no means insignificant, and all the internal squabbles aside, Microsoft and its brethren have indeed been given a very definitive wake-up call, which they have not been frightfully pleased to receive.

The Fundamental Concept

Copyleft is 'an agreement allowing the software to be used, modified and redistributed freely on the conditions that a notice to this effect is included with it'.¹² The essence of the copyleft movement was explained by its patriarch himself, who opined that the objective of the entire process was to ensure that copyright law served 'the opposite of its usual purpose: instead of a means of privatizing software, it becomes a means of keeping software free'.¹³

In the realm of software too, the practice of blocking source codes riled many, who protested that proprietary software was undermining the very values that were envisaged to be upheld by the idea of copyright. Arguments such as the personality of the creator as well that of reward were frowned upon, and a separate norm was sought, which would foster 'the prosperity and freedom of the public in general'.¹⁴ Thus, the birth of copyleft.

The license issued with the software in the latter's original state assumes a sort of omnibus form. It is in tune with Stallman's vision that software ought to be ever-dynamic; having the source code available would facilitate regular modifications and improvements, which would serve the interests of the public in general, instead of leaving all the control in the hands of manufacturers. Accordingly, copyleft involves copyrighting the program through a

copyright statement, in the process diluting many of the stringencies otherwise involved, whilst acknowledging the contribution of the creator.¹⁵

A copyleft license provides that any user must agree not to assert copyright to protect any improvements or changes he makes, must distribute any changes subject to the license, and must make publicly available the entire source code for those changes.¹⁶ This indeed, is the most intriguing part of the entire discussion, viz. that the license covers not only the software in its original form, but all modifications and improvements that may be made upon it by subsequent users. The possibility of appropriation by the opportunistic (referred to earlier) is countered by the condition, which forbids any restrictions (on reproduction, distribution etc.) to be imposed by any user in the chain, over and above those in the GPL itself. There are three primary rights encompassed in the GPL, viz.:

- (i) The right of use and redistribution;
- (ii) The right of modification; and
- (iii) The right of access to the source code.¹⁷

Richard Stallman set up the Free Software Foundation (FSF), a tax-exempt charity organization with the specific objective of mobilizing finances for the spread of his crusade against proprietary software. All the while, certain very definite conceptions of freedom always drove him. The GNU Manifesto bears testimony to his vision, where he laid down four basic freedoms, which necessarily had to be guaranteed by any software in order to be termed free. They were the freedoms to:

- (i) Execute a program for any purpose;
- (ii) Analyse, modify and adapt its operation;
- (iii) Distribute the program to the public; and
- (iv) Improve the program, and facilitate the availability of the same.¹⁸

The GPL endeavours to provide a scope for remuneration of programmers as well, which is naturally a very pressing concern in a situation such as this, especially in the light of the fact that a crucial term of the license is that subsequent users have a carte blanche to make any modifications as they desire. Thus, although technically one can charge for modifications, it would not really serve any commercial purpose. Through the GPL, programmers can earn through value additions that they may make to the program, such as providing specialized inputs for the same.¹⁹

The system of the GPL copyleft license has been referred to as 'viral', for the concerned software sort of perpetuates itself by 'contaminating' each program, including subsequent distributions, and thereby propagates.²⁰ It must be kept in mind, however, that the above term is a sobriquet accorded by the proprietary software community on the system, and not coined by the FSF or any other organization questing in favour of the GPL or copyleft.²¹

A distinction ought to be made between software distributed under the GPL (or under a copyleft license in general) and general 'open source' software *per se*. For all practical purposes, the birth of the latter is said to have taken place in March 1998, when Netscape announced that it would reveal the source code for its browser software.²² Soon enough, the potential for the development of this concept was acknowledged, especially in the light of the existing ambiguity regarding the purport of the word free *vis-à-vis* Stallman's school. Unlike in the case of the copyleft movement, it was felt that this was a method more in sync with gumption and business acumen rather than ideology; the need was thus felt (by OSI guru, Eric Raymond and others) 'to dump the confrontational attitude that has been associated with 'free software' in the past and sell the idea strictly on...pragmatic, business-case grounds'.²³ The movement began to gather further momentum, culminating in what is known today as the Open Source Initiative (OSI).

General open source software (not looked upon too favourably by Stallman and his philosophy) has source code that remains available to the public, but commercial products may incorporate it without developers having to release the full product code.⁸ The underlying principle behind the OSI is that for software distributed under the same, innovations and modifications do not necessarily have to be accompanied by an identical license, unlike in the case of copyleft. In other words, for this school of thought, copyleft is an unreasonable interference with the liberty to commercially exploit software, what with the need for steadfastly adhering to the license-attaching requirement. The OSI likes to believe that it offers a healthy balance between commerce as well as defiance for traditional proprietary software. However, what must be stressed upon is this—since there is no need for licenses *vis-à-vis* successive users, any one in the chain can appropriate the software and

make it proprietary, since the source code is available to all. Thus, unlike in copyleft, here 'the freedom does not survive the author'.²⁴

A potent shot in the arm for Stallman's movement came in 1991, in the wake of a lecture delivered by the former at the Polytechnic University in the Finnish capital, Helsinki. In the audience was a certain 21-year old student, who was greatly interested by what he heard, and soon decided to do his bit for the GPL-FSF crusade. He answered to the name of Linus Torvalds, and he empathized with what Stallman was preaching.²⁵ He soon set about the task of writing a kernel for the GNU operating system, which would in due course evolve to be what is known today as Linux, and which some opine ought to refer to as GNU/Linux.²⁶ The phraseology aside, what goes without saying is that it is something, which has surely made Microsoft, and its brethren lose a fair bit of sleep.

An alternative to the GPL in copyleft licenses is the Lesser General Public License (LGPL), which may be described as a less stringent copyleft license, in the sense that it does not apply in its entirety to programs created independently with the assistance of the basic source code. That is, independent programs 'merely compiled or linked' with the original code will not be subject entirely to the subsequent licensing requirements.²⁷ It is sometimes referred to as a 'weak copyleft', for reasons just observed.

A word about the origin of the term copyleft is in order. As per Stallman, the origin can be traced to a microprocessor manual receipt from one Don Hopkins, on which was a sticker bearing the words 'Copyleft-all rights reversed'!²⁸ As a tribute to Hopkins, Stallman named his free software license thus. In the course of time, the term as well as its symbol (the ordinary © sign inverted) has become an official FSF synonym for the GPL.⁷

Arguments in Favour and Against

Richard Stallman and his brainchild have certainly sparked off much discussion as the years have rolled by. Certain quarters have gone so far as to asseverate that the GPL and the copyleft movement have succeeded in sounding the death-knell of the institution of copyright as one understands it, and 'its only a matter of time before the shackles associated with it are but a relic of the past. However, the general perception appears to be that copyright *per se* is alive and well, and the GPL/copyleft concept merely offers a detour whilst essentially traversing the same avenue.

It cannot be gainsaid though, that wishful thinking has been (and shall continue to remain) a source of sustenance for many. The GPL Preamble itself suggests that copyright is an inextricable part of the license-in fact, the rights of distribution, modification etc. themselves hinge on the general idea of a copyright for the original author.²⁹

The dissatisfaction felt by some towards copyright in relation to software is not too difficult to fathom. It all stems from the 'square peg in a round hole' argument, which has prompted individuals such as Samuelson to press for 'a *sui generis*, market-oriented approach to the protection of computer software', which would naturally necessitate the jettisoning of many of the usual characteristics of copyright.³⁰ But to attempt to divorce copyright entirely is easier said than done. And considering the fact that the very essence of copyleft is copyright, it is submitted that it would certainly not be accurate to say that copyright has been extinguished altogether in this sphere. It is certainly true that under the system of copyleft and the rights granted to successive users under the GPL presuppose an overarching, supreme right that is granted to the original author in relation to his or her creation.³¹

Another issue (and one which has been the subject of a fair bit of discussion) is rather interesting. It concerns the reward argument used to justify traditional copyright, which in turn is supposed to provide an incentive for further creation. Individuals, most notably Torvalds, have demonstrated that in certain situations, the philanthropic desire to ensure that the entire community has unfettered access to a creation does indeed supersede the goal of personal enrichment to the exclusion of all others.³² This indeed is a significant contribution of the GPL/copyleft crusade, one that has managed to provide a rude wake-up call to perceptions which had hitherto been ensconced in the deepest recesses of the mind.

Even amongst opponents of traditional copyright in software, there appears to be no unanimity regarding an alternative. Whilst copyleft has its supporters, so does the idea of non-copylefted open source software. The campaign has fragmented along the lines of those who have strictly ideological issues with intellectual property *vis-à-vis* software, and others who advocate better designed software, a larger user base and the prospects of a larger market to be exploited, and believe that source code ought to be made available

for the same.³³ The jury is still out on which of the two systems is a better detour to the conventional path of copyright, with both factions equally vocal.

For advocates of the OSI, the system of copyleft does not exactly cater to the needs of the community as such, in the sense that since the source of innovation is confined only to one individual (viz. the author), owing to the stringent requirements of the license, there lies the hazard of the software losing relevance for users further down the chain. Consequently, the possibility of further innovations and improvements to the software decreases greatly. On the other hand, in the case of the OSI, the possibility of subsequent versions being proprietary (and distributed without the availability of the source code) would potentially trigger a chain reaction of improvements, which would be in the interest of all and sundry.³⁴

The Berkeley Software Distribution (BSD) license is arguably the magnum opus of the OSI, and is often juxtaposed with the GPL in a bid to compare and contrast the characteristics of their respective schools. The main characteristic of the BSD License may be understood thus. As per its terms, there is no embargo on the use of the source code, so long as the requisite notice accompanies it (which, like the GPL, is indebted to the institution of copyright, and necessitates that successive users also incorporate the identical notice).³⁵ Advocates of the GPL/copyleft in turn have expressed reservations about some of its characteristics. One of them is the fact that 'the freedom does not serve the author' (referred to earlier), which they argue, is a disservice to the identity of the latter for posterity. Further, they claim, it is copyleft which is the true vanguard of competition in the market. The allegation that Stallman's entire philosophy smacks of 'open source protectionism' is emphatically rubbish, and daggers are in turn drawn in the direction of the OSI.

A concern with non-copylefted open source software is that since at any time, the source code can be bottled up, distributors are thus allowed to conceal imperfections in the same, leaving users with no option to turn to them in time of need.³⁶ Therefore, they opine that works under the OSI would be thus culpable of the self-same sin that ordinary proprietary software had been charged with. Also, the claim that the BSD/OSI enterprise actually affords a greater amount of freedom is also not agreed to, for the reason that one of the most important elements of

such a license is a proscription on the right to modify any of the existing provisions of the given software whilst redistributing the same.³⁷

The difference between free software (as preached by Stallman) and the OSI lies in the thought processes that have gone behind the development of each. The former, in tune with the anti-establishment stance of its founder, has philosophy as its motivation, whilst the latter aims more at a pragmatic, market-oriented approach.³⁸ It is certainly true that the OSI has tasted a fair amount of commercial success, what with the likes of the Apache web server and the X Window System (the creation of the latter hauled over the coals by Stallman) inflicting a good deal of damage upon established proprietary software rivals.

It cannot be gainsaid that the bickering between the FSF and the OSI has not been in the best interests of a concerted struggle against the supposed hegemony (if one may call it that) of copyright and its digital *protégé*. Hence, the ground gained (albeit no means imperceptible) has probably been somewhat than what would have been the case had there been unity in the ranks. Even so, Microsoft has been taking no chances, vituperating both factions equally. The viral tag attached to the GPL is also their handiwork, with the intention of highlighting the supposed threat posed to intellectual property by the whole idea. The use of the adjective has been frowned upon by many advocates of free software, for the obvious negative connotations that it entails.⁷

The Road Ahead

For starters, it would have to be said that copyleft licenses have certainly not served to obliterate copyright, for reasons noted earlier. Furthermore, it would be interesting to note that GPL *per se* is under the copyright ownership of the FSF!¹ Thus, it certainly cannot be said that copyright is on its last legs. It is humbly submitted that the proprietary software brotherhood probably misses the plot when it lambastes the free software movement (as well as the OSI for that matter) as a potent threat to intellectual property. It is glaringly apparent that the *raison d'être* for these alternatives is entirely dependant on copyright, albeit with a departure from the latter's traditional norms. Hence, it would be highly inaccurate to term it as a menace in this aspect at least; proprietary software manufacturers are only deceiving themselves when they claim thus.

A clear indicator that the kingdom of William Henry Gates III is growing increasingly chary of an invasion would be a comparatively recent development of Microsoft, referred to as 'Shared Source', an obvious bulwark against the progress made by Linux, Apache and other (copylefted or otherwise) open source initiatives.³⁹

A significant development appears to be that the concept of copyleft is no longer restricted solely to the domain of computer software. In 2001, Professor Lawrence Lessig of Stanford Law School founded the Creative Commons Organization, a non-profit charitable organization whose mission is to devise various categories of licenses for authors, musicians, artistes and others who desire to ensure that the fruits of their labour are made available for the public, without imposing stringent limitations on the right of reproduction or distribution as is the case with usual copyright.⁴⁰ With respect to Creative Commons licenses, one is free to share (i.e., copy, distribute or transmit) or adapt the work in question, provided the same is attributed as per the directions of the author or licensor.⁴¹ Further, in France and certain other nations, there exists a framework known as the Free Art License (FAL), a la the GPL. If the thrust of the GPL is on the availability of source codes for computer programs, the FAL stands for a common endeavour *vis-à-vis* the 'diffusion, sharing and appropriation to further the creation of artistic works'.⁴²

Devised almost identically along the lines of the GNU GPL, in this case, there is the like liberty of use, modification and distribution, provided the license itself is always attached. Heavily dependant on copyright as well for its existence, the FAL has already found a good many takers. The goal of the FAL is not to eliminate the institution of copyright or author's rights, but rather to reformulate their significance 'while taking today's environment into account'.⁴³ Reference may also be made to other efforts such as the Design Science License and the Free Music Public License, both copyleft licenses concerned with works of scientific and artistic nature, and musical creations respectively, which place thrust upon reforming the existing environment. Thus, it is clear that the GPL has been the harbinger for a number of ventures which have opted to tread on the path that Stallman broke a tad more than two decades ago. The role of these later licenses in the movement is akin to that of the dutiful disciple, who learns all

that his teacher has to offer, and when the time is ripe is go it alone, adroitly puts the teachings into practice. As a result, the movement has not stagnated.

Arguably, no study about the GNU Project would be complete without a reference to Debian. A direct descendant of the Project, it may be explained as an extension of the Linux operating system, developed under the 'distribution freedom' afforded by the GPL. With Linux as its base, it has developed into a hub for a large number of programs, since anyone interested is welcome to contribute. The contributors to Debian are a closely linked lot, who regularly communicate with one another, thus aiding the community to grow and prosper even further.⁴⁴

A common grievance against the idea of copyleft licenses has been that only the licensee has to bear the brunt of stringencies (most notably the proscription from imposing restrictions upon subsequent users over and above those in the GPL), whilst no such limitations are placed upon the rights of the licensor. A suggestion to remedy the same envisages a so-called 'modified copyleft' license. According to this, what the license terms would also contain are any assurances or representations made by the software manufacturer. Thus, what would be implied is a copyleft contract in reverse: the producer would be obligated to keep the specifications open as a condition of its standard being accepted by the consumers who rely on the producer's open-source manifestations.⁴⁵ Thus, unlike in usual copyleft where it is only the user who is fettered, here the neck of the manufacturer would also be on the line.

An important characteristic of the GPL ought to be mentioned. Much ballyhoo concerning the freedom to distribute notwithstanding, nowhere in the license is found the requirement that the public release of the concerned software is mandatory. The modified software may very well be used by a private entity, and the need for releasing it to the public may never arise. But if one opts to release modifications of the software to the public in some way, only then does the GPL oblige one to ensure that the source code is made available (or the method to obtain the same is expressly laid down, as already noted). Thus, it is further evidence of the idea of freedom that is encompassed in the FSF/GPL enterprise, leaving the decision on the release of the modified software purely on the user concerned.⁴⁶

Richard Stallman has often been derided as being an unrealistic visionary, whose obsession for ideology

and battling the establishment has often proven to a hindrance for the true growth of the movement, with the result that proprietary software today is probably not as vulnerable as it otherwise might have been. Such criticisms are by no means entirely unfounded—Stallman himself would probably be the first to put his hand up and admit thus. He has left no stone unturned in his quest to educate the world on the fact that Linux, for example, is useless without the benediction of the GNU GPL. Further, his insistence on referring to the operating system as GNU/Linux has been criticized by many, who have termed it imprudent and potentially detrimental to the camaraderie that exists at present in the FSF fraternity.²⁴ Strict business sense would probably not concur with a lot of Stallman's views and deeds. But the entire movement of his was not founded on business in the first place. It was directed against 'an abusive cultural despot...and a monopolist of semiotics'; in other words, the reign of proprietary software, operating as it did under the aegis of conventional copyright.² He firmly believed that the notion of copyright as understood *vis-à-vis* other works, was both incongruous in, and pernicious to, the computer software scenario.

Had he so desired, he could have very easily joined the bandwagon. But he had strict convictions of his own, which he was not prepared to budge from under any circumstances.⁴⁷ His ideals of the freedoms associated with software transcended merely pecuniary considerations, and treaded into the domain of ethics, and he could not remain true to his conscience by playing along.

What must be remembered is that the enforceability of the GPL/copyleft licensing system is still to be canvassed in a court of law.⁸ Unless and until that happens, the entire discussion and debate will remain confined to the theoretical plane. What is required is for the courts to elucidate the ambit of copyleft definitively, in order that all speculation and uncertainty about what the concept truly entails is finally put to rest. However, it is already believed that legal sanction to the entire system should not be a problem, as the courts should grant the same amount of protection to the GPL (and other copyleft licenses) as they do to shrinkwrap and shareware license agreements.⁴⁸ It does appear to be a contractual right (in personam) as opposed to traditional copyright, which is clearly a right in rem. Father Time alone shall throw light on what finally transpires.

Conclusion

For starters, it would be useful to focus on one potentially gargantuan endeavour of the GNU Project, which when complete, will herald a veritable revolution in the genre of computer software. It is the GNU Hurd, an entirely new kernel currently under construction by the FSF, an improvement on Torvalds' work about a decade and a half ago. Stallman has high hopes about it, and Debian too is waiting eagerly in anticipation. Its unique selling proposition appears to be its object-oriented structure, which implies that it would retain its original identity even after extensive modifications made to it.⁴⁹

The main contribution of the GPL would be that it created a system of communal ownership within the normally proprietary confines of copyright law.⁵⁰ It demonstrated the truth of the adage that to fight against the system, one has to remain in the system. In this context, it implies that Stallman realized soon enough that the institution of traditional copyright was much too potent for an individual to overhaul, and any attempt to that effect would be foolish as well as futile. Thus, one and the only option was to work from within the confines of copyright law and try to arrive at a system which offered a relief from the fetters it imposed upon freedom and liberty, and offered users the right to (for example) modify and redistribute the program, which was unthinkable as far as traditional copyrighted software was concerned. Much has been made of the divide between the FSF and the OSI, and the mutual suspicion with which the two view one another. Consequently, the anti-proprietary momentum has probably not achieved optimum efficiency. The advocates of both schools largely believe though that the schism, although fairly pronounced, has been blown out of proportion somewhat by vested interests, for reasons plain enough for all to see. They have been at pains to communicate the fact that the actual adversary is proprietary software, and that the two have to work with, and not against, one another.⁵¹ The end is common for both parties, albeit the means to achieve the same may not be so.

Says Stallman, 'My work on free software is motivated by an idealistic goal: spreading freedom and cooperation. I want to encourage free software to spread, replacing proprietary software that forbids cooperation, and thus make our society better.'⁵² His understanding was that Dracon ran amok over the genre of software in the guise of copyright, and the

net result was akin to what prevailed in the erstwhile Soviet Union, where ordinary copies of documents were forbidden, and 'offenders' punished- in other words, the infamous 'samizdat' publishing.⁸ There was however, one all-important difference; the USSR, the motive was politics, whilst here, it was economics.⁵³ Even so, in his eyes, it was no less an evil which had to be eliminated at any cost.

The free software movement has been criticized as actively discouraging development of a feasible commercial avenue *vis-à-vis* software, since the terms of the GPL are such that subsequent rival versions of the software cannot practically be priced any higher than the cost of reproduction and distribution of the GPL-licensed software, and thus the concept of free software 'fundamentally undermines the independent commercial software sector'.⁵⁴ Hence, free software is awful for business, they say. As already observed, the essence of free software was itself to try and topple the empire, and thus it is but natural that it would indeed be a case of sour grapes for some. Business is good, but not at the cost of encroaching upon the liberty and freedom of others-this is the mantra of the FSF, and 'its obvious that it does not sit well with some'.

Instead of crying themselves hoarse over the potential threat posed by the GPL, the proprietary software majors would probably be well to try and devise new and innovative software of their own (which they are certainly capable of doing) to outstrip, that which is governed by the GPL. In such an atmosphere of continuous brainstorming, it is society, which would ultimately benefit, as opposed to a situation of acrimony, which presently exists. In order to effectuate this, one would have to reiterate that the FSF and the OSI have to abandon their internecine squabbles, cast their differences as far aside as possible, and work together. An idealistic desideratum, admittedly, but otherwise, there appears to be no other way of ensuring that Stallman's (and the OSI's, for that matter) dream achieves fruition.

The real test of the GNU Project (read a court case) is yet to come, but everyone concerned is fairly optimistic that it would not be found wanting. Stallman, for all his impracticality and intransigency, heralded the start of something truly special, the possibilities of which are yet to be completely realized. Certainly it would be incorrect to brand Microsoft as the architect of all that is awry in the digital world. They have to take a lion's share of the

credit for converting computers from bewildering contraptions that only professionals dared handle to readily accessible devices, which luddites can easily use sans trepidation, and one cannot take that away from them. However, there does come a time when they are not really cherubic in their demeanour, and it is then that individuals such as a certain MIT programmer, feels the urge to put them in their place. It is up to Microsoft and its brethren to bite the bullet and take the challenge head-on. If there are indeed as great as they are made out to be, they are almost certain to come up trumps.

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- 5 Whilst source codes are instructions which can easily be read by humans, the object code (the binary translation of the same) is decipherable only by machines; for reasons directly germane to commerce and confidentiality, software came to be distributed in the latter form, with the former known only to the manufacturers. In the MIT case, in 1978, a new laser printer by Xerox ('Dover') arrived with its source code locked up, leaving programmers with no scope for making modifications in case of malfunctions, which they had so far been able to do with great success. Thus, one can clearly empathize with their resentment. Nadan Christian H, Open source licensing: Virus or virtue? *Texas Intellectual Property Law Journal*, 10 (2002) 349, 353.
- 6 Stutz Michael, Applying copyleft to non-software information, gnu.allegrius.com/philosophy/nonssoftware-copyleft.html (29 October 2005). The purport of the word free is of great significance to the entire discussion. As per Stallman, it was to be used in relation to liberty and expression, and not in a pecuniary sense. It can be pithily explained by Stallman's view that it pertains to 'free speech, not free beer'. Ken's musings about free software and open source, ken.coar.org/musings/free-source.html (28 November 2005).
- 7 Stallman's disillusionment with the prevailing state of affairs and his consequent rebellion can be understood by an interview of his to Byte magazine back in 1986. His opinion regarding the GPL was that people ought to 'see it as a form of intellectual jujitsu, using the legal system that software hoarders have set up against them.' Williams Sam, The GNU General Public License, www.laisenk.dk/The_GNU_General_Publ.1226.0.html (1 December 2005).
- 8 Lillington Karlin, In defense of copyright, www.wired.com/news/politics/0,1283,41679,00.html (11 November 2005).
- 9 Quoted in the well-known case of *Computer Associates v Altai*, 982 F 2d 693.

- 10 Some of the statements of the Microsoft top brass would make their sentiments crystal clear. Vice-President James Allchin has referred to open source as ‘...an intellectual property destroyer’. CEO Steve Ballmer’s views on Linux are even less flattering-for him, the latter is ‘...a cancer that attaches itself in an intellectual property sense to everything it touches...’ Miller Joseph Scott, Allchin's Folly: Exploding some myths about open source software, *Cardozo Arts & Entertainment Law Journal*, 20 (2002) 491, 501.
- 11 Open source software is so called because the source code is open, i.e. available to all.
- 12 As per The Concise Oxford Dictionary of Current English (1990), quoted in Madhavan Mahesh, Use of copyright by open source software movement on computer software and its implications, *Journal of Intellectual Property Rights*, 8(1) (2003) 32, 36. An alternative definition may be noted in the Jargon File, which defines it as ‘[t]he copyright notice...granting reuse and reproduction rights to all comers’. Stutz Michael, Applying copyleft to non-software information, gnu.allegrius.com/philosophy/nonsoftware-copyleft.html (29 October 2005).
- 13 Carlos Romero Moragas, Free Software-Freedom of knowledge is freedom to be creative, www.wacc.org.uk/wacc/our_work/thinking/ipr/copyleft_free_software (1 November 2005).
- 14 Severine Dusollier, Open source and copyleft: Authorship reconsidered?, *The Columbia Journal of Law & the Arts*, 26 (2003) 283.
- 15 Madhavan Mahesh, Use of copyright by open source software movement on computer software and its implications, *Journal of Intellectual Property Rights*, 8(1) (2003) 37.
- 16 Patterson Chip, Copyright misuse and modified copyleft: New solutions to the challenges of internet standardization, *Michigan Law Review*, 98 (2000) 1351, 1377.
- 17 Rosenberg Donald K, Copyleft and the religious wars of the 21st century (12 November 2005), www.stromian.com/copyleft.htm. Of course, it may not always be possible to physically distribute the source code along with all copies of the software. In such cases, the license necessitates that the information relating to the availability of the source code be made available, along with the ways and means of accessing the same. The user may thus have a means of obtaining the code as and when required.
- 18 Vaidhyanathan Siva, Copyrights and copywrongs (New York University Press, New York), 2001, pp 155-56.
- 19 In this sense, therefore, a sort of service industry, a la self-employed professionals, would thus be created in the realm of computer software. The underlying motto in this regard is, ‘Who needs copyright when you’re on a retainer?’ Teresa Hill, Fragmenting the copyleft movement: The public will not prevail, *Utah Law Review*, 797 (1999) 811-12.
- 20 Severine Dusollier, Open source and copyleft: Authorship reconsidered?, *The Columbia Journal of Law & the Arts*, 26 (2003) 284.
- 21 The opinion of senior Microsoft executive Craig Mundie is that the ‘viral aspect of the GPL poses a threat to the intellectual property of any organization making use of it.’ This makes it amply clear that a negative connotation is sought to be given to the movement through the use of unflattering descriptions, a marked practice of the proprietary software industry. Miller Joseph Scott, Allchin's Folly: Exploding some myths about open source software, *Cardozo Arts & Entertainment Law Journal*, 20 (2002) 499.
- 22 This particular event has been described as ‘the computer-industry equivalent of revealing the recipe for Coca-Cola’; Teresa Hill, Fragmenting the copyleft movement: The public will not prevail, *Utah Law Review*, 797 (1999) 816. Clearly, it was but a frantic endeavour to curb some of the substantial bleeding already caused by Microsoft’s Internet Explorer.
- 23 Nadan Christian H, Open source licensing: Virus or virtue? *Texas Intellectual Property Law Journal*, 10 (2002) 354.
- 24 IP, www.pjprimer.com/copyleft.html (28 November 2005).
- 25 Subsequently, Torvalds reflected upon that encounter. Said he, ‘I may not have seen the light. But I guess something from his (Stallman’s) speech sunk in’. Williams Sam, The GNU General Public License, www.laisen.dk/The_GNU_General_Publ.1226.0.html (1 December 2005).
- 26 A kernel has been described as ‘the fundamental part of a program...the part of the operating system that is closest to the machine’. Madhavan Mahesh, Use of copyright by open source software movement on computer software and its implications, *Journal of Intellectual Property Rights*, 8(1) (2003) 47. It is the edifice over which the entire functioning of the system hinges, and various other programs can run.
- 27 Nadan Christian H, Open source licensing: Virus or virtue?, *Texas Intellectual Property Law Journal*, 10 (2002) 360.
- 28 Copyleft, en.wikipedia.org/wiki/Copyleft (1 November 2005).
- 29 The Preamble states, ‘We protect your rights with two steps: 1) copyright the software, and 2) offer you this license which gives you legal permission to copy, distribute and/or modify the software’ (Emphasis added). This would appear to bear testimony to the fact that copyright has anything but fallen into desuetude as far as copyleft is concerned. GPL, www.fsf.org/licenses/licenses.html#GPL (28 October 2005).
- 30 Teresa Hill, Fragmenting the copyleft movement: The public will not prevail, *Utah Law Review*, 797 (1999) 808.
- 31 Of importance in this regard are the views of intellectual property lawyer Paul Lambert, who opines that even in copyleft, ‘...as a fundamental concept, copyright remains...If a creative work is of sufficient quality and uniqueness, copyright manifests automatically’ Lillington Karlin, In defense of copyright, www.wired.com/news/politics/0,1283,41679,00.html (11 November 2005).
- 32 Severine Dusollier, Open source and copyleft: Authorship reconsidered?, *The Columbia Journal of Law & the Arts*, 26 (2003) 287. However, it would be incorrect to brand Torvalds as an ideologue along the lines of his mentor. According to him, whilst the primary motive behind the copyleft movement is surely a desire for openness and co-operation, the same is also in sync with the traditional route of scientific progress, which ‘offers an approach without impediments for spreading knowledge’. Hence, the copyleft system has a scientific aspect to it as well, which is as important, to say the least.
- 33 Teresa Hill, Fragmenting the copyleft movement: The public will not prevail, *Utah Law Review*, 797 (1999) 799.
- 34 The premise of such an argument is as follows. If modifications are made to open source software and the same is subsequently made proprietary, other developers in similar types of software would be encouraged to brainstorm and come up with innovations to rival or

- surpass the same. This spirit of competition would thus aid in the development of the software industry in general, a possibility which (in their opinion) is remote in the case of copyleft. Michael Stutz, Applying copyleft to non-software information, gnu.allegrius.com/philosophy/nonsoftware-copyleft.html (29 October 2005).
- 35 However, there is absolutely no proscription on any user in the chain to appropriate the concerned software and lock away the source code, as a result of which subsequent users can view it solely in its object code avatar. Nadan Christian H, Open source licensing: Virus or virtue? *Texas Intellectual Property Law Journal*, 10 (2002) 361.
- 36 Pool David, When copyleft is bad for copyright..., www.news4neighbors.net/article.pl?sid=05/11/28/1732242&mode=nocomment&tid=1 (4 December 2005).
- 37 An explanation of this particular license term is probably in order. Merely additions to the existing software are permitted, to the extent that they are not repugnant to any of the provisions already in existence. Alsberg Tom, *GNU GPL v the BSD license - theory v practice?* www.cs.huji.ac.il/~alsberg/freedom/gplbsd.html (4 December 2005). This would probably illustrate the fact that the BSD certainly cannot claim to be a more efficient sentinel of liberty and freedom than the FSF/copyleft franchise.
- 38 Madhavan Mahesh, Use of copyright by open source software movement on computer software and its implications, *Journal of Intellectual Property Rights*, 8(1) (2003) 35.
- 39 Miller Joseph Scott, Allchin's Folly: Exploding some myths about open source software, *Cardozo Arts & Entertainment Law Journal*, 20 (2002) 499. (The present study shall not address the shared source concept in detail).
- 40 The licenses are envisioned to be customized according to the wants and needs of the person concerned, and it is for the latter to lay down which rights specifically are desired to be parted with. Expressly declared to be 'copyleft licenses', as per individual needs, each license would consequently be modelled. Therefore, it is a case of 'certain (as opposed to all) rights reserved' for the author concerned. Carlos Romero Moragas, Free Software-Freedom of knowledge is freedom to be creative, www.wacc.org.uk/wacc/our_work/thinking/ipr/copyleft_free_software (1 November 2005).
- 41 The thrust of Creative Commons is to strike a middle path between the extremities of 'total control' (as in traditional copyright) and 'anarchy' (where wide freedom also carries with it the hazard of increased susceptibility to exploitation). Although, (by its own admission) directly inspired by the GNU GPL, it consciously opts to steer clear of software, and focuses on other creative works such as websites, cinema, music etc. Its debut project (in December 2002) saw it releasing a set of copyright licenses free for the public to use. About us, www.creativecommons.org/about (9 April 2007).
- 42 Severine Dusollier, Open source and copyleft: Authorship reconsidered?, *The Columbia Journal of Law & the Arts*, 26 (2003) 285.
- 43 www.artlibre.org/licence/1al/en/ (9 April 2007).
- 44 Stutz Michael, Applying copyleft to non-software information, gnu.allegrius.com/philosophy/nonsoftware-copyleft.html (29 October 2005). The illustration of Debian would serve as a powerful counter to the argument of the OSI (referred to earlier) that copyleft actually works against the interest of the community since innovation is limited to only one individual, and interest in the concerned software would thus be lost gradually. The situation here appears to be just the opposite, since the community, if anything, is becoming even stronger and closer-knit as time rolls by.
- 45 Patterson Chip, Copyright misuse and modified copyleft: New solutions to the challenges of Internet standardization, *Michigan Law Review*, 98 (2000) 1379.
- 46 It would also be useful to note that the provision applies as much to companies/organizations as it does to private individuals. In other words, if the improvements to the software by made by an organization *per se*, the latter is well within its rights not to release the modified version to the public. Of course, he would not be permitted to commercially exploit the same, as it would entail a violation of the License. However, there is absolutely no restriction on private use. Frequently asked questions about the GNU GPL, www.gnu.org/copyleft/gpl-faq.html (28 November 2005).
- 47 In hindsight, Stallman reflected upon his decision thus, 'I could have made money this way, and perhaps amused myself writing code. But I knew that at the end of my career, I would look back on years of building walls to divide people, and feel I had spent my life making the world a worse place.' Stallman's disillusionment with the prevailing state of affairs and his consequent rebellion can be understood by an interview of his to Byte magazine back in 1986. His opinion regarding the GPL was that people ought to 'see it as a form of intellectual jujitsu, using the legal system that software hoarders have set up against them.' Williams Sam, The GNU General Public License, www.laisen.dk/The_GNU_General_Publ.1226.0.html (1 December 2005).
- 48 One distinction between copyleft and shrinkwrap/shareware is that unlike in the latter, there is money consideration involved in the entire process of granting the license. The proviso of course (in case of both) is that no provision of the license is to be repugnant to any established principle of contract. Teresa Hill, Fragmenting the copyleft movement: The public will not prevail, *Utah Law Review*, 797 (1999) 812.
- 49 Bushnell Thomas, The brains behind Hurd, has an explanation regarding the name. He says, 'Hurd stands for 'Hird of Unix-Replacing Daemons. and then Hurd stands for 'Hird of Interfaces Representing Depth'. The GNU Hurd, www.gnu.org/software/hurd/hurd.html (14 December 2005).
- 50 Stallman's disillusionment with the prevailing state of affairs and his consequent rebellion can be understood by an interview of his to Byte magazine back in 1986. His opinion regarding the GPL was that people ought to 'see it as a form of intellectual jujitsu, using the legal system that software hoarders have set up against them.' Williams Sam, The GNU General Public License, www.laisen.dk/The_GNU_General_Publ.1226.0.html (1 December 2005). For this reason, the terms of the GPL have been referred to as 'conditions precedent to a non-exclusive copyright license'. One distinction between copyleft and shrinkwrap/shareware is that unlike in the latter, there is money consideration involved in the entire process of granting the license. The proviso of course (in case of both) is that no provision of the license is to be repugnant to any established principle of contract. Teresa

Hill, Fragmenting the copyleft movement: The public will not prevail, *Utah Law Review*, 797 (1999) 812.

- 51 Stallman is very clear as to the fact that there are certain irreconcilable differences between the FSF and the OSI, and certain principles and activities of the latter are simply non grata for him and his Foundation. For him, the difference is thus, ‘‘Open source is a development methodology; free software is a social movement.’ Even so, he says, although ‘[w]e disagree on the basic principles, but agree more or less on the practical recommendations.’ Stallman Richard, Why ‘Free Software’ is better than ‘Open Source’, www.gnu.org/philosophy/free-software-for-freedom.html (14 December 2005).
- 52 Stallman Richard, Copyleft: Pragmatic idealism, www.april.org/groupes/gnufr/work/originaux/pragmatic.html (4 November 2005).
- 53 Teresa Hill, Fragmenting the copyleft movement: The public will not prevail, *Utah Law Review*, 797 (1999) 813-14.
- 54 Miller Joseph Scott, Allchin's Folly: Exploding some myths about open source software, *Cardozo Arts & Entertainment Law Journal*, 20 (2002) 500.