THE MORALITY OF UNAUTHORIZED SOFTWARE COPYING

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The issue of unauthorized software copying has come up quite often in discussions dealing with the computer industry in particular and computer science in general. There have been two reactions to the issue; on the one hand, one tendency has been to sidestep the question altogether but tacitly justify it as necessary, and on the other hand, to condemn all unauthorized copying at once as software piracy.

This article is not the last word on the issue of unauthorized software copying, but it is intended to contribute to the debate on that topic. To further define the parameters of the discussion, this writer states that the use of the term unauthorized simply means that he is aware that present Philippine law does not authorize software copying. His use of the term does not imply that he is in agreement with the existing copyright and patent laws. The article deals with morality and not with legality. It does not offer a way out of legal problems due to copyright violations, but it presents a possible conscience solution to the problem.

By way of a further distinction, references to software in this presentation, refer only to 'generic' software. By 'generic' software is meant software which is not programmed for the specific needs of a specific client. In this light, the Lotus spreadsheet program would be considered generic but a similar spreadsheet program specifically designed for a specific company or entity like the Bank of the Philippine Islands would not be so.

The mode of presentation then in this article begins with a discussion of copyright, then moves on to the application of the rules of copyright to software. Next, the parameters for discussing the morality of software copying are introduced. Finally the presentation becomes projective and prescriptive, as it explores the meaning of unauthorized software copying in the Philippine setting.
COPYRIGHT: SOME NOTIONS

Frequently the discussion of morality centers on the issue of respect for copyright rules. Such an approach can progress only from a clear understanding of copyright.

Copyright has been defined in scope as the “exclusive, legally secured, right to publish and sell the substance and form of a literary, musical, or artistic work.” It has a two-fold purpose, namely, for the ‘author’ and for the ‘public’.

It is for the good of the former because the work of the ‘author’, who may be a composer or writer is recognized as contributing to man’s knowledge and the quality of human life. At the very least, the exclusive right to publish and sell presupposes an economic philosophy which was recognized by the U.S. Supreme Court in Mazer vs. Stein, 347 U.S. 201, 209. In a decision penned by Supreme Court Justice Reed, it is claimed that:

The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in ‘Science and useful Arts’. Sacrificial days devoted to such creative activities deserve rewards commensurate with the service rendered.

This whole orientation was based on the thinking that the creation of literature, music or art can be a legitimate opportunity for the ‘author’ to acquire compensation, as well as honor, from those who use and enjoy and their creative efforts. But copyright is also for the public. The copyright is a visible way of showing that works of authorship have social value. Thus the other side of copyright has to do with the dissemination and availability of productions for use. There is thus a creative tension between the good of the author and that of the public. The rights of control accorded to authors by copyright must therefore be tempered accordingly to avoid any undue restrictions on the use of their works.

2. Ibid. 30.
3. Ibid. 31.
SCOPE OF COPYRIGHT

One can then legitimately ask, "What can be copyrighted?" The patent laws, which define the legal meaning of copyright, make a distinction between a given idea and its expression. Only the expression of a particular idea can be patented; the idea which gave rise to the expression cannot be patented. The expression of an idea has protectability; the idea itself has none. One rather abstruse illustration shows this:

Pythagoras, when he discovered the principle governing relationships in a right triangle, commonly expressed as "\(A^2 + B^2 = C^2\)," could have copyrighted those precise words. But he would have been unable to stop anyone from writing a text containing the same idea expressed in different words, such as "side one multiplied by itself plus side two multiplied by itself equals the hypotenuse of the triangle multiplied by itself."\(^4\)

Thus, clearly, ideas or intellectual innovations, a program(!)\(^5\), a system, an approach, a method of organization, a short-cut, a logical design cannot be patented. However, the expression may be patented. Another way of saying this is that only tangible creations may be given patent and copyright protection — the realm of ideas is free and open. Thus, for example, the Djikstra shortest-path algorithm may not be patented but a packaged computer program which includes it may be patented.

In essence, copyright is a legal device designed to provide the opportunity for economic reward that enables authors to expend their energies in creation, and enables publishers to invest their resources and efforts in making the authors' works available to the public. Copyright seeks to achieve this end by giving to authors, who in turn may grant to publishers or other producers, broad rights of control over the various modes of reproduction of their works, or, at least, the right to exact payment for their reproduction.\(^6\)

Obviously, copyright is defined primarily as a legal notion and only secondarily as a moral one.

5. Ibid.
SOME PECULIARITIES

The distinction between an idea and its expression creates certain peculiar conditions when applied to computer software. Consider the following quotes from the copyright statements of some packaged computer programs:

MathSoft, Inc. owns both this software program and its documentation. Both the program and documentation are copyrighted with all rights reserved by MathSoft. 7

This software is protected by both United States Copyright Law and International Treaty provisions. Therefore, you must treat this software just like a book with the following single exception: Borland International authorizes you to make archival copies of Turbo C for the sole purpose of backing up your software and protecting your investment from loss.

By saying, "just like a book," Borland means, for example, that this software may be used by any number of people and may be freely moved from one computer location to another so long as there is no possibility of its being used at one location while it's being used at another. Just like a book that can't be read by two different people in two different places at the same time, neither can the software be used by two different people in two different places. (Unless, of course, Borland's copyright has been violated.) 8

In these cases both the program, which is the expression of the idea, and the documentation, which presumably contains the idea behind the program, are protected by copyright. It seems that there is a confusion between the idea and its articulation. It seems that both have been copyrighted. The computer industry itself admits the confusion it has generated: One author has remarked that:

No area of the law surrounding computer technology is more confused than the area involving the proprietary rights of creators or innovators in the field . . . Normally, the problems attendant to the protection of creativity are those of the vendor and are of little interest to the user provided

that the user is protected contractually by the vendor against the vendor's infringement upon the rights of others.  

What is patented is the expression, in this case, the packaged computer program. The basis for the copyrighting and patenting of the packaged computer program is the legal doctrine of the "trade secret" or "proprietary information." Under this doctrine, an innovator or creator could make use of, and on a limited basis permit others to use, some novel idea, method or process, or collection of information and would be protected against those who attempted to appropriate it. It is in effect a recognition that a certain amount of secrecy is necessary for the person who acquires the copyright. For an effective copyright requires publication of the copyrighted material, thus exposing the idea or creation to public view, while protecting only its articulation and not the underlying idea. This may not be feasible in the case of the computer program, for this may mean the publication of the source code. This automatically means opening the 'secrets' of the program, its logic, its creative use of the resources of a particular machine. Since a major portion of any programming tasks is deducing the logic of the task, it makes sense to have trade secrets. Or, to take another example, if a packaged program were designed to secure confidential files, exposure of the program logic would ease the way for unscrupulous hackers to analyze and counteract the code. This would effectively nullify the program and render it valueless.

In the data processing industry, the most common example of a proprietary idea or process is the packaged program. As is discussed elsewhere, vendors of proprietary packages go to great lengths in an attempt to secure the proprietary aspects of their product by imposing restrictions upon the user. These are directed toward preventing the user from disclosing, reproducing and making unauthorized uses of the proprietary information.

SOME COMMENTS ON PRIVATE PROPERTY

The issue of proprietary rights brings us to examine the con-

10. Ibid. 57.
11. Ibid.
12. Ibid.
cepts of property and ownership. Ownership has been defined as "the exclusive right of control over a thing." The scope of ownership includes not only material goods but also intellectual and spiritual creations, such as inventions, products of art, books, etc. In the full sense, ownership includes (1) the right to dispose of a thing freely, i.e. to use, consume, sell, donate or bequest it; (2) the right to the fruits of a thing, whether they are natural or industrial; the right to exclude others from acting upon the thing and to restitution in the event of unlawful deprivation. The object of ownership which is property can consist of consumer goods like food or clothing; movables like furnishings, tools, cars, animals, jewelry; immovables like flats, land, houses, plants; intellectual property like patent rights and copyrights; claims against other parties like bank accounts, shares securities, debts, insurance claims and money in general.  

MORAL BASIS FOR THE RIGHT TO PRIVATE PROPERTY

At the onset, there is no intrinsic connection between the definition of the meaning of ownership and the scope of property. The facts of ownership and property do not automatically justify the right, if indeed there is, to private property.

What is known, though, is that there is a natural desire for property. There is an innate human sense that a person has the right to dispose of the fruits of his work. There are compelling reasons which show that the right to private ownership is a natural right. One reason is that property is an important means for the exercise of personal responsibility, self-realization and creative development. Another reason is that private property secures independence and protects freedom. It enables persons to provide for the sustenance and upbringing of those who are entrusted to their care. Private property serves to maintain peace in society and obviates disputes and serves to bring about a better utilization of the goods available in the interest of all.  

But the reasons given for the institution of private property show that it is primarily a conditioned right. It is clear that "pri-

14. Ibid.
15. Ibid. 519-20.
private property is not an absolute right, but a right conditioned by the needs of the individual and of the community."

THE LARGER QUESTION: UNAUTHORIZED SOFTWARE COPYING

The concepts of copyright and private property now merge into the larger issue of software copying.

Probably, the first caveat that must be made is that there is a distinction between the moral and the legal. The degree of the moral obligation to obey human laws depends on the greater or lesser importance they have for the common welfare. Thus there is a hierarchy with respect to the binding of moral laws. While it is clear that moral law accepts the idea of a natural right to private property, it is equally clear that the right to private property is a conditioned right, i.e., it is not to be held absolute over the greater needs of the community.

One approach, then, to find the moral acceptability/unacceptability of unauthorized software copying would be to consider the conditions under which the act of copying is done. This entails focusing on the purpose of private property rather than zeroing in on private property itself. Instead of stating: "To the extent that unauthorized software copying violates the right to private property, to that extent, it is immoral," the position proposed is, "If it can be shown that the copying does not serve a higher good than that served by the right to private property, then it is immoral." In this approach, private property is relativized against the purpose for which it exists.

Another approach would be to check whether software copying is ipso facto a violation of copyright, i.e., whether the protection which is extended to the owner of the copyright is infringed upon.

Crucial to both approaches is a determination of the purpose of the copied software. For this reason, software has to be classified under certain categories. Tandy Corporation follows these topics in one of its software catalogs.

Business/Accounting

16. Ibid. 521.
It seems that these categories can be further simplified into production of *business* software, *education* software, *development* software, and *leisure* software. The categories are not mutually exclusive: Software for spreadsheets and word processing seem to fall under production/business category. Software like TurboC, TurboPascal, compilers seem to fall under education and software development. Software for arcade-type games undeniably fall under leisure software.

It is this writer's contention that the assessment of the morality of software copying is also conditioned by the type of software being copied.

THE CONTEXT: THE PHILIPPINE SETTING

Fr. Bienvenido Nebres, S.J., former Provincial of the Philippine Province of the Society of Jesus, in a paper delivered at a mathematics conference, once described the context of many developing countries:

It is quite likely that developing countries will have to depend on advances in the developed world in these two areas of a calculator-integrated and/or microcomputer-integrated curriculum. We do not have the human and financial resources to go into the intense research, development, testing and evaluation necessary to develop such new curricula. Having said this, I will still propose an agenda for developing countries with respect to the impact of technology on the school mathematics curriculum. I suggest that we look on it like the classic case of technology transfer. The success of the newly industrializing countries in my part of the world in absorbing new technology has followed a pattern: importing the technology, imitating it, making small but important modifications, eventually mastering the

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18. These are the categories used in Radio Shack TRS-80 Applications Software Sourcebook, vol. 4, Cat. no. 26-2114.
technology and reconstructing it according to their own needs and purposes.¹⁹

This writer believes that one overriding concern in a Third World country such as the Philippines should be how to keep pace for the sake of national development or survival with the rapidly changing and advancing technology of the more developed countries. At first blush, this may be a self-centered approach except that the quality of relationships between developed and underdeveloped nations improves in direct proportion to the closing of the gap between their standards of living. It seems fair to claim that progress in bettering the lot of the undeveloped nations vis-à-vis the developed constitutes a good which has to be matched against the claims of private property, as represented by copyright. Thus, a consideration of the impact of copyright on underdeveloped countries should enter any discussion of copyright requirements and formalities in the Philippines.

An earlier section of this paper stated that private property is an important means for the exercise of creative development. Since the means may not contradict the end for which it is intended, it stands to reason that in a Third World context, exaggerated insistence on copyright will in fact forestall the ability to develop a computing capability which will enable a Third World country to narrow the technological gap between itself and a much more developed country.

The sale of software is subject to the economic principles which govern elastic demand, i.e., products may not be bought because of their prohibitive prices. The standard of living in the Philippines cannot meet the price software manufacturers want for their product. For example, four hundred dollars may not be much for the American market, but that is close to 8,500 if paid for in pesos. An American earning according to the American minimum wage would be able to pay for such a program in sixteen days; his Filipino counterpart would have to work for 131 days or 5.5 months to pay for his copy. Precisely because of the price of the software, the local user market is so small. The size of the market

does not significantly cut into the potential market of the copyright owner. How can it be otherwise? The unauthorized copiers do not belong to the potential market, since they cannot afford the software. Thus, it is undeniable that the unauthorized copying does not hurt the copyright owner; it is equally clear that copied software helps to increase local productivity. The case here is that the same act which does no harm to the copyright owner does a lot of good for the user.

The point Fr. Nebres has made with respect to the Third World’s use of technology also brings out the fact that for the country to develop technologically, it must be able to import technology, imitate it, make small but important modifications, eventually master it and reconstruct it for the country’s needs and purposes. Given the cost of software, it would not be possible to train students in computer science if the copyright laws are strictly followed. The status quo which enables the academe to use unauthorized copies has made it possible, and continues to make it realistic for students to learn high-level languages such as C and Pascal, as well as the different assembly languages. An imposition of the copyright on the implementations of these languages (e.g. TurboC, Turbo Pascal) would cause a de facto decline in the quality of the teaching of the ideas behind these languages, and for that matter, other computer concepts. There is no harm being done to the producer of these education-related software, but they are very useful pedagogical tools for local students.

It seems clear then that the most compelling reason for the moral decision to make unauthorized copies is based on the contention that the benefits received by the local community are not achieved at the expense of individual software producers. The use by the former of unauthorized copies does not cut into the potential market of the latter.

EPILOGUE

This writer has attempted to show that it is morally tenable to copy copyrighted software on the ground that the advantages which accrue to the country are not gained at the expense of the author and/or publisher of the software. This involved a process of demonstrating that the right of private property which is the basis of copyright has been set aside in favor of the need for present
Philippine society to have access to technology which would otherwise be out of its reach.

This, however, does not provide an excuse for indiscriminate copying. The fact that there are different kinds of software means that the 'need' for them in the given Philippine context is not homogeneous. There is a real need for business software or for any kind of software which would enhance productivity, and this includes word processing as well as engineering programs. There is also a real need for educational software. This includes compilers, languages (translators and parsers, etc.), and other software which would help train Filipinos in software development. For such programs are really tools for development and as such, their copying can be justified by the reasons this writer has stated earlier. It is harder to justify the morality of copying leisure software; this writer is hard put to find reasons for doing so.

Finally, this analysis is limited because it applies to the Philippine context at this particular period of history, during which the Philippine economy is still not among the tiger economies of Asia and whose standard of living does not permit it to pay for software at First World prices. A short term solution to recognize the real rights of software writers may consist in treating useful software the same way the government deals with the copyright on books. This involves offering software writers a cut on sales of the manuals for their software. The cut can be made dependent on what the market can bear, with the added proviso that the cut can be made bigger to the extent that the software actually helps productivity. In this way, the country can also make clear to the world that it is not a country of software thieves but only of people who are currently in need but will pay when they can.