

Copyright and longevity

There are people who think that without the prospect of death, life somehow becomes meaningless. But you know, I look at young children. They are full of joy of life. They bounce out of bed in the morning; they want to get together and play games. They're not doing that because they think that in the future they're going to die. They're living for the sake of life. They're not living for the sake of death. And it's my view, we're quite capable of finding lots of purpose in life, even if there is no threat of death ahead. David Wood, author of *The abolition of aging*. On the [Skynews](#) channel. June 19, 2019

Theme of the month: A copyright for the immortality pill?

Introduction

About 26 centuries ago, the inhabitants of [Sybaris](#), a Greek colony in what is now Calabria, invented copyright.



Sybarites were known for their taste for luxury in all respects, including food. They granted cooks the exclusive right to their recipes. [According to Phylarchus of Naucratis](#), an Egyptian Greek from the 2nd century BC: *"If a cook invented new and succulent recipes, no other of his fellow chefs was allowed to put them into practice for a year, he alone having the privilege of freely preparing his dish. The stated aim was to encourage other cooks to compete in creating ever more refined dishes.*

In 2019, the legal fictions that are intellectual property rights invaded the world's social life, becoming mixed up in the most improbable areas of our activities: arts, writings, lyrics, dances, inventions, performances and even much of what is natural but theoretically appropriable from certain [living species](#) to [extra-terrestrial objects](#). The following are notably "appropriable": medicines, medical techniques, scientific articles on research for a longer and healthier life, product names....

All this is part of a framework in which signs, symbols and virtual objects occupy an increasingly important place in social life. The resulting complexity, volatility and contradictions generate an increasingly slow decision-making process, a process that unfortunately takes little account of longevity objectives derived from research for health and a better environment.

The ancient Greeks would probably be surprised to find that despite all the imagination of those who profess to monetize any production of the mind, cooking recipes are [generally](#)

[considered today to be non-appropriable](#). A diet recipe, a variant of the Cretan diet, presumed useful for longevity, will not be protectable.

But he would be even more surprised to know that if a 20-year-old girl writes a beautiful text for health promotion today and publishes it in what is now France, theoretically, her text will be able to financially benefit her descendants (but practically her publisher) until the middle of the 22nd century, precisely until the year 2159 if the person dies at age 90. Even in a century, in theory, they will be able to refuse to have it published in a way that they consider having a purpose contrary to the author's ideas. And if research for longevity one day allows a life of unlimited duration, copyright will no longer have a limit (unless there is a change in legislation, of course).

Intellectual property rights - Copyright - Trademarks - Patents

Here is a very brief summary of a field that spans millions of pages.

[Intellectual Property \(IP\)](#) is the set of rights that allow people to restrict the right of others to use certain things, creations, works on the basis of intellectual "property". In theory, these rights protect the creator. In practice, these rights almost always protect the creator's representatives, most often without the creator him or herself gaining anything and having any real choice about the contract. For example, a scientific publishing house or a rights management company may prevent an author from putting his or her knowledge at the service of the community, a company that has bought medical patents can prevent the inventor of a new medical technology from making it available to those who need it...

[Copyright](#) is the most classic intellectual property right. A scientific or popular medical article, on paper or online, but also most other forms of original cultural expression such as a photo, a medical plan, relaxing music, an original anatomical sculpture... will in principle always be subject to copyright protection.

The specific word "*copyright*" is the term used in English-speaking legal systems, notably in the United States and Great Britain, but the concept is more or less the same everywhere. In the "Anglo-Saxon" countries legal systems it affects most of the prestigious medical and scientific journals (The Lancet, Elsevier, Springer, Nature...). Generally, copyright, in English-speaking countries and elsewhere, does not expire until 70 years after the author's death ([50 years in certain countries](#)). Today, this right is no longer subject to any formalities, the famous © sign being [generally no longer an obligation](#).

[Trademarks](#) benefit from protection that extends to sometimes absurd areas such as common objects (even an [apple](#) or [windows](#) !). In the medical field, one of the harmful effects arising from this right is that many similar medicines have variable names in order to be able to sell more, which makes them less accessible (due to lack of transparency, confusion about the names of medicines, different pricing, etc.).

A [patent](#) is an intellectual right related to an invention. It allows the right holder to benefit from an exclusive right to the economic rights resulting from its exploitation. The right is much

shorter than copyright (20 years, sometimes extendable by 5 years) and requires a formality, namely registration. Drugs and medical devices are generally patented.

The consequences of copyright for medicines and therapies

To the question "What can be used for medical progress without fear of legal recourse?", the short answer is "Almost nothing". Indeed, some people specialize in legal action (on the basis of all commercial law, not just copyright) against any innovative use or more precisely try to obtain profit from any innovative use. Some of these approaches would be comical if they were not particularly harmful to the community. For example, pharmaceutical companies have tried to [seize products that have been used by indigenous peoples for centuries](#). Very often, for copyright reasons but also for tax reasons, these appropriations are attempted by entities with legal status such as "start-ups" and/or with a highly opaque international dimension. Finally, the legal aspects contribute, in an already extremely cumbersome administrative context, to an environment of often surreal complexity generating millions of forms of non-disclosure agreements (NDAs), author's contracts and other provisions whose implications are not fully understood by anyone, not even the lawyers and other legal professionals who write them.

More broadly, another development may be an overall modification of researchers' wishes based on the lure of profit but also on the search for respectability resulting from agreements with private companies. Without a start-up, some researchers may (wrongly) think they are nothing. And yet the original goal, for the researchers, is often to bring benefits to the community.

The most well-known negative consequence is the growth of prices to inaccessible levels for some therapies because companies have to generate profits. This concerns the treatment of so-called [orphan diseases](#) and also many innovative therapies. Many poor patients die as a result. And where the healthcare system allows for public funding, the costs to the state are high.

In addition, for products to sell well, it is important to present results in the most positive way and to minimize negative results, which hinders transparency.

When a pharmaceutical product becomes royalty-free, companies that had patents will feel obliged to conduct research aimed at slightly improving the product much more for commercial than therapeutic purposes. And above all, with regard to progress that is "hard to appropriate, sell or patent", research will be very difficult to achieve by private companies. This is the case for [promising research on metformin \(whose patent has expired\) in the fight against aging](#).

Generally, DNA and therefore all genetic modifications, particularly in humans, are (fortunately) considered [unpatentable](#). On the other hand, the means to achieve genetic modification are not. A [complex legal confrontation](#) exists between the different researchers (and especially the companies!) involved in CRISPR-type research. If, one day, gene therapy

is discovered that has an impact on a much longer healthy life, making it accessible to all should be easier legally than photocopying a Tintin cartoon album for your little cousin.

Consequences of copyright for publications

The publication system for scientific articles is widely recognized as aberrant. A few private publishers have a de facto monopoly on publishing prestigious scientific journals accessible online. Access to these journals is extremely expensive and is therefore in principle almost inaccessible, not only for ordinary citizens, but even for researchers except in "rich" universities. Fortunately, in recent years, considerable progress has been made with the following developments:

Many publications are published without the consent of the publishers in order to make them accessible to researchers. The best known and most effective initiative is [Sci-Hub](#) created by Kazakh computer scientist [Alexandra Elbakyan](#). These approaches are generally considered illegal, even it may sometimes be considered that necessity is its own legal argument in order to allow research that saves lives. In practice, there are many other ways to obtain documents, for example by requesting access from those involved.

At European level, the [S Plan](#) aims to require that from 2021 onwards all publicly-funded scientific publications be published in open-access journals. This plan is part of a logic that should be obvious: what is paid for with public funds must be made available to the public. It is quite surprising to note that the most "progressive" regulation in this area is the [American federal legislation](#) which provides that that which is done by the federal administration is in principle accessible to everyone: from photos of the earth by NASA to documents useful for medical research.

Conclusion and prospects

Despite the gloomy picture above, copyright has certainly had some utility for medical research in the current social and economic environment. Without it, many researchers would no longer have income and much research for products that could be useful for longevity would have to be abandoned.

But a radically facilitated pooling of projects and research results through investment, particularly public investment, would be a considerable factor in progress. It would be useful to have simple and comprehensible legal provisions ensuring that research results are "copyright free" and that the fair compensation of researchers and private partners should in no way hinder the provision of therapies to citizens.

This month's good news: CHAI, California Initiative on Healthy Aging for a referendum in the Silicon Valley area

Longevist activists in California and elsewhere are supporting an election initiative to provide \$12 billion in public funding for research on aging over the next 12 years. California is one of the states where citizens can create laws directly through their votes. In 2004, this process [was successfully used](#) to allocate \$3 billion to stem cell research. But collecting signatures and educating the public is a costly proposition. They will need a broad coalition of interests (probably with hundreds of thousands of citizens' signatures) to allow the referendum to take place.

This is a considerable challenge. If the referendum were to be held, it would be the first time that millions of voters would be directly asked to vote on research for longevity. And what better place to address these issues than Silicon Valley?

For more information:

- See in particular: heales.org, sens.org, longevityalliance.org and longecity.org
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