Poly-Existentials Reference Model

A Framework For Mapping Of

The Western Intellectual Property Model To Poly-Existentials

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This is a DRAFT. It reflects work in progress.

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Chapter 1

Nature Of Poly-Existenials

Here we categorize our world into two:

1. Mono-Existentials
2. Poly-Existentials

There are things in nature that exist in singular and there are things that exist in multiples.

That which exists in nature in singular, we call mono-existential. Examples of mono-existentials include: tangible physical objects, a pencil, land, Internet domain names, bandwidth. Chemistry and physics are the realm of mono-existentials.

That which exists in nature in multiples, we call poly-existential. Examples of poly-existentials include: knowledge, ideas, information, the digital entities.

This natural categorization then permits us to revisit the question of ownership of poly-existentials which simply maps to the Western Intellectual Property Rights (IPR) Regime. The topics of Western IPR and ownership and restriction of poly-existentials are one and the same.

Our analysis is from the perspective of the possessed. Traditional Western IPR analysis has always been from the perspective of owner/creator/author. The perspective of the possessed represents societal and human liberties.

This is the first introduction of the concept of poly-existentials which leads to a different way of looking and analyzing Western IPR regime. This duality of analysis based on the perspective of author/owner vs. the perspective of possessor/owned perspectives is similar to time domain analysis vs frequency domain analysis or the dual nature of light as particle or light as wave. They are different bases of analysis for the same thing. Results of correct analysis in each domain are equally valid and incorrect analysis in each domain are equally invalid.

There is ample historic precedence for our approach. In the 13th century Ibn-Sina «بو علی سینا» produced "Daneshnamh Alaei" «دانشنامه علایی», [8], in which he classified his world. Based on that

classifications, he then used logic to conclude. Ibn-Sina's work became a basis for much of the Western academic beginnings. In a sense, what we are doing here is extension of that type of classification and logic for the digital era.

1.1 Poly-Existentials Reference Model

In this chapter we begin to develope a reference model. Let's call it the "Poly-Existentials Reference Model". Our goal is to introduce a set of concepts and a terminology that can then be used to evaluate merits of Western Intellectual Property laws and to assist us to understand the proper governance model that is needed for poly-existentials. The poly-existentials reference model is independent and outside of the Western IP traditions. This reference model is based on nature. It reflects science, not beliefs, faith and opinions. This model is independent of societal consensus and is equally valid in the East and the West.

We then put the Western IPR model against the poly-existentials reference model and see that the two are in conflict. When nature and man made conventions conflict, it is the man made conventions that are wrong. The poly-existentials reference model permit us to **prove** that Western copyright and patent laws are invalid as any form of property. Such a proof is then no longer subject to any dispute because it is rooted in nature and logic – not beliefs and opinions.

We then conclude that the Western IPR model is erroneous. Based on that, we advocate that the Western IPR model should be abolished.

Such analysis needs to start with clear categorization of mono-existentials, poly-existentials and mixed-existentials.

1.2 Mono-Existence, Poly-Existence And Mixed-Existence

Examples of mono-existentials are:

Material Mono-Existentials: (things, spoon, touchables)

Non-Material Mono-Existentials: (spectrum, internet domain name, view)

Rivalry Mono-Existentials: [economic term] (Rival Goods: spoon, spectrum)

Non-Rivalry Mono-Existentials: [economic term] (Non-Rival Goods: air, fish in the ocean, view) – Non-Rivalry goods are often confused with poly-existentials – (e.g. Wikipedia and Jewish analysis has made that mistake).

Public Mono-Existentials: [economic term] (Public Goods: roads, national parks)

Examples of poly-existentials are:

Pure Poly-Existential: (recording/s, disclosed formula, disclosed idea, text, recipe, algorithm, knowledge)

Digital Poly-Existential: (recording/s, formula, idea, text, recipe, software source, software binary)

Poly-Existential Content: (mp3, book, cd, video, cookbook, software on a cd)

Poly-Existential Service: (Google, By*, Facebook – Poly-Existential drived service – mono-existential aspect not dominant)

Examples of mixed-existentials are:

Poly-Existential Product: (tivo, viagra, sauce-bechamel, Mixed-Existentials as poly-existential drived products)

We present the concept of "Expressed Formula" as the general form of "primary poly-existential". The digital format presents a "pure poly-existential" form.

Poly-existentials and mono-existentials do mix. Sometimes the dimension of poly-existence is dominant and sometimes the dimension of mono-existence is dominant.

Much of the world is actually a mixture of mono-existentials and poly-existentials – mixed-existentials. In the case of mixed-existentials, the dominant aspect of poly-existence or mono-existence is sometimes clear. In such instances, we will refer to the mixed-existentials based on its dominant aspect.

Consider a book. A traditional book is mixed-existential. The paper and the ink are mono-existentials. But the content of the book (its information) is poly-existential. In the case of a book, clearly the dominant aspect is usually (not always) poly-existential. When you read a book, you are reading its content. A book can easily be digitized, in which case it becomes a pure poly-existential. But, if the book was a rare historic manuscript, then the dominant aspect could have been its mono-existential dimension.

In the case of a given factory generated spoon, the dominant aspect is usually the material spoon which is mono-existential and not poly-existential instructions supplied to the numerically controlled machine that produced that particular spoon.

1.3 Mono-existentials

Mono-existentials are bound by their location. At any give time they exisit in one and only one specific location. Material mono-existentials can be moved (trasported) at physical speed.

1.3.1 Categories Of Mono-existentials

In the context of mono-existence versus poly-existence, all that is material is mono-existential. Some non-materials are also mono-existential.

We categorize mono-existentials in the following 4 categories.

- Nature's Material Mono-Existentials
- Man Made Material Mono-Existentials

- Nature's Non-Material Mono-Existentials
- Man Made Non-Material Mono-Existentials

In the following sections we describe each of these.

1.3.1.1 Nature's Material Mono-Existentials

Anything material is mono-existential.

Matter is the stuff around us. Atoms and molecules are all composed of matter. Matter is anything that has mass and takes up space.

A substance is matter which has a specific composition and specific properties. Every pure element is a substance. Every pure compound is a substance. For example, iron is an element and hence is also a substance. All substances are mono-existentials.

Chemistry allows us to categorize material mono-existentials into: chemical elements, chemical compounds and organic and inorganic.

1.3.1.1.1 Chemical Elements

Each stable chemical element is a mono-existential. This is illustrated in Figure 1.1.

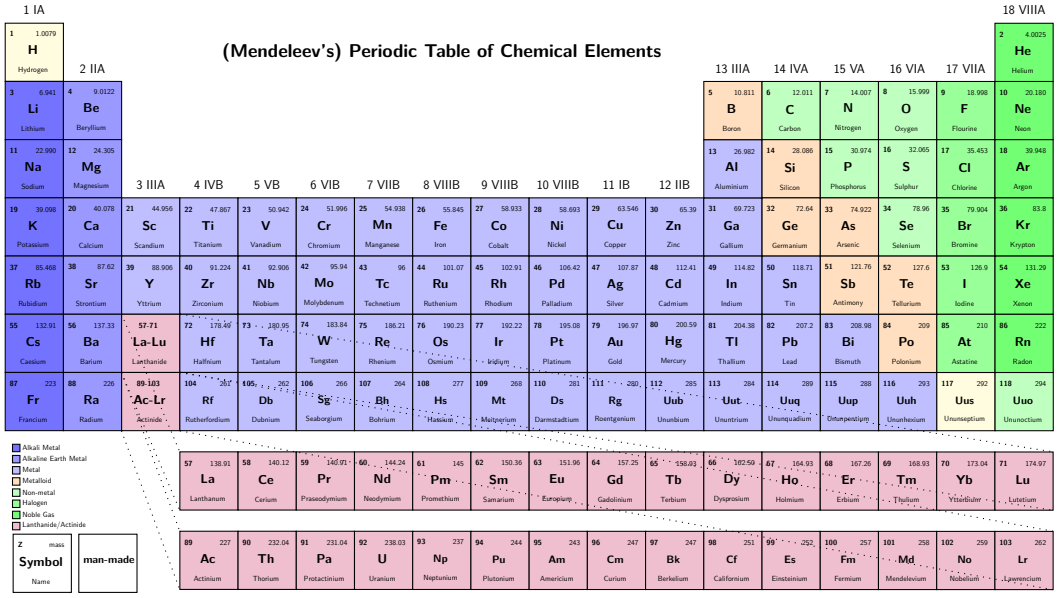

Figure 1.1: Periodic Table of Chemical Elements

Our understanding of the periodic table, itself is a poly-existential.

Our understanding of the periodic table, allowed us to predict existence of elements in nature prior to having discovered them. Mono-existence of those undiscovered elements was independent of us. Our discovery created new poly-existentials. The mono-existential existed before being discovered.

1.3.1.1.2 Chemical Compounds

A compound is a substance formed when two or more chemical elements are chemically bonded together.

Chemical compounds form much of the matter that is around us.

Beyond basic physical chemistry and inorganic chemistry, when it comes to organic chemistry and bio-chemistry, at this time we are not adequately equipped to open those analysis. When it comes to DNA in particular, there are some poly-existence similar characteristics which again we are not prepared to address at this time.

1.3.1.2 Man Made Material Mono-Existentials

A whole lot of the stuff around us is man made.

Man made mono-existentials involve a manufacturing process. The manufacturing process is a poly-existential but what gets produced can have a dominant mono-existential characteristic. When mass produced, each is mono-existential.

If the manufacturing process is relatively simple (say cutting of a tree), then we would consider the result of the manufacturing process mono-existential because the poly-existential component of the end result is insignificant.

If the manufacturing process is complex (say building a gun) then we would consider the result of the manufacturing process a mixed-existentaial. See Section 1.5 – Mixed-Existentials –, for details.

Strictly speaking one could take the position that all man made material results are mixed-existentials. There are no pure man made material mono-existentials.

1.3.1.3 Nature's Non-Material Mono-Existentials

Beyond matter there are other experiencable things in nature.

There have been many attempts in putting all of our experiencable understandings of the universe into one equation.

Figure 1.2 is one such attempt. This equation is annotated by attribution of aspects of knowledge to primary contributors.

All such forces and all such phenomena is mono-existential. They are bound by time and place and exist in singular.

Forces such as gravity and electromagnetic forces are bounded by location. So, things such as radio broadcasting and spectrum are mono-existentials.

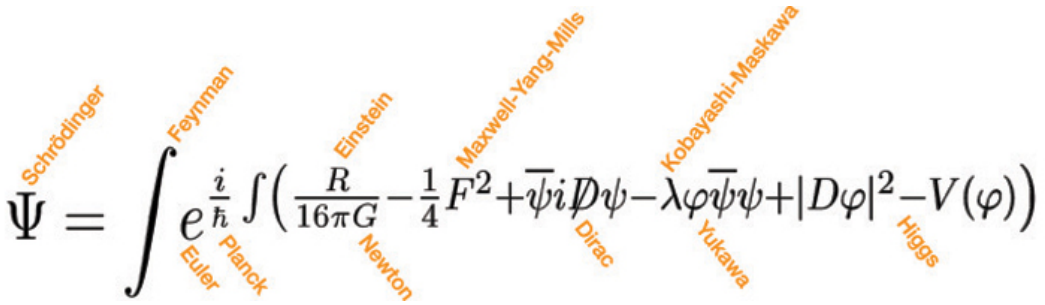

Figure 1.2: Unified Physics Equation With Inventors Labels

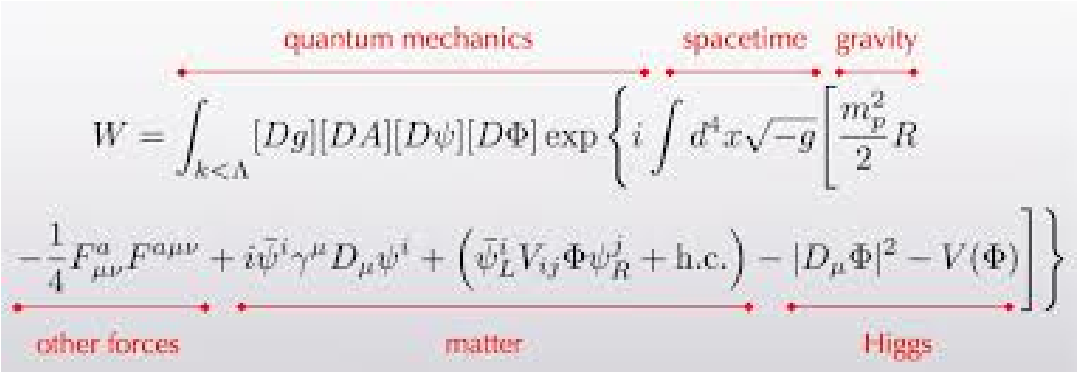

Figure 1.3: Unified Physics Equation With Subject Matter Labels

Figure 1.3 is another such attempt. This equation is annotated by subject matter labels.

The knowledge of such equations are poly-existentials.

1.3.1.4 Man Made Non-Material Mono-Existentials

Social structures and interactions often require uniqueness. As such, humans create non-material mono-existentials. Some examples of man made non-material mono-existentials are: domain names and national identification numbers such as American social security numbers.

1.3.2 Scarcity Of Mono-existentials

1.3.2.1 Mono-Existentials Rivalry Goods

“Rivalry Goods” is an economic concept.

In economics, a "good" is said to be rivalrous or rival if its consumption by one consumer prevents simultaneous consumption by other consumers.

In general terms, almost all private goods are rivalrous.

A good can be placed along a continuum ranging from rivalrous to non-rivalrous.

1.3.2.2 Mono-Existentials Non-Rivalry Goods

"Non-Rivalry Goods" is an economic concept.

Non-rival goods may be consumed by one consumer without preventing simultaneous consumption by others. A good can be placed along a continuum ranging from rivalrous to non-rivalrous.

Many examples of non-rival goods are intangible.

Some broad examples of Non-Rivalry Goods are: air, fish in the ocean, view, roads, national parks, television broadcasts.

Non-Rivalry goods are often confused with poly-existentials (e.g. Wikipedia and Jewish IPR analysis make that mistake).

Introduction of the concept of poly-existentials fully eliminates this common confusion.

The concept of poly-existentials is a philosophical concept. The concept of Non-Rivalry Goods is an economic term. Basing economics as the primary basis for structuring human laws is wrong. Inclusion of IPR in the US constitution by businessmen (so-called founding fathers of America) is another example of the confusion which amounts to an attempt in creating rivalry goods from poly-existentials – based on artificial scarcity.

Goods that are both non-rival and non-excludable are called "public goods." It is generally accepted by mainstream economists that the market mechanism will under-provide public goods, so these goods have to be produced by other means, including government provision. Poly-existentials are inherently public goods.

The Western IPR regime is the opposite of "Public Goods". In the US constitution we have government provisions creating artificial scarcity against the public good.

1.4 Poly-Existentials

We present the concept of "Expressed Formula" as the general form of "primary poly-existential". The digital format presents a "pure poly-existential" form.

Full emergence of digital technology in the middle of 20th century, has moved humanity into an arena where the dominance of mono-existentials ended. We now live is a world where poly-existentials impact nearly every aspect of life. Restrictions on poly-existentials has been harming nearly every aspect of life.

Pure poly-existentials are kept in some form of memory. Memory can be human's brain or hand written ink on a piece of paper, machine produced ink on paper (traditional books), digitized infor-

mation on hard disk. The general form memory can functions as a minimal substrate and be the container of poly-existentials.

An animal can be the producer of the poly-existential and an animal's memory can be the memory for a poly-existential. But, poly-existentials are for the most part result of human activity. Poly-existentials are often expected to be useful. The value of the poly-existentials come from the impact that they can have on human condition.

Poly-existentials can be re-instantiated. two copy of the Expressed Formula are two instances of the same formula. The mechanism that surround storage of the pure poly-existentials (e.g.; brain (human's or animal's), paper, digital memory) can facilitate copying, transmission and dissemination of the pure poly-existentials to varying degrees. The digital form in particular makes copying, transmission and dissemination of pure poly-existential extremely practical and as such the digital era has made understanding the nature of poly-existentials most critical.

Unlike mono-existentials, poly-existentials are not bound by location. At any given time multiple instances of the same poly-existential could be in different places. Unlike mono-existentials, poly-existentials can be transmitted or broadcasted over distances at the maximum theoretical speed of light. The digital form of poly-existentials permits for error-free and exact transmission and error-free and exact copying of poly-existentials. This ability to make exact transmission and exact copying of poly-existentials is a new human capability that occured in 20th centure. It is this new capability that has made the need for a poly-existential reference model more acute.

Expressed Formula is either for human consumption (idea, knowledge, software source code) or for machine consumption (binary software, paper tape for NC machines, Music CDs).

Propagation, replication, copying of poly-existentials is as simple as memory transfer. Restricting propagation of poly-existentials is counter to nature. New existence (instantiations) of poly-existentials have no impact on previous existence. Additional existence of poly-existentials can make them more useful. Monopolistic ownership oriented restriction of poly-existentials is counter to nature and creates harmful artificial scarcities. Monopolistic ownership oriented restriction of poly-existentials is morally wrong and should be abolished. Attribution of Expressed Formula to its producer is called for.

For mono-existentials possession and ownership is one-to-one. For poly-existentials. possession is many-to-many and therfore ownership is not possible.

1.4.1 Categories Of Poly-Existentials

Below we enumerate some categories of poly-existentials

- Data
- Information
- Content
- Knowledge
- Application Of Knowledge

- Code – Software
- Execution Of Code
- Remote Execution Of Code – Internet Services
- Productization Of Code

In Appendix **??** – **??** – , we present a starting point for identifying different types of poly-existentials and mixed-existentials.

1.4.2 Model Of Birth and Evolution Of Poly-Existentials

The moment of "divulging" is the moment of birth of poly-existentials.

The act of divulging of a poly-existential is that of putting the poly-existential in the possession of others without adequate measures for prevention of its further possession.

It is only prior to divulging that there can be ownership.

The following is a simple look at the stages of transformation of poly-existentials.

Producing: A Ballet, Acting, Authorship, Human Activity.

Divulging/Capturing: Can be by producer or others.

Poly-existential: Moment of birth of poly-existential is the moment of divulging.

Poly-existential Possessors: Any dissemination of the poly-existential may further result in independent and unrelated possessions.

When producers and divulgers are different and have different interest, the poly-existential is born as a "leak."

1.4.3 Private and Public Poly-Existentials

A poly-existential can be private poly-existential or public poly-existential. Private poly-existential is secret. Public poly-existential is knowledge. Knowledge is not ownable. Secret is inherently owned – unless divulged.

The "key" to most houses is a mixed-existential with a dominant poly-existential characteristic. The house key is usually marked as "do not duplicate." Because the key should not be shared, it is a *Private Poly-Existentials*.

In the context of digital signatures (PKCS), the user's secret key is *Private Poly-Existentials* and public key is *Public Poly-Existentials*.

Confidentiality Agreements are a form of explicit copy restriction which are fundamentally different from copyright law. Confidentiality Agreements are in the context of private poly-existentials, Western copyright laws are in the context of public poly-existentials. While we fully reject the Western copyright law and consider it un-natural. We regard confidentiality agreements as legitimate and natural – because they are explicit.

1.4.4 Human Work And Motivations Of Authors

Poly-existentials are result of human activity. There are typically two stages of human activity.

- Production of potential poly-existentials. (A Formula)
- Divulging (recording, dissemination, distribution) of the poly-existentials. (Expressing The Formula)

Human activity then results in creation of poly-existentials that are considered desirable or useful by some.

Economic models that can be used to organize human activity towards production and consumption and usage of poly-existentials involve motivating authors towards creation of more an better poly-existentials.

The economic models should be subservient to the nature of poly-existentials. By restricting natural propagation of poly-existentials Western IPR amounts to an unnatural economic model.

Western IPR regime amount to extending mono-existential economics to the realm of poly-existentials by restricting poly-existentials and creating artificial scarcity. Any economic model that is based on creation of artificial scarcity is unhealthy, vulnerable and challengable. In the aggregate, creation of artificial scarcity is counter to general human progress. It creates profits for a few at the cost of loss for many.

Human motivations are not always economically oriented. This is hard to understand for Americanists – economic creatures. Concepts such as Kamikaze, Martyrdom, and the actions of 911 perpetrators were not economically oriented. Human motivations to produce more and better poly-existentials need not always be economically oriented. The document that you are reading – a poly-existential available to all – is not being produced and distributed for economic motivations.

Because poly-existentials are copy-able, they thrives in a collaborative environment where they go through multiple derived work accumulations. It is unnatural for derived work from public poly-existential to be monopolistically restricted.

Because of possession and ownership differences, economic models for mono-existentials should be fundamentally different. In Chapter **??** – **??** –, we present the contours of an economic model residing in the Non-Proprietary and For-Profit quadrant.

1.4.5 Poly-Existentials As Artificial Rivalry Goods

Poly-Existentials are by nature non-rivalry goods.

By nature one consumption of poly-existentials does not prohibit another consumption. Poly-existentials by nature are “Public Goods”.

It is possible to turn poly-existentials into artificial rivalry goods. This amounts to an unnatural and purely economic activity.

That is what the Western IPR regime does. It creates artificial rivalry goods from poly-existentials through government provisions that restrict natural existence of poly-existentials and which violate basic human rights of: “Right To Copy” and “Right To Apply Knowledge”

The Western IPR regime is the opposite of "Public Goods". In the US constitution we have government provisions creating artificial scarcity in the name of promoting public good.

Creation of artificial rivalry goods from poly-existentials have major side-effects which put civilization in danger. This is often what happens when man tries to violate basics of nature.

1.5 Mixed-Existentials

Pure poly-existentials and pure mono-existentials are very often mixed to form mixed-existentials.

With a mixed-existential, a poly-existential is instantiated in the substrata of a mono-existential.

Hence, a mixed-existential has a mono-existential component and a poly-existential component.

We expand on this in the context of an example.

1.5.1 Mixed-Existential Example: A Hypothetical Gun

We are using a hypothetical gun as an example because guns are relatively cohesive products and yet they can be relatively complex to build. Guns have also been subject of many Western IPR patents.

Consider a `hypothetical gun`, a `hypothetical 3d-printer` (or a hypothetical Numerical Controlled (NC) Machine) and some `hypothetical 3d-printer-raw-meterial` (or metal for the NC Machine).

The `hypothetical gun` is then the result of running the `hypothetical gun-program` on the `hypothetical 3d-printer` with the `hypothetical 3d-printer-raw-meterial`.

The `hypothetical gun` is then a mixture of the `hypothetical gun-program` (which is a poly-existential) and the `hypothetical 3d-printer-raw-meterial` (which is a mono-existential).

In the context of the `hypothetical gun-program` (poly-existentials) component of the `hypothetical gun` (mixed-existentials) there are two distinct aspects.

1. The totality of the `hypothetical gun-program`.
2. Applying one's knowledge of the `hypothetical gun-building-process` to write one's own `hypothetical gun-program`.

The Western IPR regime restricts one with copyright law.

The Western IPR regime restricts two with patent law.

This `hypothetical gun` (mixed-existential) represents the majority of man-made stuff that is around us (manufactured product). `hypothetical 3d-printer` represents the factory equivalent. `hypothetical 3d-printer-raw-meterial` represents the product's raw material. `hypothetical gun-program` represents the specific manufacturing steps. Knowledge of `hypothetical gun-building-process` represents the knowledge of manufacturing process.

Through controlling the `hypothetical gun-program` (poly-existentials) and the `hypothetical gun-building-process` (poly-existentials) the Western IPR regime restricts the totality of `hypothetical`

gun (mixed-existentials) which is the processed `hypothetical 3d-printer-raw-meterial` (mono-existentials). Hence, the Western IPR regime can restrict classes of mono-existentials and limit exisiting ownership of instances of mono-existentials.

1.5.2 Scarcity Of Mixed-Existentials

Scarcity of mixed-existentials could be based on their mono-existential component or their poly-existential component.

If the poly-existential component of a mixed-existential is not owned or restricted, then scarcity of the mixed-existential is same as its mono-existential component.

If the poly-existential component of a mixed-existential is restricted, then the mixed-existential is more scarce than its mono-existential component.

1.6 Possession Of Mono-Existencials, Poly-Existentials and Mixed-Existentials

Naturally, possession of mono-existentials and possession of poly-existentials work very differently. Possession of mono-existentials is one-to-one. Possession of poly-existentials is many-to-many.

Multi-possessablity is a universal aspect of nature of poly-existentials. Any law that prohibits multi-possessablity is counter to nature.

Here we first analyze possessibility of mono-existentials and possessibility of poly-existentials.

Based on that, we next analyze proper ownership assignments for mono-existentials and poly-existentials.

1.6.1 Natural Law of Mono-Possessability of Mono-Existentials

Possession is one-to-one for mono-existentials.

At any given time, each posessed has one and only one possessor. A given possession preempts any other possession.

Dis-association of this one-to-one relation can be immediately and tangibly disadvantageous to the possessor.

1.6.2 Natural Law of Multi-Possessability of Poly-Existentials

Here we enumerate some key attributes relating to possession of poly-existentials.

- It is an inherent characteristic of Poly-Existentials to be possessed by many at the same time over distances.

- Any new possession of a poly-existential does not impact other possessions of that poly-existential.
- Multi-possessibility is a universal aspect of nature of poly-existentials. Any law that prohibits multi-possessibility is counter to nature.
- Any agreement not to copy can only be made voluntarily and is only valid amongst explicitly agreeing parties. And can not extend to any other person that is not part of the agreement.
- Because copying is a universal human right, no entity is authorized to restrict copying other than in a voluntary manner.
- When a person possesses a poly-existential which is not subject to a voluntary not-to-copy agreement he has the freedom to copy.

1.6.3 Natural Law of Mono-Possessability of Mixed-Existentials

Mixed-existentials are processed mono-existentials and are therefore mono-possessabile.

1.7 Missing From Basic Human Rights: The Natural Right To Copy and Apply Knowledge

Multi-possessibility of poly-existentials is part of nature.

The right to copy and the right to apply knowledge are basic natural human rights.

Yet the Western IPR model amounts to restriction of these rights and under Western dominance, these rights are missing from Western declarations.

1.7.1 The Natural Right To Copy

Missing from universal basic human rights is:

> WHEREAS recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world,
>
> We proclaim
>
> - All human beings have a right to remember.
> - Everyone has the right to share one's memory with others who wish to share. We call this the natural right to copy.
>
> The natural right to remember naturally includes the right to use available tools to better remember without undue restrictions.
>
> The natural right to share one's memory naturally includes the right to use available tools to disseminate information without undue restrictions.

These universal basic human rights lead to poly-existentials' natural law to be copied, to be shared and to be transmitted without restrictions.

These universal basic human rights are in full conflict with Western Copyright laws.

Western IPR is in conflict with these universal human rights and natural law of poly-existentials.

1.7.2 The Natural Right To Apply Knowledge

Missing from universal basic human rights is:

> WHEREAS recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world,
> We proclaim
>
> - All human beings have a right to learn.
> - Everyone has the right to apply one's knowledge without restrictions.

These universal basic human rights are in full conflict with Western Patent laws.

Western IPR is in conflict with these universal human rights and natural law of poly-existentials.

1.8 Ownership Of Mono-Existencials, Poly-Existentials and Mixed-Existentials

Concepts of existence and possession are aspects of nature. Everything that we have presented in this Chapter this far has been about analyzing aspects of nature. Such analysis is independent of society, culture and belief systems.

Concept of ownership is man made and is dependent on society, culture and belief systems. Ownership rules in one society can be very different from ownship rules in other society.

There are certain general aspects of proper ownership that span societies, cultures and religions. We will start by analyzing basic principles of ownership.

Ownership rules exisit to resolve conflicts and as such are tied to the scarcity of what is to be owned. Natural scarcity is what gives rise to the need for property rules.

Only naturally scarce entities over which access control is possible are candidates for protection by property rights. Only mono-existentials (and mixed-existentials) are naturally scarce and rivalry. Poly-existentials are naturally non-scarce (naturally abundant) and non-rivalry. For poly-existentials, the only property rights oriented protection possible is that achievable through personal rights, i.e., explicit bilateral or multi-lateral contract.

Bouckaert, correctly notes:

> Natural scarcity is that which follows from the relationship between man and nature. Scarcity is natural when it is possible to conceive of it before any human, institutional, contractual arrangement. Artificial scarcity, on the other hand, is the outcome of such arrangements. Artificial scarcity can hardly serve as a justification for the legal framework that causes that scarcity. Such an argument would be completely circular. On the contrary, artificial scarcity itself needs a justification.

Western IP laws create an artificial, unjustifiable scarcity.

Ownership rules exisit to resolve conflicts and as such are tied to possesion of what is to be owned.

Tony Honoré puts it this way:

> The right to possess, namely to have exclusive physical control of a thing, or to have such control as the nature of the thing admits, is the foundation on which the whole superstructure of ownership rests.

Mono-existentials and mixed-existentials are mono-possessable. Therefore, mono-existentials and mixed-existentials are ownable.

Poly-existentials are multi-possessable. Therefore, poly-existentials can not be owned. Western IP laws are about assigning ownership to multi-possessables (poly-existentials), as such Western IP laws are erroneous laws (similar to Western Slavery laws). They are erroneous because they are counter to the nature of poly-existentials.

Proper ownership laws should not result in restricting general liberty. Ownership of a mono-existential restricts actions of only those who wish to interact with that particular mono-existential (a unique instance). Ownership of a poly-existential or ownership of the poly-existential component of a mixed-existential put blanket restrictions on liberty of all those who wish to interact with any instance (all instances) of that poly-existential or mixed-existential.

In the context of mixed-existentials and our hypothetical gun example in Section 1.5.1 – Mixed-Existential Example: A Hypothetical Gun –, Western IPR restricts everyone who wanted to make a `hypothetical gun` with their own labor, their own `hypothetical 3d-printer` and their own `hypothetical 3d-printer-raw-meterial`.

In the next section we analyze common aspects of ownership with respect to possession and scarcity of mono-existencials, poly-existentials and mixed-existentials.

In the section after next we map Western IPR to ownership and monopoly and restrictions on poly-existentials and mixed existentials.

1.8.1 Ownership of Mono-Existentials

Since possession of mono-existentials is a one-to-one relationship, assignment of ownership is very simple. The owner is the legitimate possessor. Based on some criteria (e.g., homesteading) an owner is assigned to a mono-existential. Thereafter, only that owner is the legitimate possessor.

Some mono-existentials are scarce (rivalry goods). Some mono-existentials are not scarce (non-rivalry goods). Scarce mono-existentials are subject of proper ownership.

The concepts of theft and stealing are very clear. Theft is illegitimate possession. Theft is denial of possession to the owner.

Judaism, Christianity and Islam all consider stealing a sin.

The economic models that have been built around these are well established and enduring ownership laws are well established. We are devout mono-existential Capitalists – subject to societal health.

1.8.2 Ownership of Poly-Existentials

Possession of poly-existentials is many to many. A given poly-existential can have multiple possessors at the same time and in different places.

A new possession of a given poly-existential does not impact previous possessions.

Creation, transfer and dissemination of poly-existentials can be restricted. Such restrictions could be general restrictions or they could be monopolistic restrictions.

In the context of general poly-existential restrictions consider the real situation with porn in Iran. The Iranian society has chosen to prohibit creation, transfer and dissemination of pornographic poly-existentials within its borders. Let's also consider the hypothetical case of some society requiring that the manner-of-existence of any software that is to be made generally available should always be internally transparent (open-source) so that all users could have the option of knowing what the software that they are using is actually doing. Such general poly-existential restrictions are separate from ownership of poly-existentials.

In the context of monopolistic poly-existential restrictions consider the real situation of the Western copyright laws. A given entity is assigned to define its own monopolistic poly-existential restrictions for a given poly-existential. Such monopolistic poly-existential restrictions are sometimes called ownership of poly-existentials. See Section 1.9.2 – Mapping Of Copyright Law To Restriction Of Poly-Existentials, for additional details.

Any poly-existential is inherently non-scarce. Assignment of ownership (monopolistic poly-existential restrictions) to a given poly-existential is counter to the nature of poly-existentials.

1.8.3 Ownership of Mixed-Existentials

Possession of mixed-existentials is a one-to-one relationship.

Assignment of ownership to a given mixed-existential based both on its mono-existential component and its poly-existential component results into inherent conflicts.

See Section 1.9.4 – Mapping Of Patent Law To Restriction Of Mixed-Existentials And Poly-Existentials, for more information.

1.9 Mapping Of Western Intellectual Property Rights to Poly-Existentials

Each and every aspect of the Western Intellectual Property Rights directly map to restriction of one or more category of poly-existential.

The Western IPR is a recent umbrella misnomer to cover the following 4 branches of US and Western-laws.

- Copyright
- Patent
- Trademark
- Secrecy (Confidentiality)

Each of these 4 branches are distinct and different.

Copyrights are public restrictions on verbatim (or close to verbatim) copying and partial copying of many types of poly-existentials including, books and code (software).

Patents are public restrictions on application of knowledge.

Trademarks are public restrictions on labeling and use of labels.

Secrecy are explicit bilateral or multilateral agreements about restricting copying (transfer, dissemination) of information and other forms of poly-existentials.

As such, it is clear that the subject of the entirety of the Western so-called Intellectual Property Rights are Poly-Existentials. Therefore, analysis of nature of poly-existentials is analysis of the Western so-called Intellectual Property Rights regime.

Copyright, patent and trademark are monopolistic owner restriction law that apply to subjects within a local jurisdiction without explicit agreement from the claimed subjects.

Copyright, Patent and Trademark violate people's basic human rights of copying and applying knowledge.

Ethics and morality of Copyright, Patent and Trademark as "property law" or otherwise have no track record in any major religions. There are no ethical and moral global consensus on validity or global applicability of Copyright, Patent and Trademark.

There is global general consensus on ethics and morality of property laws related to ownership of mono-existentials. All major religions fully recognize theft as denial of possession to the proper owner.

Any attempt to create parallels between ownership laws of mono-existentials and ownership laws of poly-existentials are a sham. In fact putting the word "property" inside of the "Intellectual Property Rights" is a huge fraud.

It is the simple perspective of mono-existential vs poly-existential that makes the mistakes and fraud of the Western "Intellectual Property Rights" so very obvious.

1.9.1 About Copyright Laws

This overview of copyright law has been compiled from various online resources.

Copyright are public restrictions on verbatim (or close to verbatim) copying and partial copying of many types of poly-existentials including, books and code (software).

One of the most visible rights that the author of a work has, is the copyright over his work. Almost everything that is published, whether eletronically or not, is copyrighted. In general, a work is copyrighted when it is created, and it is not necessary to apply for copyright. Some countries may, however, give extra protection to works that are registered. In any case, when a work is copyrighted, others may not use or redistribute the work without the permission of the author.

Copyrights are considered "territorial rights", which means that they do not extend beyond the territory of a specific jurisdiction. While many aspects of national copyright laws have been standardized through international copyright agreements, copyright laws vary by country.

In the U.S.A., copyright is a right given to authors of "original works," such as books, articles, movies, and computer programs. Copyright gives the exclusive right to reproduce the work, prepare derivative works, or to perform or present the work publicly. Copyrights protect only the form or expression of ideas, not the underlying ideas themselves. While a copyright may be registered to obtain legal advantages, a copyright need not be registered to exist. Rather, a copyright comes into existence automatically the moment the work is "fixed" in a "tangible medium of expression," and lasts for the life of the author plus seventy years, or for a total of ninety-five years in cases in which the employer owns the copyright.

1.9.2 Mapping Of Copyright Law To Restriction Of Poly-Existentials

Copyright law is a form of monopolistic ownership oriented poly-existential restriction.

Under Western copyright laws, the creator of a given poly-existential (the copyrighted poly-existential) is granted a monopolistic ownership oriented restriction privilege that enables the grantee (copyright holder) to restrict all others within the jurisdiction of copyright law from copying the poly-existential or any mixed-existential whose poly-existential component is the copyrighted poly-existential.

1.9.3 About Patent Law

Patents are monopolistic ownership oriented laws which restrict the public on application of knowledge.

A patent is the exclusive right to make, use or sell an invention in a country. In order to get this right, the inventor must apply for a patent at his patent office. Patents provide very powerful legal remedies against infringers, even against infringes who have developed the same invention completely independently.

A patent effectively grants the inventor a limited monopoly on the manufacture, use, or sale of the invention. However, a patent actually only grants to the patentee the right to exclude (i.e., to prevent others from practicing the patented invention); it does not actually grant to the patentee the right to use the patented invention.

In the U.S. not every innovation or discovery is patentable. Three categories of subject matter that are unpatentable are: "laws of nature, natural phenomena, and abstract ideas." Reducing abstract ideas to some type of "practical application," i.e., "a useful, concrete and tangible result," is patentable, however. U.S. patents, last from the date of issuance until twenty years from the original filing date of the patent application.

Most countries have a "first-to-file" system for priority. The U.S. system is a "first-to-invent" system.

Under the World Trade Organization's (WTO) TRIPS Agreement, patents should be available in WTO member states for any invention, in all fields of technology, provided they are new, involve an inventive step, and are capable of industrial application. Nevertheless, there are variations on what is patentable subject matter from country to country, even among WTO member states. TRIPS also provides that the term of protection available should be a minimum of twenty years.

1.9.4 Mapping Of Patent Law To Restriction Of Mixed-Existentials And Poly-Existentials

Western patent law assigns a given entity monopolistic ownership oriented rights to restrict all others (the public) from incorporating a given poly-existential (subject of the patent) in any mixed-existential whose poly-existential is the subject of the patent.

In the context of the patent laws, the restricted poly-existential is knowledge. The patent law then restricts the public to apply their own knowledge to their own mono-existential to become the substrate of mixed-existentials that they desire to create.

In the example of the hypothetical gun, the real owner of the hypothetical raw-material looses its real ownership rights over his/her hypothetical raw-material when he/she wants to mix it with the monopolistic poly-existential restrictions – even when the existence of such restrictions in not known to him/her.

In the case of patents, monopolistic poly-existential restrictions are allowed to interfere with the existing mono-existential real ownership.

1.9.5 About Trademark Law

Trademarks are public restrictions on labeling and use of labels.

A trademark is, broadly speaking, any mark that is used for indicating goods or services in commerce. Normally trademarks are words or an image (a logo), although occasionally colors or sounds can also be trademarks. Usually, it is necessary to register the mark with a local trademark office before it gains protection under trademark law. A trademark holder can forbid others from offering particular goods or services using the trademark or a confusingly similar sign. It is also often possible to act against use of the trademark which dilutes its reputation.

1.9.6 Mapping Of Trademark Law To Restriction Of Poly-Existentials

Trademark law amounts to grants of monopolistic poly-existential restrictions on names, symbols, marks and lables.

Trademark laws are not as problematic as copyright and patent. But, they are unnecessary. What they set to accomplish, can be accomplished by other means – particularly in this day and age.

Kinsella, in [7], puts it this way:

> Suppose some Lachmannian changes the name on his failing hamburger chain from LachmannBurgers to Rothbard Burgers, which is already the name of another hamburger chain. I, as a consumer, am hungry for a RothbardBurger. I see one of the fake RothbardBurger joints run by the stealthy Lachmannian, and I buy a burger. Under current law, Rothbard, the "owner" of the RothbardBurgers trademark, can prevent the Lachmannian from using the mark RothbardBurgers to sell burgers because it is "confusingly similar" to his own trademark. That is, it is likely to mislead consumers as to the true source of the goods purchased. The law, then, gives a right to the trademark holder against the trademark infringer.
>
> In my view, it is the consumers whose rights are violated, not the trademark holder's. In the foregoing example, I (the consumer) thought I was buying a RothbardBurger, but instead got a crummy LachmannBurger with its weird kaleidoscopic sauce. I should have a right to sue the Lachmannian for fraud and breach of contract (not to mention intentional infliction of emotional distress and misrepresentation of praxeological truths). However, it is difficult to see how this act of fraud, perpetrated by the Lachmannian on me, violates Rothbard's rights. The Lachmannian's actions do not physically invade Rothbard's property. He does not even convince others to do this; at most, he may be said to convince third parties to take an action within their rights, namely, to buy a burger from the Lachmannian instead of Rothbard.

Western Trademark laws are unnecessary.

1.9.7 About Trade Secret Law (Confidentiality/Secrecy)

A trade secret is a formula, practice, process, design, instrument, pattern, commercial method, or compilation of information not generally known or reasonably ascertainable by others by which a business can obtain an economic advantage over competitors or customers. In some jurisdictions, such secrets are referred to as "confidential information".

Trade secrets are often protected by explicit bilateral or multilateral contracts (agreements) about restricting copying (transfer, dissemination) of information and other forms of poly-existentials.

1.9.8 Mapping Of Trade Secret Law To Restriction Of Poly-Existentials

Trade secret laws are ordinary bilateral or multi-lateral contracts that relate to voluntary restriction of poly-existentials. Trade secrets don't involve grants of monopoly restrictions.

There is nothing wrong with this at all. Applying contract law involves explicit agreed upon restrictions between parties who choose to be restricted.

However, the nature of poly-existentials renders such agreements limited.

1.9.8.1 Limitations Of Contract Law On Poly-Existentials

A possessor of a given poly-existential may be able to contractually obligate his purchasers not to copy the poly-existential, but he can not prevent third parties from publishing and selling the poly-

existential, unless some explicit contract prohibits this action.

Third parties, then, who are not parties to the contract and are not in privity with the contractual obligor and obligee, are not bound by the contractual relationship.

For this reason, although a creator of a poly-existential (say an innovator) can use contract law to stop specified individuals from freely using his ideas, it is difficult to use standard contract law to prevent third parties from using ideas they glean from others.

1.10 Fraudulence Of The Western IPR Regime

The poly-existential reference model that we presented in this section makes it clear that:

1. The subject of patent, copyright and trademark are poly-existentials.
2. Poly-existentials are multi-possessable and therefore unownable.
3. Poly-existentials are inherently non-scarce and therefore unownable.

Mono-possession and scarcity are fundamental requirements for property and ownership.

The underlying subjects of patent, copyright and trademark are poly-existentials. That which is to be patented, copyrighted and trademarked are unownable and therefore can not be considered property of any sort.

Ownership of poly-existentials in the form of monopolized restriction of poly-existentials and their consideration as any from of property is erroneous and counter to nature.

Therefore, patent, copyright and trademark individually and under the collective label of Intellectual Property are fraudulent. The fraud is that of applying property and ownership to poly-existentials which are inherently not ownable.

Having established that patent, copyright and trademark are not any form of property, we now consider them as societal regulations.

Patent, copyright and trademark in general and patent and copyright in particular are local laws that result in grants of monopoly privileges for restriction of poly-existentials.

These restrictions result in scarcity of poly-existentials which are otherwise inherently non-scarce. Patent, copyright and trademark are local laws that result in creation of artificial scarcity.

The purpose of patent and copyright laws in creating artificial scarcity is towards the goal of "promoting the progress of science and useful arts" by providing exclusive rights to creators. This amounts to the assumption that by making a particular useful poly-existential scarce it is possible to create an unnatural environment that is superior for creation of more useful poly-existentials. This in turn is based on the assumption that a forced competitive model is superior to the natural collaborative model for progressing science and useful arts. Both of these assumptions were unproven at the time that patent and copyright laws were instituted. We now know that both of these assumptions are wrong.

It is impossible to "prove" a negative – that IP does not have the direct positive economic and innovative effect often claimed. But there is also no conclusive evidence that Western patent and copyright laws have had the direct economic effect often claimed. There is also no conclusive evidence that patent and copyright laws increase incentives for innovation. There are many indications that patent and copyright laws hamper innovation.

1.11 Ramifications Of The Western IPR Fraud

After more than 200 years of being in practice in the West, there is no empirical evidence that confirm success of Western IPR in accomplishing its intended goal. However, the harm of Western IPR in the form of restricting natural rights of others is concrete and evident.

Patent and copyright laws are hostile to liberty. Patent and copyright monopolies interfere with the freedom of others. They prevent others to use their own knowledge, their own bodies and their own justly acquired mono-existential properties as they relate to the specific poly-existentials that patent and copyright restrict. Secondary effects of patent and copyright laws result in reduction of autonomy and privacy of individuals.

Grants of patent and copyright monopoly in the wealth maximization utilitarian model end up damaging market foundations. Creation of artificial scarcity for poly-existentials towards mimicking the market process governing mono-existentials results in weakening ownership of mono-existentials. The very same legal foundation from which markets begin.

Patent and copyright laws are in conflict with nature, They do not serve the ideal intended purpose of societal regulations, i.e. to balance rights equitably among conflicting constituencies. On the contrary, it has the effect of enriching a minority of powerful vested interests, to the very great detriment of society at large. The detrimental effects include the obstruction of engineering creativity, a distortion of the competitive business environment, and denial of the benefits thereof to the public.

In practice, natural dynamics of Western IP restrictions result in transfer of power and autonomy away from individuals and to corporations and Corpocracy.

Patent and copyright are laws that have severe harmful ramifications which are not generally understood. In the context of software and internet (digitals – pure poly-existentials), Western patent and copyright laws have directed manner-of-existence of software and internet services to become internally opaque. As a result we don't usually know what the software or internet service that we are using is doing. This in turn has been eroding our autonomy and privacy. And that trend is continuing.

The natural global and universal nature of poly-existentials has required the Western IPR regime pushers to present patent and copyright laws as universal and global. In other words a local ownership mistake is well on its way to becoming a global ownership mistake.

The Western so-called Intelectual Propoerty Rights regime has put humanity in danger.

Chapter 2

Digital Poly-Existence

2.1 Digital: A Practical Pure Form Of Poly-Existentials

Sometime in the 20th century humanity entered the digital era.

Full emergence of digital technology in late 20th century and early 21st century has moved humanity into an arena where the dominance of mono-existentials ended. We now live is a world where poly-existentials impact nearly every aspect of life.

Digital as a practical pure form of poly-existentials permits us to use, apply and produce more potent poly-existentials far more easily.

Perhaps the most clear moment for our entry into the digital era can be considered the understanding of digital capabilities by the likes of Nyquist and Shannon. Based on that knowledge, we became equipped to convert most information into digital, transfer and broadcast poly-existentials over large distances and store and reproduce exact copies of information.

We can point to event that established the discipline of information theory and the digital era, as the publication of Claude E. Shannon's classic paper "A Mathematical Theory of Communication" in July and October of 1948. By then basic physical laws of the digital world were generally understood.

2.2 Basic Physical Laws Of The Digital World

2.2.1 Digitization – Perfect Poly-Existential Reconstruction

It is possible to convert some of what we can sense (e.g., sound and images) into digital form.

Such transformation involves sampling.

Sampling theorem says:

A signal can be completely reconstructed from its samples taken at a sampling frequency F, if it contains no frequencies higher than $F/2$:

$$f_{max} < f_{Nyquist} = F/2; \quad \text{i.e.} \quad F > 2f_{max}.$$

This equation is referred to as the Nyquist condition for perfect signal reconstruction.

The lowest sampling frequency F at which the signal can be sampled without losing any information must be higher than twice the maximum frequency contained in the signal; i.e., $F > 2f_{max}$, otherwise aliasing or folding will occur and the original signal cannot be perfectly reconstructed.

Human perception is limited, therefore achieving perfect capturing in digital form is possible.

For example the maximum frequency that we can hear is 20KHz and sampling at above 40KHz is very feasible. So, audio can reliably become perfect lossless digital audio which can be digitally encoded, transported, distributed and encrypted.

2.2.2 Encoding Of Information Content

In 1944, Shannon for the first time introduced the qualitative and quantitative model of communication as a statistical process underlying information theory, opening with the assertion that:

"The fundamental problem of communication is that of reproducing at one point, either exactly or approximately, a message selected at another point."

With it came the ideas of:

- the information entropy and redundancy of a source, and its relevance through the source coding theorem;
- the mutual information, and the channel capacity of a noisy channel, including the promise of perfect loss-free communication given by the noisy-channel coding theorem;
- the bit—a new way of seeing the most fundamental unit of information.

In information theory, systems are modeled by a transmitter, channel, and receiver. The transmitter produces messages that are sent through the channel. The channel modifies the message in some way. The receiver attempts to infer which message was sent. In this context, entropy is the expected value (average) of the information contained in each message.

Based on the probability mass function of each source symbol to be communicated, the Shannon entropy H, in units of bits (per symbol), is given by equations the like of:

$$H = -\sum_i p_i \log_2 p_i \quad \text{(bits per symbol)}$$

So, at that point the basics of how information can be packed inside of the digital world were understood.

2.2.3 Transfer and Transmition Of Digitals

Digital entities can be reliably and perfectly transmitted over distances through imperfect and noisy channels.

In information theory, the Shannon–Hartley theorem tells the maximum rate at which information can be transmitted over a communications channel of a specified bandwidth in the presence of noise.

By 1948, theorems and equations such as:

$$\langle v, e_j \rangle, \langle v, x \rangle) \leq 0.5 \log(1 + \text{SNR})$$

expressed our understandings of transmission of digital entities.

We then built on this physical layer understanding and added say six more layers to create the Internet.

And we now have a global network on which digitals can be transmitted, often without knowing borders.

2.2.4 Cryptography, Encryption And Information Confidentiality

Storage and transfer of digital entities can be in the clear or can be made confidential.

Cryptography, the use of codes and ciphers to protect secrets, began thousands of years ago. Methods of encryption that use pen and paper were used to limit poly-existence of information.

In parallel with our entry into the digital era, roughly in the 1970s secure cryptography which until then was largely the preserve of governments became a generally available tool. Two events have since brought it squarely into the public domain: the creation of a public encryption standards like DES, and the invention of public-key cryptography systems (PKCS). By the 1980s, internationally proposed standards such as X.509 included all necessary knowledge to secure digital information.

Nature believes in encryption. It is natural to encrypt.

It is easier to encrypt information than it is to decrypt it.

And we have the necessary knowledge to make digital entities private and to make our human communications and human interactions autonomous and private. So, our privacy can be preserved.

2.3 Human Structures For The Digital World

We can use this natural property to create the laws for a human universe which preserve autonomy and privacy of the individual in the digital era.

Nature permits us to do that. Encryption is in harmony with nature. It is our responsibility not to loose our autonomy and privacy.

The likes of Julian Assange, put it like this:

> The universe, our physical universe, has that property that makes it possible for an individual or a group of individuals to reliably, automatically, even without knowing, encipher something, so that all the resources and all the political will of the strongest superpower on earth may not decipher it. And the paths of encipherment between people can mesh together to create regions free from the coercive force of the outer state. Free from mass interception. Free from state control.
>
> In this way, people can oppose their will to that of a fully mobilized superpower and win. Encryption is an embodiment of the laws of physics, and it does not listen to the bluster of states, even transnational surveillance dystopias.
>
> It isn't obvious that the world had to work this way. But somehow the universe smiles on encryption.
>
> Cryptography is the ultimate form of non-violent direct action.

Strong cryptography means that corporations, states and corpocracy, even by exercising unlimited violence, cannot violate the intent of individuals to keep secrets from them.

As corporations and states merge with the internet and the future of our civilization and humanity becomes the future of digital entities and the internet, we must redefine power relationships.

If we do not, the universality of poly-existentials, digital entities and the internet will merge global humanity into one giant grid of mass surveillance and mass control.

Our task is to secure autonomy, self-determination and privacy where we can, to hold back the coming dystopia where we cannot, and if all else fails, to accelerate its self-destruction.

Western IPR regime takes dynamics of power and the future of the digital world and us towards stronger corporations, stronger states and a more dominant corpocracy.

Rejection of the Western IPR regime outside of the West and abolishment of Western IPR regime can take dynamics of power towards preservation of human autonomy.

Nature is on our side. Basic physical laws of the digital world permit preservation of humanity.

Chapter 3

Proper Governance Of Poly-Existentials: Halaal And Haraam Manner Of Poly-Existence

Our analysis in the previous chapters makes it clear that poly-existential should not be owned. We have demonstrated that monopolistic ownership oriented restriction of poly-existentials is wrong.

With the question of ownership of poly-existentials aside, we focus on the question of proper of governance of poly-existentials.

Poly-existentials should be regarded as "public goods" and as such deserve legal protection because of negative externalities which arise if poly-existentials are not properly governed.

One of our challenges here is that of terminology. The concepts of "public goods", "commons", "targedy of the commons", etc are all rooted in the realm of mono-existentials but have occasionally been extended to poly-existentials without the needed recognitions. Hence, use of the existing terminology for analysis of proper governance of poly-existentials rapidly becomes disorderly.

The types of needed legal protections are dependent on the type of poly-existentials and are to be rooted in the health of professions that correspond to the poly-existential. All of this is to be towards health of society and humanity.

The most basic needed legal protections of poly-existentials is for their manner-of-existence. Because manner-of-existence of poly-existentials is inherently universal and global, it is this most basic aspect of poly-existentials that should eventually be subjected to global governance (legal protections).

Hence, we set the stage for moving towards global definitions and labellings of halaal (ethically correct) manner-of-existence of poly-existentials.

3.1 Manner-Of-Existence Of Poly-Existentials

There are three fundamental aspects to poly-existentials:

- Manner-of-existence of Poly-Existentials
- Capabilities (functionality) of Poly-Existentials
- Usage of Poly-Existentials

By poly-existential capabilities, we mean what the poly-existential is built to accomplish, for good or ill. Examples of software poly-existential built for ill might be spying, tracking, invasion of privacy.

By poly-existential usage, we mean how the poly-existential is used, regardless of its intended purpose. For example a video player software could be used to watch news or to watch porn.

Regarding the functionality and usage of software and Internet services, a sovereign state can and should exercise its own moral sovereignty and define halaal on its own terms. And so praise and applause to the great firewall of China, and the great firewall of Iran. Clearly, Las Vegas porn should stay in Las Vegas and should remain haraam in Ghom.

Consideration of what constitutes right and wrong with regard to capabilities and usage is primarily the domain of ethicists. And these rights and wrongs need not be global in scope.

But in contrast to functionality and usage, the definition of halaal manner of existence of poly-existentials in general and software and internet services in particular are best dealt with in the global context.

The topic of this section is *manner-of-existence* of poly-existentials. By "manner-of-existence" of poly-existentials we mean everything relating to how the poly-existential exists within society. This includes but is not limited to:

- Is possession of the poly-existentials restricted by local law?
- Is possession of the poly-existentials restricted by other methods?
- Is the poly-existentials assigned to an owner?
- Is the poly-existentials attributed to its true author?
- Is copying the poly-existentials restricted by local law?
- Is copying the poly-existentials restricted by other methods?
- Is use of the poly-existentials restricted by local law?
- Is use of the poly-existentials restricted by other methods?
- Is the poly-existentials internally transparent?
- Is the poly-existentials modifiable and enhanceable?

Global or societal rule governing manner-of-existence poly-existentials can be broadly categorized into the following three:

Proprietary (owned) and Restricted manner-of-existence of Poly-Existentials: This is exemplified by the Western IPR Regime.

Law Less Poly-Existentials: Many societies allow governance of poly-existentials to be purely based on the nature of poly-existentials and have no laws governing manner-of-existence of poly-existentials.

Halaal manner-of-existence Poly-Existentials: Where for each form of poly-existentials a set of requirements for the "right" manner-of-existence of the poly-existential is recognized. By "right" here we really mean "halaal".

3.2 Halaal Poly-Existence and Haraam Poly-Existence

Therefore, we need to introduce the sensitive and potent word "Halaal."

In a sister document titled:

> **Introducing Halaal and Haraam into Globish**
> **Based on Moral Philosophy of Abstract Halaal**
> **And Defining The Libre-Halaal Label**
>
> **معرفیِ دنیاییِ حلال و حرام**
> **و تعریفِ حلالْ-وجودیِ چند وجودی‌ها**
>
> http://mohsen.1.banan.byname.net/PLPC/120039 — [3]

we precisely define what we mean by "Halaal" and "Haraam".

Briefly, philosophical halaal is "manifestation" of "moral sensibilities" relevant to a specific topic where "the set of actions" map to "right." And, philosophical haraam is "manifestation" of "moral sensibilities" relevant to a specific topic where "the set of actions" map to "wrong."

3.2.1 Uses Of Halaal As A Label

In the context of poly-existence, the primary question then becomes: What is the "right" manner-of-existence of a poly-existential? But then, what do we mean by "right"? Are "moral" or "ethical" better words for the label that we need. Unfortunately English does not have the right word for the label that is needed here.

"Halaal" is the right word and label that we are looking for.

What makes for Halaal or Haraam manner-of-existence of poly-existentials directly affects and involves professions.

We put forward that for each form of poly-existential, the manner-of-existence that permit professions to safeguard society and humanity are the halaal manner-of-existence for that poly-existential.

3.2.2 The Libre-Halaal Label

As a title for halaal manner-of-existence of poly-existentials we introduce the "Libre-Halaal" label.

In the "Libre-Halaal" label, Libre indicates that:

1. The scope of consideration of Halaal is manner-of-existence of poly-existentials.
2. We reject the Western IPR regime. That the natural right to copy and the natural right to apply knowledge are the basis of our ideology.

In the "Libre-Halaal" label, Halaal indicates that:

1. We are rooted in philosophy, ethics and morality — Not just economics.
2. For each form of poly-existential, the manner-of-existence that permit professions to safeguard society and humanity are the halaal manner-of-existence for that poly-existential.

   There are two reasons for this:

   - A: Professions have responsibility to society.
   - B: When poly-existentials are man made tools, the halaalness requirement should empower conviviality of tools.

By conviviality we refer to the concept of "Tools for Conviviality" as Ivan Illich introduced it.

In the document titled:

> **Introducing Convivial Into Globish**
> http://mohsen.banan.1.byname.net/PLPC/120037 — [1]

we introduce the term "Convivial" into Globish.

Briefly, in Illich's words:

> Tools are intrinsic to social relationships. An individual relates himself in action to his society through the use of tools that he actively masters, or by which he is passively acted upon.
>
> To the degree that he masters his tools, he can invest the world with his meaning; to the degree that he is mastered by his tools, the shape of the tool determines his own

> self-image. Convivial tools are those which give each person who uses them the greatest opportunity to enrich the environment with the fruits of his or her vision. Industrial tools deny this possibility to those who use them and they allow their designers to determine the meaning and expectations of others. Most tools today cannot be used in a convivial fashion.

The dynamics of the Western IPR regime are such that they produce industrial tools.

Conviviality of tools involves their manner-of-existence, capabilities of the tools, their broader environment and their usage context.

The dimension of manner-of-existence of poly-existential tools (their Libre-Halaalness) is necessary but not sufficient to make the tools convivial.

In the context of our own profession (software and internet engineering), we build on this and provide definitional criteria for Libre-Halaal Software and Libre-Halaal Internet Services.

3.3 Ramifications Of Manner-Of-Existence Of Poly-Existentials On Professions

We put our finger on Western IPR Regime and label it a central sin of our time because it impacts many professions and many aspects of life. Western IPR regime is the source of much that becomes haraam.

Each profession has a responsibility to society and humanity towards protecting a certain aspect of life. In order to fulfill these responsibilities, professions need and require certain moral understandings and agreements from society.

Here we are using the term "profession" in the way it is understood in the East.

The notion of a "profession" in the West consists of training and the acquisition of specialized skills, to perform specialized work, to create monetary income. The responsibility of a profession towards society at large does not factor significantly in this. Western society is mostly, if not totally, economically driven. The Western model of economically driven individuals existing within an industrial context considers only money and self-interest. Such broader concepts as society, profession, responsibility and respect are very weak in the Western model.

In the East the word "profession" carries a greater meaning. It includes the Western meaning of a specialized skill set to perform work of value to others. But it also includes an agenda of trust and responsibility. The professional person is entrusted by society to maintain guardianship over an important aspect of life. Based on proper execution of this responsibility, the profession is respected.

The primary author of this essay, attests that: for him as an engineer it is only in Iran that he is called "Mr. Engineer Banan." That has never happened to him in America, Canada, England, France, or anywhere else in his travels throughout the Western world.

So it is in this Eastern sense that we are here speaking of "professional responsibility."

Today, professions know less borders. And these certain moral understandings need to now be certain global moral understandings and agreements from humanity. Such global moral agreements

can well take the form of halaal and haraam declarations.

Subject-matter knowledge and application of subject-matter knowledge is at the core of professions. The profession's subject-matter knowledge is often tied to something that is a basic societal need. Farmers and Food, Doctors and Medication, Software-Engineers and Software are some examples. Restriction of knowledge and restriction of application of knowledge through patents amounts to crippling of professions. That crippling of professions in turn makes the manner-of-existence of the thing that the profession is responsible for, a haraam manner-of-existence.

3.3.1 Role of Professions in Declaring Halaal and Haraam

The rapid pace of technology has created an environment where the need for halaal/haraam declarations is more urgent.

Because the profession is often closest to the source of the harm and because the profession is sometimes best positioned to understand the harm, the profession should sometimes blow the whistle before the ethicists, theologians, philosophers, sociologists and legislators get to it. Often, by the time that the legislators get to it, it is too late.

The halaal manner-of-existence of what is at the base and core of a profession therefore needs protection. For example:

Halaal Manner Of Existence Of Medication is fundamental to the profession of Medicine.

Halaal Manner Of Existence Of Food is fundamental to Farmers.

Halaal Manner Of Existence Of Knowledge is fundamental to Academics.

Halaal Manner Of Existence Of Digitals is fundamental to the profession of Software Engineering.

Here we briefly consider, "Medicine and Doctors", "Food and Farmers" and "Knowledge and Academics" as three examples. We then focus on our own profession (Software Engineering) to move towards defining halaal-manner-of-existence of software.

3.3.1.1 Medication and Doctors

The fact that patented medication in the West restricts healing has ramifications for the profession of medicine in Brazil, in Iran, in China and everywhere. In the Western patent model, the knowledge of the cure for an illness is at hand, but applying that knowledge to produce the medication is restricted by the patent regime and the businessman who holds that patent (a monopoly). And the patient has to suffer and perhaps die, unless he is rich enough and he conforms to the Western so-called Intellectual Property Rights economic regime that demands payment to the patent holder who is in control of his cure. In many cases, the cost of a patented medication is almost entirely the cost of the patent. The cost of the ingredients and the cost of making the drug are often a very small fraction of what the patent holder demands for the patent.

In America, the profession of medicine has fully failed society. The American doctor has become quite comfortable being an economic creature existing in an industrial context. The "Patient" has become the "Client". The American "Doctor" has become the "Service Provider". And in that "Client"–"Provider" model, the services and goods being exchanged for money is called "Health Care". In that model, of course there is no place for respect that Society owes its Doctors.

The nature of the profession of medicine is unique and making it be subservient to the economic model damages society and endangers humanity. In America the profession of medicine is fully subservient to economics. This is fully manifest in an exceptionally American phenomena: Prescription Drug Advertising. On national TV, the holder of patents for prescription drugs directly advertises to the public the availability of their goods. The business-man dangles the cure in front of the patient and tells the customer to demand that good from his service provider. That much for the end of the Doctor-Patient relationship! The ugliness of this inhumanity goes straight over the heads of American individualistic economic creatures.

The profession of medicine and Doctors everywhere should do what the American service provider does not comprehend: start with demanding that society, government and moral leaders declare:

> Patents for Medications are Haraam.

It is only after the powerful patent based pharmaceutical industry is contained, that Medicine may have a chance to be a profession.

3.3.1.2 Food and Farmers

The fact that American agro-business has terminated the American farmer (see Food Inc., [6].) has ramifications for the Brazilian, Iranian and Chinese farmers. A main instrument of American agro-business in terminating the American farmer were patented chemicals and patented organisms. Separate from the American economic model, Brazilian, Iranian and Chinese farmers should put on the table the question of what makes for global halaal agriculture and what makes for global halaal food. Are patented GMOs (Genetically Modified Organisms) haraam? Is patented food haraam?

Farmers everywhere should do what the American farmer failed to do: demand that society, government and moral leaders declare:

> Patents for Food are Haraam.

3.3.1.3 Knowledge And Academics

Academics play an important role in the well being of the society. Their role falls into two broad categories:

1. Teaching – dissemination of knowledge
2. Research – discovery and production of knowledge

Teaching prospers when copying is not restricted by the Western copyright regime.

Research prospers when application of knowledge is not restricted by the Western patent regime.

The existence of the patent and copyright debate may be understandable in the industry but not in academia. Pursuit of knowledge is in conflict with ownership of knowledge. Being in favor of patents and participating in IPR regime is in conflict with being an academic.

Yet, American Academia loves copyright and patents. There is no shortage of so-called American teachers that compete in producing copyright restricted text books and lecture notes. There is no shortage of so-called American researchers that keeps restricting application of knowledge with patents.

The process that has made the American economic model the American societal model has corrupted both teaching and research.

Academics everywhere should do what the American academic has failed to do: demand that society, government and moral leaders declare:

> Patents And Copyrighted Information Are Haraam.

3.3.1.4 Digitals And Software Engineers

In section 3.5 we focus on the "Halaal Manner Of Existence Of Software". There, in addition to providing a formal definition for the halaal manner of existence of software, we put forward a roadmap for realizing it.

Software is a special form of poly-existential that has the most potential for demonstrating the erroneous fundamentals of Western intellectual property rights regime. Software is of essential use. Software is purely digital. Under the halaal manner of existence of software, development of software can be very collaborative and global. Software is inherently cumulative.

The model that we present towards safeguarding the software engineering profession can be mimicked by other professions.

3.4 Manner-Of-Existence of Digitals – Halaal and Haraam Digital Existence

At that point in mid 20th century, one could say that the basic physical laws of the digital world were understood. But, what Western technocrats the likes of: Hartley, Nyquist, Landauer, and Shannon; did not pay much attention to is the question of "Halaal manner-of-existence of digital beings".

Without proper understanding of Halaal manner-of-existence of Information, Software and Internet Services, humanity is doomed. With Haraam manner-of-existence, digital beings and the physical laws of the digital world would be leashed towards harming humanity.

For as long as the manner-of-existence of Information, Software and Internet Services are Proprietary-Haraam, there is nothing no one can do. The natural dynamics are towards destruction of humanity.

In the case of digital ecosystems, the Proprietary-Haraam poly-existence model unleashes certain dynamics which result in:

- Amplification Of The Power Of Corporation
- Diminishing Of Role and Importance Of Professions In Society
- Loss Of The Individual's Autonomy
- Loss Of The Individual's Privacy

Net cumulative and aggregate result of the above is destruction of civilization and humanity.

With Proprietary-Haraam poly-existence model as the underlying basis of any digital ecosystem, that ecosystem will harm humanity.

Only with Libre-Halaal poly-existence model as the underlying basis for a digital ecosystem, we may have a chance to rescue humanity.

At a minimum we need to properly establish:

- Halaal manner-of-existence of Software
- Halaal manner-of-existence of Information
- Halaal manner-of-existence of Internet Services

These writings are towards that.

We happen to be living at a rare inflection point of technological environment. We witnessed the beginning of information age. It is at this very beginning that our actions and thoughts have most impact. Later the disease will be easier to notice but harder to stop.

3.5 Uses Of Halaal and Haraam By Software Engineering Profession

As software engineers, our focus has been one form of poly-existentials and halaal manner of existence of that poly-existential. That of: halaal manner of existence of software and halaal manner of existence of Internet services.

Software and Internet services are now common, everyday aspects of life, globally. This demands a common set of understandings and agreements regarding their manner of existence.

Regarding the functionality and usage of software and Internet services, a sovereign state can and should exercise its own moral sovereignty and define halaal on its own terms. And so praise and applause to the great firewall of China, and the great firewall of Iran. Clearly, Las Vegas porn should stay in Las Vegas and should remain haraam in Ghom.

But in contrast to functionality and usage, the definition of halaal manner of existence of software and Internet services is best dealt with in the global context.

3.6 The Manner of Existence of Software

Manner-of-existence of software impacts societal and social structures and autonomy and privacy of the individual.

As software engineers, our focus has been one form of poly-existentials and halaal manner of existence of that poly-existential. That of: halaal manner of existence of software and halaal manner of existence of Internet services.

Software and Internet services are now common, everyday aspects of life, globally. This demands a common set of understandings and agreements regarding their manner of existence.

Today there are two models for the manner-of-existence of software.

1. The Proprietary Software Model.

   This model is exemplified by Microsoft Windows. It is based on a competitive development model, and dominated by American companies. It is protected and rooted in the corrupt Western so-called Intellectual Property Rights regime, in particular the twin ownership mechanisms of patent and copyright. It is opaque and prevents software users from knowing what their software is doing. Therefore, the user can not trust the software. Its distribution is controlled by its producer.

2. The Non-Proprietary Software Model.

   This model is exemplified by Debian GNU/Linux. It is based on a collaborative development model where software engineers worldwide work collectively to move the software forward. It rejects the corrupt Western so-called Intellectual Property Rights regime of patent and copyright. It is internally transparent and permits the Software Engineering profession to verify the software. Therefore, the user can trust the software. Its distribution is unrestricted.

Though it is not part of popular cultural awareness, there is currently a titanic battle taking place between these two competing ideologies. This is a to-the-death battle, from which there can eventually emerge only a single winner.

The software battle is part of a broader ideological contest, about ownership models for poly-existentials in general (software, but also including literature, music, images, movies, etc.) in the digital era.

The result of this battle has broader ramifications for individuals and society – which impact autonomy, privacy, freedom, and social interaction. The model that any given society chooses for the manner-of-existence of software (and more broadly digital constructs and poly-existentials) impacts social and societal behaviors and shapes what people become.

The scope of usage of the "Libre-Halaal" label is the entirety of the domain of poly-existentials. The digital domain as a form of poly-existentials is of particular interest to us as software engineers.

Libre-Halaal Software in particular is of importance in that software is controller of all that is digital. Key attributes of Libre-Halaal Software are that its usage and copying are unrestricted and it is perpetually internally transparent and modifiable.

We want to move towards defining the halaal manner-of-existence of Software and the halaal manner-of-existence of Internet Services and halaal manner-of-existence of Digital Ecosystems. As such we

provide our definitions for use of the labels Libre-Halaal for Software, Internet Services and Digital Ecosystems in [2].

The Free Software and Open Source movements and their combination the Free and open-source software (F/OSS, FOSS) or free/libre/open-source software (FLOSS) have been attempting to address this labeling challenge. Because their philosophical and moral analysis is shallow, all of their labels are problematic in a number of respects.

The FLOSS movement lacks deep recognition of IPR regime being just Western and does not call for full abolishment of the IPR regime. The FLOSS movement lacks deep recognition of the place of software as a special form of digital poly-existential. The FLOSS movement lacks deep recognition of importance of morality and role of software engineering profession in formulation of definitions and labels.

But since we have the "Libre" label in common, we use the "Libre-Halaal" label when operating in Western authority. Where our rejection of the copyright regime is through FLOSS copyleft licensing. And where we wish to express common cause with our FLOSS brothers and sisters.

3.6.1 Software and Internet Services as Natural Primary Focus

We are software engineers.

Our profession, the Software Engineering profession, is hindered by the Western so-called Intellectual Property Rights (IPR) regime. As engineers instead of being able to freely collaborate, we are enticed to compete. Instead of collectively inventing and innovating towards the good of society, the Western IPR model pushes us to individually reinvent.

Software and Internet Services have become an integral and critical component of societal functioning, and the consequences for humanity are enormous. Of fundamental importance in this regard is what we will call the *manner of existence* of software.

We present the Halaal *manner of existence* of software and Internet services in: "Defining Halaal Software and Defining Halaal Internet Services" [2] – available on-line at:
http://www.bycontent.net/PLPC/120041 . The Western IPR regime adversely impacts our ability to produce Libre-Halaal software and Internet services.

It is for this reason that we are writing this paper. While poly-existentials are far broader than software, we emphasis software in this presentation for two reasons. First, we are software engineers. Second, the collaborative and cumulative and usage orientation of software (as a poly-existential) permits us to demonstrate the natural power of poly-existentials in contrast to Western so-called Intellectual Property Rights (IPR) regime. This of course is demonstrated in success of the Libre-Halaal GNU/Linux in contrast to the proprietary MS Windows.

3.6.2 Libre-Halaal Software – Halaal Manner-of-Existence of Software

So, with the stakes that high, what is the halaal ("right") manner-of-existence of software?

We put forward that for each form of poly-existential, the manner-of-existence that permit Professions to safeguard society and humanity are the halaal manner-of-existence for that poly-existential.

The following criteria are required for halaal manner-of-existence of software, to allow the Software Engineering profession to fulfill its responsibility to society and humanity.

We use the label "Libre-Halaal Software" to convey "Halaal Manner of Existence of Software".

Software is Libre-Halaal Software if it has all of the following attributes:

- **Halaal Criterion 1 – Unrestricted Multi-Possessablity**. There are no restrictions in possessing the software by anyone who wishes to possess it – There are no restrictions in copying and redistributing copies.
- **Halaal Criterion 2 – Unrestricted Usage**. There are no restrictions for using (running) the software.
- **Halaal Criterion 3 – Internal Transparency**. The source code of the software is available to all software engineers to examine the software and study how it works. Unless software is internal transparent, the software can not be trusted.
- **Halaal Criterion 4 – Modifiability**. Software engineers must be able to modify the software, re-install the modified version and use the modified version without restrictions. The available source code of the software permits software engineers to change and enhancement it.
- **Halaal Criterion 5 – Proper Authorship Attribution**. The authorship of the software is not misrepresented.

Additionally, the software engineering profession requires from software engineers that the perpetuity of all of the above be applied to all public modifications of the software. In other words, any modification or enhancement that is generally offered as software or service forever shall also have all of the above attributes. Perpetual internal transparency is a key requirement.

In a document titled:

> **Definition Of The Libre-Halaal Software Label**
> **Defining Halaal Manner-Of-Existence Of Software**
> http://www.by-star.net/PLPC/180044 — [5]
>
> http://www.halaalsoftware.org

we provide definitional criteria for Libre-Halaal manner-of-existence of software.

Based on that definition, the manner-of-existence of proprietary software such as Microsoft Windows is haraam.

Based on that definition, the manner-of-existence of libre software such as Debian GNU/Linux is halaal.

3.6.3 Libre-Halaal Internet Services – Halaal Manner-Of-Existence of Internet Services

In a document titled:

> **Definition Of The Libre-Halaal Internet Services Label**
> **Defining Halaal Manner-Of-Existence Of Internet Application Services**
> **A non-proprietary model for delivery of Internet services**
> http://www.by-star.net/PLPC/180045 — [4]
>
> http://www.libreservices.org

we provide definitional criteria for halaal manner-of-existence of Internet services.

The following criteria are required for Internet Services to be considered Halaal, and so to allow the Software Engineering and Internet Engineering professions to fulfill their responsibility to society and humanity:

1. Every software component included in the service must be Libre-Halaal software.
2. The software for the entire service must be Libre-Halaal software. The entire primary source code for the entire service must be available to all software engineers, so that the entire service can be reproduced.
3. All protocols used by the service must be transparent and unrestricted.

Based on the above definition manner-of-existence of Facebook is haraam, Google is haraam, Yahoo is haraam, MSN is haraam, and many others.

It accomplishes little to label something as haraam, when a halaal alternative is not offered.

See Chapter ?? – ??, for details.

3.7 Overview Of Digital Ecosystems

Our use of the term "Digital Ecosystem" is very broad and includes inter-related software, systems, services, content and societal frameworks including: philosophical, moral, societal, social, economic, business and legal practices – that shape it and are shaped by it.

Here we describe digital ecosystems in four parts.

Ideology – Societal Frameworks:
Digital Ecosystems exist within societal frameworks. Digital Ecosystems are shaped by societal norms and Digital Ecosystems shape people and society.

A very important aspect of societal framework which has immediate impact on shape of digital ecosystems are laws and models governing poly-existentials. Societal Agreements governing

all that is digital (and more broadly poly-existentials) in the West is based on the IP regime. This has shaped the entirety of Western Digital Ecosystems.

Software and Usage Environments:
Software is the digital form that controls other digital forms. As such, it is the foundation of digital ecosystems.

Internet Services:
Internet Services consist of *software execution accessed through a network*. The fact that as such, software may no longer be in the immediate possession of the user, Internet Services are a distinct part of digital ecosystems.

Information and Content:
A primary purpose of digital ecosystems is to facilitate production and communication of information and content. In addition to the content itself, facilities and rules governing production, publication and access to content are a distinct part of digital ecosystems.

3.8 Manner-Of-Existence Of Digital Ecosystems

We then recognize two basic manner-of-existence of digital ecosystems.

Proprietary Digital Ecosystems: Governed by laws and models for poly-existentials which are:

- Rooted in the Western patent regime
- Rooted in the Western copyright regime
- Are internally opaque

Libre-Halaal Digital Ecosystems: Governed by laws and models for poly-existentials which are:

- Consider knowledge as unownable and fully rejects the Western patent regime
- Considers the right to copy a basic human right and fully rejects the Western copyright regime
- Are required to be internally transparent

We expand on this in Chapter **??** – **??**.

Bibliography

[1] " Mohsen BANAN ". " introducing convivial into globish ". Permanent Libre Published Content "120037", Autonomously Self-Published, "July" 2011. http://mohsen.banan.1.byname.net/PLPC/120037.

[2] " Mohsen BANAN ". " defining halaal manner-of-existence of software and defining halaal internet application services ". Permanent Libre Published Content "120041", Autonomously Self-Published, "September" 2012. http://mohsen.1.banan.byname.net/PLPC/120041.

[3] " Mohsen BANAN ". "introducing halaal and haraam into globish based on moral philosophy of abstract halaal معرفیِ حلال و حرام به بقیه‌یِ دنیا ". Permanent Libre Published Content "120039", Autonomously Self-Published, "September" 2012. http://mohsen.1.banan.byname.net/120039.

[4] " Mohsen BANAN ". " libre-halaal internet services defining halaal manner-of-existence of internet application services a non-proprietary model for delivery of internet services ". Permanent Libre Published Content "180045", Autonomously Self-Published, "September" 2013. http://www.by-star.net/PLPC/180045.

[5] " Mohsen BANAN ". " libre-halaal software defining halaal manner-of-existence of software ". Permanent Libre Published Content "180044", Autonomously Self-Published, "August" 2013. http://www.by-star.net/PLPC/180044.

[6] Robert Kenner. *Food, Inc.*, September 2008.

[7] Stephan Kinsell. "against intellectual property". http://www.uow.edu.au/~bmartin/pubs/98il/.

[8] Ibn Sina. Daneshnameh Alai. Web Published at http://pdf.tarikhema.ir.

Glossary

C

copyright One of the most visible rights that the author of a work has, is the copyright over his work. Almost everything that is published, whether eletronically or not, is copyrighted. In general, a work is copyrighted when it is created, and it is not necessary to apply for copyright. Some countries may, however, give extra protection to works that are registered. In any case, when a work is copyrighted, others may not use or redistribute the work without the permission of the author.. 17

I

IP Intellectual Property. 15

IPR Intellectual Property Rights. 16, 17

N

Non-Rivalry In economics, a good is considered non-rivalrous or non-rival if, for any level of production, the cost of providing it to a marginal (additional) individual is zero. 2

P

patent A patent is the exclusive right to make, use or sell an invention in a country. In order to get this right, the inventor must apply for a patent at his patent office. Patents provide very powerful legal remedies against infringers, even against infringes who have developed the same invention completely independently.. 17

R

Rivalry In economics, a good is said to be rivalrous or rival if its consumption by one consumer prevents simultaneous consumption by other consumers. 2

T

trademark A trademark is, broadly speaking, any mark that is used for indicating goods or services in commerce. Normally trademarks are words or an image (a logo), although occasionally colors or sounds can also be trademarks. Usually, it is necessary to register the mark with a local trademark office before it gains protection under trademark law. A trademark holder can forbid others from offering particular goods or services using the trademark or a confusingly similar sign. It is also often possible to act against use of the trademark which dilutes its reputation.. 17

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