

Ugo Pagano

Università di Siena

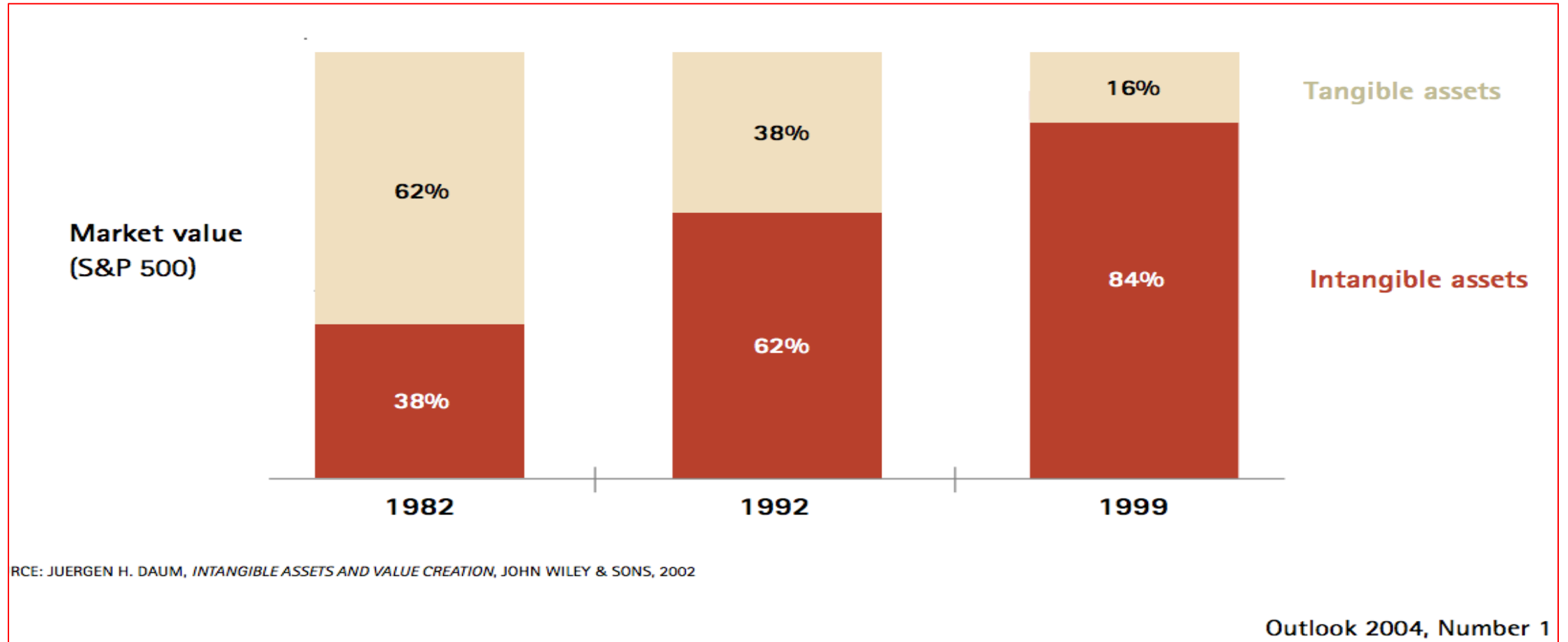
# The Law and Economics of Intangibles

Palermo

14-17 Dicembre

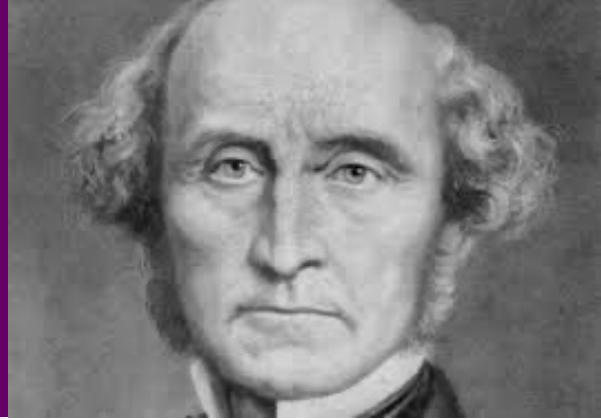


# 1982-1999: The Great Metamorphosis



# The Boom of Intangibles

- According to many contributions, (see for instance the two books by **Haskel and Westlake** ), the raise of intangible investments is due to **technological changes** that have necessarily led to an increase in their intensity in production processes.
- In this view, institutions (including investment financing and **property protection**) **are struggling to adapt** to this new form of organization of the economy. **Their failure to adapt** is the ultimate cause of the economic **crisis** we are experiencing.
- However, one can argue that the boom intangibles was the result of **extending the sphere of private property**. The exclusive right to use a certain knowledge is an intangible asset which exists in the realm of law and has important economic consequences.
- **John Stuart Mill, Wesley Hohfeld and John Commons** can help us to frame this alternative view.



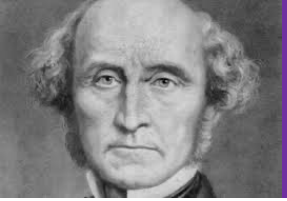
# Private Property and Liberty

Private property has the merit to limit a **sphere of action** where individuals can exercise their **liberty** without the interference of other individuals or the State.

According to J. Stuart Mill, in general, **liberty** was not a gift of a human nature and even less an attribute of wild animals. It was a late conquest of civilization protecting a sphere of individual sovereignty from authoritarian regimes and democracies.

Mill argued, “The only part of the conduct of anyone, for which he is amenable to society, is that which concerns others. In the part, which merely concerns himself, his independence is, of right, absolute. Over himself, over his body and mind, the individual is sovereign.” **In this case his property rights cannot be disputed!**

**Private property extends this sphere of sovereignty to some resources which the individual can use and exchange.**



# The liberty of opinions and its limits

**L1) Liberty of unexpressed opinions.** Beatrix has **full liberty L1** over her own unexpressed opinions and feelings. Adrian **Exposure E1** to Beatrix's unexpressed opinions does not give him the right to force Beatrix to change her opinions for the simple reason that they do not affect him. This can only happen if he investigates what is going on in her mind, thus violating her privacy. **A** has **no right R1** to force **B** to alter her opinions.

**L2) Liberty of expressed opinions (not instigating harmful action).** Adrian may be affected by the opinions that Beatrix expresses or even publishes. He is exposed to **B's** liberty of opinion and may suffer because of her views. If B's opinions do not instigate harmful actions, A has **no right R2** to limit **B's liberty L2**.

**L3) Liberty of expressed opinions (instigating harmful actions)** If Beatrix expresses opinions instigating violent actions against Adrian the **liberty L3** of B should be restricted. **B** has a **duty D3** to comply with the implications of this **right R1** of **A** and **no liberty L3** to express opinions instigating harmful actions.



# Liberty in Hohfeld's Jural Relations

We can express the problem in terms of the legal relations considered by Hohfeld. In the Hohfeldian framework the boundary between **the rights** and **the exposures** of A must coincide with the boundary between **the duties** and **the liberties** of B.

Mill's **Liberties L1** and **L2** of **Beatrix** imply that **her Duties** do not include **D1** and **D2** to refrain from these liberties. **Adrian** is exposed to **E1** and **E2** **but not to E3** (the exposure arising from the liberty **L3** to express opinions instigating harmful actions). **Adrian's Rights** include **R3**, and **Beatrix** has the **duty D3** not to express those opinions. **Beatrix** lacks the **liberty L3** to do so.

<b>Rights of A:</b> R3	<b>Duties of B :</b> D3
Exposures of A: E1, E2 (no-right)	Liberties of B : L1, L2 (privilege)



# Commons on Morality and Law

- The positional nature of legal relations: no increase in the **rights** of **Adrian** is possible without decreasing the **liberties** of **Beatrix**. (Ch. 3, Vatiero 2021)
- If **Beatrix** and **Adrian** shared a system of common ethical values, Adrian's boundary between **Rights** and **Exposures** would be perfectly correlated to Beatrix's boundary between **Duties** and **liberties**.
- However, Commons added that *"There is, however, a difficulty with these ethical mandates. They are mental processes and therefore as divergent as the wishes and the fears of individuals. Hence, when they emerge into action, they are individualistic and anarchistic. They are unrestrained in action by an actual earthly authority to whom each party yields obedience.*
- According to Commons *"It seems that the only procedure that will correlate the wishes and fears of each and prevent anarchy is to resort to a third person of an earthly quality whom each consents to obey, or each is compelled to obey."*



# Power in a Hohfeld-Commons framework



When enforcement agents – typically State officials – perform their tasks efficiently, **Adrian's R3 Rights** require enforcement **Powers  $\pi_3$**  corresponding to a **Liability  $\lambda_3$**  of Beatrix to perform her **Duty D3**.

Not only State officials but also private citizens have **powers**.

For instance, **Adrian** may have the **Powers  $\pi_3$**  to sell membership of a club to **Caesar** and **Beatrix**, who is also a member of the club, suffers because she does not like **Caesar**. However, Beatrix may have **no immunity  $\iota_3$**  against Adrian's **power** but instead a **liability  $\lambda_3$** ,

<b>Powers of A: <math>\pi_3</math></b>	<b>Liabilities of B: <math>\lambda_3</math></b>
<b>Disabilities of A : <math>\delta_1, \delta_2</math></b>	<b>Immunities of B : <math>\iota_1, \iota_2</math></b>



# From possession to property?

Tangible Things



Struggle for possession



Property rights

John Maynard Smith tried to show that private property came from the struggles for possessions of tangible pre-existing things. **Doves** (individuals sharing or fleeing) could do better than **Hawks** (individuals always fighting for the thing),

However, **Dovish behavior** can only emerge when **the cost of fighting** is greater than **the value of the resources**. This is unlikely to be the case for **many valuable things**.

Dovish behavior is even more unlikely when the different individuals are characterized **by different strength and fighting capacity**. Lacking a Commons-like mechanism (shared ethical values or third part enforcement) the reciprocity required for the respect of property rights is unlikely to emerge.

## From property to possession



The primary rules from which the higher-order legal rules evolve must already contain elements of reciprocity, involving some degree of respect for other individuals. For instance:

Rules such as (quasi-)monogamy.

A society which has evolved relations of this type can respect the property of others in the same way as it considers it to be a (quasi-)duty not to steal other individuals' sexual partners. (In some papers I have tried to develop this explanation based on sexual selection)

Rules of reciprocal help in inter-group conflicts.

Group selection may also create intra-group empathy and reciprocity (Bowles, Gintis, Boyd, Richerdson).

Both rules allow the community (formal or informal) enforcement required by property rights and create the conditions for uncontested possession.

# Private Property as a bundle of legal positions

The relations defining private property apply *erga omnes* (no particular person is a well-identified counterpart of the owners). This may give the false impression that private property is a relation between persons and a things and not among persons.

Numerous first-order and second-order legal relations are entailed by the existence of private property.

The private property of a thing involves:

- the **liberty** to decide how to use it and the corresponding **exposures**
- the **right** to exclusive access and the **duty** of not trespassing
- the **power** to sell it to others and the corresponding **liabilities** of third parties
- the **immunity** against altering the title of ownership and others' **disabilities**

To simplify the analysis, we will only deal with the first two sets of legal positions.

# Private property for rival goods

1

A : Use Liberty	B: Exposures
A: Use Duty	B: Veto-Use Right

2

A: Exclusion Right	B: No-Access Duty
A: Access Exposure	B: Access liberty

- **1** points out that **Adrian's** private property gives him the **liberty** to use it in the way he wishes. More than one **Beatrix** may be **exposed** to this liberty, but they have **no right** to veto this use and **Adrian** has no corresponding **duty**
- **2** points out that **Adrian** has the **right** to exclude **Beatrix** who has the **duty** not to access his property and lacks this **liberty**. **Adrian** has no **exposure** to **Beatrix** **liberty**.

When the thing is a rival good both **1** and **2** can enhance welfare.

**1** Since the good is rival only one person is affected by its use. If **Adrian** has the **liberty** to use the good as he wishes, he does **not expose** others to any form of (dis)-utility.

**2** Moreover in the case of a rival goods free access would imply a struggle for the possession of the good and very high transaction costs. Exclusion **rights** are necessary to eliminate these high transaction costs.

# Fictitious commodities for non-rival goods

- The situation is very different for many intangibles. Simultaneous possession by all is possible. By contrast, individual exclusive possession is impossible without a sophisticated system of property rights. The fact that **Adrian** is controlling and using its piece knowledge does not stop **Beatrix** from controlling and using that same piece of knowledge.
- Exclusive, or private property, of knowledge still means that only one agent has the right to use the thing. However, in this case, limiting the possessions of **Beatrix** is not increasing the quantity of the good possessed by **Adrian**. It takes away from **Beatrix** without increasing the amount possessed by **Adrian**.
- In this sense an intellectual property right is a fictitious commodity existing only in the realm of law, **an exclusion right** to limit the **liberty of access** of others and **their liberty to use** the good which they possess which has **no exposures** for other individuals. **This capability of the law to create intangibles explains the boom of intangibles that we saw in the first slide.**
- Exclusion rights involve very **high transaction costs**. It is difficult to limit the **liberty** to use what you can possess without limiting other's possession.

# Possession and Property

	Rival	Non-Rival
Unregulated possession	Low liberty, High Transaction Costs	High liberty, Low Transaction Costs
Private Property	High liberty, Low Transaction Costs	Low liberty, High Transaction Costs

In the case of a non-rival good, the transition from unlimited possession to private property has effects opposite to those that it has for rival goods.

**For rival goods** private the transition from unregulated possession to private property increases liberty and reduces the transaction cost due to conflictual possession.

**For non-rival goods** private property decreases the liberty of all the individuals different from the owner (without increasing his liberty) and increases transaction costs.

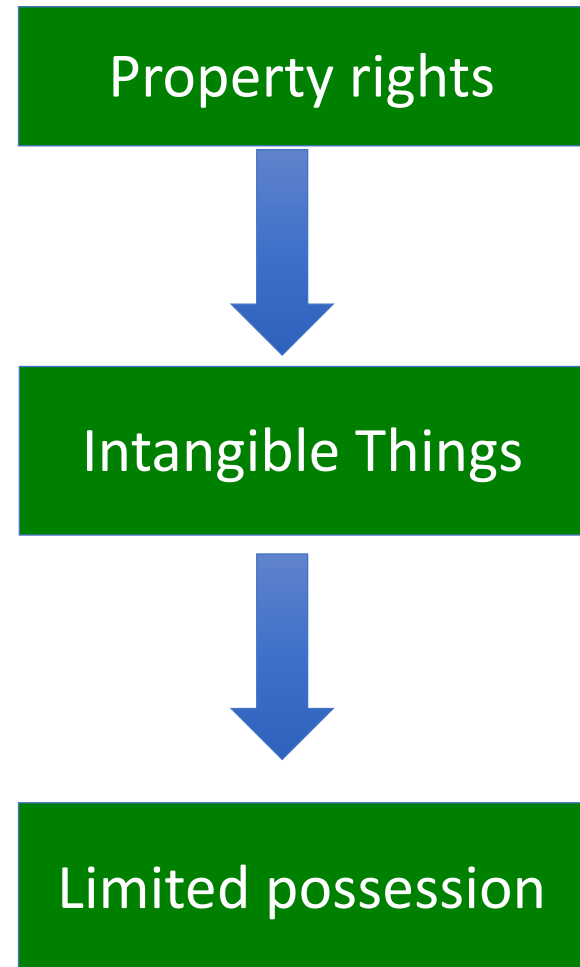
Property does not necessarily evolve from the struggle on the possession of things and can create **new intangible things**.

Since property rights are **relations among individuals**, legal relations can create fictitious commodities that express a re-arrangement of the rights – duty relations.

Property rights **define the things to be owned**. The things to be owned cannot help the definition of property rights because they do not exist independently of them.

Intellectual property rights are **fictitious commodities** that limit the universal possession that is possible for these goods.

From property  
to things





# Lon Fuller and the Incompleteness of Law

As Commons pointed out balancing rights and liberties cannot be left to ethics. It requires the activity of law.

Fuller observed that Law is **the activity to subject to rules human behavior**. Since humans are also engaged in other activities (such as producing food) there are trade-off between Law and other activities. These trade-off would be enough to make law incomplete. However, some other **trade-offs** are internal to law itself.

For instance, if rules have to guide human behavior, they cannot change too often. At the same time, they have to adapt to a changing reality. There is a **trade-off** between **flexibility and rigidity of rules**.

Another important trade-off considered by Fuller is that between the **comprehensibility and the technical precision of a rule**. It is also important to consider the trade-off between the **specificity (deepness)** and **generality (wideness)** of rules considered by Katharina Pistor.



# Jural positions and incomplete law

Right of A	Duty of B
Exposure of A	Liberty of B



In a situation of incomplete law only the rights or only the liberties may be completely defined *ex-ante*. *Ex-post disequilibrium* adjustment is necessary.

**Case A:** well-defined *ex-ante*-liberties

**Case B:** well-defined *ex-ante* rights

<b>A : Ex-ante Liberty</b>	<b>B: Ex-post Exposure</b>
<b>A: Ex-ante Duty</b>	<b>B: Ex- post Right</b>

<b>A: Ex-ante Right</b>	<b>B: Ex-post Duty</b>
<b>A: Ex-ante Exposure</b>	<b>B: Ex-post liberty</b>



# Disinformation Liberties and Land Trespassing



**Case A (ex-ante defined liberties)** According to Mill, the **liberty** of opinion should be granted even when others suffer from this **liberty**. Since individuals have no **duty** to refrain from expressing these opinions, other's exposures and rights have to adjust. But the adjustment is often unpredictable. The **liberty** of expressing opinions can conflict with the **right** of not being disinformed (Nicita, 2021).

**Case B (ex-ante defined rights).** In the the case of land enclosures boundary between the Duties and the Liberties of the commoners had to adjust to the rights of the landlords. The commoners resisted the law in real life and in court.

**In both cases the ex-ante defined legal mattered and influenced the final legal equilibrium. In the case of working knowledge, there was a clear change in the ex-ante and ex-post legal positions.**



# Catherine Fisk, and the history of the knowledge struggle

*“In enforcing contracts first, only if they were express, and later by recognizing such contracts as implied-to maintain secrecy of the employer's methods, courts created a new species of "intellectual" property at the expense of older notions of artisanal independence. This was undoubtedly a case of "creative destruction" of one form of economic privilege to create another-the corporate intellectual property.” (Fisk, p. 445 2001).*

1) 1800-1860 Skilled workers had **no fiduciary responsibility**.

2) 1860- 1890 Development of Trade Secrets as an Obligation of Employment and the **Use of Contracts** to control knowledge.

3) 1890 -1920 Breach of Trade Secret as a misappropriation of property **automatically forbidden by the employment contract**.

We moved from **Case A (well-defined ex-ante liberties)** of workers to **Case B (well-defined ex-ante rights)** of the employers.



# Katharina Pistor and the code of Capital

Three attributes transform ordinary assets into capital assets: **priority, universality, and durability.**

- 1) Priority** gives the holder of capital a superior right over others. It operates like an ace in a game of cards.
- 2) Universality** ensures that the priority right will be upheld against anybody; it extends priority in space.
- 3) Durability** insulates capital from a range of creditor claims; it extends priority in time.

Attributing private property rights on land, machines and other tangible assets could be done and enforced at **local level.**

**The corresponding limitation of liberties for the individual of other nations could stay incomplete.**



# Trade secrets

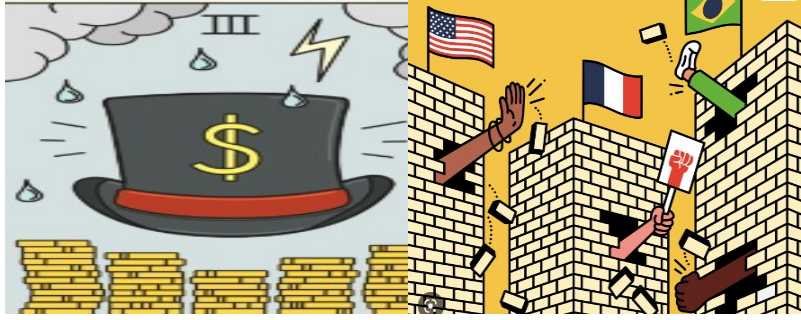
Even if trade secrets can be seen as a primitive form intellectual property they cannot be included among capital assets because **they lack the attributes of priority, durability and universality** which characterizes IPR.

**1)** The holder of a trade secret has **no priority** towards other holders of trade secrets.

**2 )**The right to enforce trade secrets is **not universal**. It holds only against individuals who got the knowledge from the person who developed the technology.

**3)** Trade secrets are **not durable**. They can expire at any moment in time when the technology is available in the public space.

**Trade secrets could not effectively be enforced at local level. Even at the time of the industrial revolution different national states were actively engaged in the poaching of skilled workers carrying trade-secrets.**



# National intellectual monopolies

**National States should balance:**

**the possibly beneficial incentives of patents** on investments

**with:**

**high prices** (especially when cost of waiting for the product is very high)

**blockage of innovative investments** requiring that knowledge

**the danger of patent trolls** ( blocking competitive innovations)

**Like Trade Secrets, Intellectual Property Rights could **not** effectively be enforced at local level.** Unlike land or machines, which stay in one place, knowledge is a non-rival good, which can be used everywhere in the world.

**"Erga omnes" property rights on knowledge had to be defined and enforced at global level and not simply at national level.**



# Globalization and intellectual monopoly capital

This situation changed radically in the second half of the 90s.

With the end of the Cold War the lobbying on multinationals (Sell 2003) made it possible the transformation of national monopolies into intellectual property rights.

The **institutions of globalization** (WTO and TRIPS) transformed national monopolies into intellectual property rights, **whose global enforcement was claimed to be a necessary condition for international trade.**

With 1994 TRIPS agreement monopoly privileges became **erga omnes** property rights, **more difficult to modify than ordinary rights.**

While national authorities could expropriate a house to make a road, they could do the same with a patent, even when it hindered ends such as public health or it blocked important innovations. **This was a paradox. Expropriated houses are usually destroyed. Expropriating knowledge is tantamount to sharing it.**

	Ex-ante defined liberties	Ex-post Defined liberties
<b>Ex-ante defined rights</b>	(1) Complete Contracts on very well-defined research projects.	(2 ) <b>Intellectual property. (Closed Science)</b> <i>Trade Secret Restrictions</i>
<b>Ex-post defined rights</b>	(3) <b>Academic Research Rewards (Open Science)</b> <i>Artisanal independence</i>	(4 ) Fruits of free and creative intellectual exchanges. Forms of collective learning.





# First effect: inequality



The distribution of the use of knowledge can be **more egalitarian** than that of land of machines. Everyone can use the **same** piece of knowledge!

However, while the privatization of a machine does not restrict the liberty of others to use an identical machine, **the so-called privatization of knowledge forbids the use of an identical piece of knowledge, causing increasing inequality.** (An alternative explanation of  $r > g$ , Piketty 2014)

- Hierarchy and inequality in global value chains (Durand and Milberg 2020).
- Low wages and firms' inequality even in the core countries (Song et al.2019).
- Developing vs. established monopolies and research exploitation (Rikap 2021)
- Kicking away the ladder for developing countries (Chang 2002)

# Second effect: financialization



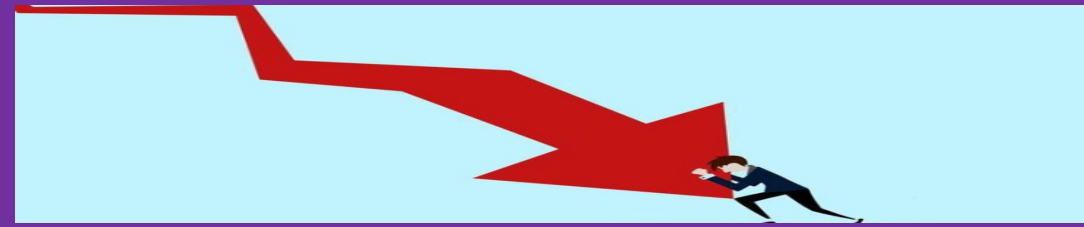
With the transformation of intellectual monopolies into ordinary assets, the capital of the firms included new fictitious commodities yielding future rents subject to financial claims.

**On the other side of the balance sheet**, the financialization of the economy has as its counterpart **the multiplication of these monopoly assets**.

By contrast, public knowledge cannot be included in any public or private balance sheet; **it is a global common of all humanity**.

When knowledge is privatized, **in spite of an enormous increase of financial wealth, real-world wealth can sharply decrease**.

# Third effect: stagnation



Intellectual monopolies have been greatly reinforced by their transformation into full-blown global property rights. A reinforcement of monopolies has two types of effects:

**A) immediate (or even anticipatory) effects:**

expectations of future monopoly rents **increase** innovative investments.

**B) medium and long terms effects:**

blocking effects, anti-common tragedies, patent trolls and secrecy inhibiting research **decrease** innovative investments

Deterministic explanations such as that of **Haskel and Westlake (2018)**, who see the growth of intangibles as a purely technological phenomenon (unrelated to a property right shock), fail to explain the **boom** of the 1990s which has preceded the subsequent stagnation.

# Some policy proposals.....

- 1) Change from the language of property to that of monopoly**
- 2) Fund more open-access knowledge and create more open-access markets**
- 3) Propose WTO rules against free-riding on the human knowledge common**
- 4) Create an International Court for the expropriation of basic privatized knowledge**
- 5) Have global human missions based on global knowledge commons**
- 6) Adjust (also) property rights to human liberties**
- 7) Adjust (also) economic liberties to social rights**

## ..... and one methodological suggestion

*There is in fact no contradiction at all between the statement of an exact bookkeeping balance ex post and the obvious inference that in a situation when saving is increasing without a corresponding increase of investment, or perhaps with an adverse movement in investment, there must be a tendency ex ante to a disparity. (Myrdal 1939: 46)*

As Commons pointed out, this ex-ante - ex-post distinctions apply also to the relation legal positions, such as rights-duties, power-liabilities, liberties-exposures and power-immunities.

The expected ex-ante legal positions are often unbalanced. Law and economics must take seriously this disequilibrium. In most cases, it is necessary to clarify which on one is the the default position to which the other positions are adjusting. Especially in the case of intangibles, the choice between what is ex-ante decided and what is ex-post adjusted is not neutral. It can greatly increase (or decrease) not only total wealth but also all sorts of inequalities.