

The Investor Pays Principle Evolving Institutions and the Coase Theorem



*Houston,
we've got a
problem*

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Institutions: the role of *new constraints*: Natural scientist vs Social scientist:

- Present trends cannot continue (natural scientist)
- Then, they won't (social scientist)

Institutions: Control Rights

- Economics of Institutions; control rights (property rights, say, or breathing rights, user rights, such as right of way)
 - Ex: Over
 1. a colony,
 2. a cow,
 3. a child,
 4. a fish,
 5. a woman,
 6. a slave:
- When control rights shift: toward unused potential? Reflecting underlying real economic change? Towards efficiency?

Institutions: Control Rights

I discover that early law (Hammurabi, Book of Moses) covers (in the sense of protects) 'private goods' (cow) but not 'collective' (a well, a creek, a bay).

Puzzle?

Exceptions? Yes: two?

Explanations? Yes. But it fails testability?

The static idea of 'intervention'

- $MSB = MC$
- \Leftrightarrow
- $T = ED$, for instance,
Samuelson condition for optimal supply of public goods

Rights given, and the 'Coase Theorem'

- Take an idea of efficiency, such as $MSB=MAC$ (The Samuelson Condition for optimal supply of a pure public good)
- For river quality in Downtown Creek (Nesttunelven) at Downtown (Nesttun), it could in principle be that

- a) 'rights' are vested *downstream* (Nesttun has a right to an unpolluted river, *or*
- b) 'rights' are vested *upstream* (*Øvsttun* has a right to pollute as much as she wants)

⇒ In both cases, if negotiations are efficient, there will be optimal river quality in the sense that $MSB=MAC$.

(I will retain much of the idea of efficient negotiations)

The 'Coase Theorem'

- a) 'rights' are vested *downstream*:
Communication upstream is with anger and pitchforks: Nesttun has strong sons with reputation of being rough, *or*
- b) 'rights' are vested *upstream*:
Communication *upstream* is with a smiling communications representative and flowers and funds; Abate, I'll pay!

The 'staticness' is: rights are cast in stone. From there: Basis for negotiation.

The World is born. Once.



Our dynamic idea

- An environmental problem must *arise* for protective institutions to emerge



Our dynamic idea

- Environmental problems must arise (or at least be envisaged) to be handled, or 'solved'
- Fixed costs of institutional development
- Possible outcome is EKC: worse before better
- Thus, this dynamic idea is also the start of institutional economics and political economy, the start of departing from 'benevolent planner', in the sense that we may ask
 - Where did that 'benevolent planner' or 'his tax rate $t_e = n \frac{u_e}{u_1}$ ' come from? From democracy? From selfish ruler? From lobbying firms?

Some developments: Streetwise

- Climate change: a genuine surprise. Plantfood (CO₂) becomes a 'pollutant'
- Lawsuits, some clearly hindsight-informed, some winning, others just shaking, some environmental (also Pigou, 1920, started here),
- Other political developments (kids on strike, for instance)
- Nürnberg processes, the heavy tales of Holocaust;
- Environmental legislation
- Politicized world
- Clean air act
- Endangered species act
- Norwegian constitution (moderately slowmoving) gets its 'Environment paragraph', 112 in Norw Constitution: everyone has a right to a clean unharmed environment', in 2014.

Some developments: Academic

- Institutional eccs, starting w Coase
- Studies of 'a sin portfolio'
- Milton Friedman's (overhyped straw man?): corporations should care about profits only
- Hart and Zingales and Gollier: well here are some twists that may put environment in minds or hearts of investors, or in mgt (involving heart and/or underpricing of environment)

Environment as a laboratory for institutional development:

Environmental problems *arise* and *grow* with growth and density:

1. Density of environmental quality beneficiaries, or benefits (downstream). Fishers, for instance.
2. Density of polluters (upstream): Miners, for instance.

An upstream theory of institutional development:

Behavior starts *as if* rights are vested upstream. Coase theorem might therefore be interpreted as saying: money goes upstream to clean up river. Ex: Norway has paid Nickel in Murmansk to reduce emissions; CDM;

- i. Problem1 (normative): might this cause a subsidy to polluting activities?
(Eskeland, Harstad, others)
- ii. Problem2 (descriptive): do environmental improvements typically come about with money going upstream to filters, catalysts, water treatment plants, polluters?



Modern institutional economics:

When institutions change, do they change in the direction of efficiency?

Is there an efficiency interpretation for

- i) the suppression of ownership in man?
- ii) The emergence of divorce for women?
- iii) Public land, and the emergence of property rights in land?
- iv) The polluter pays principle?



An upstream theory of institutional development:

Prediction and observation:

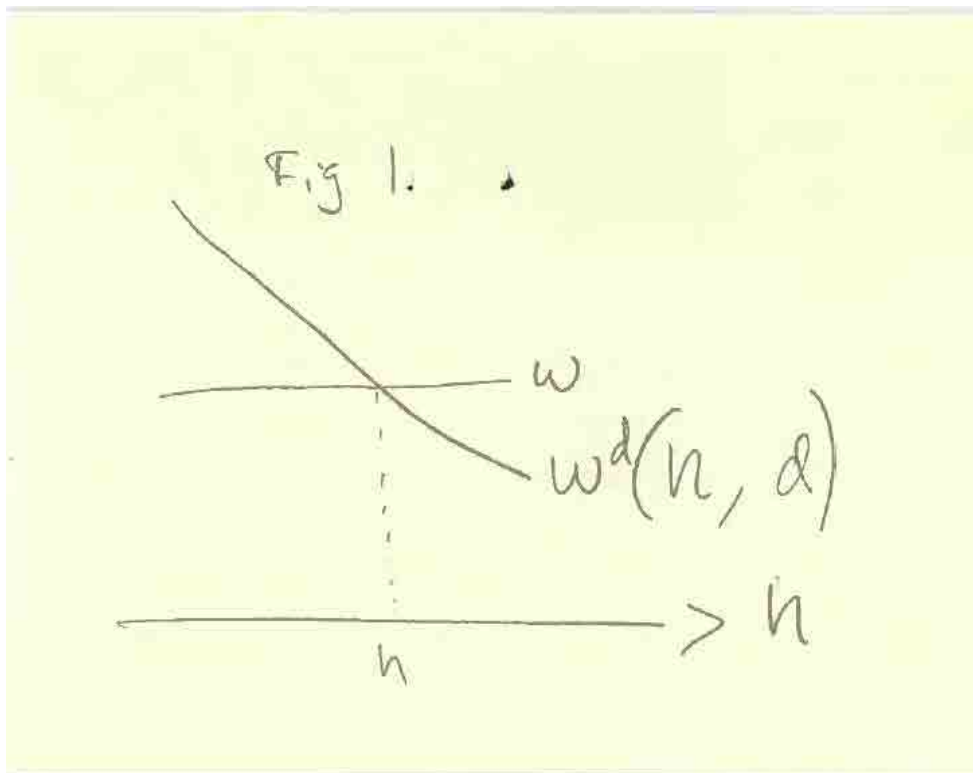
- i. Rights are not given and carved in stone, control rights *evolve*, are endogenous.
- ii. Rights *move downstream*, obligations move upstream (as messengers do)
- iii. As if marchers upstream do not carry a checkbook, but torches and pitchforks



Model: local public good; open access (free immigration) and full rent dissipation

- 1 $w^d = w^d(n, d)$
- 2 $w^d = w$

Free-rider problem #1, downstream: there can be no effort downstream to communicate upstream if access downstream is open. A downstream spokesman needs 'club' backing



Downstream community: Not monopoly and inefficient, but *optimal* size:

$$w^d(n^*, e) + n^* \frac{\partial w^d}{\partial n}(n^*, e) = w.$$

Implementation can be envisaged for instance with a 'membership fee',

$$t^d = -n^* \frac{\partial w^d}{\partial n}:$$

$$w^d = w + t^d$$

Some *entry constraint* is essential (or ltd population, ltd capital, ltd scale)

- a Tiebout equilibrium: an equilibrium with landowners/ developers maximizing land rents
- cooperatives bidding for land: cooperatives the size of n^* (and m^*) will win
- benevolent planner maximizing welfare for all (upstream, downstream, and on the plains, redistributing tax revenues in a lump sum fashion.

Similar for upstream community:

Maximize with respect to m :

$$m[w^u(m, a) - w]$$

resulting in a first order condition for optimum (assuming internal solution):

$$w^u(m^*, a) + m^* \frac{\partial w^u}{\partial m} = w$$

where, again, implementation could be by an upstream

community participation fee $t^u = -m^* \frac{\partial w^u}{\partial n}$:

$$w^u = w + t^u$$

Whereas joint (upstream-downstream) community optimum:

$n[w^d(n, e(a)m)) - w] + m[w^u(m, a) - w]$, with first order conditions for optimum:

$$w^d + n \frac{\partial w^d}{\partial n} = w$$

$$w^u + n \frac{\partial w^d}{\partial e} e + m \frac{\partial w^u}{\partial m} = w$$

$$-n \frac{\partial w^d}{\partial e} \frac{\partial e}{\partial a} m = m \frac{\partial w^u}{\partial c}, \text{ or } -n \frac{\partial w^d}{\partial e} = \frac{\partial w^u}{\partial a} / \frac{\partial e}{\partial a}$$

- Familiar: The last expression is the Samuelson condition for optimal supply of public goods, or MSB=MAC.
- Familiar but noticeable: no environmental institutions for $-n \frac{\partial w^d}{\partial e} = 0$
- Unfamiliar but noticeable: 'entry constraints', or 'collectively based community rents payable' are required.

One implementation of joint upstream-downstream optimum (negotiated merger, for instance)

$$t^d = -n \frac{\partial w^d}{\partial n}$$
$$t^u = -m \frac{\partial w^u}{\partial m}$$
$$t^e = -n \frac{\partial w^d}{\partial e}$$

- Notice: further limitation of upstream membership same occurrence as implementation of abatement: at $-n \frac{\partial w^d}{\partial e} > 0$ onwards
- Thus: as env'tal problem emerges and is acted upon, upstream population is suppressed (by this) downstream population expands

An upstream theory of institutional development:

Due to the 'don't subsidize polluting activities' argument, it looks like a 'rights move downstream', affirm downstream (or are held downstream) can be efficiency based,

Thus: rights are not given (and respected, used as a base for negotiations) but emerge, grow, change.



An upstream theory of institutional development:

Also: Polluter Pays Principle is based on (not distributional concerns, but) efficiency concerns

A big question for institutional economists like Coase, Fogel, North, Ostrom, Williamson, Liebecap: do institutions move in direction of (emerging) efficiency gains?). Fish? Property in man? Divorce?

Our contribution:

- i) *yes, polluter pays principle, or obligations move upstream, is efficiency driven*
- ii) Rights affirm downstream is such a phenomenon (Grunnlovens para 112) a) affirmed, b) especially in generalization



An upstream theory: Farther upstream are investors

If factories over time may face new demands, new obligations (regulation, pollution taxes, liability lawsuits), then those weary should not only be factory workers, paper buyers, but also factories, their lenders, shareholders.

Owners, creditors, will think about how river evolves, downstream evolves, upstream evolves...

Could it be that those taking decisions with the longest time perspective have the longest antennae?



Could financiers – stock prices – *care* about climate change, emissions, emission lies, myopia in factory management, liability?

The studies of 'sin portfolio' might so indicate:
Notowners sacrificed stock returns
Those who stayed in tobacco (in sin) earned more
Perhaps sector was starved of capital and became smaller (or 'cleaner'?) than it otherwise would have been.
If so: 'I do not want to own this' had an effect. It shrunk tobacco.
The possibility is that leavers (nonsinners) worried only about returns, and time has not proven them right. Yet?



Amerikansk jury: Roundup bidro til å gi mann kreft

Ugressmiddelet Roundup, som produseres av amerikanske Monsanto, var en viktig faktor da en mann i Sonoma fylke fikk kreft, slår en jury i California fast.

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ATMOSPHERE- THE LAST FRONTIER? OR AT LEAST: THE PRESENT ONE?

*An upstream theory of
institutional development*

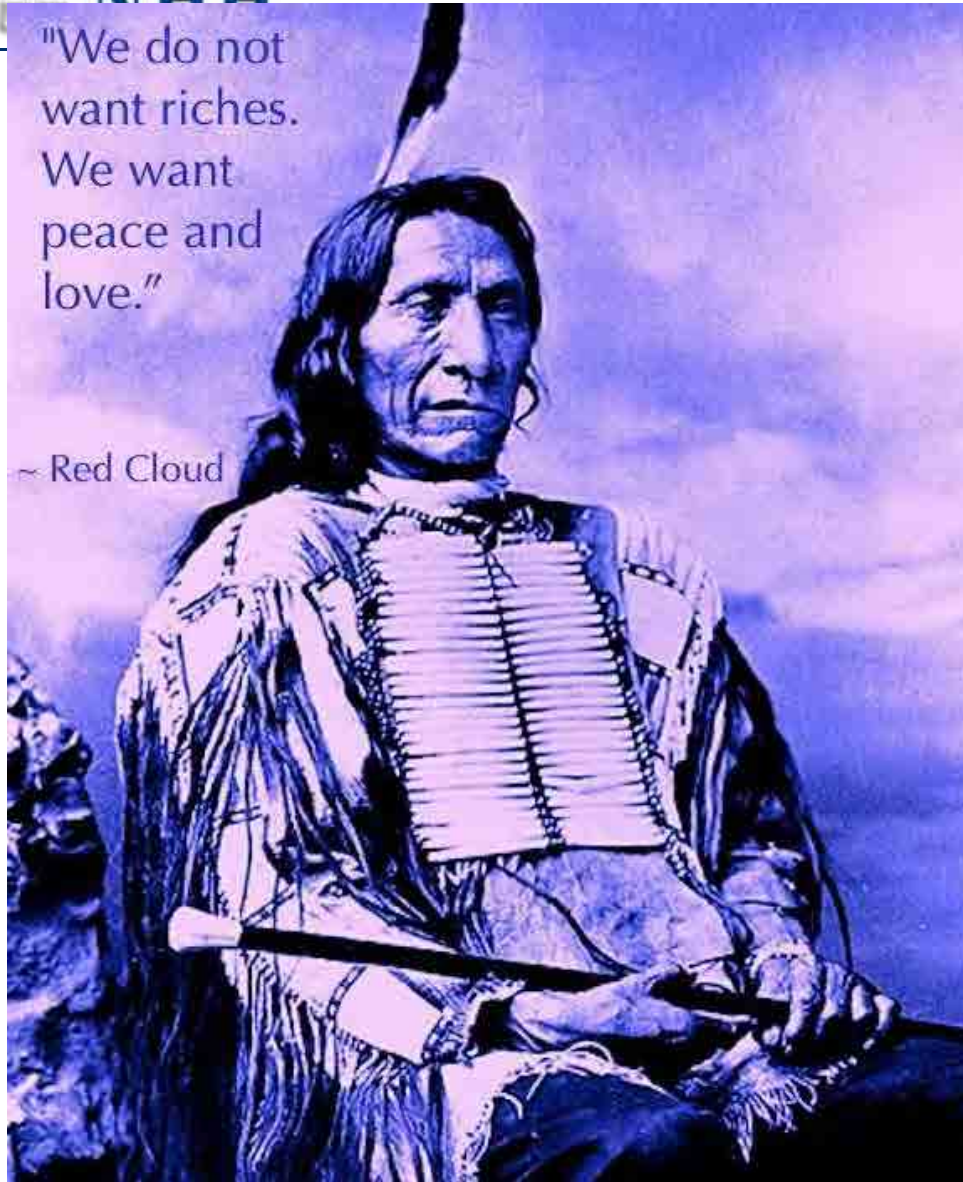
If it is the case that Europe has
climate policy and USA does not

and is is the case that Europe
builds coal (plants, mines) while
US shuts

Could it be that in US, with weak
govt, liability is more of a
threat?

Gary Libecap: Four factors raise ‘transactions costs’ in agreeing on (new, changed, expanded, control rights

- The greater the scientific uncertainty about the size;
- The greater the diversity of preferences and perceptions;
- The greater the asymmetry of information about contributions;
- The greater the anticipation of agreement violations



"We do not want riches. We want peace and love."

~ Red Cloud

White man made me many promises.



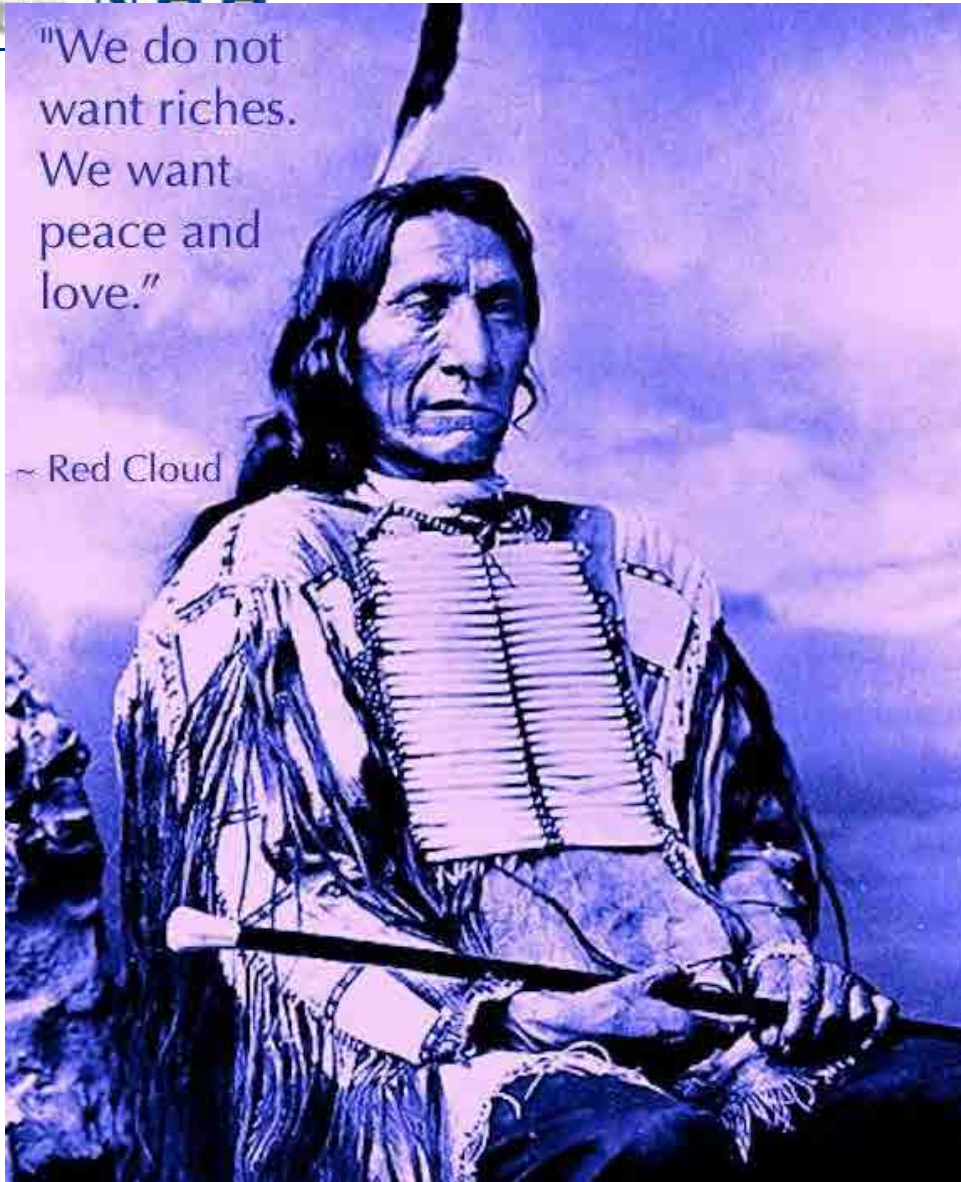
He never kept but one.

He promised to take my land and he took it.

Red Cloud of the Oglala Sioux

"We do not want riches. We want peace and love."

~ Red Cloud



Red Cloud, too
 'We have two holy mountains in that area, the Black Hills and Bighorn Mountain. I have come to say for the third time: I want no roads through there.'

Red cloud, political genius, understood fighting was impossible. He had traveled to see New York, Washington DC. 'the force' was too strong.

Institutional interpretation of the Indian wars (plains):

- Nomads are disadvantaged in no entry barriers.
- But the emerging 'upstream' activity was also too strong. Corner solution efficiency based? (despite injustice)

Key proposition: environmental problems – and responses – emerge and develop with expropriative effect: rights move downstream, evolve downstream, affirm downstream. One implication is generational: granddaughters grow!

Legislation: downstream rights emerging in laws, constitutions

Legal: lawsuits

Political: schoolchildren on strike

Due to this directional force, efficiency driven, investors will worry, will be anticipatory. Not only responding to policies. Ecologically and socially nervous, aware. Responsible? Perhaps. If not also trying to be invisible, blend in.



**Thanks for the opportunity
Grateful for comments!**

