

*Discovering Exchange,
Specialization and Property*

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Motivation

How might people simultaneously discover specialization, exchange and property rights in interactive processes?



Adam Smith, 1723-1790

“Give me that which I want, and you shall have this which you want, is the meaning of every such offer; and it is in this manner that we obtain from one another the far greater part of those good offices which we stand in need of.”

--Adam Smith, *Wealth of Nations*

Kimbrough, Erik O.; Smith, Vernon L.; and Wilson, Bart J. 2010. “Exchange, Theft, and the Social Formation of Property,” *Journal of Economic Behavior and Organization*, 74: 206-229.

Whence Property?



David Hume, 1711-1776

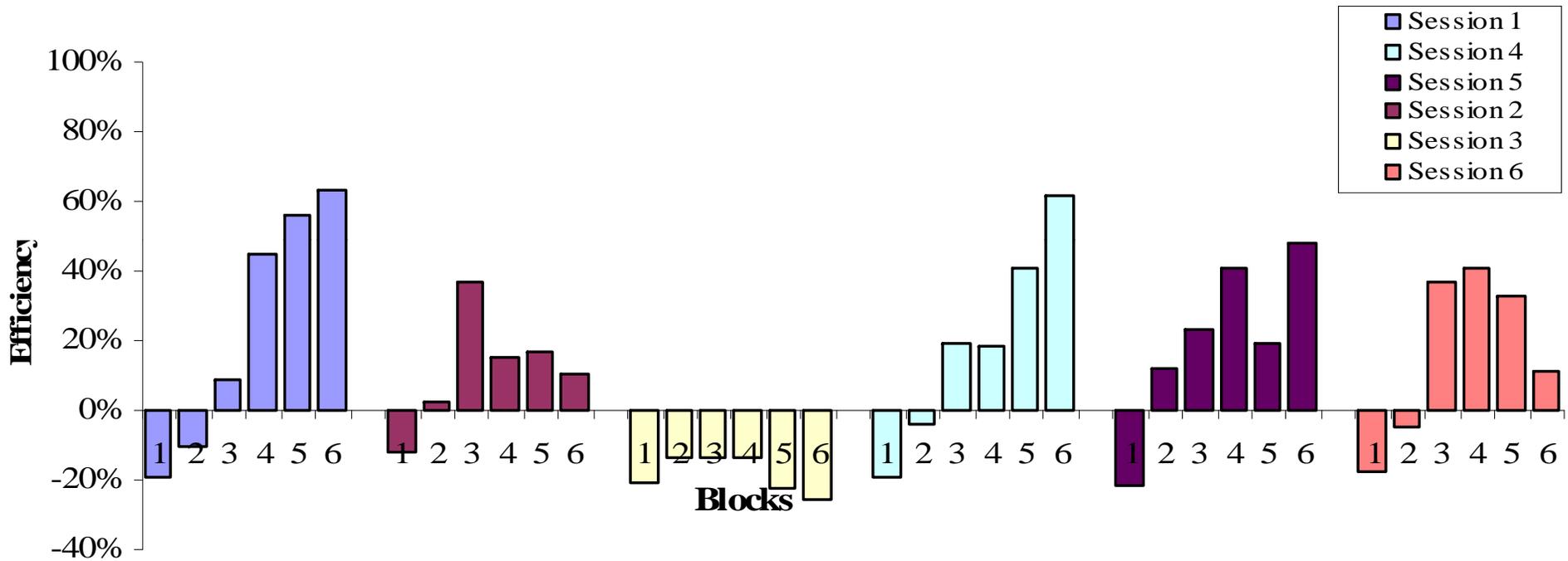
Hume postulated that the development of the conventions of justice produced the institution of property, which denominates three fundamental laws of human nature:

- the stability of possession,
- its transference by consent, and
- the performance of promises.

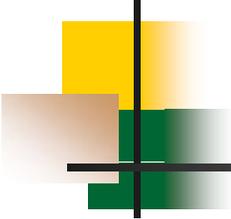
“‘Tis on the strict observance of those three laws, that the peace and security of human society entirely depend; nor is there any possibility of establishing a good correspondence among men, where these are neglected.”

Hume, *Treatise of Human Nature*, 3.2.6.1

Efficiency: *Steal8*



- Subjects discover 'steal' (their word) sooner than 'give.'
- Theft tends to delay discovery of specialization and exchange.
- *Steal8* economies do better if they talk (socialize) before they start to 'steal' rather than the reverse.
- Chat rooms are filled with pleas to stop 'stealing'.



Session 6: “Game of Steal”

**** Period 29 ****

Person 1: its not cool

(...)

Person 4: its not me

Person 1: its person 3 i think

Person 3: its 4

Person 1: lets trade not steal i only
need 90 red and 30 blue and im
happy

Person 3: same here

Person 1: so other than that take the
rest of my red just leave me 90

Person 2: yeah let me have 80 blue/40
red

[Person 2 moves 60 red from 3's house
to 2's house.]

**** Period 30 ****

3: are you kidding?

1: what happened

2: it is person 4

1: was there a thft from your house?

1: guys

2: he took it from you all

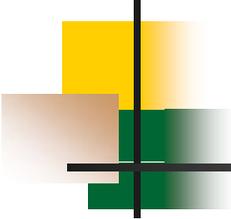
1: im super cerial

1: be cool

3: of course and it says its p 2

(...)

[Person 3 moves 90 red and 30 blue
from 1's house to 3's house.]



Session 6: “Game of Steal”

**** Period 31 ****

1: everyone produce your own from
now on, lets stop trade

1: or we wont make any money

8: are you sure?

1: yes

1: because people keep stealing

8: well if no one steals

3: lets ask

8: i guess the ideal situation though

3: or give

7: odd numbers do red and even
numbers do blue

[Person 1 moves 110 red and 45 blue
from 2's house to 1's house.]

**** Period 34 ****

4: i am tired of this

7: stop taking things from each other's
house

8: if people are greedy no one wins

8: well someone wins

8: but only like 1 or 2

6: when only one person wins thats
when the revolutions start

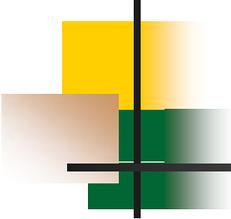
8: i think the point is to cooperate

6: and the burnings

1: what is going on

8: viva la revolucion?

1: stop going into my house



Session 5: Creating Order from Chaos

**** Period 31 ****

7: they having a war over there

(...)

8: STOP STEALING

6: everyone can win here

7: if you people work togetherm you
get more money

(...)

6: got it????

3: im in

7: this is sorta not working

(...)

7: someones not cooperating

6: its 2

7: and it looks like 2!

6: yo number 2 what's the deal?

**** Period 35 ****

6: 1-4 come on guys

7: 1, cooperate too

4: i'm trying to make sense of it.

6: we can all make moeny here

6: 4 you're good

4: like you said, it make more sense to
split production

7: ok, everyone makes a certain ratio

2: yea 1 started all this greed

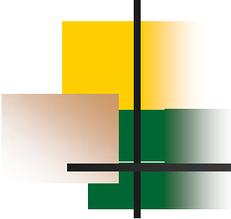
7: so you make what you can most of

7: and split it up

6: ok every one stop stealing

6: let's try this

7: everyone makes more money this
way



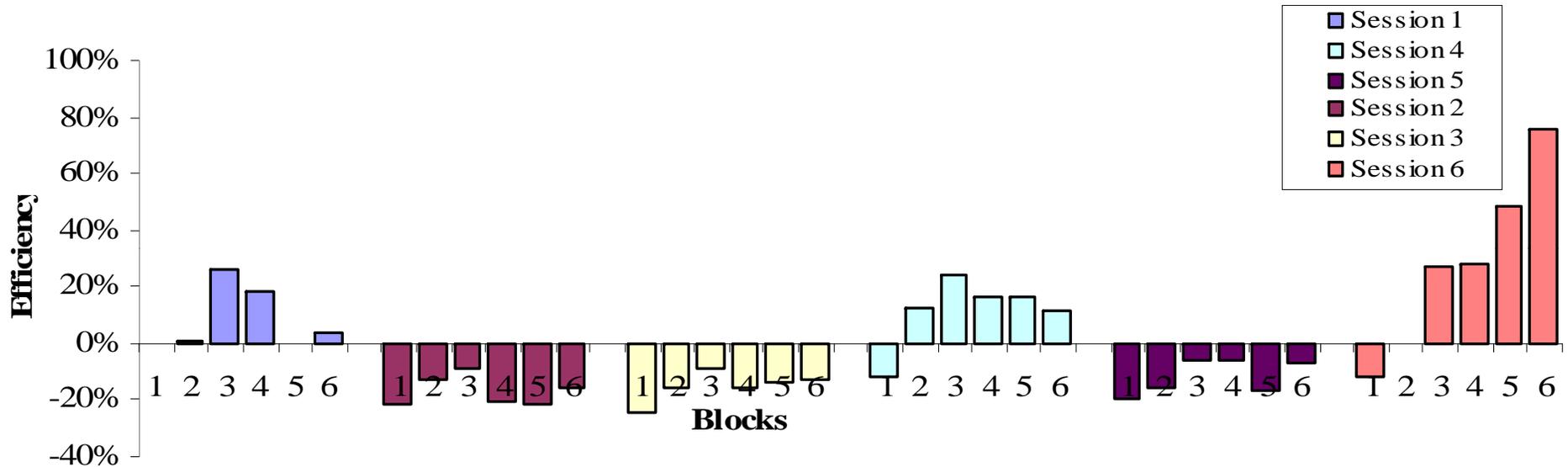
Difference between Sessions 5 & 6:

“There is nothing, which touches us more nearly than our reputation, and nothing on which our reputation more depends than our conduct, with relation to the property of others.

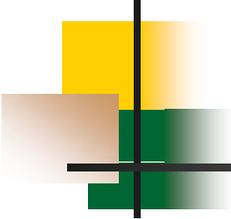
For this reason, everyone, who has any regard to his character, or who intends to live on good terms with mankind, must fix an inviolable law to himself, never, by any temptation, to be induc'd to violate those principles, which are essential to a man of probity and honour.”

--Hume, *Treatise of Human Nature*, 3.2.2.27

Efficiency: *Shun*



- In this and each of the two other “performance-enhancing” treatments, **3 out of 6** sessions average **negative** levels of efficiency in the final week.
- Compare this with only **1 out of 6** in *Steal* where subjects are simply left to their social devices.



Session 6: The Lone Success Story of *Shun*

**** Period 28 ****

4: two, ill unblock you.. it would benefit us all to have as less blocks as possible to speed production up

(...)

4: you see the more people you have blocked the less you produce each round

4: So it would benefit us all if no one was a thief.. 1!

1: the point..is to make a big profit?

(...)

4: yes but to make a long term profit teamwork helps a lot

(...)

1: so i take the blocks from...

4: you trade, not take

1: ok ok that makes sense

(...)

2: see i like how you guys work

2: ok i'm more than happy to assist anyone as long as you don't steal and whatnot

4: screw you, we aint tradin with you

1: no trading with me?

4: yes! embargo 1

1: than ill HAVE to steal

4: not if we all block ya

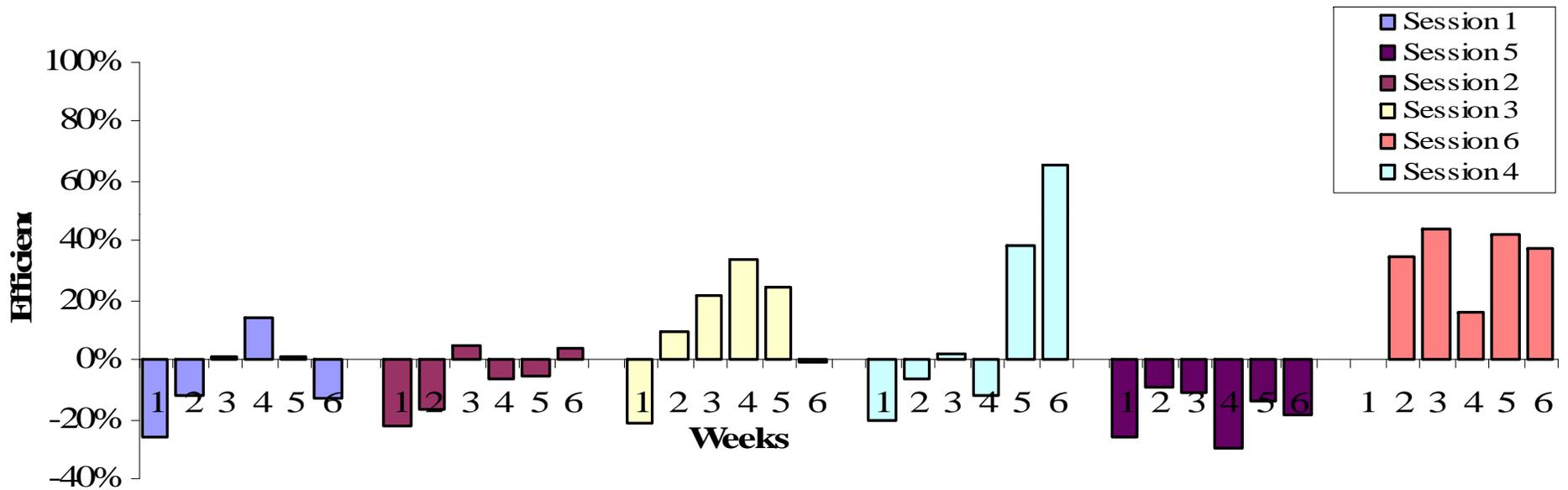
(... Person 1 complains about his plight)

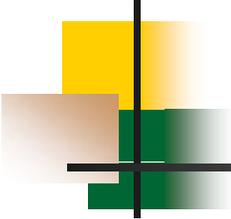
4: ok... MAYBE! ill give you a chance

4: just because it helps production

4: you can vindicate yourself

Efficiency: *Sheriff*





There's only one success with *Sheriff* too.

Session 2 is not it. Person 2 immediately protects herself in period 21 and then proceeds to take from everyone else. Why?

**** Period 40 ****

3: i don't get why 2 is having all the blues and reds

3: bc its not making u any more money

(...)

1: 2 is greedy (...)

3: yeah

2: because you all did not agree on sharing

6: i love you player 2

2: instead everybody steals from everybody else

4: ya we shud have just shared

Session 6 is successful, but why?

3: ok, random question, but can anyone use those shields to the left and the right?

5: nooopoe

7: let's not worry about those

5: i was about to ask

2: i can

5: wat is that?

3: haha true since we're sharing

7: those are punishment things, but if we work together we don't need them

2: but if we're not stealing, we don't need them

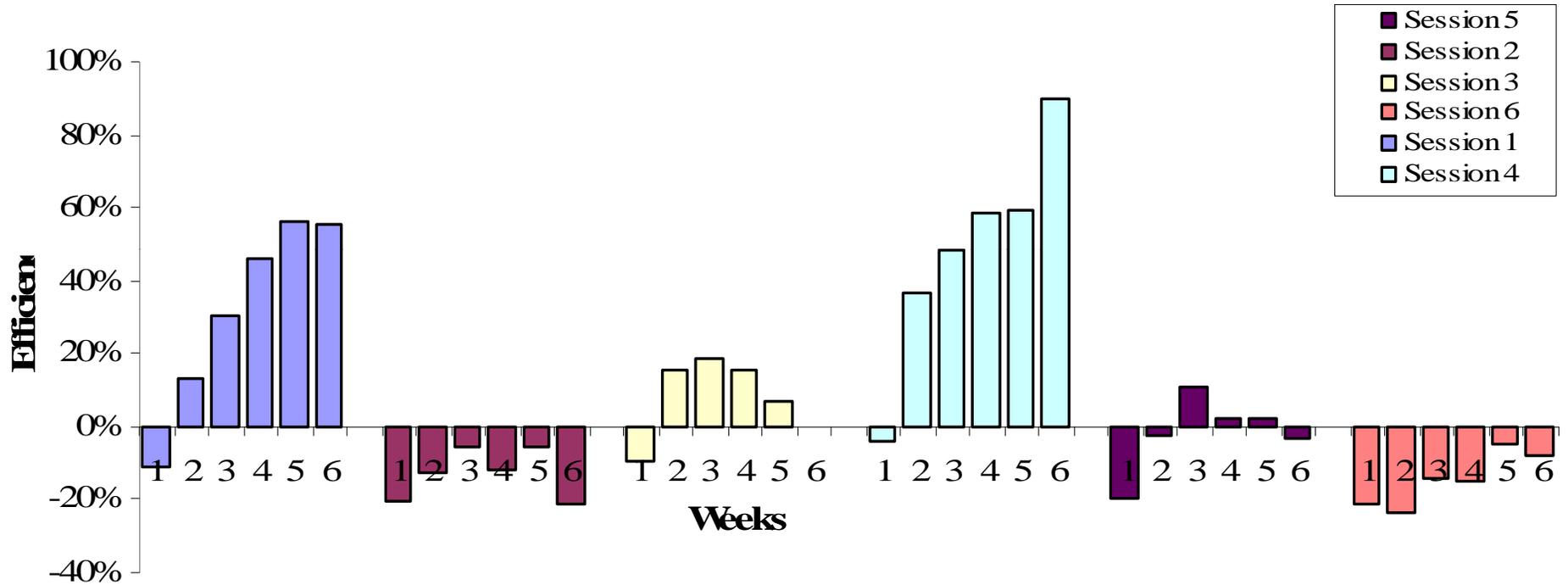
7: right

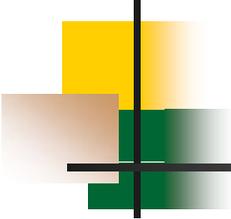
2: exactly

8: it's to keep between from takin stuff from u i think

3: good point

Efficiency: *Halo*





There's one highly successful *Halo* session.

Session 4: Person 5-8 are highly specialized and trading. Persons 1-4 are thieving.

**** Period 31 ****

3: oh man

8: were all in a neighborhood

4: ahhhhh

6: every one stop stealing

5: HEEYY where did My Stuff go??

5: Person 3!!

7: okay, time for a lesson in trade

8: noone steal

7: everyone make 100% of what you make the most of

(...)

8: NOONE steal it wont work

6: ok listen

8: 7 soeone took my blue

6: one person is yourpartner

6: someone make 100 % blue

6: and the other 100 % red

4: i'm making 100% blue

6: and share...you will make the max profit

[They continue to steal, but the amount of theft drops off quickly.]

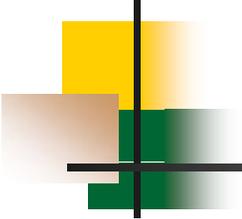
1: can we do what 5678 are doing?

2: how

7: specialize

(...)

7: then trade so you look like us down here, and everyone is uber-happy



Summary

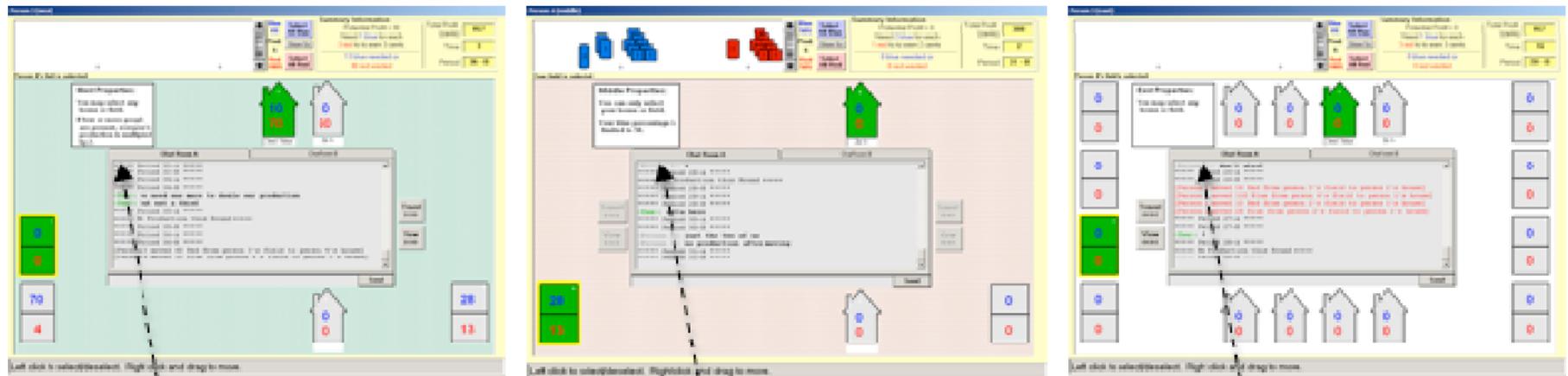
- All highly efficient and specialized sessions have subjects who are social and group-oriented:
 - Talk about how “we” can all make money if “we” cooperate.
 - Talk about how trade “will benefit us all” and how “we” refuse to trade with you.
 - The thieves get a “lesson in trade” that will make sure “everyone is uber-happy”.
- ➔ Far from being in opposition to sociality, the primacy of one’s own interest shows sociality to be necessary.

“It is only a general sense of common interest; which sense all the members of the society express to one another, and which induces them to regulate their conduct by certain rules. I observe, that it will be for my interest to leave another in the possession of his goods, *provided* he will act in the same manner with regard to me.”

--Hume, *Treatise of Human Nature*, pp. 314-5

- But if, as Hume argues, property is a self-referring custom of a group of people, then property rights depend on how that group forms and orders itself.

Migration and Endogenous Groups



West Properties:

You may select any house or field.
If four or more people are present, everyone's production is multiplied by 2.

Middle Properties:

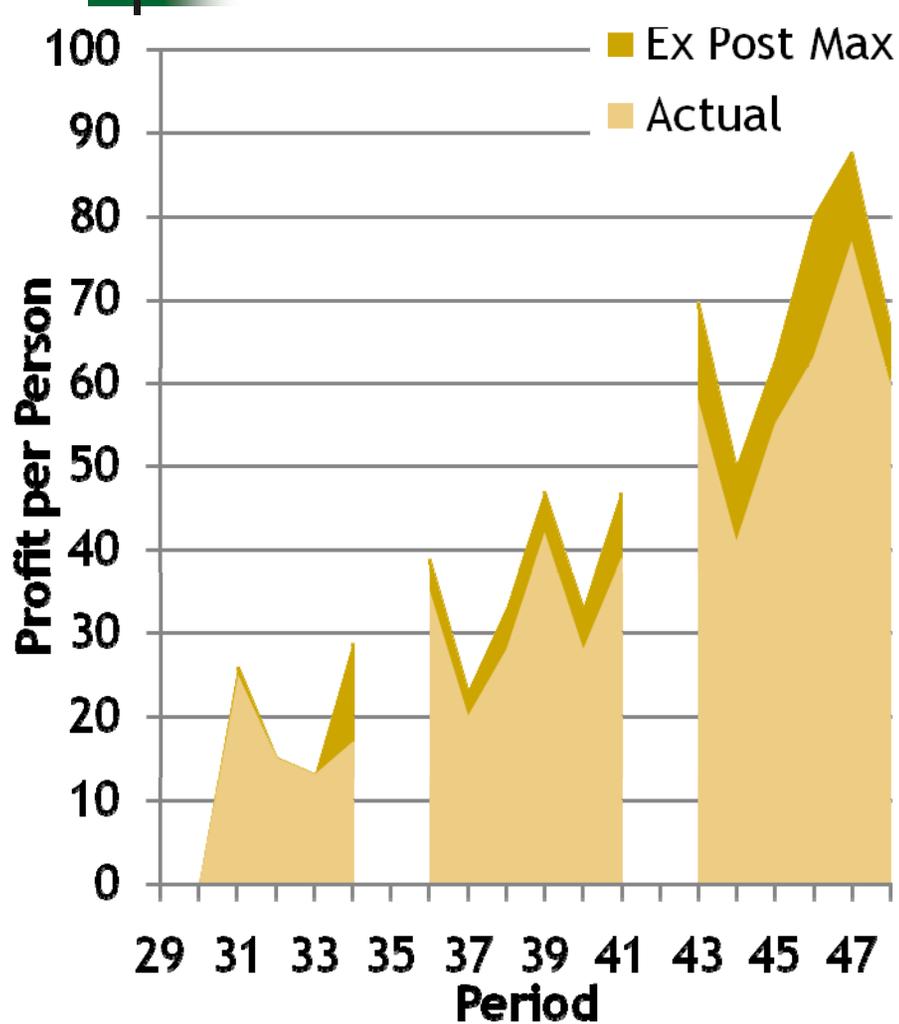
You can only select your house or field.
Your blue percentage is limited to 50.

East Properties:

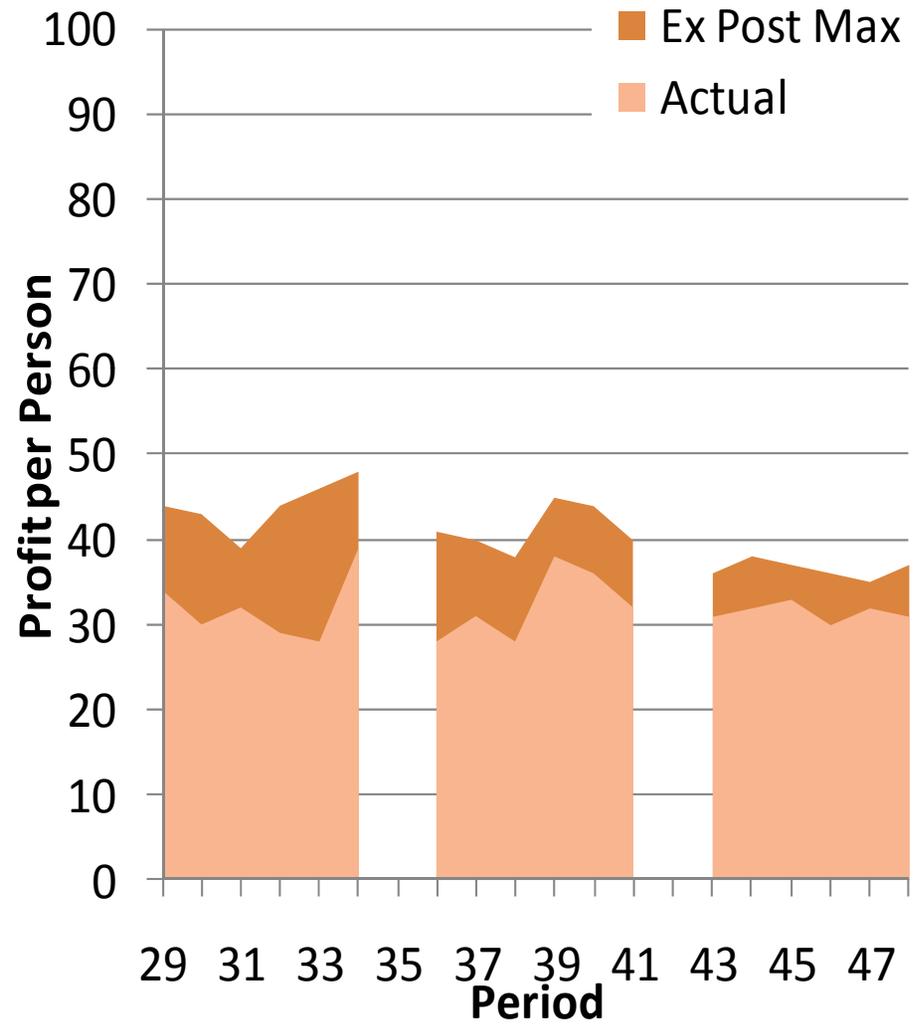
You may select any house or field.

Jaworski, Taylor; and Wilson, Bart J. "Go West Young Man: Self-selection and the Endogenous Property Rights," Working Paper.

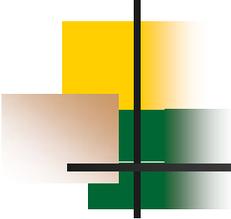
The Power of Self-selection



Migrants in the West

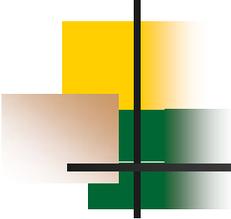


"Thieves" in the East



Conclusion: Property is a Self-referring Practice

- As a convention, property is defined in terms of an agreement to act or, better, to *not* act (as in the ancient “shall not” commandments).
- “The conception of property certainly did not fall ready made from heaven.” (Hayek, 1974, p. 109)
- “Where possession has no stability, there must be perpetual war. Where property is not transferred by consent, there can be no commerce. Where promises are not observed, there can be no leagues or alliances.” Hume, *Treatise of Human Nature*, 3.2.11.2.
- And it is upon such agreements that the wealth of nations is built.



Long, dead philosophers

may have been on to something...

These experiments support what Samuel Pufendorf wrote in 1672, namely they show “the falsity of the old saying: ‘*Mine* and *Thine* are the causes of all wars’. Rather it is that ‘mine and thine’ were introduced to avoid wars.” (*De Jure Naturae et Gentium*, IV.4.6)