

Moral paradoxes: Cognitive biases or adaptive judgments?

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Ecole Normale Supérieure



What is morality?

Selfishness

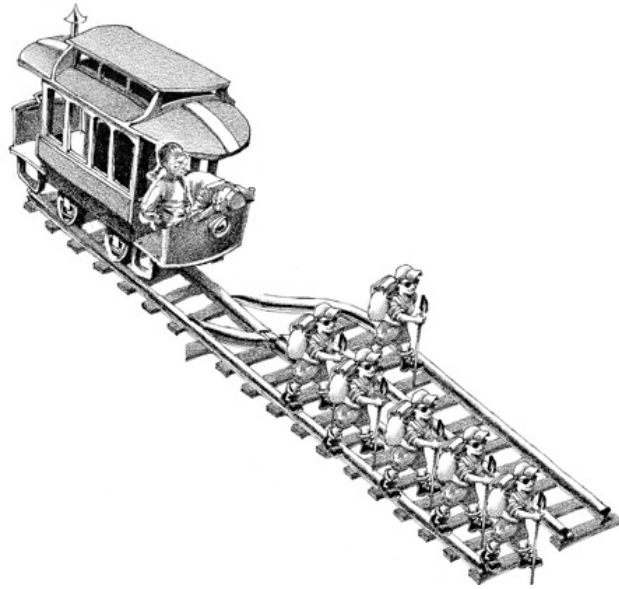
Morality



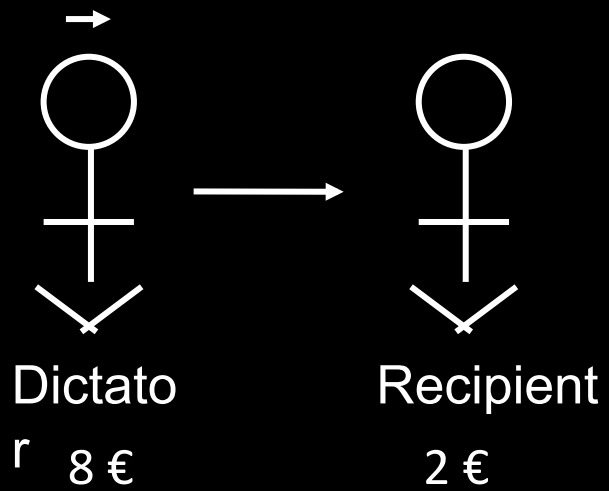
Self

Others

- Being moral = helping others, at a cost for oneself.
 - The more you help others, the more moral you are
- Utilitarian theory (or consequentialism)
 - Morality aims at maximizing global utility or welfare



Is it OK to divert the trolley?



The utilitarian theory in an evolutionary perspective

The utilitarian theory in an evolutionary perspective

When individuals within a group compete...

... **selfish individuals** will produce the most offspring and come to dominate the group



The utilitarian theory in an evolutionary perspective

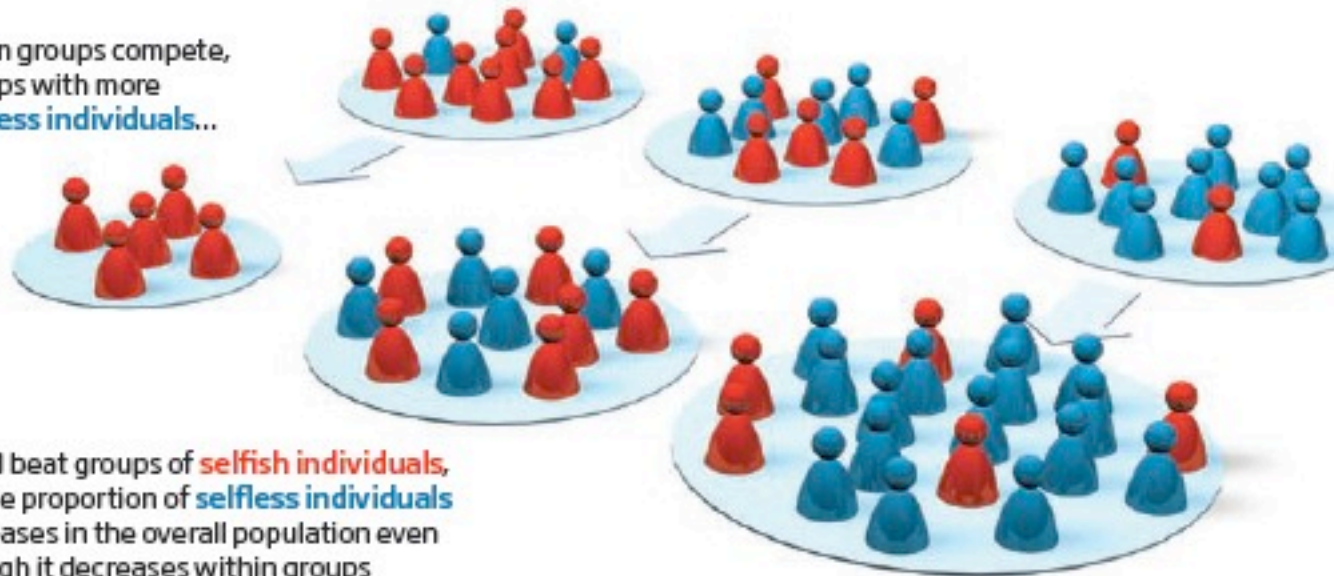
When individuals within a group compete...

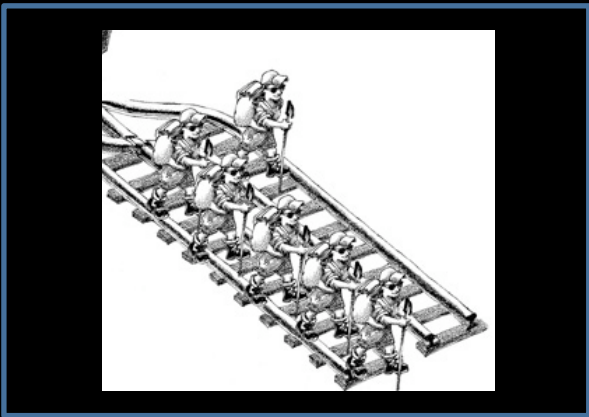
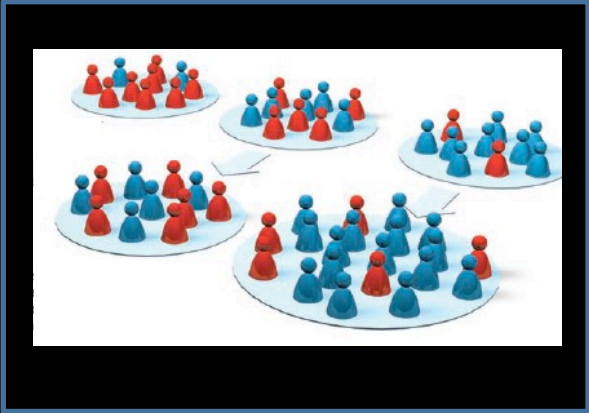
... **selfish individuals** will produce the most offspring and come to dominate the group



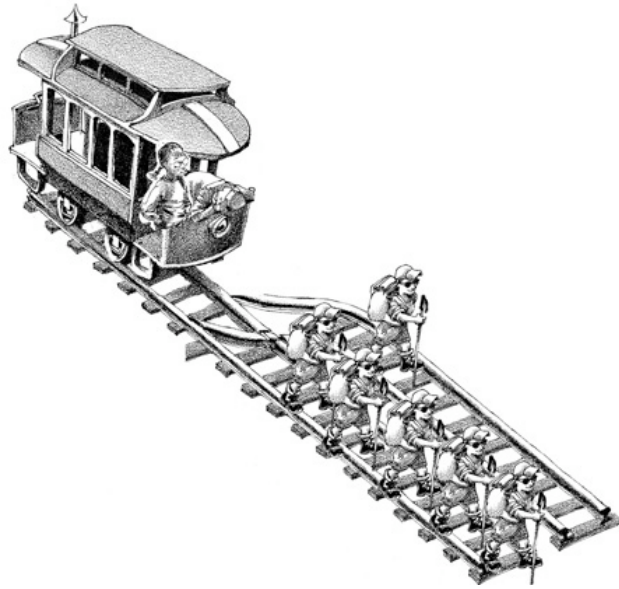
When groups compete, groups with more **selfless individuals**...

...will beat groups of **selfish individuals**, so the proportion of **selfless individuals** increases in the overall population even though it decreases within groups

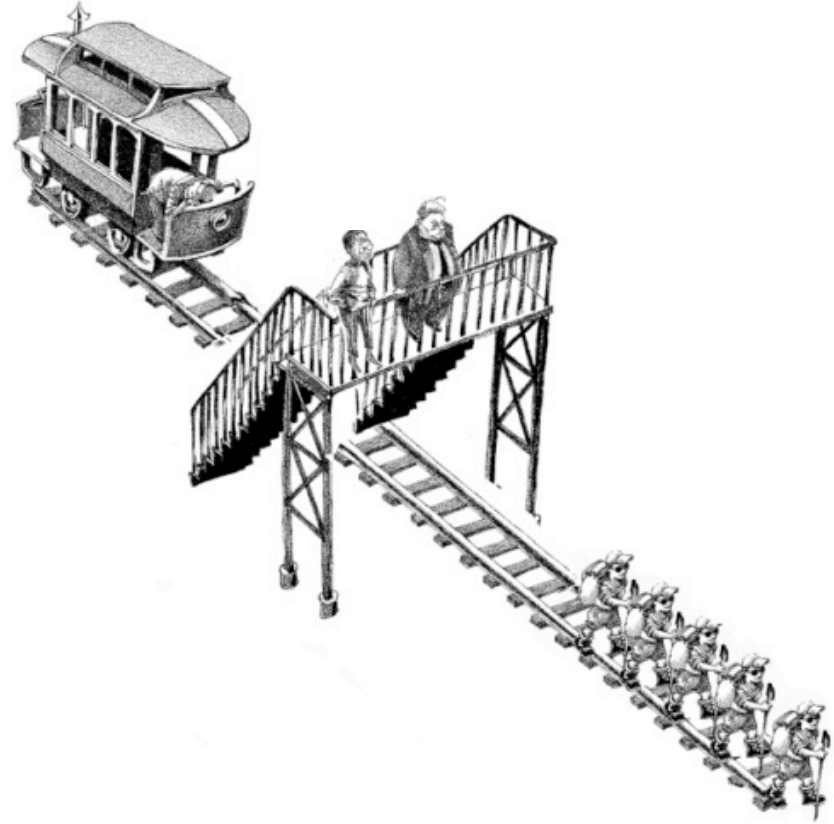




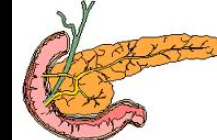
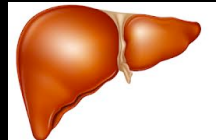
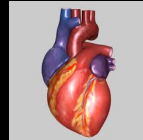




Is it OK to divert the trolley?



It is OK to push the man?

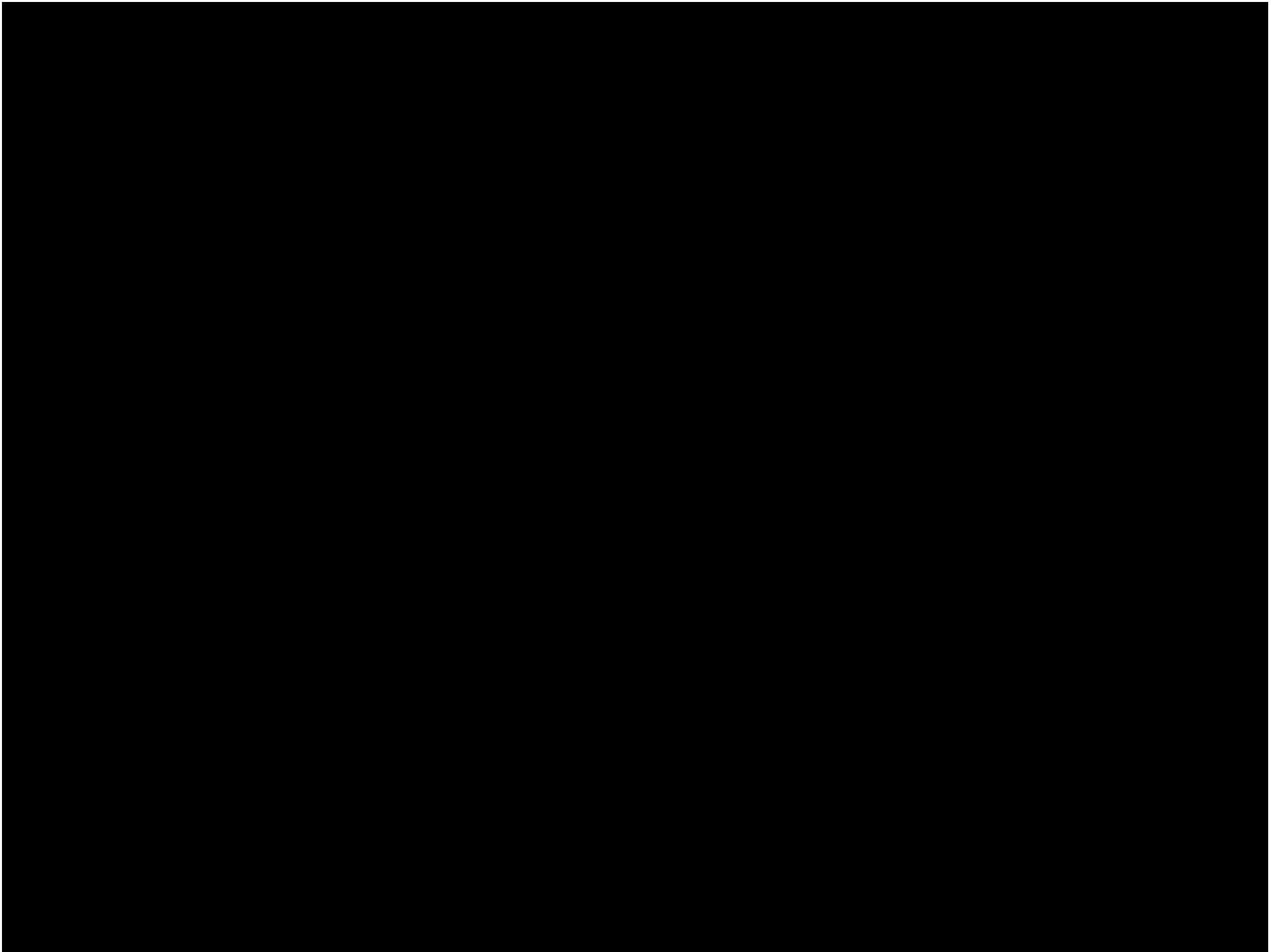


“A brilliant transplant surgeon has five patients, each in need of a different organ, each of whom will die without that organ. Unfortunately, there are no organs available to perform any of these five transplant operations. A healthy young traveler, just passing through the city the doctor works in, comes in for a routine checkup. In the course of doing the checkup, the doctor discovers that his organs are compatible with all five of his dying patients.” (Thomson, 1985)



Cognitive biases

- Sunstein (2005): Utilitarian rules are “simple heuristics that make us good”. They are generally good (“do not harm”) but sometimes they are mistaken (“do not kill anyone, even though it may save many people”).
- Baron (1994, 2003): Non utilitarian judgments could be the result of “docility” or “overgeneralization”. As a result, people have “protected values”.
- Greene (2001, 2010): Non utilitarian judgments are due to primitive emotional dispositions such as violence aversion, disgust or empathy. Departures from utilitarianism are “moral confabulations” based on “alarm bell emotions”.



Cognitive biases or adaptative judgments?

Selfishness

Morality

Self

Others



- When we help, we don't give as much as possible. We give a *quite specific and limited amount*: duty to give a few coins to beggars, not all our wealth.
- When we share, we don't give as much as possible. We share in a *quite specific and limited way*: those contribute more should receive more.
- When we punish, we do not take as much as possible from the wrongdoer. We take in a quite specific and limited way: a year in jail is too much for the theft of an apple and not enough for a murder.

Selfishness

~~Morality~~

Self

Others







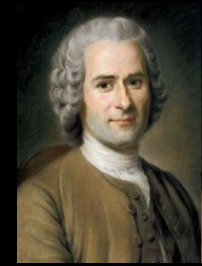
- When we help, we don't give as much as possible. We give a *quite specific and limited amount*: the cost of helping should be **proportionate** to the benefit of the help.
- When we share, we don't give as much as possible. We share in a *quite specific and limited way*: the distribution of the benefit should be **proportionate** to the contribution of the individuals.
- When we punish, we do not take as much as possible from the wrongdoer. We take in a quite specific and limited way: the compensation should be **proportionate** to the tort, the punishment to the crime.



- When humans follow their moral intuitions, they behave **as if** they had bargained with others to reach an agreement about the distribution of the costs and benefits of social interactions.



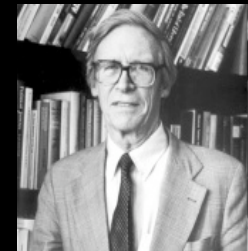
Hobbes



Rousseau



Kant



Rawls

- Morality is about sharing the benefits of cooperation **in a fair way**.



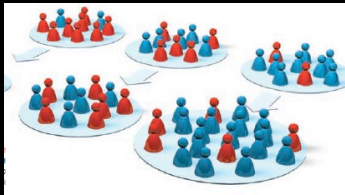
Moral judgments



Theories of cooperation

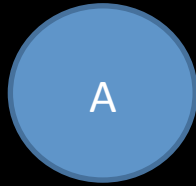
Groupselection

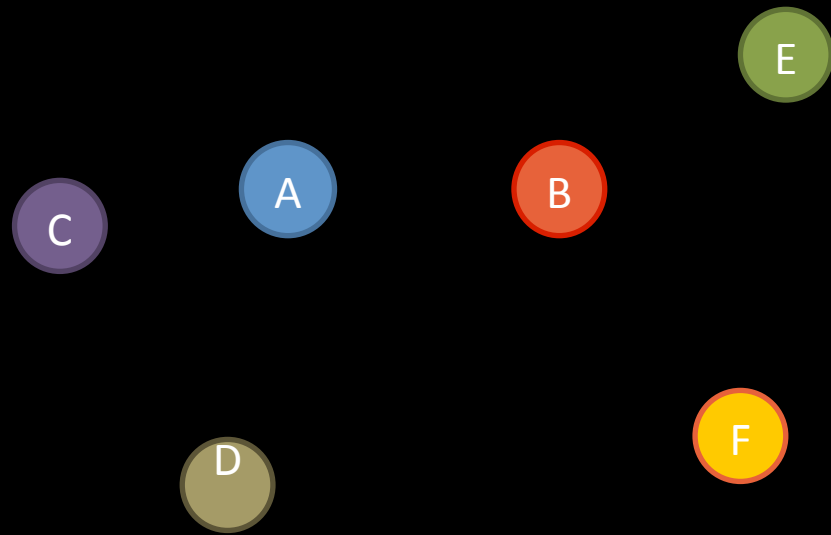
Individual selection





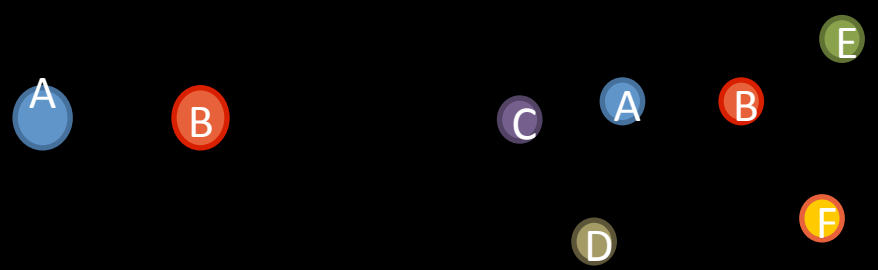
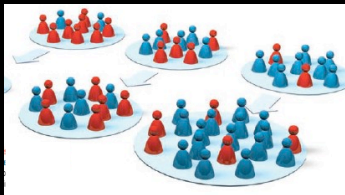
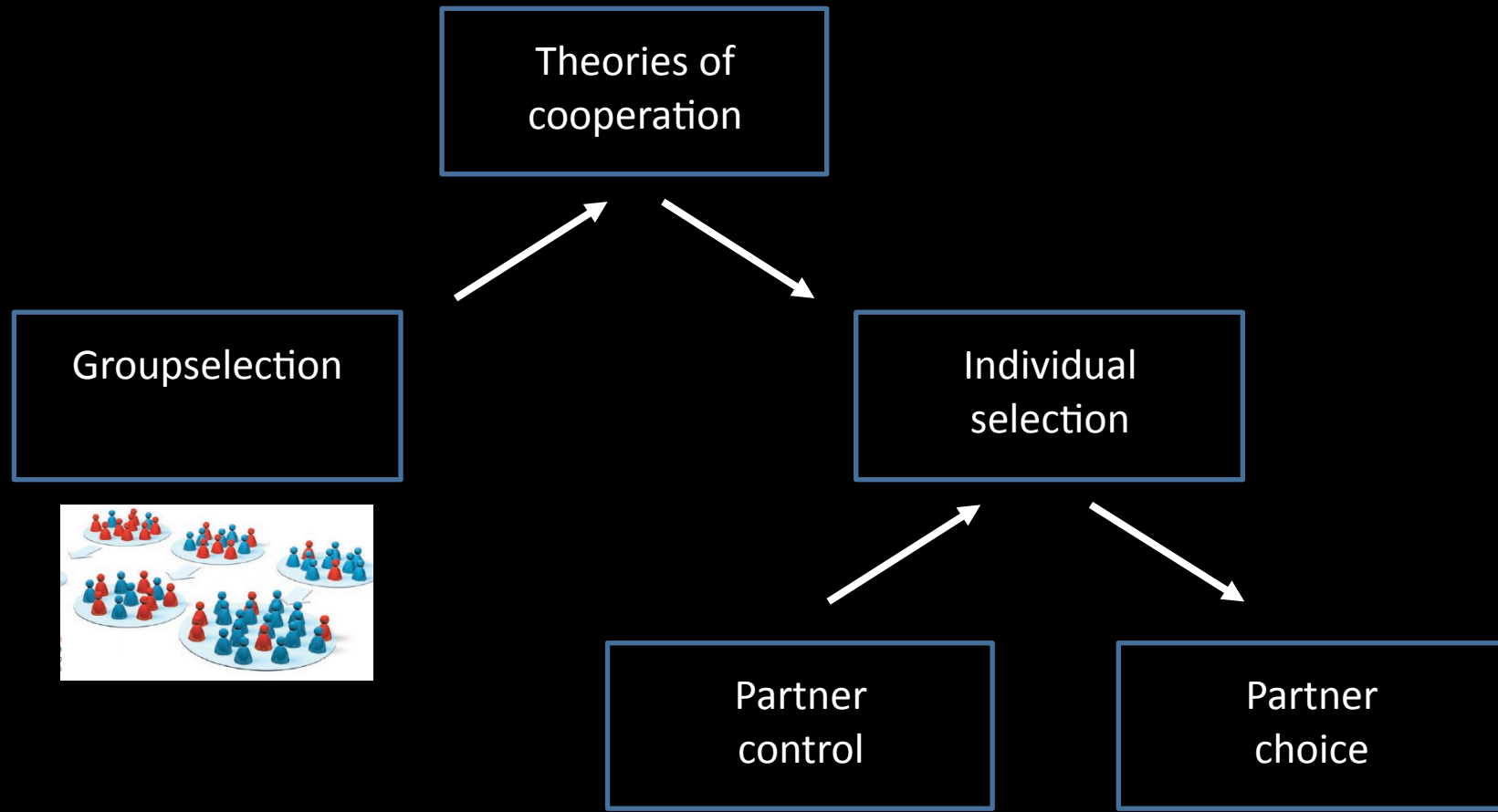
- Reciprocity theory



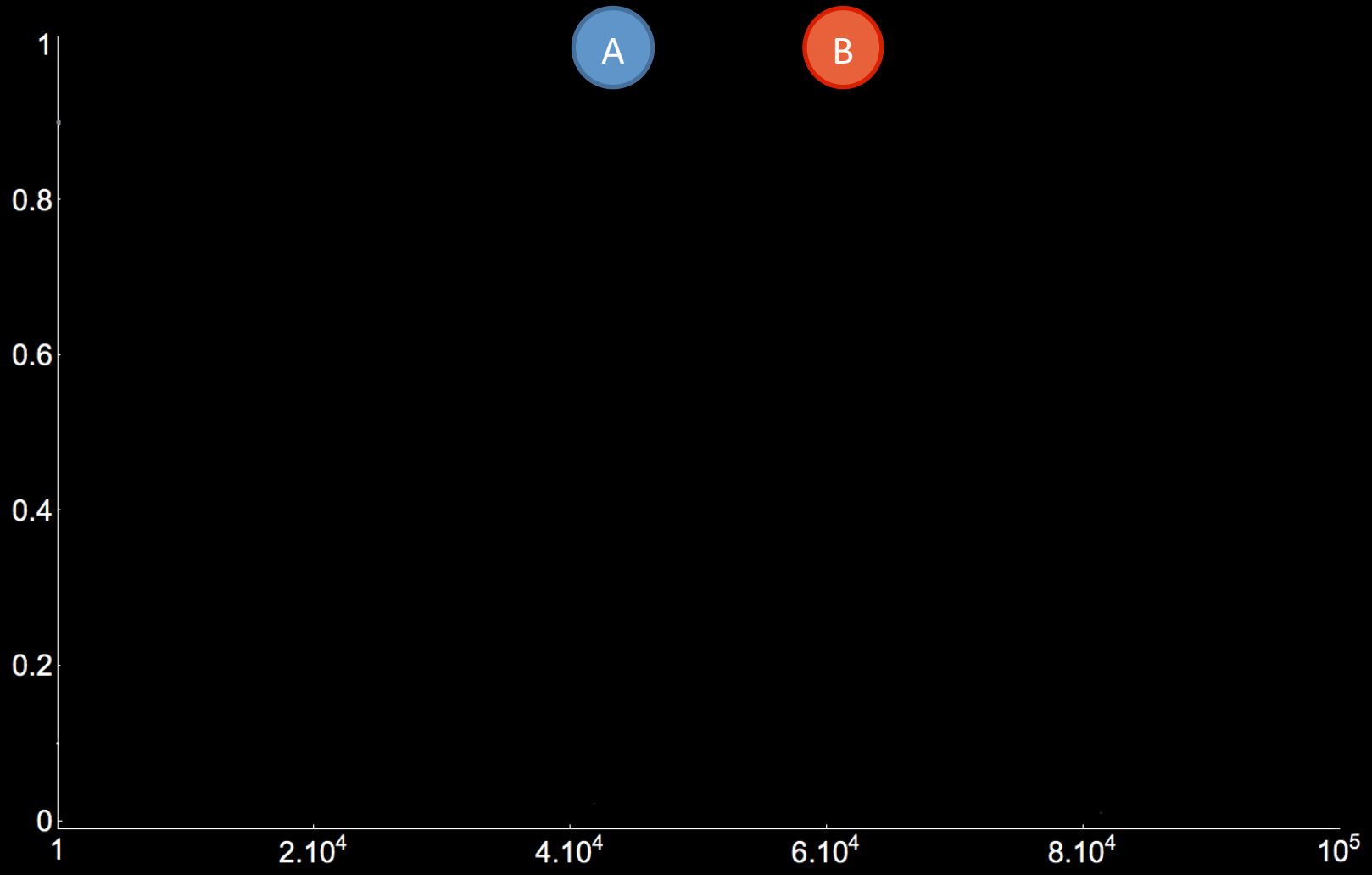


- Biological market

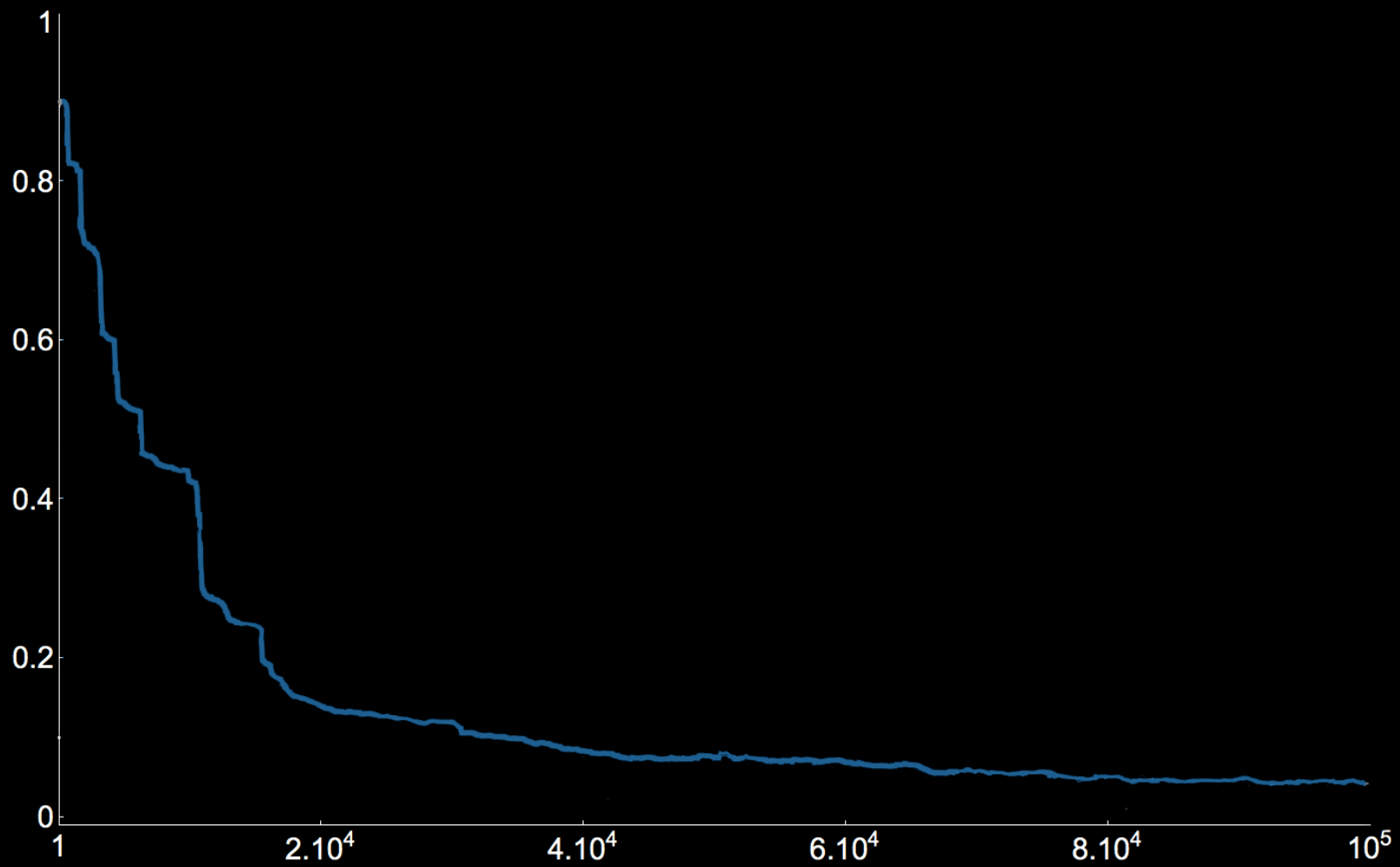




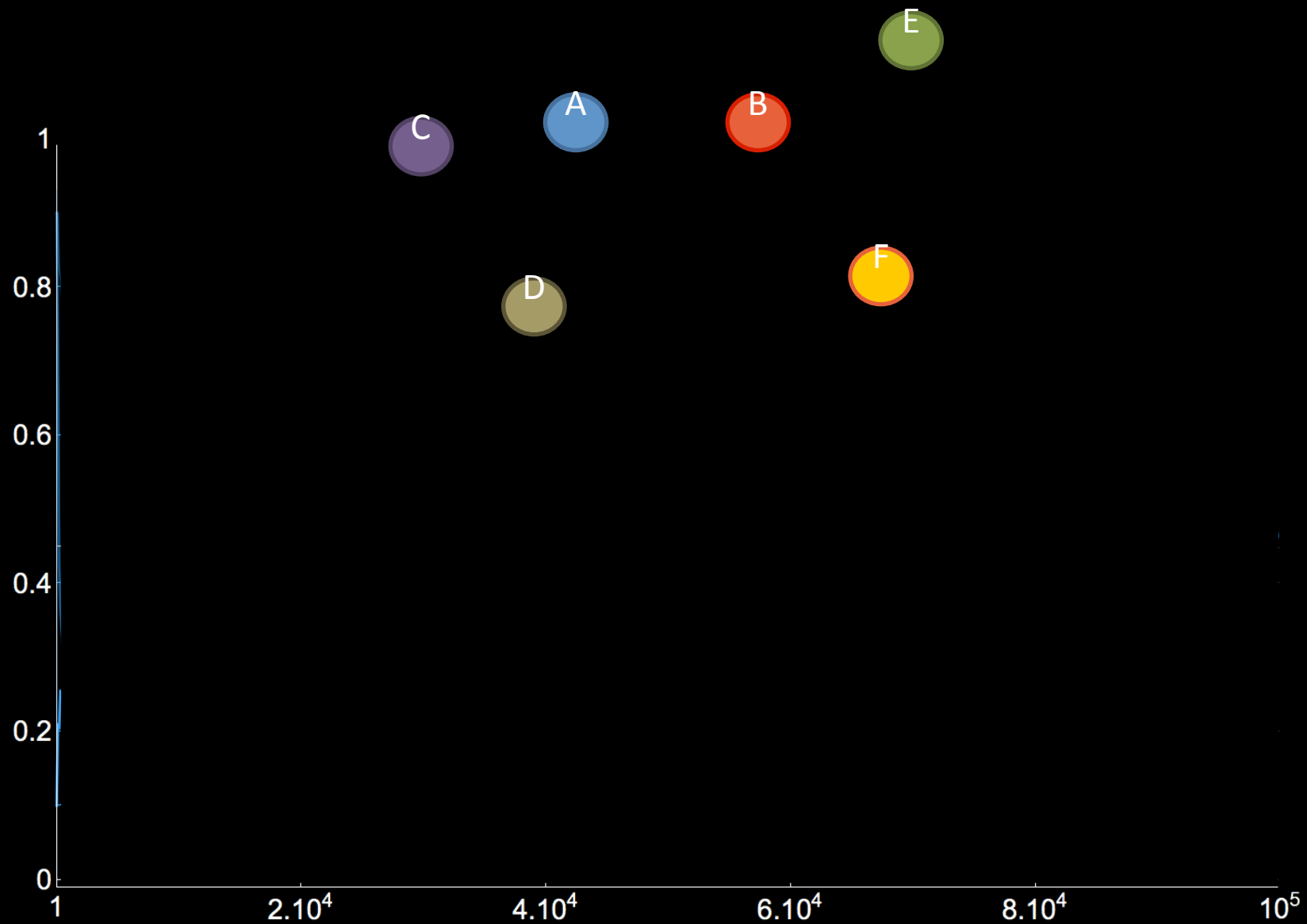
André & Baumard, 2011, *J. Theoret. Biol.*
 André & Baumard, 2011, *Evolution*



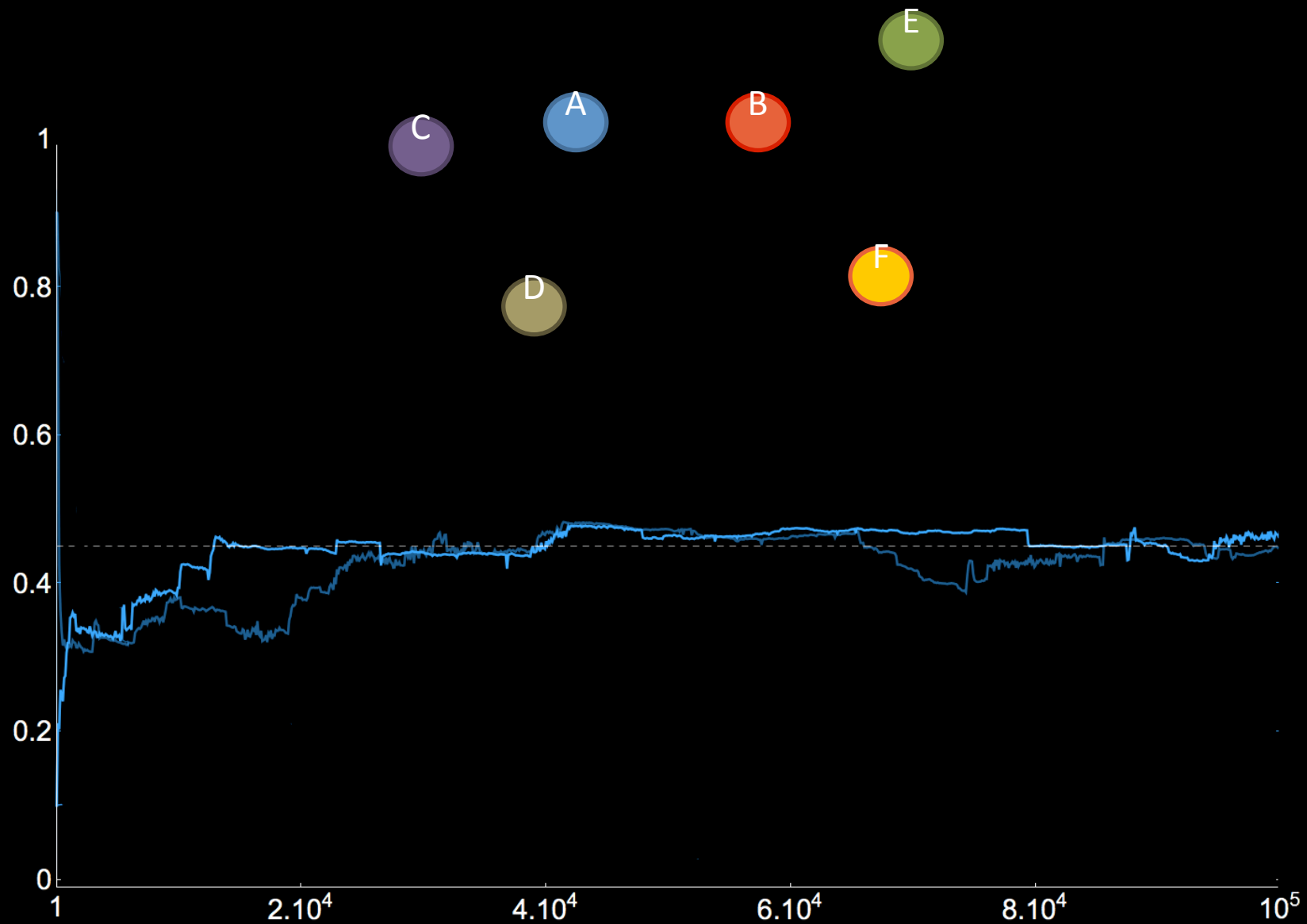
Number de generations



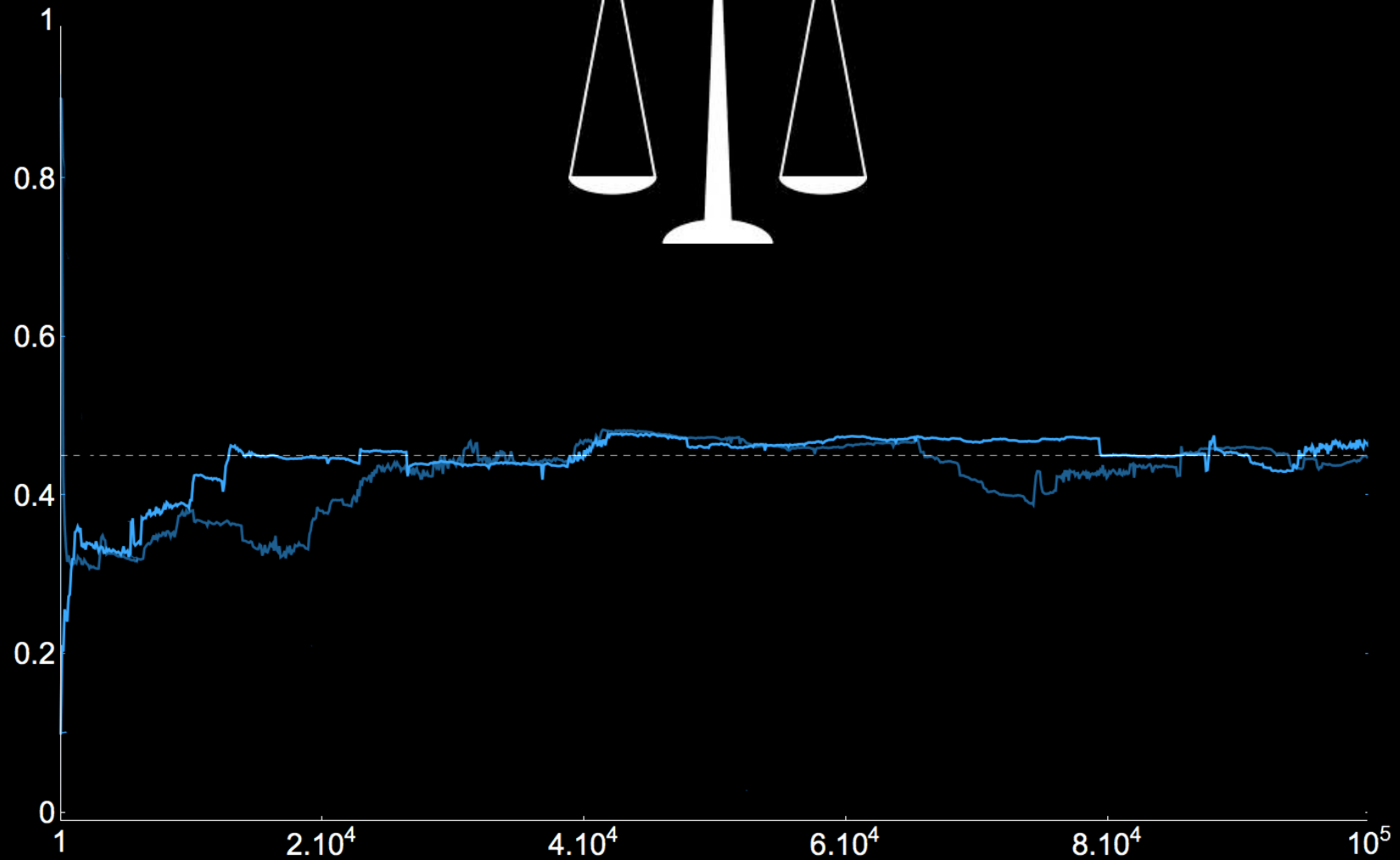
Number de generations



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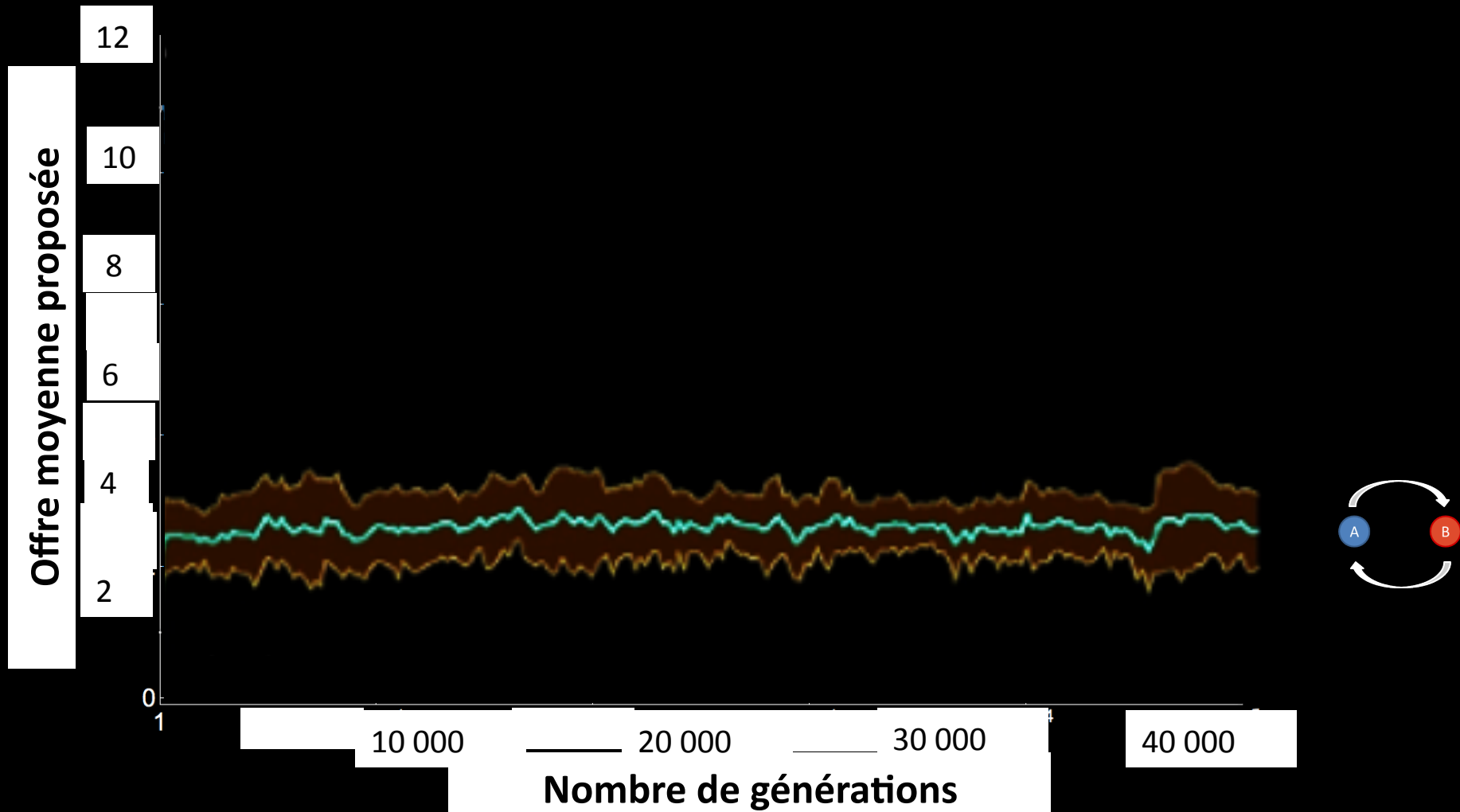


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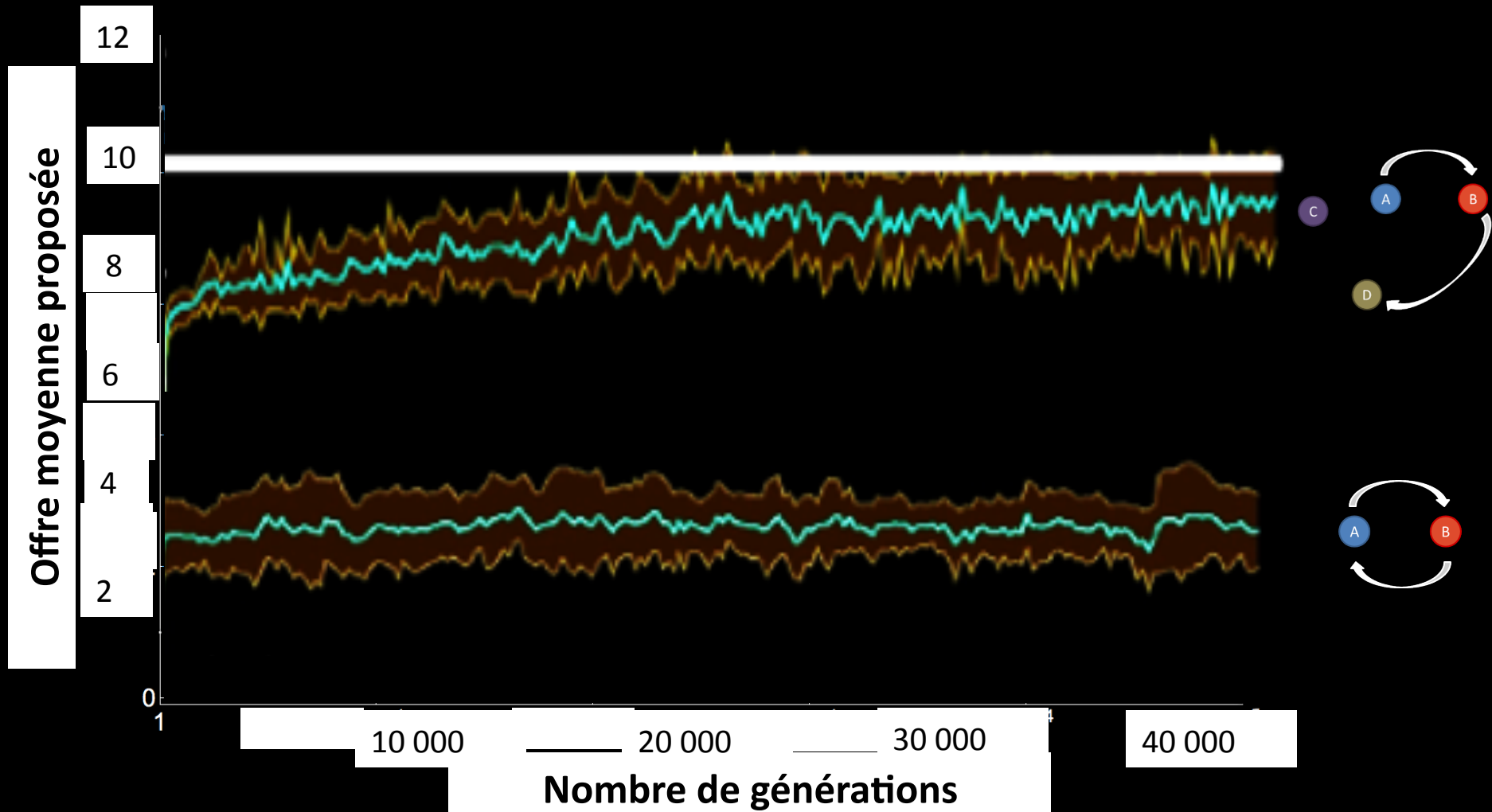


15?

Debove, **Baumard**, & André (soumis) Defend the weak and the helpless:
an evolutionary account of the existence of rights for the weak.
Debove, André, & **Baumard** (en prép.) The evolution of merit by partner choice:
A behavioral economic approach.



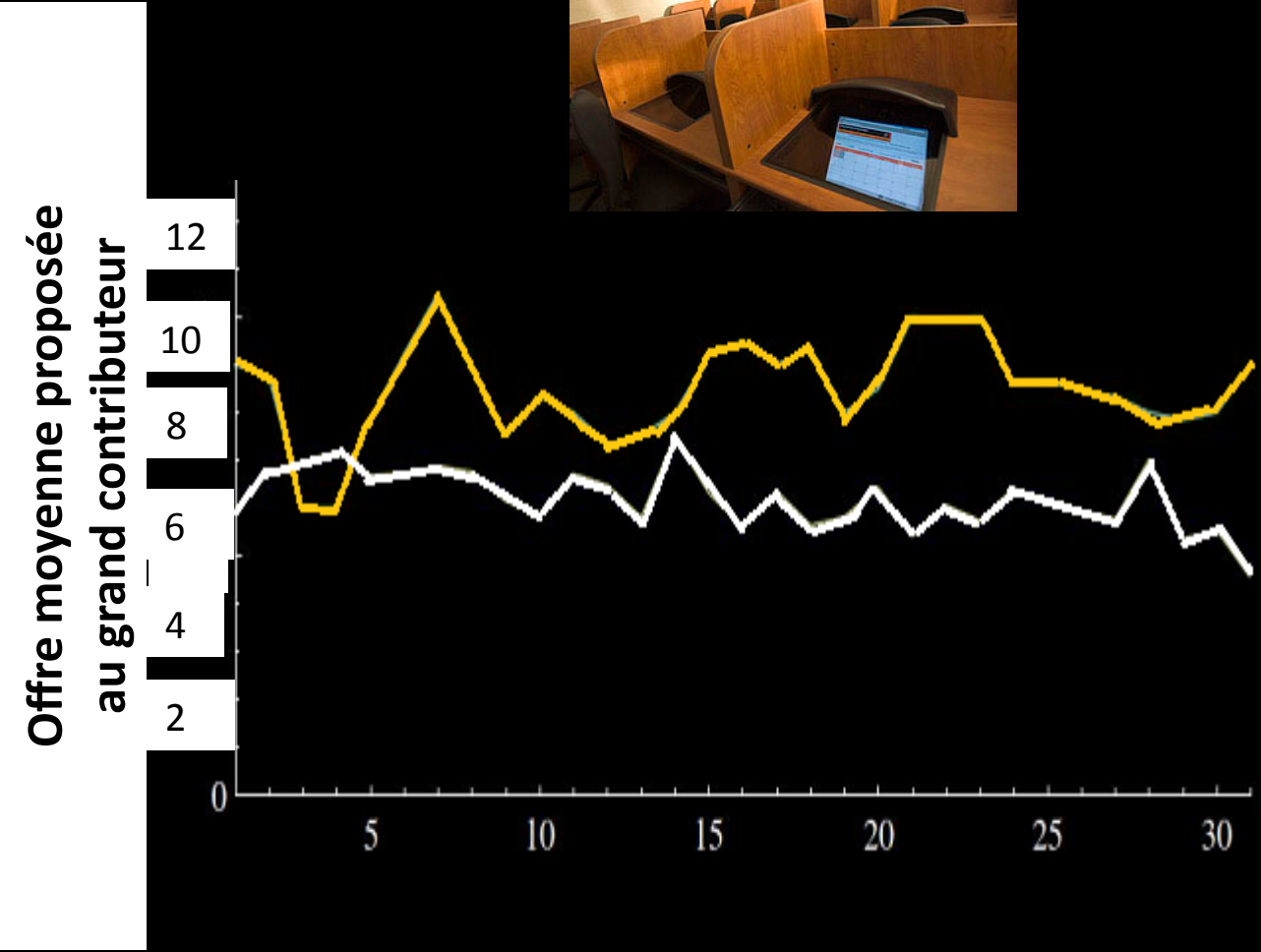
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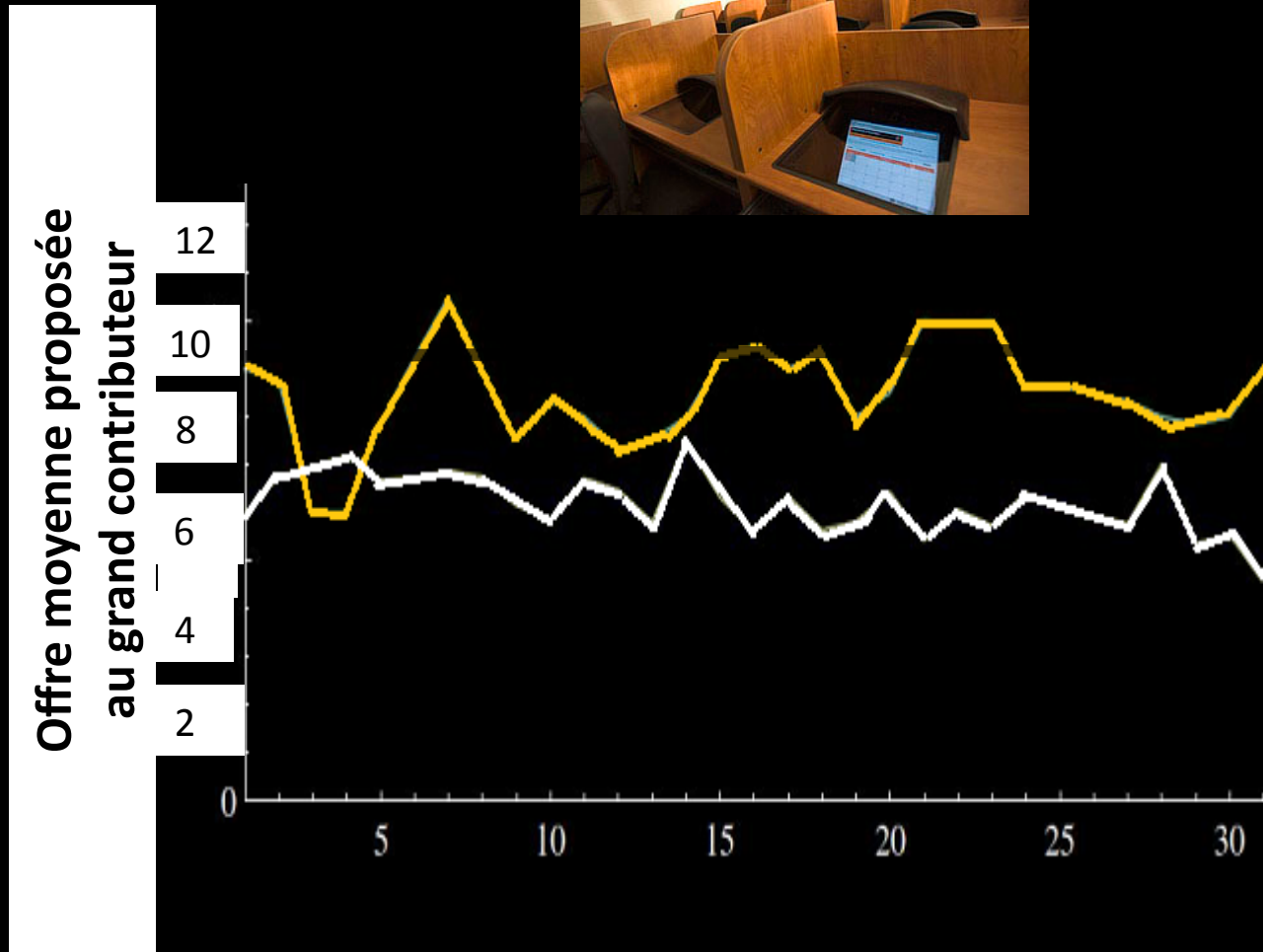
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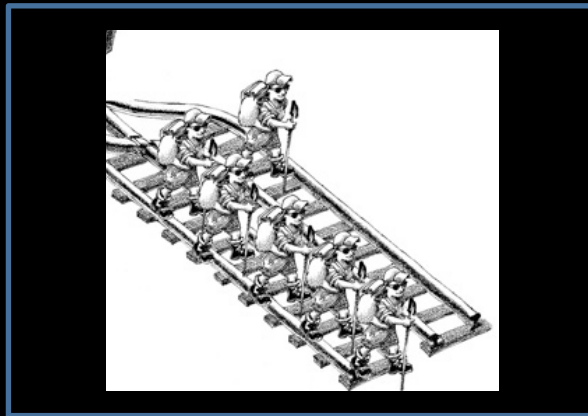
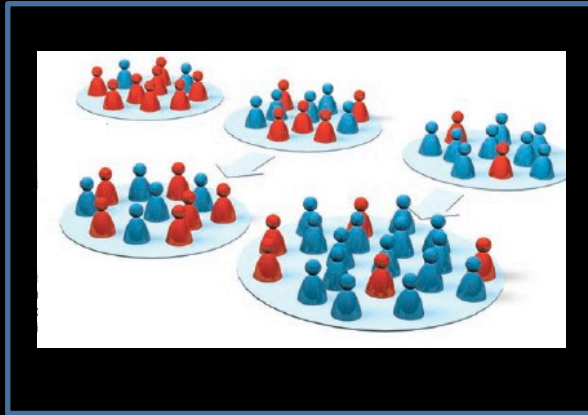


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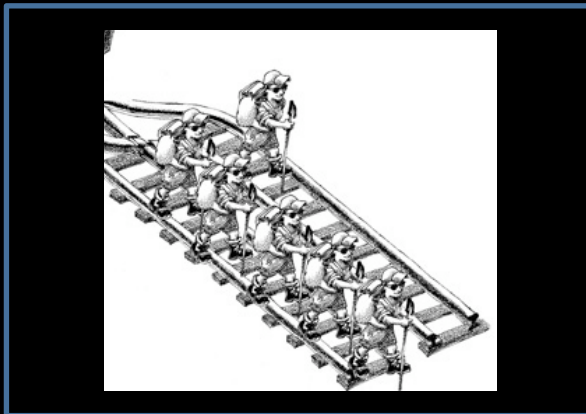
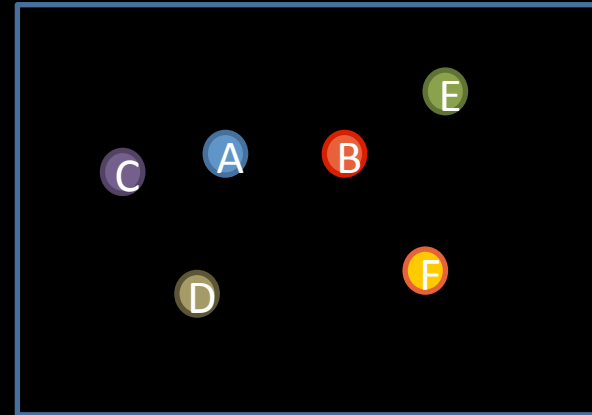
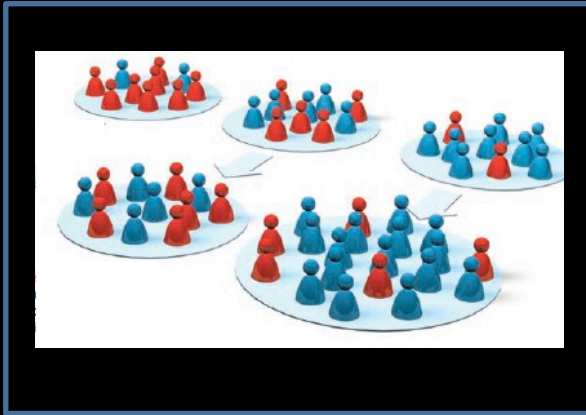


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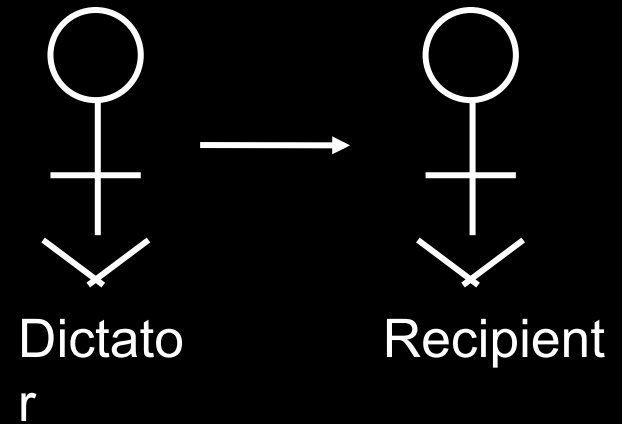
An alternative



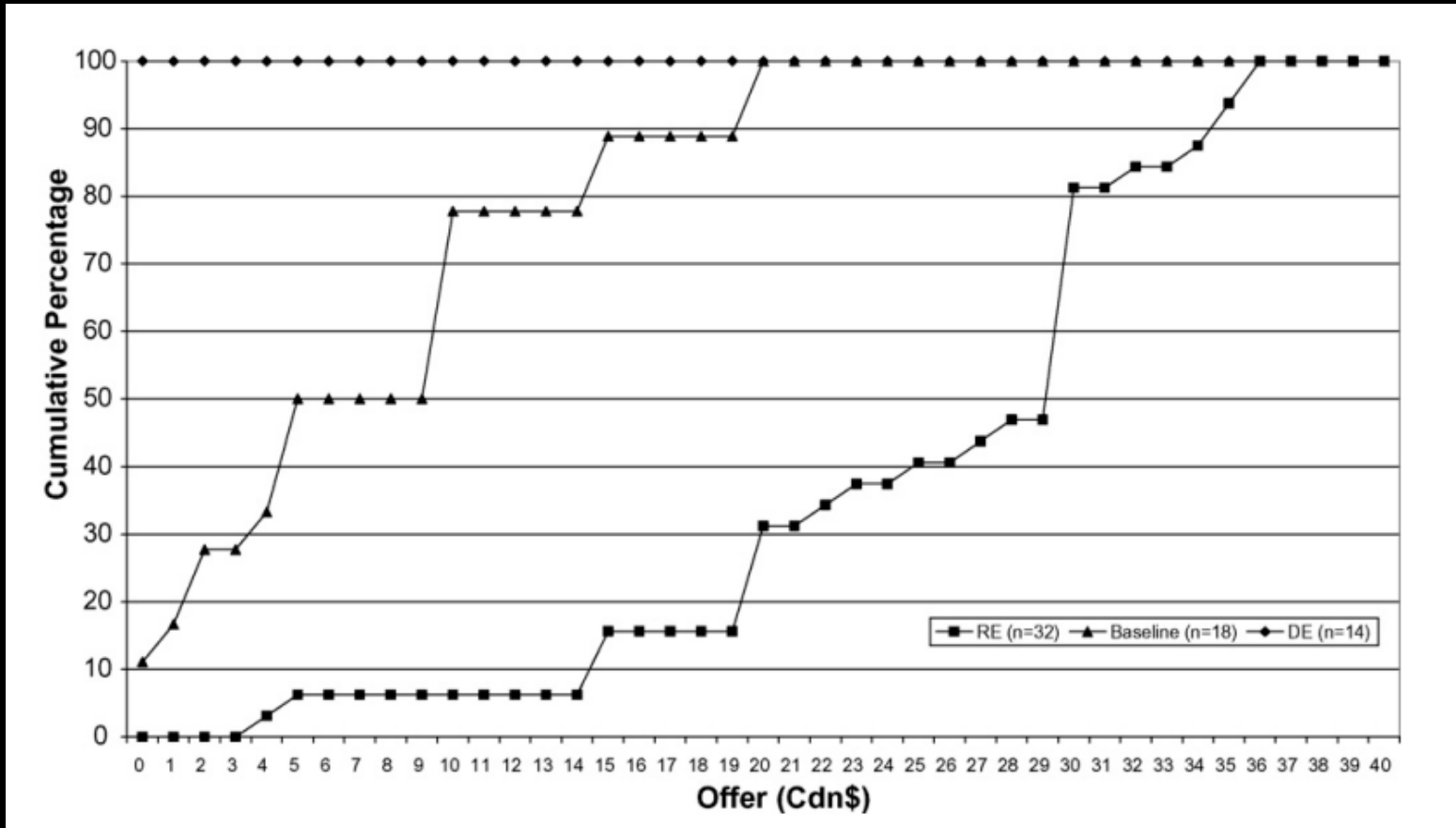
An alternative



Variations of the dictator game



- Prediction:
 - The dictator is trying to give out the amount which she feels is fair (rather than helping out the other participant)
- The amount given by the dictator will vary according to the situation.
 - The distribution of the money will be affected by participants' perception of who has rights over the money (rather than by how much the other player would benefit from the money).



Spragon & Oxoby, 2008, *Evolution & Human Behav.*

Self

Others



Baumard, André & Sperber, in press, *BBS*

The logic of proportionality in punishment.



- Utilitarianism: morality is about maximizing welfare
→ Punishment aims at deterring crimes.

- Contractualism: morality is about being fair
◇ Punishment aims at restoring fairness (by compensating the victim or inflicting a cost to the criminal)

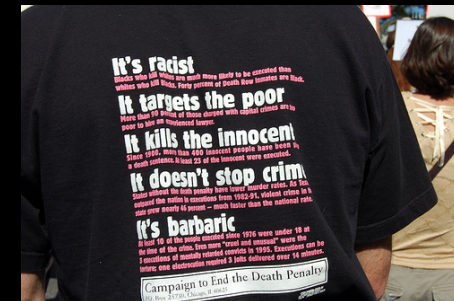
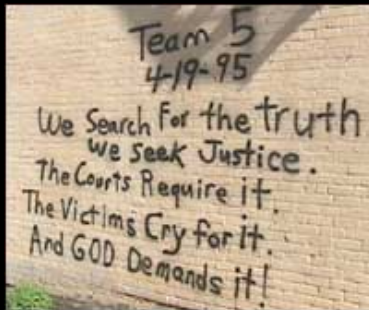
The logic of proportionality in punishment.



- Utilitarianism: morality is about maximizing welfare
→ Punishment aims at deterring crimes.

Sanctions should always be **harsh enough** to make it more advantageous to cooperate than to defect: if a crime is difficult to detect, the punishment for that crime ought to be more severe in order to counterbalance the temptation created by the low risk of getting caught.

The logic of proportionality in punishment.



“66% of those who said they supported the death penalty indicated that they would still support it if it had no deterrent value”

Ellsworth and Ross 1983

Baumard, 2010, *Mind & Society*
Baumard, 2011, *Mind and Society*

The logic of proportionality in punishment.



- When people punish harmdoers, they generally ignore factors related to **deterrence** (likelihood of detection, publicity of the punishment, likelihood of repeat offending)
- When people punish harmdoers, they generally take into account parameters that are relevant to **restore fairness** between the criminal and the victim (magnitude of harm, intentionality).

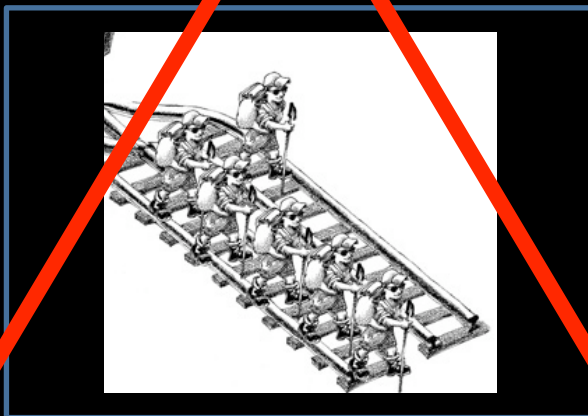
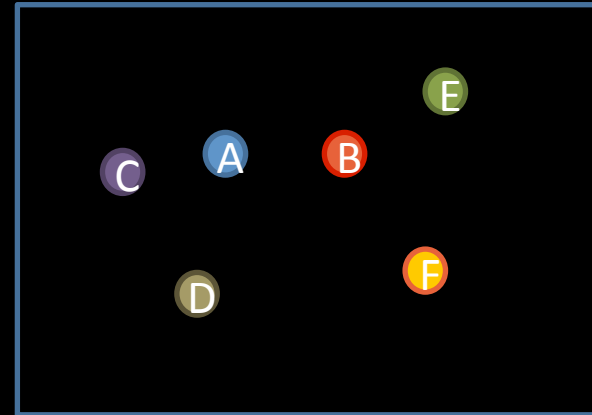
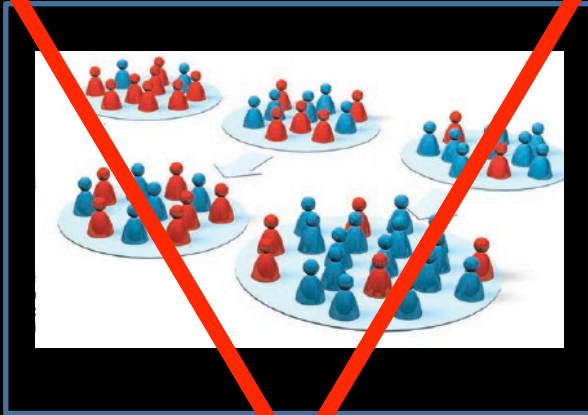
The logic of proportionality in punishment.



- The level of compensation in prestate societies is proportional to the harm done to the victim: it aims to force the wrongdoer to compensate the victim rather than to deter future crimes.

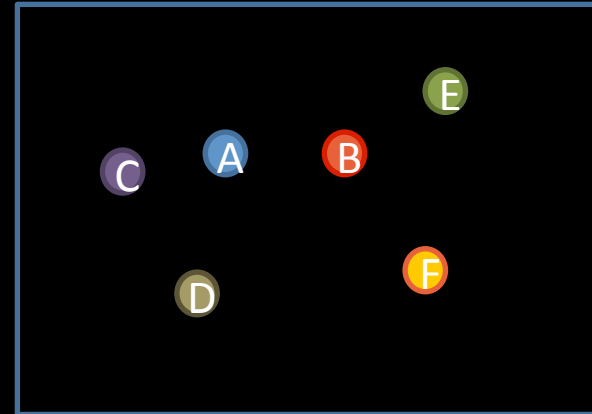


An alternative

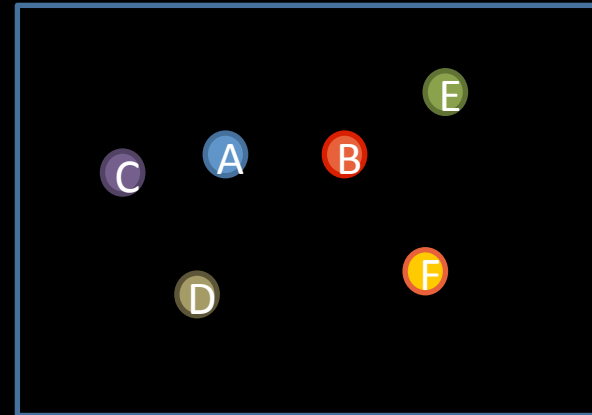


An alternative

- Fairness means:
 - If it does not belong to anyone, it should be divided equally (ultimatum game).
 - If it's yours, it's yours.
 - If you bring more to the interaction, you deserve more.
 - If you take other's resources, you need to compensate.



An alternative



Baumard, André & Sperber, in press, *BBS*



Input A

Input B



Output A

Output B



Input A

Input B



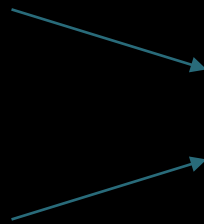
Output A

Output B



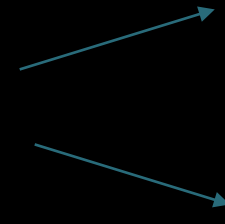
Input A

Input B



Output A

Output B



EACH DAY HUMBLE SUPPLIES ENOUGH ENERGY TO MELT 7 MILLION TONS OF GLACIER!

This giant glacier has remained unmelted for centuries. Yet, the petroleum energy Humble supplies—converted into heat—could melt it at the rate of 80 tons each second! To meet the nation's growing needs for energy, Humble has applied science to nature's resources to become America's Leading Energy Company. Working wonders with oil through research, Humble provides energy in many forms—to help heat our homes, power our transportation, and to furnish industry with a great variety of versatile chemicals. Stop at a Humble station for new Econ Extra gasoline, and see why the "Happy Motorist's Sign" is the World's First Choice.

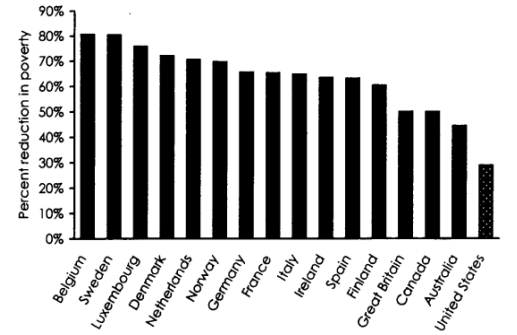
HUMBLE
AN AMERICAN PETROLEUM COMPANY
America's Leading Energy Company

Input A

Input B



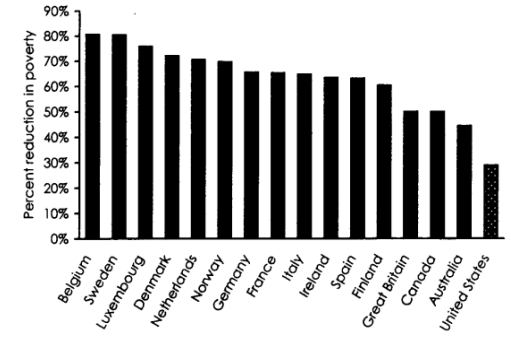
Figure 9.1 Percent Reduction in Poverty Due to Government Taxes and Transfer Programs



Source: Smeeding, "Financial Poverty in Developed Countries," table 7.
Notes: Poverty levels are based on 50% of each country's median disposable income. See page 262, note 1 for details of income, tax, and transfer calculations.



Figure 9.1 **Percent Reduction** in Poverty Due to Government Taxes and Transfer Programs

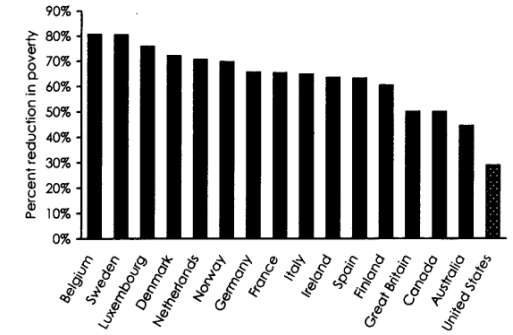


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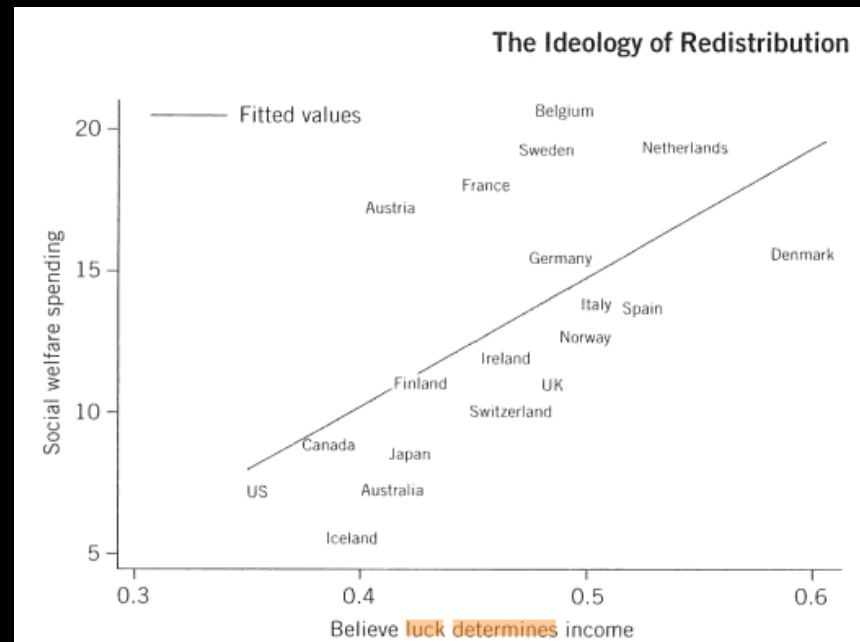


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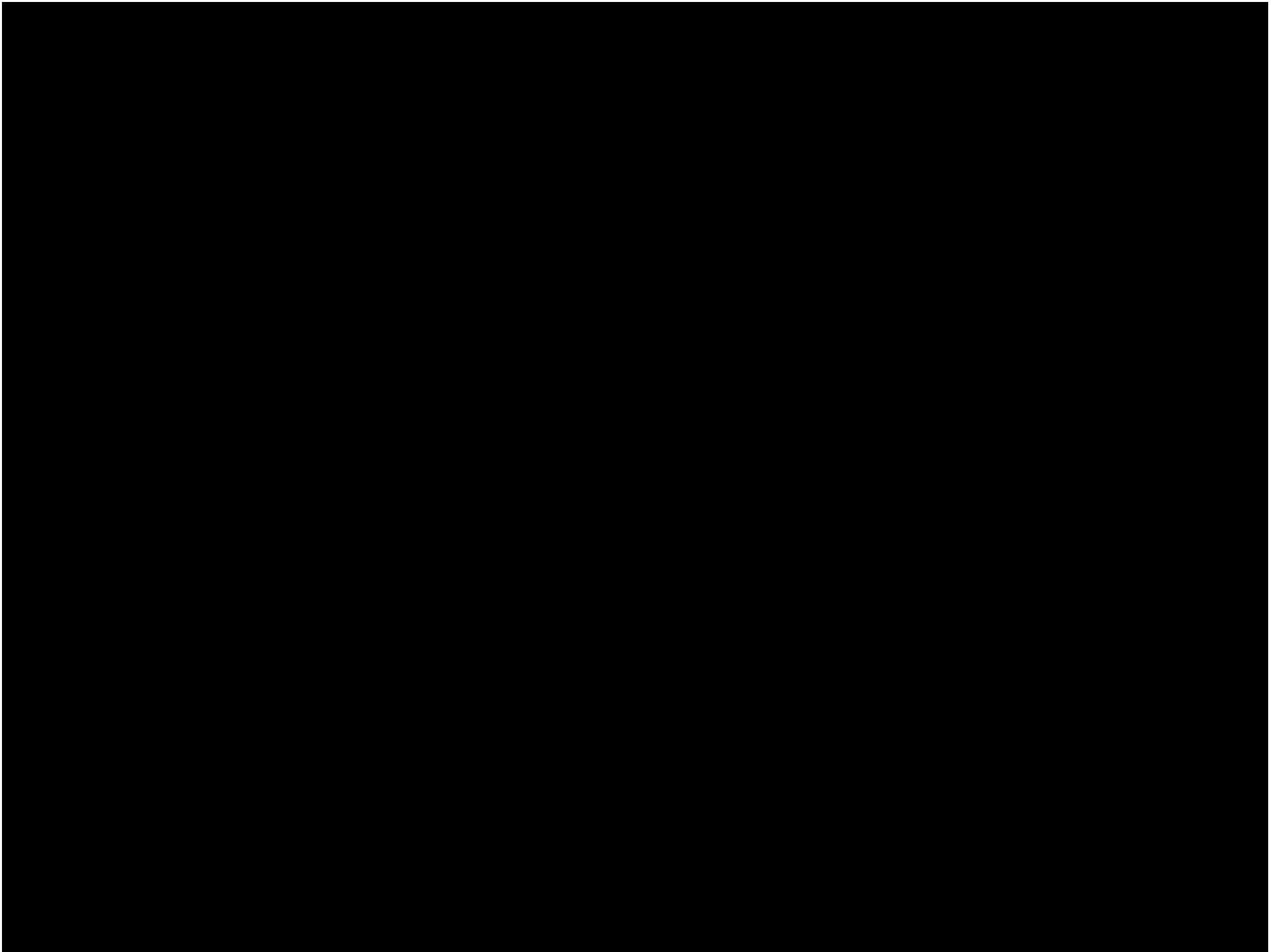


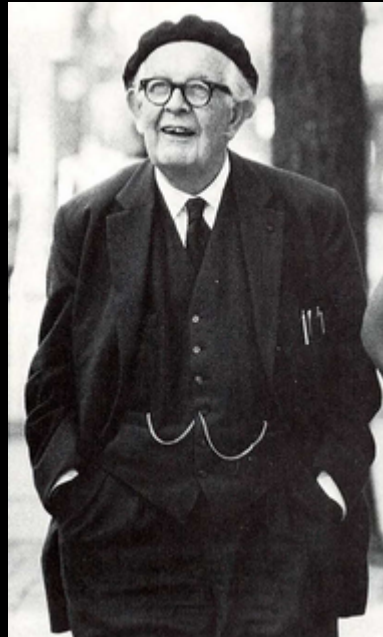
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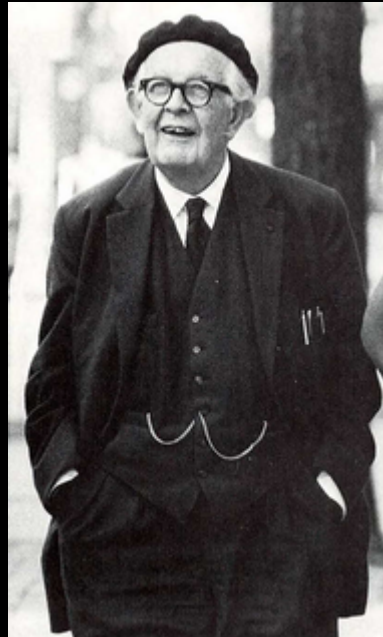






Jean Piaget

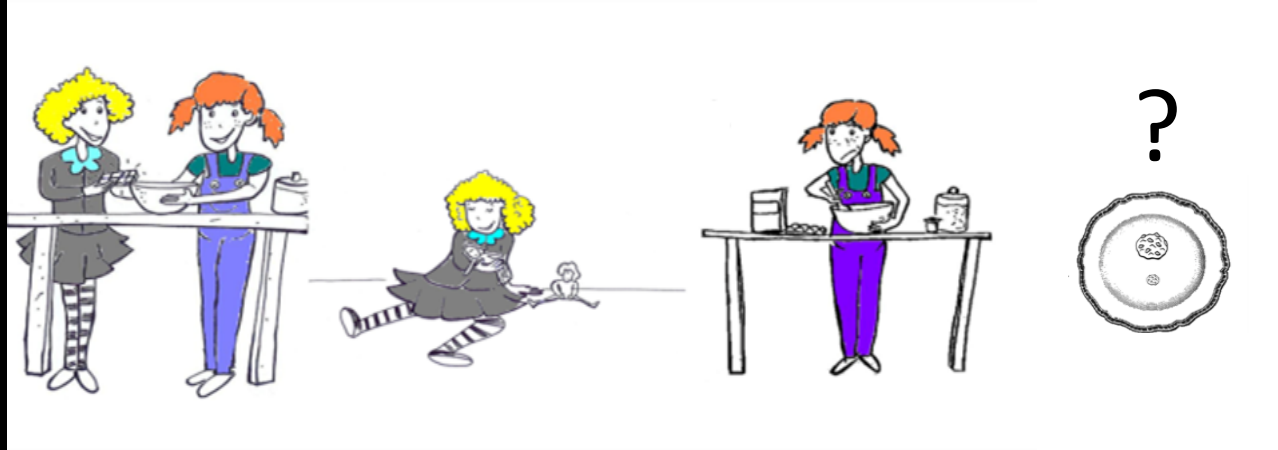
	View of Persons	Social Perspective Lvl
6	Sees how human fallibility and frailty are impacted by communication	Mutual respect as a universal principle
5	Recognize that contracts will allow persons to increase welfare of both	Contractual perspective
4	Able to see abstract normative systems	Social systems perspective
3	Recognize good and bad intentions	Social relationships perspective
2	Sees that a) others have goals and preferences, b) either conform to or deviate from norms	Instrumental egoism
1	No VOP: only self & norm are recognized	Blind egoism

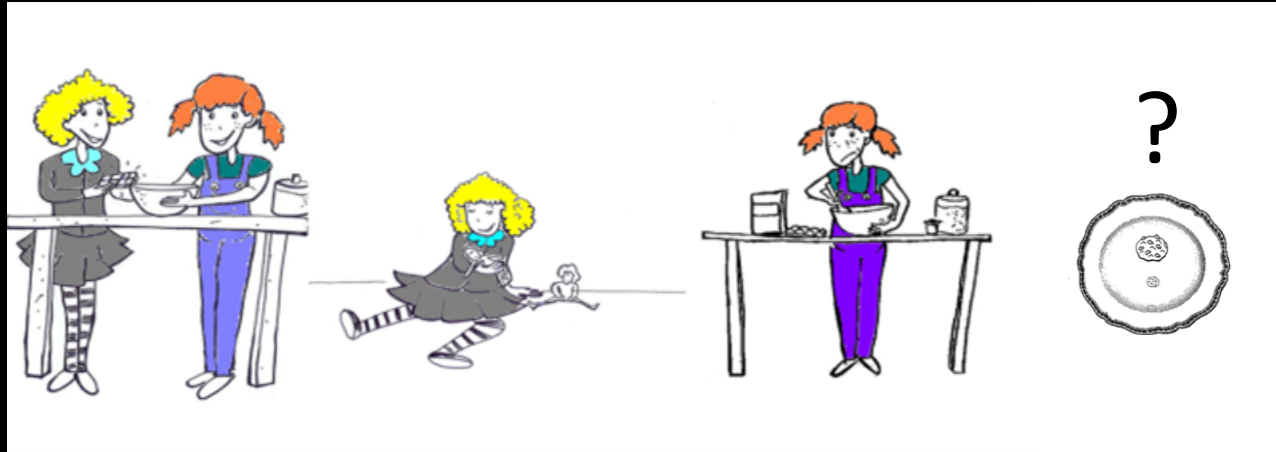




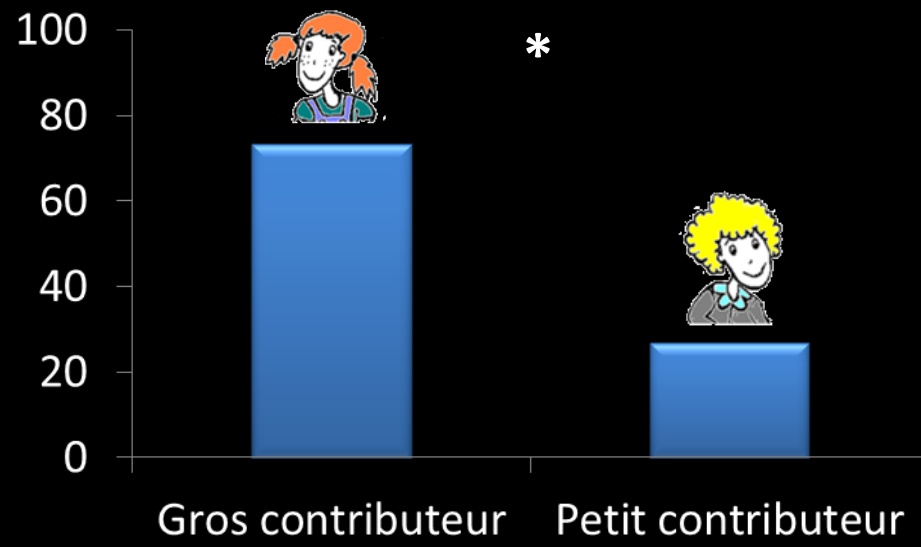




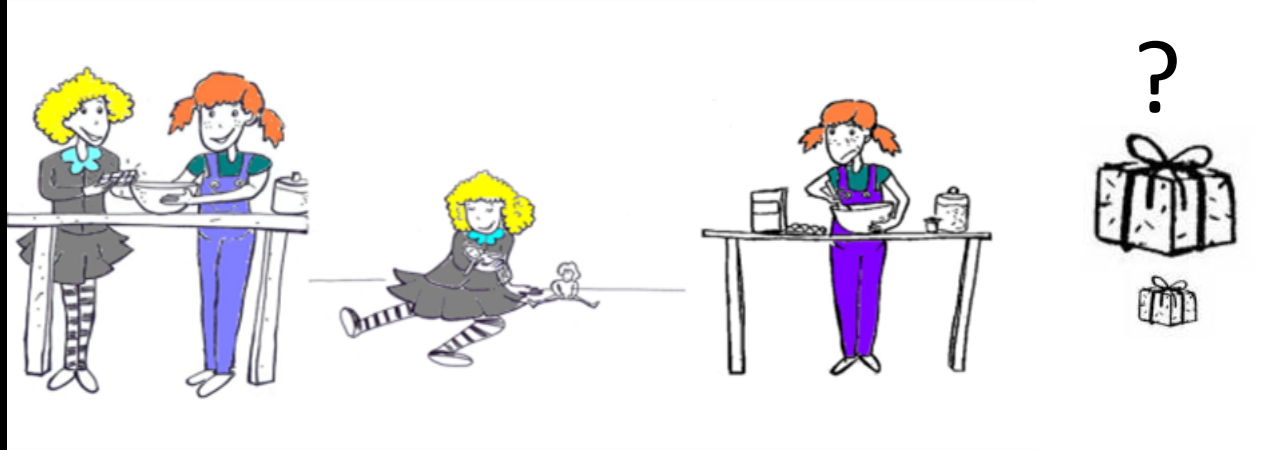




% d'enfants

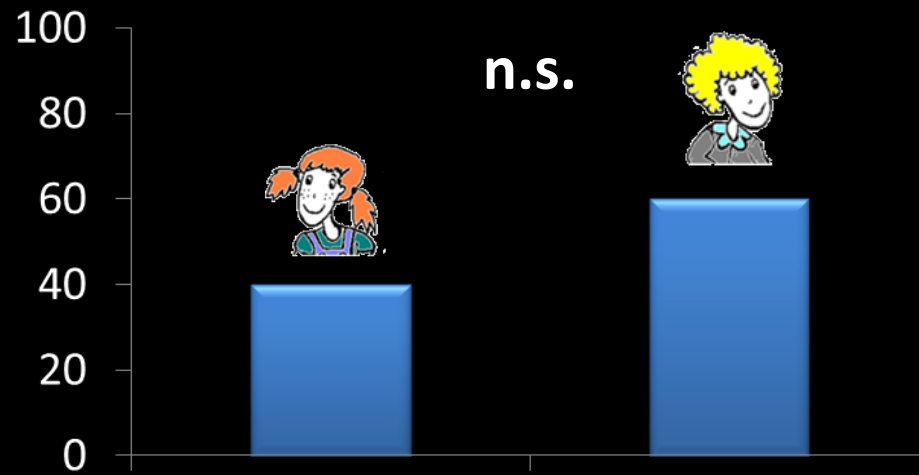








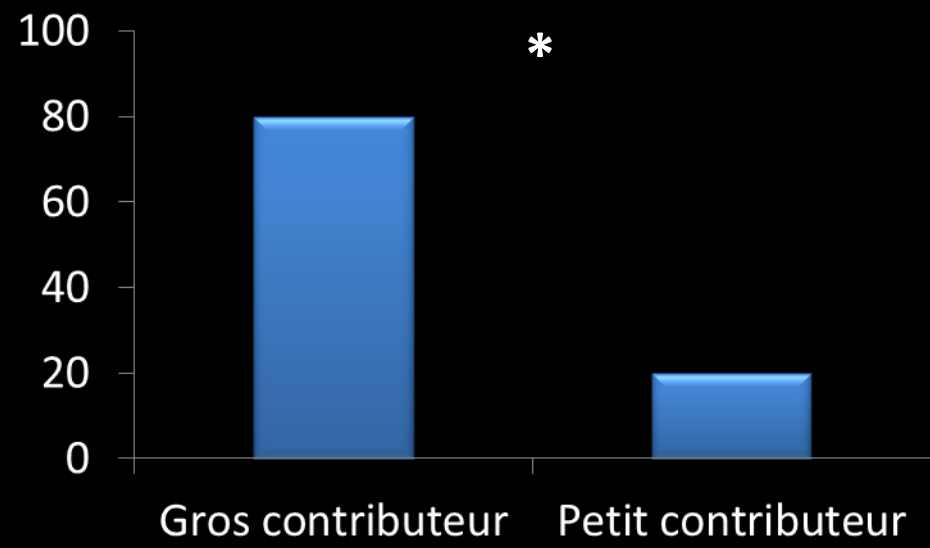
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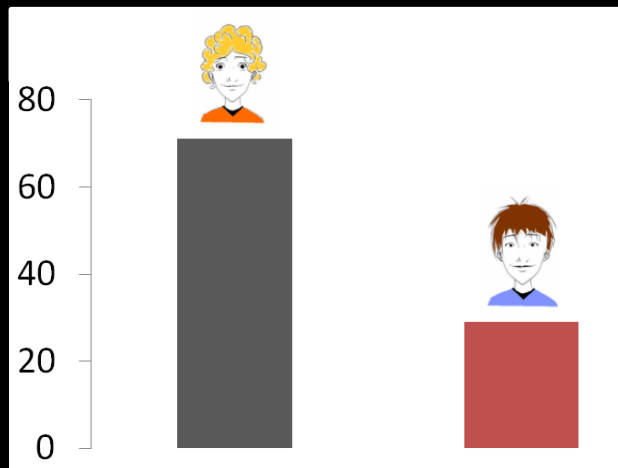
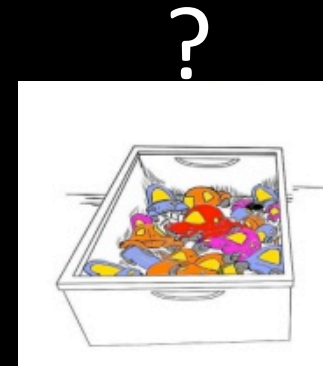
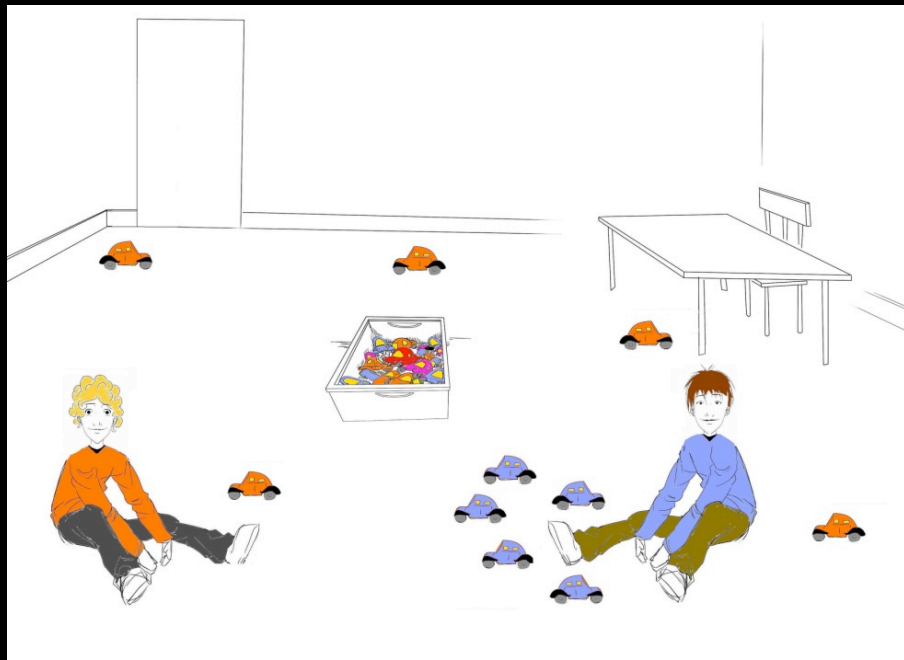






% d'enfants





Input A

Input B



Output A

Output B



A boat has sunk and six people are about to drown. Five people are very much close to each other, another person is alone. A sailor happens to be there and can throw a big buoy to help them.

The buoy lands exactly between the two groups.

The sailor sees that the shipwrecked are very tired and that he will not be able to save both the group of five and the person alone. The sailor can take back the buoy with a rope and throw it again. If he throws the buoy toward the five, he will save them but the person alone will die.



A boat has sunk and six people are about to drown. Five people are very much close to each other, another person is alone. A sailor happens to be there and can throw a big buoy to help them.

- 1) Exactly in the middle
- 2) Waves pushing the buoy towards the person alone
- 3) The buoy is right next to the person alone

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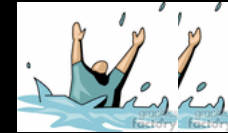


A boat has sunk and six people are about to drown. Five people are very much close to each other, another person is alone. A sailor happens to be there and can throw a big buoy to help them.

- 1) Exactly in the middle
- 2) Waves pushing the buoy towards the person alone
- 3) The buoy is right next to the person alone

The sailor sees that the shipwrecked are very tired and that he will not be able to save both the group of five and the person alone. The sailor can take back the buoy with a rope and throw it again. If he throws the buoy toward the five, he will save them but the person alone will die.

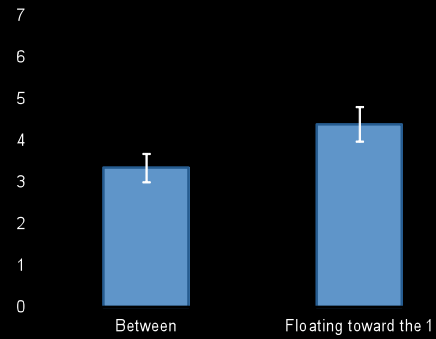


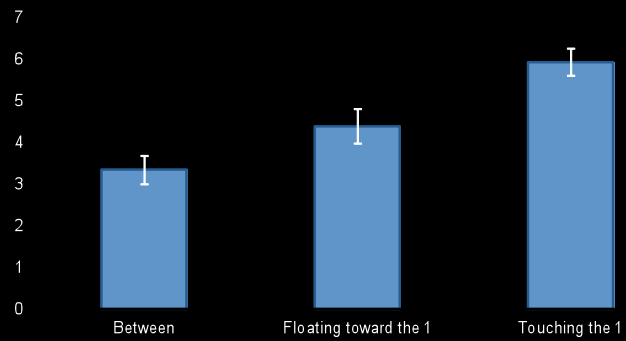


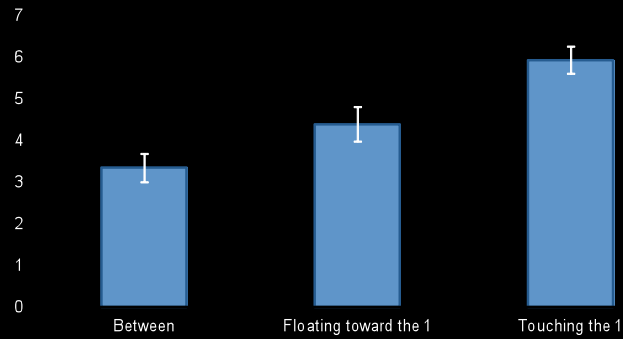
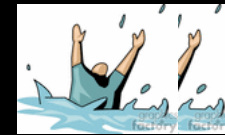
7
6
5
4
3
2
1
0



Between

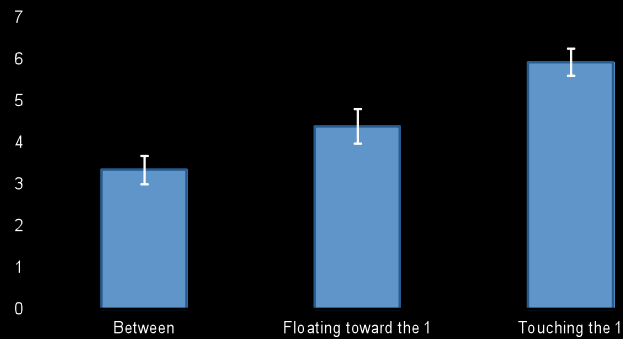
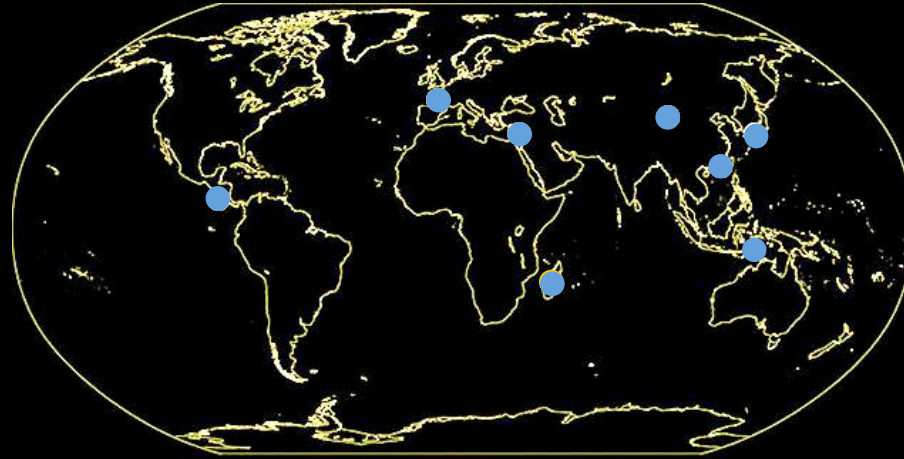






The one

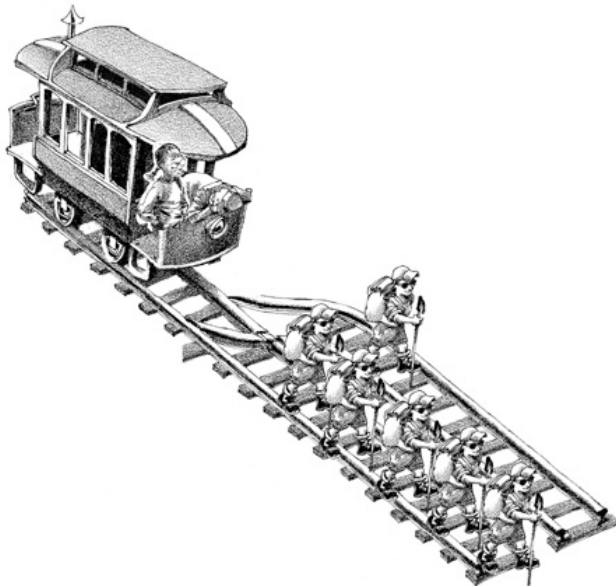
The five



The one

The five

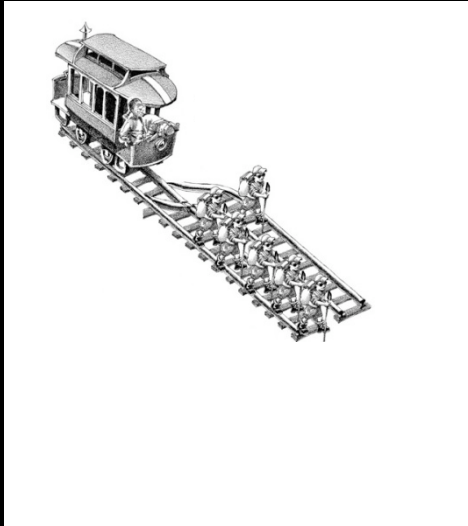
Prediction: The less likely the trolley is to hit the man on the track, the less OK it should be to divert the trolley toward him. The more likely the trolley is to hit the man on the footbridge, the more OK it should be to push him to stop the trolley.



Is it OK to divert the trolley?

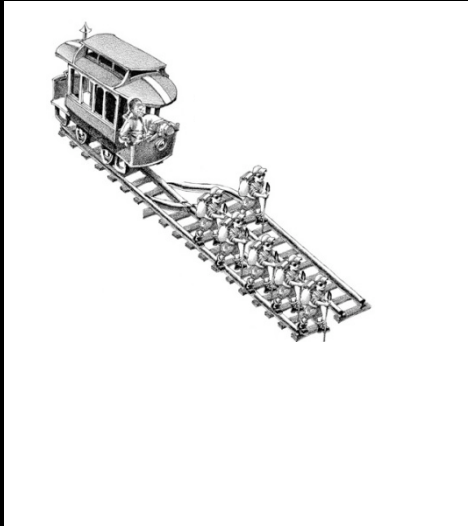


It is OK to push the man?



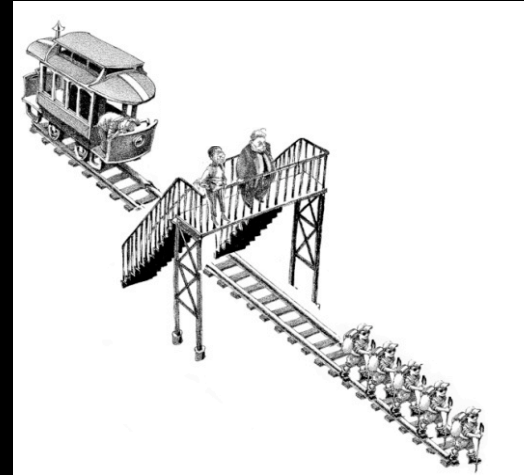
Original
Side track

Variant
Disused track



Original
Side track

Variant
Disused track



Original
On the bridge

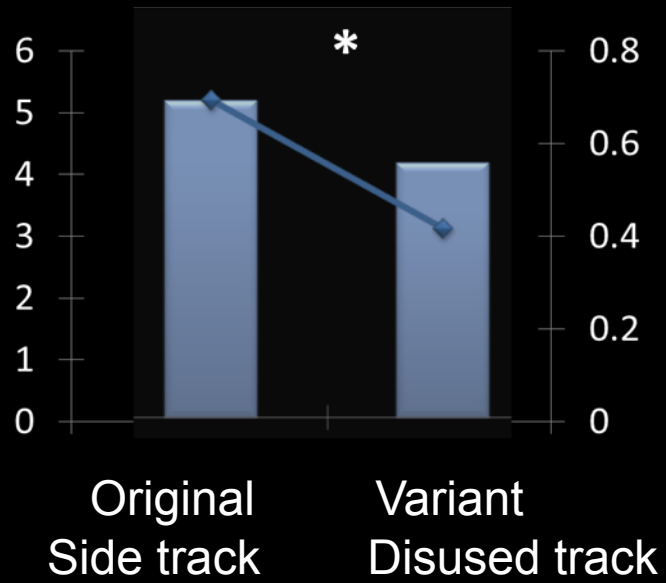
Variant
On the ground

Original
Side track

Variant
Disused track

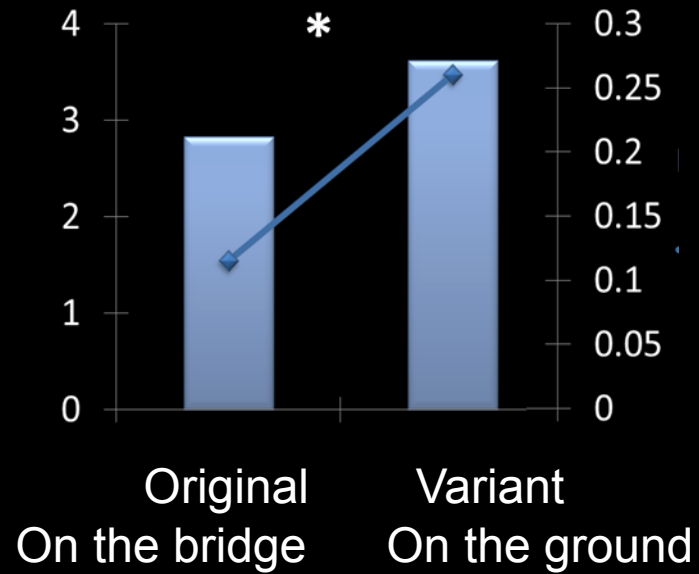
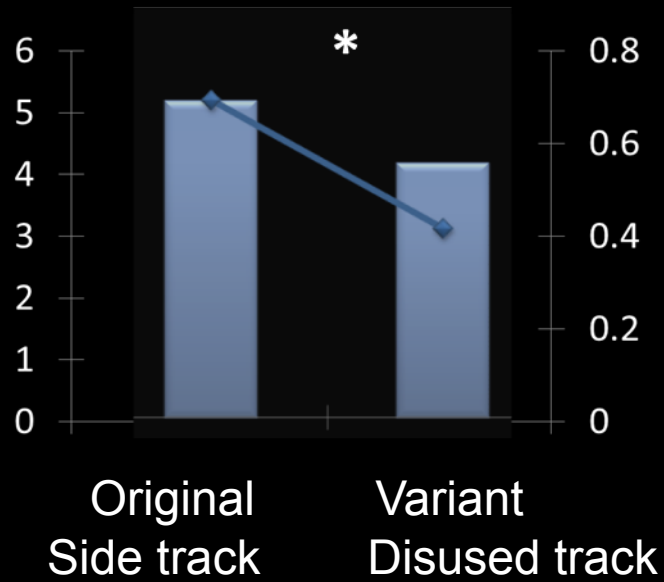
Original
On the bridge

Variant
On the ground



Original On the bridge
Variant On the ground

Is it OK to sacrifice the person alone?



Is it OK to sacrifice the person alone?

