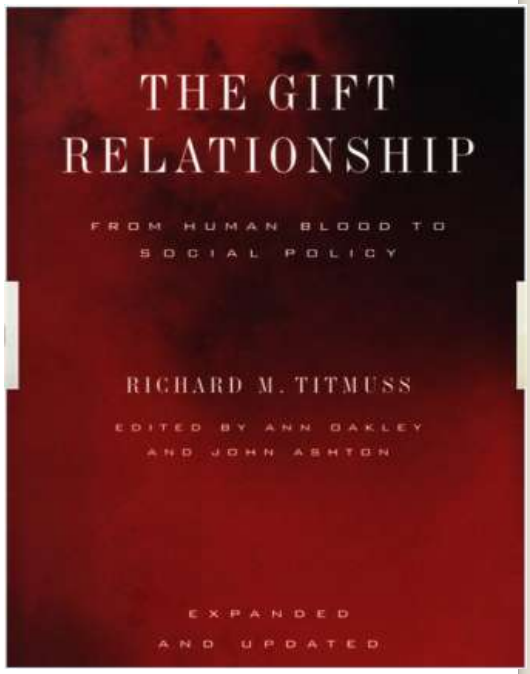
Are economic incentives overused in cases where they crowd out pro-social motivations?

Samuel Bowles
Santa Fe Institute, U.S.A. and
Dipartimento di Economia Politica, Univerity of Siena, Italy

Sung-Ha Hwang
University of Massachusetts Amherst, U.S.A.

Economic incentives (subsidy) when preferences are affected by incentives

Common Belief on the use of incentives.
-Explicit incentives -> crowd out ethical motivations -> the reduced effectiveness of incentives
-But, a naïve social planner by ignoring this over-uses incentives (Titmuss, 1971, The Gift Relation: From Human Blood to Social Policy ; Hirschman, 1985; Le Grand, 2006).
-**incentives = subsidy by a social planner aimed at raising contribution level.**



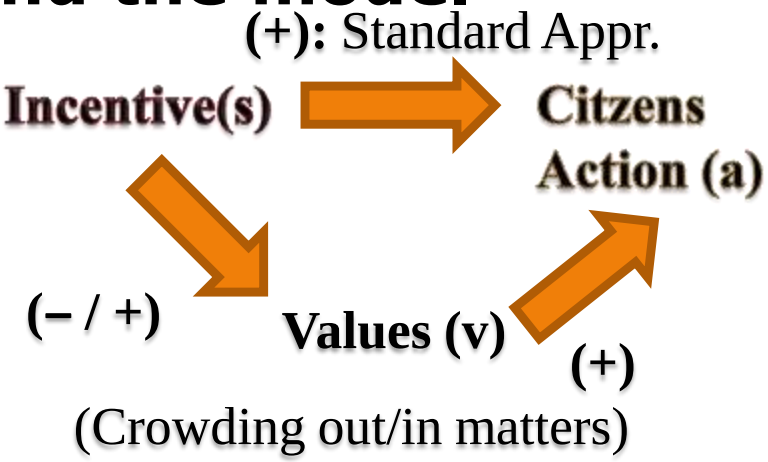
Goal.
-To build a formal but simple model (explaining the empirical and experimental evidence; Sandra Polanía-Reyes Presentation)

- Crowding out over-use; so Titmuss intuition misleading!?
- Identify the condition for over-use or under-use of incentives

Incentive and action and the model

Standard approach (separability) fails when incentives affect (+ or -) values (preference);

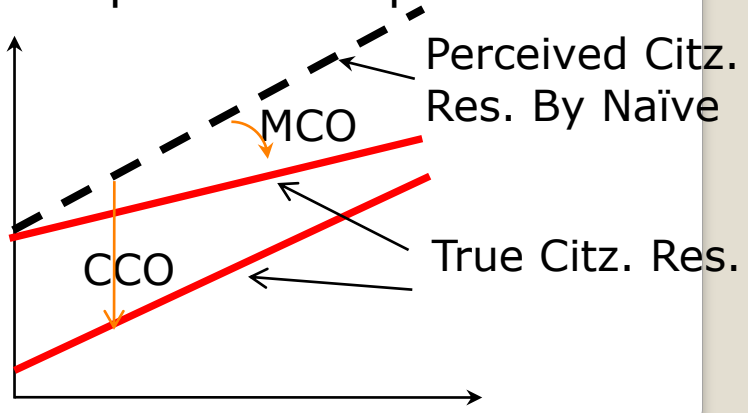
Our approach account for Crowding;
What is the implication of ignoring this.



The determination of the optimal incentives
-citizens' response to the incentives -> a constraint to SP.
-Given this constraint, SP maximizes social welfare.

Naïve planner VS Sophisticated Planner
-The naïve planner ignores crowding out; the sophisticated planner does not.

The model of the misperception of the Naïve planner
-Crowding out (CO) -> a gap between **the perceived behaviors by Naïve** and **the true behaviors of citizens**.



Optimal subsidy by the Social Planner (SP)

Two important quantities affecting the social planner's decision.

I. Effectiveness of subsidy **(EOS):** The slope of citizens' response function.

II. Marginal Rate of substitution **(MRS).** The rate at which the social planner is just willing to provide the subsidy to induce more action

$$\text{MRS} = \frac{\text{marginal cost of subsidy}}{\text{marginal net social benefit}}$$

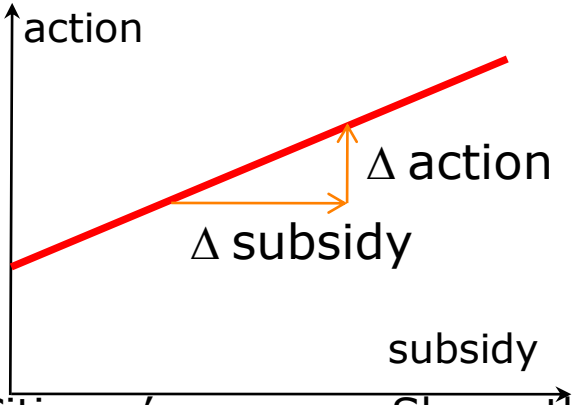
Net Social Benefit = Benefit from public goods – total cost of contribution

The Social Planner Optimal Choice when I = II !

(b/c if I > II, then use subsidy more, if I<II, use subsidy less)

Optimal subsidy selected by the Social Planner

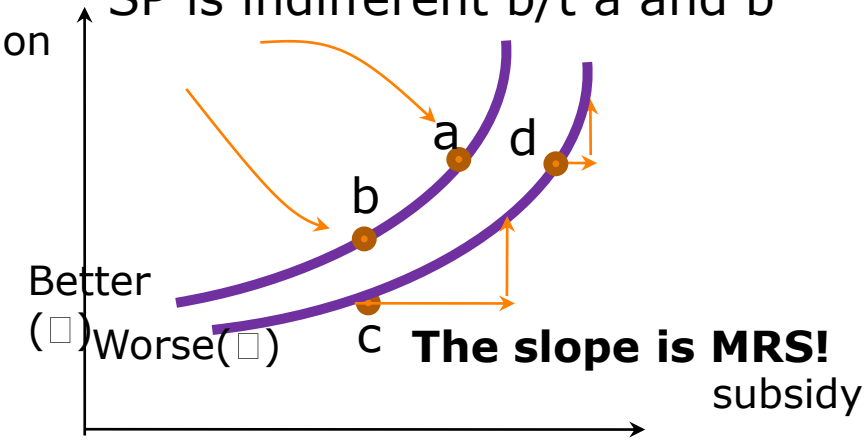
I. Effectiveness of subsidy (**EOS**)



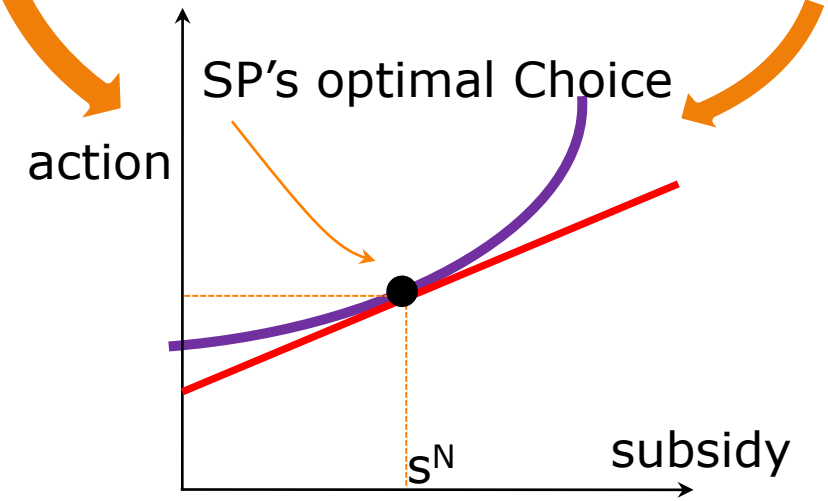
Citizens' response, Slope: the effectiveness of subsidy; steeper The more effective

II. Marginal rate of substitution(**MRS**)

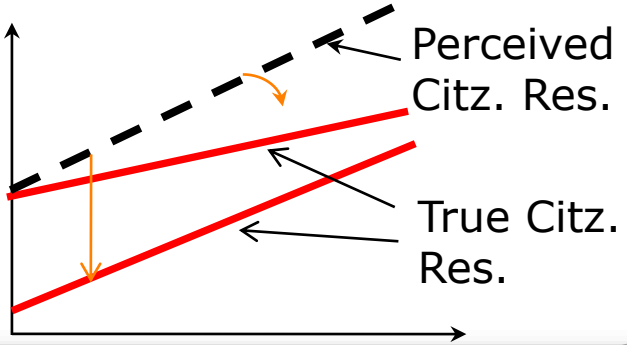
SP is indifferent b/t a and b



Indifference Map for SP.



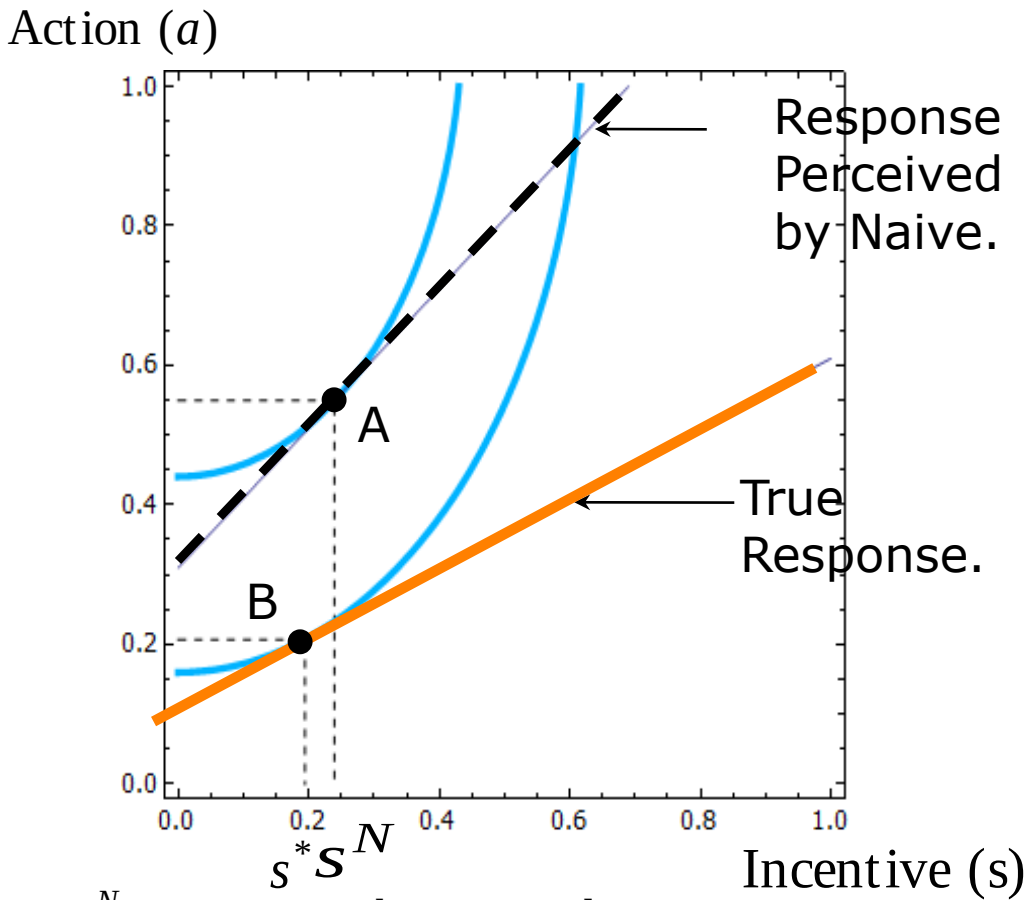
What will happen?



Over-use of Incentives by Naïve Planner -Titmuss Intuition

Overuse of incentives by the naïve planner when both forms of crowding out (marginal and categorical) occur.

-> Study the separate case



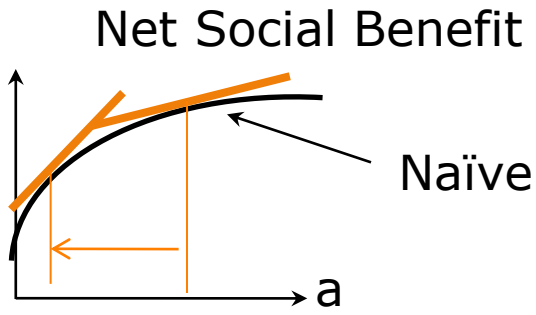
s^N : incentive by naive planner

s^* : incentive by sophisticated planner

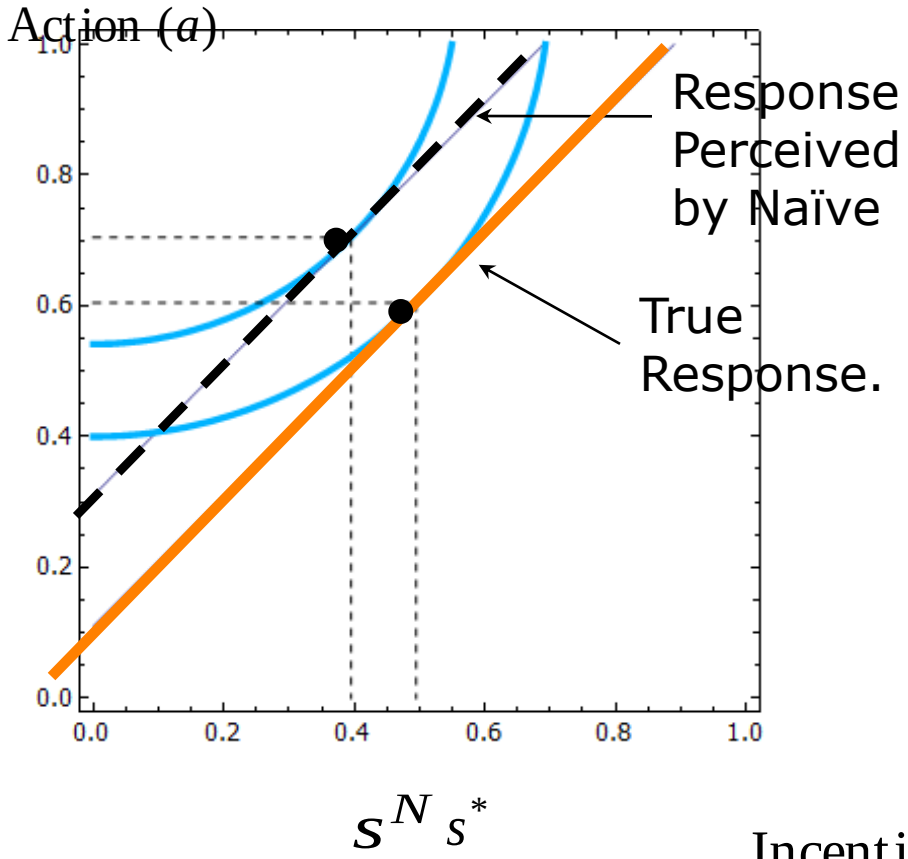
Under-use of Incentives: Categorical CO case

Assumption: Net social benefit function is concave (Plausible; the scarcity of resources)

1. categorical CO □ a□ □ the marginal net social benefit of contribution □



2. However, the naive planner under-estimate the marginal net social benefit □ productivity of contribution is small □ the under-use of subsidy.



Categorical CO, Titmuss' intuition is misleading; what about the MCO?

Under-use of Incentives by Naïve Planner

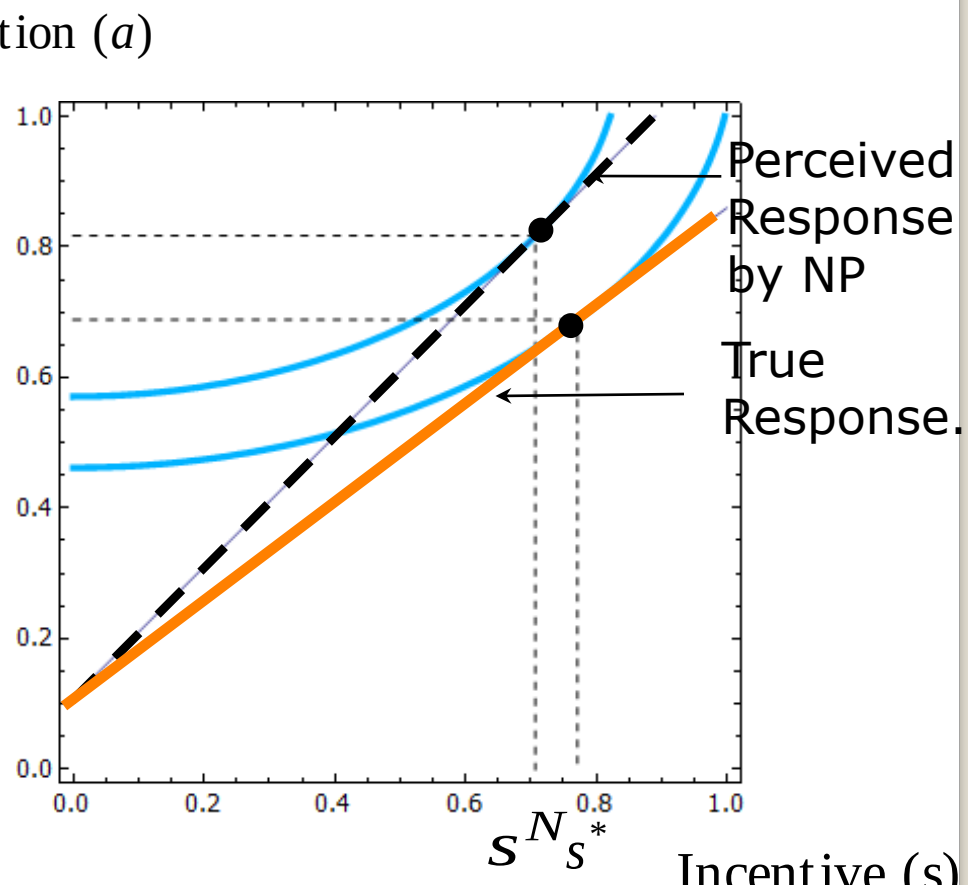
Marginal CO: Social net benefit function is concave

…but surprisingly underuse by the NP may occur even if the crowding out is only marginal

-Two effects: 1 (the same as CCO). The under-estimation of net social benefit of contribution by NP -> a factor which makes Naïve to use less subsidy

2. (Change in the slope of Citz's response fn; unlike CCO). The over-estimation of effectiveness of subsidy -> a factor which makes Naïve to use more subsidy.

When Effect 1> Effect 2, Under-use of incentive by NP



s^N : incentive by naive planner

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Conclusion: the objective of public policy when crowding out may occur

1. Adopt the effective policy considering crowding out
2. Design Policy so that incentives crowd in social pref.

- HAIFA DAY CARE (CROWDING OUT)

The imposition of fines on parents arriving late to pick up their children at day care centers in Haifa resulted in a doubling of the number of tardy pickups (Gneezy and Rustichini, 2000b).

-IRELAND PLASTIC BAG (CROWDING IN)

The small tax on plastic grocery bags enacted in Ireland in 2002 has the opposite effect of Haifa case: it resulted in a 94 percent decline in their use and appeared to crowd in pro-social preferences (Rosenthal, 2008)

- These examples suggests that crowding parameters, taken as given, are subject to public policy interventions.