

S³ 4 Soc++

Using Systemic Social Sciences to Co-Construct Plus-Sum-Games in Societies

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Prologue

Is it possible, that climate change, overwhelming debt burdens, social inequality, religious conflicts and resource wars all have the same root causes? This article suggests a strictly game theoretical view onto all those problems defining individual and collective behaviour of human beings as „games“, with two manifestations, zero-sum-games (soc+/- for short), where the sum of all profits must equal all losses in the game, and plus-sum-games (abbreviated as soc++), where it is possible that all „players“ can win without any losses involved, profits and losses not canceling each other out, without equality condition of any kind. In this view human beings are „intelligent, adaptive role players“, that analyze the rules in their environment and then adapt to them in the most profitable way for themselves. It is no incident, that the first book of Adam Smith („The Theory of Moral Sentiments“) was written before the better known second book („An Inquiry into the Nature and Causes of the Wealth of Nations“) because for most time human ethics was perceived as being causal to human behaviour. Today there exists empirical evidence, that the social rules shape human perception and behaviour and this forms the moral sentiments (ethical feelings) at last. In a peaceful and cooperational future the free flow of information and knowledge is paramount, something that will not be possible as long as we treat „information“ as a commodity that is sold for money in a direct, symmetrical exchange act. The terminology, methods and tools for the co-construction of such a plus-sum-game-society (soc++) will be presented in the following text.

Systemic Social Sciences

If we strictly adhere to a game theoretical interpretation (without moral judgments and dogmas), there can be no conflict between Economics (the maximization rule of individual profits) and Law (the idea of equality for the members of society, enforced by legal rules and the monopoly on legitimate force of the state). Both are just parts of a larger game in society, because the wealthiest players can manipulate the law, even suggest legal texts using lobbying. And both are implementations of zero-sum-games, because the financial profit of one player must equal the losses of the others, governed by the accounting rules, that were created as an image of a scarce number of gold coins circulating in medieval societies. In the legal context, in court, if one player „is right“ (+1), the other one must „be wrong“ (-1), even a tied result is possible (0:0). Conflicts between members of monotheistic religions show the same pattern: if „my name of god is correct“ (+1) all others must be wrong (-1). Market players use predatory competition (to conquer markets) in the same way as political parties in democracies maximize the votes, where the „majority principle game“ is played.

Now let's analyze zero-sum-games and how they effect human communication and the flow of information. The best known zero-sum-card game is Poker: the winner takes it all. And what he takes is the pool representing the losses of all other players. The communication rules with the best winning chances are well known also, the poker face (don't give away any information!) and the bluff (misinforming, deceiving the other players). In the end (at least in the „wild west“) in many cases poker players lost even their lives, which is plausible, because violence erupts in those cases,

where the communication fails - „poker faces“ and intentional deception are just another name for that. On the other hand, there exists the card game Wizard ([https://en.wikipedia.org/wiki/Wizard_\(card_game\)](https://en.wikipedia.org/wiki/Wizard_(card_game))), where a different information strategy must be followed to win. The objective of the game is to bid correctly on the number of tricks that a player will take in the subsequent round of play. Points are awarded for a correct bid and subtracted for an incorrect bid. The player with most points after all rounds have been played is the winner. The game is played in a number of rounds from 10 to 20, depending on the number of players and each round consists of three stages: Dealing, Bidding, and Playing. After looking at their cards, starting with the player to the dealer's left, each player states how many tricks he believes he will take, from zero to the number of cards dealt. This is recorded on a score pad. At the end of each round, each player is given a score based on his performance. For predicting the number of tricks taken correctly, a player receives 20 points plus 10 points for each trick taken. For predicting the number of tricks taken incorrectly, a player loses 10 points for each trick over or under. Following those rules a more cooperative behaviour emerges, because a player having taken all his bidden tricks will try to let the rest of the tricks for the other players. When we compare those two games we realize, that a case where all players win in poker is not really possible, because then each player will just get back his stake. In Wizard, when all players correctly predicted the tricks taken, they all receive premium scores – but those are just numbers written down (accounting ledger entries, no gold coins that must be taken away from someone else).

Applications of S³

Our current definition of money is

1. Medium of exchange;
2. Medium of value storage;
3. Valuation measurement.

As a medium of exchange money constructs a zero-sum-game, each and every single purchase already is a zero-sum-game, because buyer and seller receive exactly the same (financial value) as they give/pay. In zero-sum-games the „cheating rule“ is the best winning strategy, therefore deception (of bank customers, car buyers, etc.) has nothing to do with moral sentiments nor with the enforcement of legal rules, it is the emergent consequence of the zero-sum-game. The use of money as a medium for value storage suggests, that it has an intrinsic value, something, that is obviously wrong and can only be simulated using the „rule of supply and demand“ (only scarce resources are valuable, goods in abundance can't even be commodities because their price would be zero). The rule of supply and demand creates scarcity, because only scarce resources can have a „market price“ and increasing scarcity leads to increasing prices. Only the use of money as a valuation unit (similar to meter as the unit of length and kilogramm as the unit of weight) can assure that we don't inadvertently construct a zero-sum-game (with breakdown of communication and eruption of violence). Meters and kilogramms have never been scarce, as long as things to measure the length and weight of are not scarce. Financial units for measuring valuable social contributions of individuals won't be scarce as long as human skills, knowledge and capabilities accumulate in healthy societies. A sheer valuation measurement without intrinsic value enables us to implement asymmetric prices, meaning that the seller (producer) receives a higher amount (freshly created „book money“, as measurement unit of his performance) than the buyer (consumer) pays for (meaning that a different amount is deleted on the account of the consumer). This „information money“ acting as a voucher is created for each and every social valuable act and deleted in consumption.

The most important advantages of information money as a sheer valuation measurement are:

- Inflation and deflation cannot exist any more, because this money has no intrinsic value, it is created for human performance and deleted in consumption and not brought into circulation any more.
- The creation of this value measurement represents of a positive value and debt (the „lending of money“) is not needed any more, neither are interests and insolvencies.
- When demand is fulfilled, using asymmetrical prices, the producer can be payed (by „creating book money“), but the consumer can get the products for free (because the only economic function of the consumer price is to distribute a small supply onto a larger demand – if the demand is completely fulfilled, we don't need consumer prices any more, we can abolish them but nevertheless pay the producers!).
- In classical economic service situations, where consumers and producers must cooperate to create the commodity together (teachers teaching students, doctors treating patients, e.g.) both parties can be payed (get newly created book money) and no one has to pay for (no book money will be deleted). Therefore the public sectors „health“ and „education“ will be „self-financing“ right from the start.
- Anthropologists know, that in primordial human communities economic exchange (barter) with fair equivalents that would be violently enforced only happened between hostile tribes, with individuals that were seen as enemies right from the beginning. Within one own's community cooperation was practiced, fair equivalents had a broader interpretation, time frames were flexible and even gifts were quite common („gift economies“).
- In a community that uses consensual valuation and voluntary cooperation the individual and the common interest can never be opposed to each other, this is only possible in a system that uses barter on the basis of „fair equivalents“. In the cooperative community what is the best for each individual automatically is the best for the community (because each individual is part of the community) and what is best for the community is automatically best for each individual (again, because each individual is part of the community).
- The flow of information and knowledge today, in a globally linked society, is much more important than the „equivalence principle of accounting“, a relict of medieval gold coins. But if we still adhere to those accounting rules (on individual, national as well as international levels), communication and information flows will deteriorate, espionage and deception will increase and as a result even violence and war might erupt. Therefore we should overcome old dogmas and reconstruct new game playing rules in the light of S³.

Suggestions for Implementation

1. Information and education of the most important of the traditional, materialistic zero-sum-game players. It is very important for them to understand, that this paradigm shift resembles the introduction of the arabic number system into the world of the roman numeric system, a step that lasted about 500 years, but enabled humanity to implement mathematical models and equation systems impossible in the roman numeric system. Today this paradigm shift should, given internet and electronic media, be possible within just 5 years. Neither political ideologies nor ethical judgment are involved, it is just a new scientific language to describe societis and social processes,

that replaces „intrinsic values“ that could „fluctuate“ (or have been „manipulated“) with information flows and the co-construction of knowledge that will lead to a consensus of human values at large.

2. Creating wealth for the masses using sheer acts of valuation (fertile land in Africa, creative achievements of young people around the world, innovative healing methods by just changing personal habits by everyone, e.g.) can bring back purchasing power for the masses to keep the (old) economy up and running just as long until the paradigm shift has succeeded (soft landing).

3. Introduction of information money as a complementary currency for certain small communities, goods and services, regions etc. The sectors public health and education are particularly apt for that, because the social security systems use already an IT system with individual accounts, electronic cards etc., so the creation and deletion of electronic money linked to certain events and procedures could very easily be implemented.

4. Teaching the principles of S³ to children in school, students at university as well as diplomats and politicians as a basis for their international negotiations. This includes nonviolent communications (Marshall B. Rosenberg, e.g.) as well as systemic consensuations (Siegfried Schrotta and Erich Visotschnig) and lots of other social-psychological tools to improve peaceful co-construction in our communities. When we implement the view of society that was given to us by Niklas Luhmann („society is not the sum of individuals but the sum of the communications between those individuals“), we can even do away with the state monopoly on legitimate violence, if we only provide that the communication processes stay intact and functioning.

If we model our relations to our environment (plants, animals, mother earth and all living beings surrounding us) using materilistic barter methods (give and take that is enforced even violently) we will always end up in conflicts and perceived scarcity. But if we instead use a model of information flows and co-constructed knowledge for the positive common development, mutual understanding and cooperation are not only possible but the natural consequence of this alternate modeling approach. Common values ought to be co-constructed by the whole community, which implies that all members are both healthy and well educated. Those, immaterial, values are the most important and have always been – mind over matter!