



The Theory of Potential (TOP) and Social Game Theory (SGT)

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Introduction

The primary use of game theory is to describe and model how human populations behave. Some scholars believe that by finding the equilibria of games they can predict how actual human populations will behave when confronted with situations analogous to the game being studied. This particular view of game theory has been criticized. It is argued that the assumptions made by game theorists are often violated when applied to real-world situations. Game theorists usually assume players act rationally, but in practice, human behavior often deviates from this model. Game theorists respond by comparing their assumptions to those used in physics. Thus while their assumptions do not always hold, they can treat game theory as a reasonable scientific ideal akin to the models used by physicists. However, empirical work has shown that in some classic games, such as the centipede game, guess 2/3 of the average game, and the dictator game, people regularly do not play Nash equilibria. There is an ongoing debate regarding the importance of these experiments and whether the analysis of the experiments fully captures all aspects of the relevant situation.

Some game theorists, following the work of John Maynard Smith and George R. Price, have turned to evolutionary game theory in order to resolve these issues. These models presume either no rationality or bounded rationality on the part of players. Despite the name, evolutionary game theory does not necessarily presume natural selection in the biological sense. Evolutionary game theory includes both biological as well as cultural evolution and also models of individual learning (for example, fictitious play dynamics) [1].

This paper attempts to compare Game Theory to the Theory of Potential. The intent is to demonstrate the validity of Potential Theory as a Social and Intellectual Theory of everything.

Social Game Theory (SGT) Rules and Their Systems = 3 Functions for Social Life

1. Direction
2. Understanding
3. Referents/Models

The SGT Types of Rules = categories, details

Open and closed theory

The Social Game Theory (SGT) incorporations = mutual awareness principles, rule components, resources, functionality.

10 Matching Components of TOP to Game Theory

1. Applies to multiple principles, interactive and interdependent.
2. Set of principles whose outcomes are interdependent and interact in Physical, Mental, Emotional and Intuitive (P, M, E & I) contexts and subject to rules established by the user, make decisions to achieve goals.
3. Provides a Cultural Characteristic basis for objectives, organization and functionality as well as values.
4. Identifies properties of interactions and outcomes and defines decisions and actions based upon TOP principles.
5. It's a closed system which operates as an open system. The principles are the closed aspect and are all-encompassing, while the Cultural Characteristics, Core Human Dynamics, Great Restrictors and other adapted rules are open.
6. Communications relate characteristics of Physical, Mental, Emotional, Intuitive nature. They are governed by the focus and concepts of the agents(s) when organizational principles are applied, and wide variety of interpretations emerge.
7. Broad, all-encompassing social and cognitive applications are incorporated in the system.
8. Action arrays can be generated by an interactive infinite matrix structure for purposes such as Planning, Organizing, and Functioning. The principles set the model of implementation(s).
9. The TOP Theory is transformative. Any agent can apply any concept or action. The principles and the organization of the game define and can predict the outcome.
10. It is totally flexible in structure as well as containing the binary capacity. It can be symbolic as well as strategic, general, specific or incidental.
11. (TOP) principles are closed; CHD, CC, significant restrictors are open.

Its referent structure defines factors such as actions, controls and results. This defines differences as well as weaknesses and

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strengths of individuals or institutions by virtue of the closed approval and value structure of the agents/agencies.

By means of feedback, rules, beliefs, acts, structure can be adjusted to maintain and restructure relationships. By virtue of the TOP framework, once rules of Planning, Organizing and Action are established, focus and concepts are then governed and directional judgement can be established, thereby enabling fitting character communication—in accordance with its base structure/rules. Hence, judgment is directional rather than condemning or penal.

Core Factors

The core of SGT are concepts which enable analysis of participant’s orientation as to good and bad, right and wrong, etc. This compared to TOP whose core is Planning, Organizing and Functioning Principles. These principles have been accepted as all-encompassing by research studies.

The distinctions here are several:

First: SGT is solely based in rules and concepts. These are only two of the 13 TOP all-encompassing principles.

Second: SGT labors at the identification of beliefs. This is an exercise in infinite continuity. NaTI on the other hand identifies these concepts as Cultural Characteristics—a subclass of beliefs. It then relates these specifics to the other TOP principles for further interpretation.

Third: The most significant distortion of comprehension with SGT is the notion of open and closed systems. The closed systems are finite and are actually employed with an open architecture. I.E. “new strategies” are employed to solve an issue. With TOP, its closed system which is absolute, is utilized to analyze the basis of the issue. Here, open system aspect is categorized and then related to other closed principles and the open system rules and concepts.

Fourth: SGT is a linear logic concept while TOP is a collective categorical theory.

Group Rule Configuration

According to Dermott’s Table of Rule Configuration (2005), he identifies Rule Types for Terrorists.

Below I have set forth his rule types and compared them to the TOP model of comprehension:

Table 1	TOP
Defining identity	Characterizing the Model
Recruitment, Involvement	Functional Factors (P, M, E, S)
Values, Purpose	Develop Potential (P, M, E, S)
Beliefs, Models	Beliefs, Model-Polarities/ Oppositions
Group Relations, Leadership	Focus and Concepts=Character
Functions	Physical/Material Factors
Environmental Relations	Models and Processes with Polarity
Rules, Procedures, Change	Rules, Procedures, Polar Character
Group Resources	Physical/Material, Procedures, Parts
Time, Location of Activities	Measurement

The purpose here is to demonstrate the concepts of open and closed systems, the absoluteness of the TOP principles and the categorical nature of TOP. This last factor shows how several key principles have been omitted from Table 1 for consideration. For example, Wholeness or Integration and Priorities and Spiritual and Emotional factors. Also, Feedback, a major organizational principle, is omitted.

This is not to say Table 1 is incorrect or bad. Rather, it’s a labor of comprehension which is incomplete and lacking clarity vs. TOP.

Burns and Roszkowska correctly demonstrate the differences between self-organization and detailed structure. However, there was no need for them to labor the point as they did since TOP is both self-organized and structural in the same breadth. This is due to the fact that the TOP principles are independent from each other yet they are interdependent in systems application. This structure also provides for “cross disciplining” models.

Illustration of Group Rule Configuration- Table 1

In this illustration, the authors attempt to display the same Group Rule Configuration with five other (six in total) illustrations.

While the table sufficiently defines rule complexes which produce substantial variation in patterns among diverse groups, it misses the point of TOP. This is that TOP assessments point out that a participant has a particular characteristic and that it explains their decision-making process and the resulting behavioral manifestation.

Internal Coherence (IC)

SGT defines IC as the logic to rules of multiple categories. Once again, SGT bases its theory on rules. Here the authors state the rules of a configuration are required to fit together into a whole. This is not only accurate, it is one of the basic tenets of TOP, the whole and its parts. It also fits the principle of Potential—that being the greater the number parts that fit a whole, the greater the level of Potential achievement. Because of the TOP premise of “all-encompassment,” issues are forced, in a self-organized way, to pursue coherence, synthesis.

The issue, here again, is how effective and efficient is the absolute NaTI principles. Our research studies show its validity at a 97% rating.

Compatibility of Multi Group Regimes

Once again, we see the premise of SGT regarding numerous configurations of groups. And again, the difference between SGT and NaTI being the confusion generated by the SGT dependence upon the FLEXIBLE principle of Rules and the TOP dependence upon its ABSOLUTE 13 Principles. Due to the limitations set forth by the former notion here—that being the flexible rules need to be located, defined and conceivably incomplete—the TOP format in its consistency is superior in numerous ways.

Compatibility of Content and Context

The TOP distinction here is that the principles are consistently present and applicable, in an individual way, to every issue generated. SGT is not. Rather, it is in constant search of “forms” for implementation. It is important to note here that another distinction of SGT and TOP is that TOP principles are non-referential while SGT are most definitely characterized. This distinction allows TOP to be adopted as a categorical model of issues, decisions, behaviors, etc.

Group Prioritization of Coherence

Here the authors attempt to utilize a TOP principle, in this case Priority, to define SGT by means of cultural characteristics. It's like the old adage of a round peg in a square hole. The TOP process requires the user to seek the TOP principle first then categorize the cultural characteristics within that principle. For example, if the issue is control, it can be qualified by determining if the current application falls into the planning category or the organizational one. SGT SEEMS to be building its rules around “control.”

The Polarity/Binary Character

The nature of Polarity is opposition. One of its principles is that opposites end up in the same place, hence they have the capacity to be greater predictors. In order for a proper coherence, synthesis of an issue to develop, its opposition must be dealt with. While TOP assumes this in its fundamental structure, I do not see such a format with SGT.

Group Theory and Social Science Game Theory

With the TOP structure, there is no distinction between its application of Group Theory and Social Game Theory. The same principles and thinking apply.

Group Collective Problem Solving

The SGT provisos for problem-solving once again follow what I term the “infinity factors”—that is, the factors for

consideration in problem-solving are ongoing—a continuum. This in comparison to the closed absolute structure of TOP. The TOP system of problem solving has general and specific aspects. The general is the $A + B = C$ formula where A = awareness/focus on an issue, and B = the belief of that issue, and C = the characterization of the issue, resulting as a product of A + B.

The specific application is simply applying the cultural characteristics, the core human dynamics and the significant restrictors against 13 principles. This will determine where the weaknesses, strengths and proper direction of an issue reside.

Accordingly, the procedures, models and mechanics necessary to resolve issues are built into the TOP paradigm.

Conclusions

- While the notion of SGT is valid and effective, it is the universal language of TOP which has the capacity to greatly enhance SGT.
- The complex of norms, which in NaTI terms is described as cultural characteristics, is open and available. In short time they can be set and implemented without change.
- The organizational rule configuration aspect of SGT is readily adaptable to the universal architecture of NaTI.
- “Cultural logic” and “rules of the game” are also advanced by the universal TOP architecture and more simply adapted through its open system.
- The identity rules of SGT are also built into TOP.
- SGT integration is also another principle of TOP, but serves to produce the whole picture, and clarity.
- The TOP application (Natural Thinking) clearly demonstrates group vulnerability (weaknesses) and sustainability (categorical and all-encompassing).

References

1. https://en.wikipedia.org/wiki/Game_theory