Team Syntegrity Background

by
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Team Syntegrity is a group process which facilitates team building, innovation and planning developed by Stafford Beer. The process is designed to be non-hierarchical so that communication can be open and synergy can be captured.

The freedom to explore content is contained in a protocol which depends on tight schedules and rigorous interconnections. This paper describes the process and indicates areas for further research.

Keywords: team syntegrity, Stafford Beer, group process, planning protocols, non-hierarchical process, team building, icosahedron.

Background

Team Syntegrity is a protocol developed by Stafford Beer to provide a structure for a group of thirty people to join together in a non-hierarchical but interconnected exercise in creativity and the building of group consciousness. It is called a syntegration. This word is derived from two others. The first is synergy, which is the condition in which the properties of a whole are greater than and distinct from the combined properties of the parts. The second is tensegrity - itself a combined word coined by W. Buckminster Fuller - which means tensile integrity, or the structural strength provided by tension (as contrasted with compression). The architectural metaphor is continued by modeling the structure of the meetings on the icosahedron. With its twenty (icosa) faces, thirty struts, and twelve vertices it is the most complex of the regular solids. Since there is no top or bottom to a regular solid, it is not a hierarchical structure.

Beer had been pursuing an interest in finding a way around the paradox of peripherality vs centrality for many years. This phenomenon was described mathematically by Alex Bavelas in his work on group dispersion and has been experienced by just about everyone who has tried to accomplish something in an organizational context. Peripherality of group members leads to miscommunication, alienation and low morale but centrality is required for effective action. As the group grows beyond a handful of people, the needed centrality can only be gained at the cost of increasing peripherality. This paradox is being felt today in many organizations who are moving to flatter management structures. Few people mourn the loss of the strict hierarchies which often degenerated into autocracies. They put layers of supervisors and managers between the floor where the work was done and the level where the important decisions were made, stifled initiative and responded much too slowly to change. But the flatter structures sometimes become discontinuous and leave people in a state of peripherality - floating between the self-directed work team and the upper management.

This interest meshed well with another of Beer's observations: that the most interesting and creative conversations at conferences seemed to take place informally, 'in the bar'. He suggested a 'counter conference' to try to capture and enhance the informal talk. This experiment was first introduced in 1979 at the Silver Jubilee Conference of the International Society for Systems Sciences in London, and

has since been repeated on numerous occasions in different countries in both commercial and public settings.

Description of the Syntegration Protocol

A syntegration is launched with a broad question or theme which might be some version of 'what is our future?', an effort by a group of stakeholders to define their common and disparate interests, or the conscious design of something which does not yet exist: a new product, a new perspective or a new organizational structure. Thirty people are assembled at a site where they can meet for three to five days without distractions. They are joined, ideally, by several facilitators and a support staff which can record and distribute their output as it progresses. (The protocol can be self-facilitated, but that means more work for the participants in an already intensive experience.) In contrast to some protocols, facilitators in a syntegration do not take a leading role in introducing or shaping content but concentrate on guiding the process. All the content comes from the ideas of the participants, so it is crucial that the thirty people chosen are a good representation of the variety of viewpoints on the theme.

It begins with a session which mirrors the counter conference. After a brief orientation, participants are invited to put their most important message or their most creative thoughts down in succinct form on one or more cards. These cards, called Statements of Importance or SI's are posted, examined by the participants, and perhaps clustered under similar headings. They form the base on which a free-floating series of discussions, called the Problem Jostle, is held. It takes place in a large room supplied with flip charts and flags or other means by which participants can announce the topics they are discussing. These are usually drawn from the SI's but anyone can add or change a topic as they wish. The discussions disregard normal criteria of what is polite. Anyone is free to drop in to or to leave any discussion at any time that they see a topic title posted that interests them. Or they can seize their own flip chart, put up a topic, and solicit business themselves. As consensus develops that a topic is worth further exploration, it is written up in a sentence or short paragraph and offered to the discussants as an Aggregated Statements of Importance (ASI) for signature. Once an ASI has been endorsed by five or more participants, it is eligible to be considered as one of the twelve topics (conforming to the twelve vertices of the icosahedron) which will be discussed in the next part of the syntegration.

The Problem Jostle continues generating ASI's until time is called by the facilitators. Then the process of whittling them down to twelve, called the Hexadic Reduction, begins. The first stage is to check to see if any of the ASI's cover the same ground and could be combined. This is done if their sponsors agree. A vote is taken which establishes the top twelve topics which will be discussed for the remainder of the syntegration. These become the Consolidated Statements of Importance or CSI's. A second vote is taken for participants to indicate the topics they prefer to address in their upcoming discussions.

This is the point where the meeting moves to the icosahedral structure. Each topic corresponds to one of the twelve color-coded vertices of the icosahedron and each individual corresponds to one of the thirty struts. Every vertex has five struts. They represent the team that will discuss that topic. Each strut is uniquely connected to two vertices: that participant will be a member of a different two teams from every other participant. This represents the compressive strength in the structure. The

theme of the syntegration is enclosed in the center of the twelve topics. The assignment of the teams is to explore the chosen topics. This part of the syntegration is called the Outcome Resolve.

The tensile strength is represented by two additional roles held by each team member as a 'critic' of two next but one teams. The critic roles are also unique. No member is a critic of the same two teams, although they will meet some of their fellow team members as members of the next but one teams. Critics meet with teams, listen to their discussions and offer comments. The challenge for the critics is to make a contribution to the team discussion that does not duplicate that of its members. The role of the critic is designed to provide a counterweight of tension to the compression generated by the team. This can be done by making comments or meta-comments about team process, by sharing relevant information from other teams, or by playing devil's advocate and subjecting the team's assumptions to a rigorous test.

All this sounds, and is, very complicated to hold in one's head. Luckily, that is not necessary. A computer program written by Josephine Hancock matches alternative role assignments until the maximum satisfaction of the participants' stated preferences is achieved. Roles are distributed with color coded badges which indicate each individual's two team and two critic roles. A physical model of the icosahedron, appropriately color coded, is available for reference. A close look at the model will confirm that only the two polar opposite teams do not share any team members or critics. They can, therefore, meet simultaneously. Six consecutive (and strictly timed) meetings complete the first iteration of the Outcome Resolve.

In each team meeting, the assignment is to discuss the topic, hear the critics' input, and generate a statement which summarizes the meeting's discussions. This statement will be printed and posted so that members of other teams can read it and take it into account in their own deliberations. After the first iteration is complete, each individual will have participated in four of the twelve sessions and been at liberty for two others. During these times, he or she is invited to observe other meetings but is not obligated to do so. People may choose instead to take a coffee break, to rest, to go for a walk or to pursue an independent conversation with someone else at liberty. They are requested not to introduce additional overload by calling their offices. This is because this is a high energy process and fatigue is often a factor.

Between iterations participants are expected to check on the statements produced by other teams and to add their comments or questions on post-it notes.

After the third set of meetings or iterations, the group of thirty will have achieved a high level of shared information - both directly and through reverberation around the structure from other meetings. It is possible to prove mathematically that ninety percent of the information will be shared over three iterations. A fourth brings the extent of shared information up to ninety-six percent. This mathematical finding is confirmed by the opinions of participants in the experiments with three iteration meetings. About half responded that they would have preferred a fourth iteration. To top up the extent of shared information, participants are encouraged to circulate and meet with other participants they do not see in the course of their meetings. This can be done informally or in a structured meeting of polar opposites designed by colleague Joe Truss which is based on the position of golden rectangles within the icosahedron. (There are many avenues to explore in the geometry of the

icosahedron and in the graph theory which extends it, which are beyond the scope of this paper.)

The meeting closes with a plenary. One may expect a high degree of emotional connection as well as shared information. The process is powerful; the topics chosen are close to the heart and the discussion is intense. Depending on the purpose of the group and the extent to which they are connected, it may be simply a summing up and feedback session or it may progress into consideration of the steps to be taken to translate the final statements of importance from the Outcome Resolve into a plan of action.

An Example of the Content of a Syntegration

The syntegrations which have taken place so far have been based on opening questions which have ranged from those specific to the organization to those which gather a wide cross-section of people to examine a question like 'what is our desirable future'. The following account is, obviously, a fiction; but it is drawn from the sort of content that actual syntegrations have produced.

A social issues subgroup of a professional systems society gathered in the country one October weekend at a rented facility. They had chosen to examine the question 'how can we use the special knowledge of our field to improve the larger society?' The participants included a wide range of ages, from mid-twenties to late seventies. They were a multicultural group of men and women who worked in business, for government, in non-profit organizations and who were students or teachers in academia.

The group generated slightly over a hundred statements of importance ranging from the frivolous to the serious. One of these SI's was:

'Terminate unemployment!'

It was discussed and refined to read:

'The systems field could contribute to rethinking the labor market and reducing unemployment.'

It got the necessary five signatures and was subsequently chosen as the White Team topic for the Outcome Resolve.

This was the White Team statement after the first meeting.

'People in the systems field helped to create the problem of unemployment by contributing to the development of robotics and computerization, although this consequence was never intended. This adds to our responsibility to do what we can to understand and to help.

We could start by asking what work needs to be done rather than where the jobs could be created. There's a lot of work we agree needs to be done but the problem is how to pay for it.'

The 2nd iteration produced the following statement:

'The labor economy is itself a system. It exists to fill a need for labor which comes from the larger economy. What would stimulate the larger economy to want more labor and to be willing to pay for it?

We shouldn't just think about the larger economy. Most new jobs come from small businesses in the local economies. Some of them would like to hire more people if they could borrow money for expansion. What can be done to make it easier to get resources to expand?'

This was the statement from their third iteration:

'We're overreaching. Neither the group in this room nor this whole organization can directly influence these events in any substantial way. What we can do is use systems tools to model what the consequences would be if the current situation continues and communicate the results to the public. We could also work on improving control models so that employing organizations could operate with a little less uncertainty. That might make it easier to gain access to resources.

We might explore ways to reframe the employment situation so that there was more variety than one group of fully employed and often overstretched people and another group of unemployed or underemployed people. We must never allow money to be the only consideration. These are real people with families who are underutilized and unhappy.'

This example shows the gradual refinement and the back and forth of perspectives that often characterizes the output of a syntegration. It is quite common for groups to move from urgency to empathy to analysis and back again. It should also be said that the statements of the Outcome Resolve cannot capture the richness of the discussion which may include personal stories, arguments, brilliant flashes which cannot quite be expressed sensibly and so on. The goal of eliminating hierarchy from the discussion is not always reached but the evaluations tell us that usually everyone has a chance to be heard and that they feel equal.

Comment and New Directions for Research

Team syntegrity is beyond its experimental stages in some senses but not in others. We are confident now in the protocol and that it produces results. We are also learning about what sort of additional fine tuning may be helpful. If the purpose of the group is to develop bonding and alignment, it seems to be necessary that the syntegration be residential and that there be unstructured time available. The five day session is preferable. If the purpose of the group is to develop creative solutions, some limbering up of the creative juices is in order. This might include lateral thinking exercises, guided imagery, dance, or relaxation exercises.

Some groups catch on to the protocol more easily than others. If the participants are used to group process and to spirited discussion, they will adapt to syntegration as if they were athletes learning a new sport. If they are not, more time needs to be allocated to explaining the process and how it works. Other people are skilled at making creative leaps. Groups who have a basic familiarity with systems thinking and can shift from content to context or from process to content smoothly are especially good at producing creative approaches.

There are many avenues for future research. On the practical side, it is often difficult to gather thirty people for several days. Individuals have many demands on their time and organizations have to weigh releasing thirty people for several days against their other costs and obligations. Designing protocols for smaller numbers is one possible answer. Joe Truss has been responsible for the development of various 'short form' syntegrations that may be flexibly applied to smaller group formats. Some people find it too difficult altogether to meet face to face. Some experimental work has been done to design a protocol for doing a syntegration electronically. Hybrids are also possible - say meeting for a day to a day and a half to do the Problem Jostle, selecting the topics and the team assignments - then going on-line; or, alternatively, an electronic Problem Jostle followed by a face-to-face Outcome Resolve (a format which has been used successfully in the preparation of a multi-author, multi-media book/CD-ROM).

Other practical applications may be found in the use of team syntegrity in dispute resolution or to augment traditional strategic planning exercises. It is possible to use it as a protocol in other systems approaches. Beer has suggested it be used in the context of his Viable System Model as a periodic activity of the Three-Four Homeostat which balances attention to the outside and then with that of the inside and now. It would also be possible to use it in the environmental scan stage of a sociotechnical systems study or in a broad approach to total quality management.

Another set of research possibilities exists in the theoretical and experimental branches of epistemology and mathematics. Stafford Beer has included a speculative chapter which explores the possibility of recursivity as a characteristic of group consciousness in his book *'Beyond Dispute: the Invention of Team Syntegrity'*. There are also many unexplored possibilities in geometry, graph theory and other relevant branches of mathematics. Finally, there have been many people who have been interested in the spiritual dimensions of such geometrical expressions as the enneagram and the golden section. All of these await exploration and many different directions are possible. As a social invention, team syntegrity shows great promise as a way to assist those planning for action.

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