The Improvisational Music Group—a human system simulation

Peter Forrester
Forrester Taylor & Associates Pty Ltd
48 Austin St Alphington Victoria Australia 3078
Ph & fax: +63 9489 4357
Email Petfor@bigpond.com

Dr John Bailey
Carlton Consulting Group
Level 2 / 766 Elizabeth St Carlton Victoria Australia 3053
Ph: +63 9347 8777 Fax: +63 9347 8310
Email <ccg@ozemail.com.au>

Abstract

In this paper Peter Forrester and Dr John Bailey will present a useful technique for studying human organisational systems—the improvisational music group. The improvisational music group is a challenging simulation of an organisational system that can be used to directly study system concepts. Peter Forrester and Dr John Bailey have used this technique to enable managers to experience and observe leadership behaviours in an organisational system.

The improvisational music group is able to simulate the complexity and interconnected aspects of a dynamic system. Tools for studying systems such as causal loop diagrams can be applied in an analysis of the music group experience. Concepts such as "Levels of Explanation", "Dialogue" and "Evoking Organisational Fields" can be illustrated using the music group technique.

"Systems Thinking Basics" (Anderson V. et al 1997, P 19) provides a description of how the world looks when it is viewed systemically ie. dynamic, complex and interdependent or put another way, things change all the time, life is messy and everything is connected.

People improvising music together are a part of a system that is constantly changing, messy and within which everything is connected. In our work facilitating leadership and management team development we have found the improvisational music group to be an excellent tool when used as a simulation of a human organisational system. As management teams engage in working together to improvise their music, the unfolding experience reveals information that can be processed to develop

understanding about how a human system operates and how people can work more effectively within it. The strengths of this simulation include:

- the musical instruments, participants and music produced form a complex human system
- the music quality provides an immediate feedback loop related to group effectiveness
- no previous musical instrument experience is necessary for successful involvement
- all the people we have worked with have had an innate sense of how to create and evaluate simple, well formed music
- all necessary data for analysis emerges in the experience

Our purpose both in this paper and in our workshop is to demonstrate the usefulness of the improvisational music group as a tool for understanding human systems. As such we present a technique that is excellent for illuminating systems theory and in providing an opportunity to apply that theory and practise associated skills.

The following is a model based on Peter Forrester's observations of developmental stages in an improvisational music group. This model is presented here because the depth of analysis of the improvisational music experience will depend on the stage the group reaches in its development. For example it is not possible for an improvisational group to evoke a "field" if they do not develop to Stage III; that of Innovating.

I Surviving
At this level participants use formulas to survive individually as musicians. Participants tend to be self focussed, tense and unaware of the whole musical experience. The focus is on perfect reproduction of a known or taught musical model. The music tends to be experienced as pedestrian, mundane or boring. Mistakes are threatening to the survival of the group. Enjoyment of the experience is generally low.

II Improving
At this level participants commit to improvement and they focus on developing the processes they are using to produce more interesting music. At this level participants are more aware of the relationships between each other. They listen to each other and the music as a whole, as well as discuss and apply a wider range of strategies. The music tends toward being more spontaneous and authentic. Mistakes at this level are more acceptable and tolerated; at times they will be successfully incorporated into the music. The group seems to be safer and better able to survive. The experience is generally more satisfying than at Level I.

III Innovating
This is the level which musicians describe as "being in the groove". It is a very creative level; there is a sense of not knowing what will be created musically, combined with a faith in the group's ability to produce something significant. There is a sense of musical dialogue happening between all the players. People are open to each other. The music becomes an entity in itself providing energy to the group. It is a

generative level; the music is spontaneous and authentic and tends to be well above the initial expectations of the participants. People talk about this level of playing as having a spiritual dimension. People talk of losing their self-awareness and of being at one with the group and the music. People also talk about the music seeming to play itself and the participants being a channel for the music which is coming from somewhere else. Mistakes are accepted, if noticed at all, and at this level tend to become incorporated into the music, creating opportunities for further musical exploration.

On the following pages we will use a split-page framework to explore various systems concepts in relation to what can be observed in a music improvisation session.

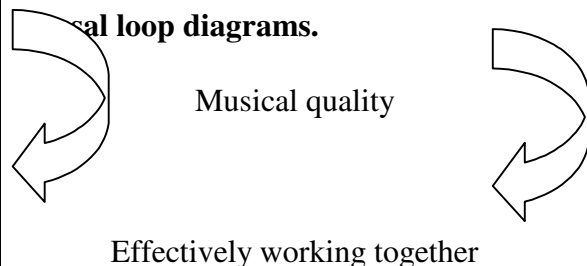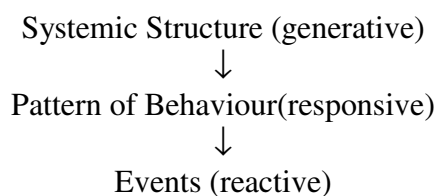| Systems Concepts.	Concepts appliedin an Improvisational music group experience.
System definition and characteristics. "A system is a group of interacting, interrelated or interdependent components that form a complex and unified whole. A system's components can be physical objects that you can touch, such as the various parts that make up a car. The components can also be *intangible*, such as the processes; relationships; company policies; information flows; interpersonal interactions; and internal states of mind such as feelings, values and beliefs. Characteristics of a system: 1. A system's parts must all be present for the system to carry out its purpose optimally. 2. A system's parts must be arranged in a specific way for the system to carry out its purpose. 3. Systems have specific purposes within larger systems. 4. Systems maintain their stability through fluctuations and adjustments. 5. Systems have feedback." Anderson V et al (1997), p 2-3	**System definition and characteristics.** The improvisational music group is a system consisting of interacting and interrelated components forming a complex and unified whole. Characteristics of the improvisational music group: 1. The improvisational music group requires: • players capable of recognising and generating music • musical instruments • music production 2. Participants must have instruments and be in a position to see and hear all the other participants. 3. Purpose—production of music to meet a creative need, for enjoyment or entertainment. 4. Fluctuations in music quality lead to adjustments in the playing of musical ideas by the participants. 5. Participants play music, which feeds into the auditory sensory system; from this sensory data, judgements are made about music quality leading to adjustments in the music production.
Causal loop diagrams. "A causal loop diagram consists of two or more variables connected by links, which usually take the form of arrows. A closed circle of variables and links makes up a feedback loop." Anderson V et al (1997), p 52	**Causal loop diagrams.** Musical quality Effectively working together When the participants are working together more effectively, music quality improves.

Levels of explanation.

"The systems perspective shows that there are multiple levels of explanation in any complex situation, as suggested by the diagram below. In some sense, all are equally 'true.' But their usefulness is quite different. Event explanations—'who did what to whom'— doom their holders to a reactive stance. As discussed earlier, event explanations are the most common in contemporary culture, and that is exactly why reactive management prevails.

Systemic Structure (generative)
↓
Pattern of Behaviour(responsive)
↓
Events (reactive)

Patterns of behaviour explanations focus on seeing longer-term trends and assessing their implications. Pattern of behaviour explanations begin to break the grip of short-term reactiveness. At least they suggest how, over a longer term, we can *respond* to shifting trends.

The third level of explanation, the 'structural' explanation, is the least common and most powerful. It focuses on answering the question, ' What causes the patterns of behaviour?' Though rare, structural explanations , when they are clear and widely understood, have considerable impact.

The reason that structural explanations are so important is that only they address the underlying causes of behaviour at a level that patterns of behaviour *can be changed.* Structure produces behaviour, and changing underlying structures can produce different patterns of behaviour. In this sense, structural explanations are inherently *generative.* Moreover, since structure in human systems includes the "operating policies" of the decision makers in the

Levels of explanation.

The three levels of explanation are well illustrated in the improvisational music group eg. how musical mistakes are managed:

An event level of explanation would frame a musical mistake as threatening to the survival of the group, experiencing it as disruptive to the music production—a reactive frame.

A pattern of behaviour level of explanation would frame a musical mistake as part of the ongoing trial and error necessary to produce interesting music—a responsive frame

A systemic structure level of explanation would frame a mistake more as an interesting shift in musical perspective from which a whole new area of musical exploration emerges—a generative frame

system, redesigning our own decision making redesigns the system structure."
Senge P. M. (1994) P 52 & 53

Dialogue

David Bohm , was a leading quantum Physicist, who developed a theory and method of dialogue, when a group "becomes open to the flow of a larger intelligence….The purpose of dialogue is to go beyond any one individual's understanding….. 'A new kind of mind begins to come into being which is based on the development of a common meaning….People are no longer primarily in opposition, nor can they said to be interacting, rather they are participating in this pool of common meaning, which is capable of constant development and change.' ….People in dialogue also begin to observe the collective nature of thought."

"In dialogue,….. people begin to 'participate in this pool of common meaning, which is capable of constant development and change.' Bohm observed that our normal processes of thought are like a 'coarse net that gathers in only the coarsest elements of the stream. In dialogue, a 'kind of sensitivity' develops that goes beyond what we normally recognise as thinking. This sensitivity is 'a fine net' capable of gathering in the subtle meanings in the flow of thinking. Bohm suggested that this sensitivity lies at the root of real intelligence.

Senge P. (1994) Pp 239 -242

Evoking fields

Fields are forces of unseen connection that directly influence our experience and behaviour. We are aware of the consequences of fields (such as gravity)without necessarily observing any direct connection between the two bodies.

Dialogue

Interesting music comes out of dialogue between the participants. When dialogue is occurring all musical ideas presented in the playing are respected and given space to be expressed. Some of these ideas will have a short life while others will be reflected and developed by the group creating something much greater than the original idea produced by one participant. Each participant becomes more open to the others and very aware of the whole group and its musical ideas. There is a sense of flow to the music and of the music being an entity separate to the group. Dialogue is closely linked to the evoked field described by musicians as "being in the groove".

Evoking fields

"Being in the groove" is an advanced level of development for any improvisational music group. It appears to be equivalent to Bohm and Jaworski's descriptions of an evoked field.

Organisational fields are also observable in situations which emerge within organisations. Forces of unseen connection between groups of people are capable of being brought forth (evoked) when intention is genuine and emotional and behavioural structures are appropriate. David Bohm once commented that "we are all connected through and operate within living fields of thought and perception"— what he called "the general fielding of all mankind."

Joseph Jaworski (author of "Synchronicity") suggests that the role of the leader is to create conditions in which organisational fields can emerge.

This level of improvising is a highly rewarding experience, not achieved by every group.

The chances of achieving this higher level of playing is improved by:
• all the participants having faith in their ability to produce significant music and being committed to the common purpose
• taking time to develop and explore the musical relationships
• recognising and dropping personal defensive patterns that interfere with the development of an effective musical relationship
• being open to other's musical ideas
• finding ways of complementing other participant's musical ideas
• valuing the synergy of varying musical ideas
• taking risks with the music
• accepting and utilising musical mistakes
• playing with a supportive professional musician who respects and incorporates your musical ideas.

Conclusion
When the experience of an improvisational music group is debriefed, participants are able to identify incidents and times in which particular elements of system concepts were demonstrated. When a highly energetic field has been evoked with the music, the debriefing brings forth profound learning and understanding for the participants.

References

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