



# Journal of Arts & Humanities

Volume 06, Issue 08, 2017, 37-46

Article Received: 29-07-2017

Accepted: 20-08-2017

Available Online: 29-08-2017

ISSN: 2167-9045 (Print), 2167-9053 (Online)

DOI: <http://dx.doi.org/10.18533/journal.v6i8.1244>

## The Generative Process of Professional and Personal Development of Cognitive-Behavioural Clinical Psychologists in Training through the Inclusion of Strategies of Expressive Arts: A Qualitative Analysis and Comparison

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### ABSTRACT

Starting out from the perspective that art is in fact a process and not simply the creation of objects neither the creation's final products, the present article reports a qualitative analysis, examination and comparison of the subjective nature of the generative process experienced with the inclusion of strategies of expressive arts, described and interpreted by two cognitive-behavioural clinical psychologists in training, both knowledgeable of the principles of cognitive-behavioural model of learning. Does the nature of the psychologists in training subjective experiences with the inclusion of strategies of expressive arts, as reported during their training of professional and personal development, share features and effects? Results revealed similar generative processes guiding towards the development of abilities to focus on the identification and contemplation of automatic thoughts. Such abilities facilitated the grasping of the mechanics of the cognitive-behavioural intervention and also triggered a beneficial sense of well-being during the course of training.

**Keywords:** Cognitive-Behavioural Clinical Psychologist, Expressive Arts, Generative Process, Professional and Personal Training.

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### 1. Introduction

The aim of this qualitative analysis and comparison is to argue for the efficaciousness of a professional and personal development of cognitive-behavioural clinical psychologists trained through the inclusion of strategies of expressive arts. In this sense, this article begins with a brief presentation of Complexism, Evolutionary Art, Complex Systems, Effective Complexity, and Generative Processes, followed by a brief presentation of the Cognitive-Behavioural Model of Learning and of some of its

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psychoeducational strategies for the training at a graduate level of development. Finally, the research question is properly formulated.

### 1.1 Arts and expressive arts

Galanter (2008) introduced a new approach called Complexism, that is, an application of scientific knowledge on Complex Systems to the Arts and Humanities issues. Complexism's iconography is a dynamic one and it is called Evolutionary Art, that means that art is in fact a process and not simply the creation of objects neither the creation's final results. Complex Systems make reference to all the systems that possess a large number of small parts or components which interact with other parts and other components present in the system, make reference to multiple systems, to composite systems where interactions among parts and components lead to the system's self-organisation. Such self-organised systems are dynamic, adaptive, constantly changing and continuously in reorganisation, repairing, in permanent emergence or growth (Park & Reuter-Lorenz, 2009).

Human beings, being biological systems, are Complex Systems in permanent change and emergence of responses that are adaptive (Burke, 2014; Skinner, 1984). Thus, human beings are emergent phenomena. Complexity science tries to abstract an understanding of systems across all the disciplines and the study of complexity is the study of integration, the act of combining into an integral whole. The efficient complex adaptive systems, Effective Complexity, illustrate how the Effective Complexity generates a context for the understanding of the effects of expressive arts in the process of professional and personal development.

Evolutionary Art, which according to Galanter (2008) is a kind of generative art, makes reference to how the art is made and to the fact that the process of making it is determined by a precise rule or set of rules that specify a procedure, an algorithm. The generative art systems themselves are the focus of attention. Galanter (2008) proposes Complexism as something that will come after postmodernism and that will provide a more elaborate synthesis comprising the worries, attitudes and activities of both modernism and postmodernism. Complexism widens the horizons and creates a new point of view where Generative Processes (the subjective nature of the individual's experiences) are considered valuable as sources of information on the effects of the experienced phenomena.

### 1.2 The cognitive-behavioural model of learning

The brain, as a physical system that was sculpted to generate behaviour, supplies extreme sensitivity to relevant information from the environmental context and coordinates behaviours that have adaptive consequences (Skinner, 1984; Burke, 2014) and the cognitive-behavioural model of learning estimates that specific environmental contexts, that is, a given event, circumstance or phenomenon, trigger flows of thoughts that occur simultaneously at three differing levels of thinking (refer to "Explanation" column on Table 1). Two of those levels of thinking occur below the level where the conscious thinking happens, exert a controlling influence over emotional reactions and over the behaviours that are emitted in specific environmental contexts (Zheng, Paterson, & Yap, 2013). As Complex Systems in perpetual growth, human beings experience with certain phenomena triggers flows of thoughts that trigger emotions/feelings that produce certain behaviours associated to that particular phenomenon and vice-versa, that is, behaviours emitted in certain situations trigger emotions that trigger flows of thoughts.

### 1.3 Professional and personal development of clinical psychologists

The psychoeducational strategies adopted during the training at a graduate level of professional and personal development of cognitive-behavioural clinical psychologists include the "Register of Automatic Thoughts", "Exercises of Mental Imagery", and "Activities of Expressive Arts" (Hogan, 2016; Keller-Dupree & Perryman, 2013). The present article examines and compares the subjective nature of the generative process experienced with strategies of expressive arts, described and interpreted by two cognitive-behavioural clinical psychologists in training, both knowledgeable of the principles of cognitive-behavioural learning.

Does the nature of the psychologists in training subjective experiences with the inclusion of strategies of expressive arts, as reported during their training of professional and personal development, share features and effects?

## **2. Method**

### **2.1 Participants**

Written reports produced by a graduate level 44-year-old female and by a graduate level 36-year-old male in training of professional and personal development of cognitive-behavioural clinical psychologists, both knowledgeable of the cognitive-behavioural model of learning's central principles, main elements, basic concepts, and main characteristics, were randomly picked out, drawn among the group of the 26 trainees attending a public university.

### **2.2 Materials and procedure**

Written reports during each of the training sessions, weekly written reflection reports on each of the sessions, and the final chapter of the weekly written reflection reports made independently by both trainees were analysed in order to answer the question "Does the nature of the psychologists in training subjective experiences with the inclusion of strategies of expressive arts, as reported during their training of professional and personal development, share features and effects?"

#### **2.2.1 Training sessions**

##### Session 1 – Introduction and phenomenon 1

As usually happens in any introductory training session, group rules, confidentiality, and the purpose of the process were discussed. All the trainees talked a little bit about their professional interests and about their feelings associated to this training of professional and personal development. After that, each member of the group was presented with a sheet of lined paper, asked to consider the question "If you were a fruit or a tree, which kind of fruit or tree would you be?" (Phenomenon 1), and to report in the lined sheet of paper her/his personal consideration (written report during the training session). When the group had finished reporting in writing, the group was invited to voluntarily share with the group their subjective experience with phenomenon 1.

The group was also asked to prepare a weekly written reflection report where they would retrospectively report their reflections on their subjective experiences with each of the circumstances (Phenomena) and their perceived effects of those circumstances. Every week a new chapter (report) was electronically submitted relative to the circumstance previously experienced.

##### Session 2 – phenomenon 2

Members of the group were asked to choose one among a set of colouring images, to choose some among a set of colouring pencils, and to take one sheet of lined paper, which were all displayed on the top of a table. Then they were asked to colouring the image (Phenomenon 2). When the group had finished colouring their chosen colouring image, they were asked to report in the lined sheet of paper her/his personal reflections on phenomenon 2 (written report during the training session). When the group had finished the written report, members were invited to voluntarily share with the group their subjective experience with phenomenon 2.

##### Session 3 – phenomenon 3

By the end of Session 2, the group was asked to bring to the next Session (Session 3) photography to be personally taken during the following days depicting something in the nature of the University Campus that truly called their attention during their daily routine inside the Campus. At the beginning of Session 3 the group was asked to voluntarily present to the group the photography they took and brought to the Session and to talk a little bit about the choice made. Then, they were presented with a blank sheet of paper, a lined sheet of paper, colouring pencils, crayons, and were asked to consider the question "If you decided to design a frame for this photography, which kind of frame would it be?" (Phenomenon 3). When the group had finished, they were asked to report in the lined sheet of paper her/his personal reflections on phenomenon 3 (written report during the training

session). After that, members were invited to voluntarily share with the group their subjective experience with phenomenon 3.

#### Session 4 – phenomenon 4

Each member of the group was provided with one blank sheet of paper and one lined sheet of paper. The group had available colouring pencils and crayons. The group then was presented with two short La Fontaine fables and asked to draw in the blank sheet of paper an image that would represent one of the fables (Phenomenon 4). Then they were asked to report on the lined sheet of paper their personal reflection on phenomenon 4 (written report during the training session). After that they were invited to voluntarily share with the group their subjective experience with phenomenon 4.

Those above were the four sessions or four activities of expressive arts, Phenomena, included among the strategies of written registers and mental imagery during the training of professional and personal development of cognitive-behavioural clinical psychologists.

#### 2.2.2 Two weeks after experiencing phenomenon 4

By the end of Session 4, the group was asked to, after having electronically submitted the weekly written reflection report on phenomenon 4, put aside during two weeks, written reports and expressive arts objects they created along four sessions. Then, after those two weeks, to revisit everything they had produced on those sessions, retrospectively reflect on their subjective experiences with each of the phenomena and on the effects of those circumstances and then to elaborate a final chapter for the weekly written reflection reports.

### 2.3 Results

Sources of data considered were a) Written reports during each of the training sessions; b) Weekly written reflection reports on each of the sessions; c) Final chapter of the weekly written reflection reports. Table 1 presents a comparison of the subjective nature of the generative processes experienced with the inclusion of strategies of expressive arts, described and interpreted by two cognitive-behavioural clinical psychologists in training, both knowledgeable of the principles of cognitive-behavioural learning. The fourth column (Explanation) explicit relevant substance for the understanding of several of the trainees reported aspects of their subjective experiences.

Table 1: A comparison of generative processes experienced with the inclusion of expressive arts during the training of professional and personal development of cognitive-behavioural clinical psychologists

Phenomena	Generative process experienced by the 44-year-old female psychologist in training	Generative process experienced by the 36-year-old male psychologist in training	Explanation
PHENOMENON 1	a) Written report during the session - reported experiencing contingent to the description of the activity (Phenomenon 1) an avalanche of automatic thoughts, including spontaneously imagery.	a) Written report during the session - reported experiencing contingent to the description of the activity (Phenomenon 1) an avalanche of automatic thoughts, including spontaneously imagery, and a single thought at the level of consciousness.	PHENOMENON means a special set of circumstances or specific contingencies or events. For this training, PHENOMENA are the strategies of expressive arts. The PHENOMENON triggers flows of thoughts, among them automatic thoughts. Flows of thoughts happen simultaneously in three levels: Level 1, at the surface,
	b) Weekly written report on the session - reported that during the	b) Weekly written report on the session	

week, in differing - reported that corresponding to the level of contingencies, kept remembering his conscious thought, level remembering her experience experience with towards which attentional with phenomenon 1, phenomenon 1 triggered a processes are directed; Level spontaneously reviving feeling of satisfaction for 2, immediately below Level 1, imagery and the feeling of having decided to share his corresponding to automatic becoming a child again and of subjective experience with thoughts, which are thoughts of being bewitched; the group during the that flow very quickly, - reported looking forward to session; towards which usually the the next phenomenon. - reported looking forward attentional processes are not to the next phenomenon directed, and that usually are and enthusiasm with all of not subjected to careful the psychoeducational rational analysis. strategies already The flow of automatic exercised. thoughts influences the thoughts that flow at the level of conscious thoughts, that is, Level 1.

PHENOMENON 2 a) Written report during the session  
 - reported that while choosing a colouring image, an automatic thought crossed her mind and triggered several emotions followed by the recovery of forgotten memories about her childhood and the realisation that she missed it; - reported that colouring the chosen image with the chosen colouring pencils triggered a flow of forgotten memories of happy childhood moments, of her school, her friends, cousins, brothers, all of which made her smile during the whole session.

a) Written report during the session  
 - reported that colouring the chosen image triggered a flow of forgotten memories of his childhood, of the island where he used to live, sand, sea, and of the natural phenomena that happen in an island; - reported that colouring gave him a sense of well-being, contentment, and happiness.

The flow of automatic thoughts triggers emotions/feelings that exert influence on operant behaviours, actions. Behaviours emitted in a certain occasion also trigger emotions, which will control thoughts in that circumstance. Behaviour is the organisms' any response that is freely emitted and that exerts influence on the organisms' own physical and social environments and on the organisms' feelings and thoughts.

b) Weekly written report on the session  
 - reported that training session 2 (Phenomenon 2) was the happiest school lesson she ever had in her whole life, that she felt a whole lot of many differing emotions in a short period of time, retrieved beautiful moments of her childhood,

b) Weekly written report on the session  
 - reported that remained thinking about the activity (Phenomenon 2) and remembering his childhood. Through the exercises of mental imagery, he kept putting himself back in Phenomenon 2 and

The Mental Imagery Exercise is one of the strategies adopted for the identification of thoughts, associated feelings in a particular circumstance. The procedure involves relive, live over, a given circumstance, in order to reconnect with thoughts and feelings that occurred in that event, occasion.

and had a productive insight, regaining relaxation over a breakthrough – becoming and over again; fully aware that she had a - reported that at the level of consciousness he came to a decision – introducing colouring images and that before; - reported that during the week, kept remembering interacting activities with Phenomenon 2, its effects his son. and then began pondering, at the level of consciousness, that life make or leave a mark on us and about the persons that stay inside of us. - reported that her subjective experience with Phenomenon 2 triggered a feeling of happiness and a sense of inner change underway.

PHENOMENON 3	<p>a) Written report during the session</p> <p>- reported that she brought to the session a photography of a very special place in her life;</p> <p>- reported that sharing such a secret with the group triggered a feeling of well-being and tranquillity.</p>	<p>a) Written report during the session</p> <p>- reported that Breakthroughs and Decisions phenomenon 3 took him to - the aim of the cognitive-behavioural strategies is, in a first instance, the identification of adaptive and of dysfunctional schemata that, in a second instance, will be developed or modified, respectively.</p> <p>be a child.</p>
	<p>b) Weekly written report on the session</p> <p>- reported that learnt a lot during Session 3, that Phenomenon 3 was a very emotional one and that allowed for a lot to be brought to the consciousness level.</p>	<p>b) Weekly written report on the session</p> <p>- reported that along the week, when exercising mental imagery, remembered the sensation of well-being during the session exactly at the moment of a breakthrough, when he realised that life in the countryside is what he really needs;</p> <p>- reported that reached a decision of trying hard to educate his child in the countryside;</p> <p>- reported that kept spontaneously remembering Session 3</p>

		that triggered a flow of forgotten memories of happy childhood events with his grandfather.	
PHENOMENON 4	<p>a) Written report during the session</p> <ul style="list-style-type: none"> <li>- reported a sense of deep involvement in the activity, the spontaneous recovery of memories long forgotten, the enormous astonishment when realising that she had those memories consolidated somewhere followed by a huge satisfaction.</li> </ul> <p>b) Weekly written report on the session</p> <ul style="list-style-type: none"> <li>- reported that during her exercise of mental imagery regarding Phenomenon 4, she suddenly realised that what she drew during Session 4, without knowing it, and before the spontaneous recovery of memories long forgotten, was that completely forgotten episode from her childhood: "...The image that I drew was the forgotten memory, the forgotten episode..."</li> </ul>	<p>a) Written report during the session</p> <ul style="list-style-type: none"> <li>- reported verifying during the activity that in life there are good and bad moments, that joyful and sorrowful moments coexist;</li> <li>- reported having a breakthrough – becoming fully aware of the importance of attachment in the shaping of schemata;</li> <li>- reported grasping the relevance of the identification of schemata.</li> </ul> <p>b) Weekly written report on the session</p> <ul style="list-style-type: none"> <li>- reported that during the week, when carrying out exercises of mental imagery regarding Session 4, remembered that he is incapable of saying goodbye;</li> <li>- reported that he grasped that the importance of the training of professional and personal development is in the possibility of experiencing the same dynamics and difficulties experienced by the patients.</li> </ul>	<p>Flows of thoughts happen simultaneously in three levels: Level 3, immediately below Level 2, corresponds to schemata, that are roots of all thoughts, rules that govern the flow of thoughts in Level 2; schemata are mental representations of some aspects of experience and memory, that are structured in a way to facilitate (sometimes to distort) perception, cognition, inference making or the interpretation of new information.</p> <p>SCHEMA (singular form) / schemata (plural form) are internal representations of the world; an organization of concepts and actions that can be revised by new information about the world.</p> <p>Schemata are enduring principles of thought, shaped during early infancy, that regulate the child's thoughts. These fundamental rules for thinking in Level 3 trigger automatic thoughts in Level 2, which influence the flow of thoughts in Level 1. These same rules trigger certain emotions in certain contingencies, occasions, phenomena.</p> <p>Nuclear schemata are individual, global, and absolute rules, governing one's interpretation of relevant information about the environmental context. These are the rules about</p>
c) Final chapter of the weekly written reflection reports	<p>Final written chapter Generative Process</p> <ul style="list-style-type: none"> <li>- these strategies are pure nonsensical;</li> <li>- if I share with the group my subjective experiences with these nonsensical strategies I will be ridiculed;</li> <li>- now I feel like sharing;</li> </ul>	<p>Final written chapter Generative Process</p> <ul style="list-style-type: none"> <li>- extreme inhibition with these strategies and a feeling of awkwardness;</li> <li>- I understood that I was acquiring personal knowledge and growing;</li> <li>- the mental imagery</li> </ul>	<p>Nuclear schemata are individual, global, and absolute rules, governing one's interpretation of relevant information about the environmental context. These are the rules about</p>

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- spontaneously thinking exercises allowed me to one's self and self-esteem.
  - about the phenomena comes revivify thoughts,
  - daily; emotions, and behaviours
  - I would report my thoughts associated to Phenomena;
  - and do the mental imagery - the subjective experiences
  - exercises daily; during the Sessions
  - I developed self-confidence; continued to be examined
  - I developed empathy between Sessions and
  - towards the patients; frequently those subjective
  - this training of professional experiences would
  - and personal development of spontaneously reach the
  - cognitive-behavioural clinical level of consciousness;
  - psychologists should last - I am able to identify my
  - much longer. automatic thoughts,
  - feelings and associated
  - operant behaviours in any
  - situation that I am in;
  - I always try reach my
  - nuclear schemata;
  - I feel free and much more
  - tranquil.
- 

### 3. Discussion

Does the nature of the psychologists in training subjective experiences with the inclusion of strategies of expressive arts, as registered during their training of professional and personal development, share features and effects? Analysis and comparison of the generative processes through the analysis and comparison of the subjective experiences, as reported along the process, and not the simple creation of objects or the artistic final result, disclosed, revealed that the nature, that is, the characteristics or the essential qualities, of the subjective experiences reported by both trainees with the inclusion of expressive arts do share features and effects.

Both trainees reported that in the first session of professional and personal development of cognitive-behavioural clinical psychologists, in their first contact with phenomenon 1, they began experiencing a whole lot of cognitions associated to the phenomenon and the controlling influence of those cognitions over their emotions in that situation.

Table 1 presents the generative process for each trainee and demonstrates the velocity with which in just four sessions both graduate level trainees in cognitive-behavioural clinical psychology learnt to identify their automatic thoughts flowing in association with the experienced circumstances of expressive arts. Such flows of automatic thoughts and the consequent feelings, according to the trainees' reports, continued to be examined between training sessions. These analyses or contemplation carried out between sessions contributed to individual insights on the central principles that orient cognitive-behavioural interventions and also to individual insights on personal issues and behavioural change. Both trainees realised that breakthroughs prompted them to design plans for behavioural change.

The "Explanation" column on Table 1, by describing the relevant elements (phenomenon, flow of thoughts, emotions, and behaviours) of the cognitive-behavioural model of learning, makes transparent the generative processes experienced by each of the trainees and also the efficaciousness of a professional and personal development of cognitive-behavioural clinical psychologists trained through the inclusion of strategies of expressive arts. Furthermore, the 36-year-old male in training of professional and personal development of cognitive-behavioural clinical psychologists reported that he had been examining, analysing, contemplating his thoughts, feelings, behaviours, and breakthroughs in order to identify nuclear schemata, which means that during the training he became fully aware of the possibility of bringing nuclear schemata to consciousness.

### 3.1 The shaping of a schema

Human babies have a biological need, present at the moment they are born, of keeping close contact (proximity) with their mothers (or some other main caregiver), a normal connection that develops within the first six months of life through the mother's readiness to react to this particular need. During this critical period of development the first schemata begin to be shaped and these are exactly the schemata related to the child's basic emotional needs, and are extremely resistant to change (Bowlby, 1985). All the schemata shaped along the whole childhood form the base, the foundation, the structure for the child's flows of thoughts and are the product of a complex interaction between biological factors and the results of the child's initial experiences with the circumstances or phenomena around her/him. The overwhelming majority of schemata are the result of those interactions (Ginsburg & Opper, 1988). Schemata thus make reference to the child's underlying basic structures of her/his public actions or operant behaviours and, being resistant to extinction, exert a controlling influence over the thoughts, feelings, and behaviours of an individual for the whole length of her/his life (Beck, 1976).

## 4. Conclusion

The present article reported a qualitative analysis of the nature of the subjective experiences with strategies of expressive arts introduced as phenomena (refer to "Explanation" column on Table 1) during the training of cognitive-behavioural clinical psychologists. These subjective experiences were reported in written by the two trainees, one male and one female, both knowledgeable of the principles of the cognitive-behavioural model of learning. Does the nature of their subjective experiences with the inclusion of strategies of expressive arts share features and effects? The qualitative analysis evidenced that the reported experiences shared features and effects and culminated in similar generative processes, in the development of abilities to focus on the identification of automatic thoughts, in the contemplating of the automatic thoughts identified, in an improved understanding of the mechanics of the cognitive-behavioural model of learning, in a beneficial sense of well-being during their graduate studies.

### 4.1 Policy implications

The present analysis certified the efficaciousness of the inclusion of expressive arts for the purposes of training at a graduate level of cognitive-behavioural clinical psychologists. As for policy implications, the inclusion of expressive arts for the purposes of psychotherapeutic interventions should require the presence and the expertise of a properly trained psychologist.

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