

**A Picture is Worth a Thousand Words:
An Executive Summary of Pershyn's 1992 Master's Project.**

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Overview:

This project described the results from three studies about creative process and contained a visual depiction of individual ideas on creative process in the form of drawings. These drawings were gathered from a variety of individuals ranging from students to professionals. Pershyn's approach was different from the traditional, in that semantic depictions of the creative process from highly creative individuals were not targeted for this study.

Pershyn argued that all individuals possess the ability to display creativity at various levels. Each day we are challenged to produce new ideas, original products and new solutions to old problems. He further contended that everyone has a creative problem solving process within them. Since an early age we have internalized the process through a series of activities to develop our own individual processes. Under those circumstances he asked, what would our own processes look like if we were asked to draw them?

The purpose of this project was to create a product that represented the way people describe their own creative processes in the form of a variety of graphic images. The goal of this project was to use graphics more deliberately to broaden the understanding of Creative Problem Solving. An early investigator of Creative Problem Solving (CPS), Alex Osborn (Osborn, 1953) developed a process that was later modified by and advanced his followers (Isaksen, 1989; Isaksen & Treffinger, 1985; Isaksen & Treffinger, 1991; Noller, Parnes & Biondi, 1976; Parnes 1967a; Parnes 1967b; Parnes, Noller & Biondi, 1977). Isaksen and Treffinger's early six-stage depiction was the basis for Pershyn's research. The function of CPS is a flexible one, allowing one to move

freely in and out of the process, but the graphic depiction of the process was portrayed in a linear fashion. This project points out the discrepancy in the way CPS functions verses the way it is graphically depicted. Pershyn wanted to be more inclusive in how CPS was depicted graphically and in exploring how people illustrated their own CPS seemed a logical place to begin.

Context:

Pershyn began with an historical perspective about how CPS had been portrayed in the past. He set the stage and gave early rationale that showed the importance of studying creativity. He used the Kirton Adaption-Innovation Inventory (KAI) to determine differences between the innate creative process of adaptors and innovators (Kirton, 1976).

The project was based on three fields of study. The first study involved an activity that asked participants to draw their own creative process. The second study served as a bridge between the first and third study. The objective of the third study was to collect and analyze data that would aid in building the graphic theory of the creative process. Pershyn used the Grounded Theory approach as the primary analytic tool for his project (Strauss & Corbin, 1990). This qualitative approach starts out broadly and then becomes progressively narrow and more focused as concepts are discovered to be relevant or irrelevant. A summary of the procedures for data collection and analysis on the three studies (See Figure 1.1) is provided.

Figure 1.1
Procedures for Data Collection and Analysis

	<u>Introduction</u>	<u>Sample</u>	<u>Data Collection</u>	<u>Primary Analysis</u>	<u>Prediction</u>	<u>Post Prediction Analysis</u>	<u>Product</u>
Study I	Participants were asked to draw their own creative process.	50 Managers from the petroleum corporation (45 male and 5 female).	Subjects were divided into groups and asked to design/draw their creative process. Researcher remained blind to the KAI until the second round.	Included: a graphic analysis of the drawings, Keywords, Modality of communication for describing the creative process, and general observations. Grounded Theory Method used.	Prediction made on rank ordering of the KAI. Used graphic and nongraphic qualities.	Used the Constant Comparative Method and a Paired Comparison Analysis.	Six process samples were created, representing adaptive, moderate-adaptive, moderate-innovative, and innovative formations of process.
Study II	Similarities in the use of some graphic characteristics were related to style of creativity. Served as a check-in for the third study.	Drawings were received and analyzed from 19 subjects. Complete data from 14 subjects (5 male and 9 female).	Subjects were divided into groups and introduced to the "Draw Your Process" activity.	Researcher remained blind to the KAI until after style predictions were made. Information from the first study was utilized to predict the style of creativity after qualitative analysis was performed.	The results from Study I were encouraging, suggesting that Study III would be productive.		
Study III	Objective was to collect and interpret data that would assist in building the graphic theory of creative process and further aid in the development of the graphic examples of innate creative process. This was the largest study.	Complete set of data from 76 subjects (60 males and 16 females).	Subjects were divided into groups and presented with the task, but directions were altered to increase the likelihood that subjects would construct accounts of their own processes and the process accounts were those that valued newness and novelty as desired outcomes.	Researcher remained blind to the KAI until after the predictions were made. Drawings were examined and process qualities noted followed by an attempt to predict style. Drawings were assigned one of the three style classes, now reduced to adaptive, moderate, and innovative. The entire set of drawings was organized according to the subjects' KAI score. Terms were developed and refined to identify graphic characteristics present in drawings of creative process.			Eight graphic examples of innate creative process emerged representing adaptive, moderate, and innovative styles of creativity. Early forms of the process examples were evaluated to help shape the final product.

Description of Population/and Method:

In November 1990, the Center for Studies in Creativity (CSC) lead a seminar for 50 top-level managers of a national petroleum corporation. 50 managers (45 males and 5 females) designated as change agents, participated in the study. The group was separated into eight homogeneous groups based on like scores from the KAI. The subjects were unaware of the grouping that created a distinct style group representing a broad range of adaptive and innovative preferences. Once in the groups, a facilitator presented the directions and read them aloud. The participants were asked to “Design, Illustrate, Draw or Diagram” their personal creative process. In addition, participants were asked to represent a process they used that resulted in a successful solution. Each person was provided paper and asked to work individually. They were allotted ten minutes to complete the task.

Next, the participants were asked to share their work in small groups, and to describe the processes they illustrated. The facilitator recorded each verbal account on flip-chart paper. When completed, participants articulated similarities and differences they observed and this too was recorded on flip-chart paper. This activity concluded with a large group, discussion of results and a debrief. With the participant’s permission, all of the information from this activity was collected and used in the project. Participant’s drawings of their creative process along with the flip-chart paper information constituted the data. In addition, parts of the activity were videotaped.

Analysis of this data was done in two phases, a primary analysis and a post-prediction analysis. The primary analysis preceded an attempt to predict style of creativity. The post-prediction analysis examined the results of the prediction and took a

closed look at the data. The flip-chart data were received. The KAI results were temporarily withheld from the researcher to prevent a bias in the data analysis. This also prompted the need for a thorough qualitative analysis of the data. Following the analysis, Pershyn began on the construction and design of the graphic examples of innate creative process. He created six process examples representing different adaptive and innovative styles determined from the KAI. These examples were modified over the course of the three studies until the final forms were obtained. It was obvious from the first study, that style of creativity was related to similarities in the use of some graphic characteristics.

For Study II, subjects were randomly arranged into five groups. Data were received from 19 subjects with complete data from 14 subjects (5 male and 9 female). No attempt at homogeneous groups attempted here. Subjects were asked for permission to use their drawings for research. They began by writing their names on their drawings. Subjects were asked to work individually following the same methodology for instructions as in the first study. Casual observations were made as tasks were performed. Small group discussion observing similarities and differences concluding with a large group discussion. The researcher remained blind to the KAI scores until after predictions of the styles were made.

Study III, the largest of the three, used information from the two earlier studies to create a test design that would result in richer, cleaner data. A complete set of data were collected from 76 subjects, 60 males and 16 females. This was a cross representation of employees from the corporate hierarchy of a large petroleum company. The subjects were divided into groups with two modifications from the earlier groups. The directions were altered and each subject was provided with a clean, white 12" x 14" sheet of

drawing paper to compose their accounts of their innate creative process. Only the individual data from the drawings and the KAI scores were used. Group data were not collected. The researcher again remained blind to the KAI scores until after predictions were made. Drawings were assigned to one of now three style classes, adaptive, moderate and innovative. The moderate-adaptive and the moderate-innovative were combined to form the moderate class. The entire data set of drawings was organized by the subject's KAI score. Eight graphic examples of innate creative process were designed representing adaptive, moderate, and innovative styles of creativity. Early forms of the process examples were presented for evaluation and guidance to help shape the final product.

Findings:

When looking at the graphic characteristics of creative process for Adaptors, Moderates and Innovators, various formats emerged ranging from linear, targeted, simple and ordered through a spectrum of nonlinear, spontaneous, complex and random. The graphics contained abstract geometric shapes arranged in flow charts to represent examples of innate creative processing. Eight graphic examples were developed to represent different styles of creativity: three adaptive, two moderate, and three innovative examples. The examples of creative process that were created from this study highlighted important differences within styles of creativity, yet these drawings used just one part of the results of the research.

When this project began it was thought that maybe the six-stage model of CPS (Isaksen & Treffinger, 1985) could be replaced by a better one, or even a “perfect model”. This project brought to light the fact that there is no “one” model that could

represent all of the variations of CPS for all people. One of Pershyn's key learnings was the fact that once a graphic depiction is made, it leaves no room for interpretation by the sheer fact that it is so concrete in nature. There is a problem in the power of the "picture". In order to effectively use visual depictions of the CPS process, one should describe some alternate perceptions of how CPS could appear. These images should be portrayed in a way that demonstrates the many approaches to creative process and encourages onlookers to consider personal unique perspectives.

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