# Peirce and Work

By Paul Ryan

This paper is a report on using Peirce's categories to structure a program for training workers. I choose to submit this paper to honor Peirce Scholar, Roberta Kevelson, because of the deft insistence in her 1994 American Semiotic Society keynote that pragmatism itself will only grow as it learns by doing.

## The Context

Downsizing in the defense industry has been estimated to result in the loss of over two million jobs (Rifkin 1995: 38). In the spring of 1994, I was invited to design a core curriculum for workers displaced from the defense industry by a company called ETI which is responsible for retraining and placing some of these workers. ETI's clients lost their jobs due to layoffs by Pratt-Whitney and Hamilton Standard in East Hartford, Connecticut. ETI has had similar retraining contracts with IBM and Pan Am. My invitation was triggered by the publication of my book, *Video Mind, Earth Mind*, (Ryan: 1993) in a series on semiotics and the humanities edited by Roberta Kevelson. In that book, I articulated the Earthscore Method, based on my cybernetic adaptation of Peirce, whereby videographers could create a shared perception of ecological systems (Ryan 1993: 379-393). The question posed by this invitation was whether the Earthscore Method, specific to video work in an ecological context, could be generalized for other workers. I

thought it could and set about designing a program based on the same method.

I called the program Success Skills and defined Success Skills, after Aristotle, as habits of right reason and ease about work to be done. The Success Skills program shapes and supports habits that enable people to find new jobs and thrive in what is being called the new world of work, where everybody is seen as in business for themselves in one way or another (Bridges: 1994). In February and again in April of 1995, I ran two Success Skills workshops for ETI clients in Connecticut. Subsequently, I taught others how to conduct the workshop and two have been conducted successfully without me. Based on testimonials, focus group reports, job club activity and job placement rates, ETI considers the Skills curriculum a genuine success with a promising future. Currently, with my ETI associates, I am redesigning the workshop for students in School-to-Work Programs. Discussion is also under way about adapting the program for welfare-to-work clients.

The necessary skills for success in the nineties and the next century have been identified by The Secretary's Commission on Achieving Necessary Skills of the United States Department of Labor. These skills are known as the SCANS skills (United States Department of Commerce: 1992). Evidence of a consensus about the identity and value of the SCANS skills is apparent in the report on essential skills produced by the American Society for Training and Development (Carnevale: 1990). As identified by the American Society for Training and Development, these skills include the three basics of reading, writing and computation as well thirteen others, which are informally

known as the "soft" skills. These soft skills are the focus of the Success Skills program. They include: being an effective member of an organization, leadership, interpersonal relations, negotiations, teamwork, self-esteem, goal setting and motivation, career development, creative thinking, problem solving, listening, oral communication and learning to learn.

To build a coherent training program, I analyzed each of these skills in terms of three generic life skills. Each participant profiles his or her own capacity to perform these generic skills using a questionnaire. Based on these profiles, participants then organize themselves into recombinant teams of three or more and follow a carefully choreographed sequence of exercises over a forty-eight hour period. Each exercise is grounded in the generic skill sets and activates one of more SCANS Skill. At the end of the workshop, a Success Skills Club is formed to sustain the ongoing task of shaping productive work habits.

The three generic skill sets are based on three fundamental categories identified by Charles Peirce (1931-35). In Peirce's understanding, the purpose of thinking is to establish effective habits. This understanding makes his categories well suited for a training program designed to shape good work habits. Strictly speaking, a pure understanding of the categories of firstness and secondness does not involve habits or skills. However, I think my use of Peirce here is justified in that I have identified skill sets that reference firstness and secondness. As a practicing artist (Ryan: 1993), I can claim that the skills of an artist, for example, reference firstness. Likewise, Zen practice cultivates skill in firstness. Sherlock Holmes, as presented by Sebeok, is portrayed as

skilled in abduction, (firstness) induction (secondness) and deduction (thirdness) (Sebeok 1981: pp. 17-53).

To adapt Peirce's categories for non academic users I dehyposthesized firstness, secondness and thirdness into "the first set of skills", "the second set of skills' and "the third set of skills". I found that my habit of explaining what we were doing using Peirce's hypothesized designation of categories only confused people. Prior to this dehyposthesation, as someone tutored by Gregory Bateson in logical types, (Ryan 1993: 174-196) I had always seen Peirce's categories as antithetical to set theory. However, recent reading in "fuzzy logic" convinced me that this dehyposthesation, if understood in a fuzzy set sense, was legitimate (McNeil and Freidberger: 1993).

By basing Success Skills on these three broad generic categories, I believe I have developed a program that can make a serious contribution to creating a highly skilled and flexible workforce. Existing programs that effectively teach reading, writing and computation can be integrated into Success Skills. The Skill Standards initiative, developed by the National Alliance of Business, will make it possible to design and deliver high performance Success Skill programs for any industry. Industry specific skills can be analyzed in terms of the three generic skills and an appropriate program developed that combines SCANS skill training with industry specific needs in any area of the country.

For example, the retail industry has developed Skill Standards that include two specific skills: 1) listen and ask open-ended questions 2) acquire and apply product knowledge (*American Management*

*Association,* June, 1995: 28.) The Success Skills program already includes training in listening and questioning in terms quality of emotion, specific facts and overall pattern. Emotion, fact and pattern each reference one of the three generic skill sets. A salesperson with this training would satisfy the listening/questioning standard. To address the standard of acquiring product knowledge, I would develop a Success Skills module that taught people to examine a product in terms quality, fact and pattern. The common ground between customer and product, created by addressing both in terms of the generic skills, would make it easy for a salesperson to apply his product knowledge by matching a specific customer's need with a specific product. Moreover, a Success Skills participant would also understand, through the Myers-Briggs indicator (more on Myers-Briggs later) and through the performance assessment (see below), just how his or her own preferences and performance skills figured into his or her habits of right reason and ease about selling.

By building specific training based on generic skills, the program can maintain commitment to a flexible workforce. Flexibility is uncommitted potential for change (Bateson 1972: 502-513). The global marketplace is unpredictable. We need a flexible workforce that can respond quickly. Consider an acrobat on a high wire. In order to maintain his balance he must be free to move quickly from one position to another. Rigidity in any part of his body will cause him to fall. A healthy economy needs a workforce that is not trapped in a rigidity of outmoded skills. By grounding the learning of very specific skills in a balance of the three generic skill sets, the capacity to learn new skills is built into the Success Skills program.

As mentioned, participants use a questionnaire is a self-assessment instrument to profile generic skills. Readers of this paper are encouraged to actually take the time to take the questionnaire, presented as the **Performance Profile** elsewhere on this site. Participants use their profiles to organize teams with complimentary skills during the workshop. There are no right or wrong answers. There are, instead, judgments to be made about one's own abilities that draw a picture of personal skills. The more accurate the picture, the better will be the fit with teammates. Participants are encouraged to as honest as possible. If unsure, they are instructed to make their best guess.

In the workshop, teams are organized based on these fundamental skill sets. As a member of these fundamental or generic skill teams, participants are given exercises that activate specific SCANS skills in the context of work search. Each of these specific skills has been analyzed to see how it makes use of the more generic and fundamental skill set profiled. Based on this analysis, team exercises have been developed that combine generic skills with specific skills. For example, a problem solving team of three people will be organized with one person strong in the first set of generic skills, one strong in the second set, and one strong in the third set. The strong second will analyze the problem; the strong first will imagine a solution and the strong third will apply the solution to the problem. People then switch roles and analyze another problem. Now the strong first can analyze the problem with the advantage of having seen how a strong second analyzed a problem. The other two have a similar advantage in facing their respective tasks. Such turn taking will enables people to learn from each other on a regular basis.

## Teamwork and the Talking Stick Protocols

Readers will note that the questionnaire above is structured so that options are intransitive, like in the child's game "paper, rock scissors". This intransitive use of Peirce's categories is key to the workshop. McCulloch has argued that the non-hierarchic circularity of preference inherent in intransitive choices is at the core of human's logic of survival. (McCulloch 1965: 40-45) I have argued elsewhere that this non-hierarchic way of making choices is also at the core of the choice making that engenders art (Ryan 1993: 395-404). A Cezanne, faced with what he fondly called *those little blues, those little browns, and those little whites* (Lacan 1978: 110) allows himself to choose white instead of blue even though he has chosen blue over brown and brown over white. There is no hierarchy of choice. Rather a heterarchy of choice takes place a *circularity of preference that is the basic circuitry for making art.* Working as an artist using video while reading Gregory Bateson, Warren McCulloch and Charles Peirce, I was able to invent a relational circuit that has served me in my art making as a figure of regulation for intransitive composing with firstness, secondness and thirdness. One of the yields from this effort has been the creation of a non-verbal art of behavior called Threeing. Normally when three people get together two combine and extrude the third. Threeing provides choreography based on the relational circuit that precludes such exclusion. This non-verbal art of triadic relationships, analogous to T'ai Chi or Yoga, provides the model for the protocols of the talking stick at the core of the success skills workshop. The talking stick protocols allow three people to work together in a formal way, taking turns using the three generic skill sets to accomplish a task.

## The Tricolor Talking Stick

The cooperation necessary to work together in threes does not come naturally. The Tricolor Talking Stick Protocols are designed to prevent certain problems from arising within the group, so the group can learn together, intransitively, as a team with optimal results. The problems are:

1) Two or more people talking at the same time.
2) Someone dominating the group or manipulating the conversation.
3) People being left out.
4) Confusing as to the roles people are playing in conversation. Is someone throwing out a suggestion, reacting or mediating?
5) Confusion between helping and competing. If I think I am helping you and you think I am competing with you, pain and confusion will result.
6) Failure to consider a topic or situation in a comprehensive way.
7) A vague or arbitrary decision making process.
8) Relational tensions accumulating so the group splits apart.

I will describe the protocols in detail and then explain how they preclude the eight problems stated above.

The talking stick is a round, fifteen-inch length of wood with a diameter of between one and three inches. The stick is painted with three five-inch bands of solid color: yellow, red, and blue. The red band is in the middle of the stick.

Each group of three gets one stick. The stick is passed around among the trio; each member indicates the role he/she is playing in the conversation with the other two by where they hold the stick. Holding the yellow band indicates that one is exercising the first skill set. Holding the red band indicates that one is exercising the second skill set. Holding blue indicates use of the third skill set. Sometimes the emphasis is on the role the person is playing: initiator (yellow), reactor (red), mediator (blue). Example: Yellow throws out an idea, red reacts and blue mediates. Sometimes the emphasis is on what the person with the stick is paying attention to: feelings (yellow), facts (red), or patterns (blue). Example: Yellow listens for emotion and feeling as someone presents an idea, red listens for the specific facts and blue listens for the reasoning behind the idea and the overall context.

Let me provide a further example. Participants are asked to develop their best alternative to getting a "job" in the industrial sense. Each person presents his/her alternative to a group of three for feedback. The group then questions the person about their alternative by moving down the ladder from the person's alternative as stated (blue) to red (facts supporting that alternative) to yellow (mood, intuition that helped generate the alternative). This is a non-confrontational style of inquiry and the phrasing of the questions should reflect a non-advocacy approach. In fact, the exercise suggests using certain types of phrases to make sure the inquiry is not mistake for confrontation.

## Blue

If I understand your correctly you are saying that If.....then.....Am I right?

Can you show me how you got from the "if" to the "then"? I did not follow you.

## Red

What are the facts behind your statements?

How could you verify these facts?

## Yellow

How do you feel about the alternative you've developed?

What was you mood as you thought about what you could do?

Confrontation, however, is possible within the talking stick protocols. Often it can be healthy. With a talking stick, participants can combine the three non-confrontational generic roles with advocacy or adversarial roles. Confrontation or non-confrontation is indicated by the way a person holds the stick. In the non-confrontational roles of yellow, red and blue, the stick is held vertically. To indicate confrontation the stick is held horizontally with the ends pointing at the two people in confrontation. Basically at any point in the exchange among the three, one member of the team can directly challenge another member of the team of three by laying the talking stick on a horizontal line between the two of them and addressing that person in the type of adversarial statement described below. The person addressed directly can then turn the stick around and respond. The third party can also enter into this exchange if one of the two points the stick at the third party. Three times back and forth between two

parties is a reasonable limit. Then the stick must be pointed at the third party or pointed upward by one of the people arguing. By pointing the stick upward that person is either going into yellow with a fresh initiative or asking the third party to go into yellow with a fresh proposition that might resolve the argument. The trio then works through the fresh proposition in the three roles. If there is no consensus among the three then the decision-making procedure, shown below, comes into effect.

Inquiry and cooperative take place with the stick pointed up. Questioning from an advocacy position is a symmetric confrontation with the stick horizontal. This type of symmetric confrontation is often more productive if someone willingly lets people see the reasoning and the facts and the feelings associated with his or her position. Certain introductory statements can go a long way toward making the confrontation formal and clear enough to be productive. Here are some samples of proper confrontational phrasing.

"Here is how I understand the context in which I am stating my argument..."
"Here is how I define my terms."
"I am assuming..."
"Here's what I think, here's how I came to think this way..."
"I came to this conclusion because...
"Here are the facts I 'm basing my argument on."
"Here are some examples of how I think what I'm proposing will effect sustainability."

Decision-making is also part of the Talking Stick Protocols. Briefly it works as follows. When three people work together on an exercise, each has a domain determined by the generic skill set indicated by his or her color on the stick. In one's own domain, one's decision cannot be overridden by the two other members of the triad **unless** a predesignated fourth party (a facilitator or other workshop member) agrees with the other two. Then three can override one. However, if the fourth party does not agree with the two then the decision made by the one in charge of the domain stands. Experience in actual work situations with this method has been positive. No one feels his or her decisions will be overruled in an arbitrary chain of command. Moreover, some people come to see the two others plus the fourth party as a safety net, allowing them to entertain risky decisions, knowing they have a triad of consultants to rein them in.

I said that The Talking Stick Protocols are designed to prevent certain problems from arising in small groups so that the group can work together with optimal results. I will now indicate how the protocols resolve the eight problems stated above.

1) Two or more people talking at the same time.

   The person who holds the stick talks. The others listen. Each person gets a turn. The stick is exchanged in an order appropriate to the exercise. Simple.

2) Someone dominating the group or manipulating the conversation.

Taking turns with the stick in different roles allows for a sharing of leadership and prevents any one person from becoming entrenched in fixed position of power.

3) People being left out.

Normally when you get three people together, two tend to combine and push out the third. Two is company and three is a crowd. Some cultures have interpersonal tactics that neutralize this tendency. For example: in parts of China if A asks B a question in the presence of C, B will answer the question facing C as if C had asked. The point is not to exclude the third party. The talking stick insures that three can work cooperatively by taking turns in three different roles. When there is a fourth or fifth party, they can await a turn in the trio, play a backup role, or start a new trio.

4) Confusion as to the roles people are playing in conversation. Is someone throwing out a suggestion, reacting or mediating?

The three colors on the talking stick can be used by the participants to clearly indicate what role they are playing.

5) Confusion between helping and competing. If I think I am helping you and you think I am competing with you, pain and confusion will result.

In normal interpersonal relationships, we often confuse each other about the manner in which we are relating. I may think you are in

a symmetric relation to me like two boxers going toe to toe. You may think I am in a complementary relation to you, as a student to a teacher. This confusion can be emotionally difficult and counter productive for the group.

In the talking stick protocols, all complementary, asymmetric relationships clearly take place when the stick is held vertically. All adversarial, symmetric relationships take place when the stick is held horizontally.

6) Failure to consider a topic or situation in a comprehensive way.

The three basic roles indicated by yellow, red, and blue provide an approach to everything that is relevant to a topic or situation. Just as any color can be created from yellow, red and blue; so any topic can be approached in a comprehensive way using the three skill sets.

7) A vague or arbitrary decision making process.

While the decision-making procedure in the talking stick protocols can be used to override one person, that overriding happens according to a formal procedure that respects his or her point of view. No one can position him/herself to make an arbitrary decision. Nor is a two against one coalition ever allowed to have decision-making power.

8) Tensions in relationships accumulating so the group splits apart.

> The principal reason why tensions accumulate and tend to split relationships apart is that participants get caught in an escalating pattern of reacting to each other's reactions. Sometimes this happens in a confrontational symmetric fashion such as in a shouting match or a fistfight. At other times it happens because the escalation takes place in a non-confrontational, asymmetric way. An example would be two people who avoid confrontation at all costs and, eventually, separate because they can no longer communicate.

The Talking Stick Protocols preclude these escalating patterns in three ways i) escalations happen more readily when there are only two parties involved. The protocols involve the constant presence of a third party mediator ii) the role of reactor is legitimate and clearly marked as such. Through constant rotation however, participants are never stuck in a reactionary role. iii) Escalation happens when people get locked in confrontation or non-confrontational patterns. The protocols require a constant shifting back and forth between these two ways of interacting. One way serves to preclude the other from going too far. Relationships become sustainable.

## The Talking Stick Protocols are used throughout the workshop, which has a sequence of four parts.

### Part One:

The first two days participants learn to work together based on their performance profiles using the talking stick protocols. In these first two days care is taken that everybody is clear on the generic skills and the

protocols. The Talking Stick protocols are seen as training wheels for cooperation based on the generic skills. Training wheels come off only when the whole group is proficient in the protocols.

In the course of using the talking stick the following six SCANS skills are incorporated: learning to learn, listening and oral communication, interpersonal relationships, teamwork and leadership. Hence all sessions are consistently exercising at least these six SCANS skills. At least 80% of the time is spent in exercises. In addition, two SCANS skills, creativity and problem solving, are featured on the second day, Tuesday.

**Part Two:**

Wednesday is devoted to applying the generic skills to the world of work. Thursday the generic skills are linked to Myers-Briggs profile of personal preferences and applied to the self. Monday of the next week is devoted to negotiating a relationship between self and the world of work. Taken together these three days address the issue of career development, a SCANS skill, for the participant. In the course of these three days the six SCANS skills built into the Talking Stick protocols are continually exercised. Creativity and problem solving are also called as needed. In addition, participants learn about being a member of an organization, negotiating, self-esteem, goal setting and motivation. In the first five days of the workshop, all SCANS skills will have been practiced, many of them cumulatively.

**Part Three:**

This part is formatted as a series of All-for-One sessions. Each participant is on the hot seat for three continuous hours. The

participant simulates a job interview and raises other issues that pertain to his or her work search. The purpose of these sessions are threefold: 1) To provide a fullness of peer feedback for each participant based on trust levels established over five days of working with formal protocols. 2) To provide the opportunity to reinforce the SCANS skills and the generic skills in a pressure situation. 3) After working with the three generic skills as a member of different teams, the All-for-One allows each individual to reappropriate from the group these generic skills for their own personal use in their own way.

**Part Four:**

The last session of the workshop is devoted to organizing the Success Skills Club. The Club meets for three hours each week over ten weeks following the workshop. Members of the workshops elect a leader and three advisors each, representing strength in one of the generic skills. One hour of the weekly meeting is devoted to general business of the club under the direction of the leader and his advisors. Two hours of the meeting are given to mini all-for-one sessions with teams of four. Members of the four person team have a half hour to present whatever he or she need to present to the team of four for feedback in their job search. Issues are selected by participants. The Success Skills club is designed to help stabilize the SCANS skills in the context of work search.

## SCANS skills

How the SCANS skills are integrated with the generic skills is shown in the following chart.

| SCANS | First Set | Second Set | Third Set |
|---|---|---|---|
| | | | |
| member of organization *Examine Corporate Culture formally and informally for* | tone and feel | facts of situation | Overall patterns |
| leadership | take initiative | respond | mediate realistically |
| interpersonal relationships *Roles are keyed to three sets of skills.* | first skill set see talking stick | second skill set see talking stick | third skill set see talking stick |
| negotiations | invent options | focus on interests | reference standards |
| teamwork | *Cooperate with others to accomplish tasks using talking stick* | *Cooperate with others to accomplish tasks using talking stick* | *Cooperate with others to accomplish tasks using talking stick* |
| self esteem | attending to stream of | Isolating pathological critic | Disarming Critic |

| | | | |
|---|---|---|---|
| | consciousness | inside | |
| goal setting and motivation: story board of career, BATNA, All-for-One Sessions. | emotional support from group | discussion of obstacles | discussion of context |
| career development | focus on self | focus on world | negotiate self/world |
| creative thinking | random collage 'dreamer' | specifying elements 'realist' | presenting patterns 'critic in name of audience' |
| problem solving | find analogy | define problem | apply analogy |
| listening | for tone | for facts | for patterns |
| oral communication *Inquiry about* | quality | facts | patterns |
| oral communication *Advocacy using* | defined terms | statements of fact | if...then thinking |

| | | | |
|---|---|---|---|
| learning to learn | rotating use of first skill set | rotating use of second skill set | rotating use of third skill set |

Learning to learn in Success Skills can be understood with reference to Gregory Bateson's theory of learning (Bateson 1972: 279-308). To understand Bateson's theory of learning in the context of the workplace the following breakdown was developed.

Zero Learning - IBM accountant loses job because Hudson River Plant closes. He gets a Job in IBM accounting in Yonkers.

Learning 1 - IBM accountant loses job at IBM. He goes to Digital and learns that IBM's style of accounting was only one way of accounting. By reviewing the larger set of skills called "general accounting", he is able to move from the IBM way to the Digital way. Note that he does not stay in the set of skills called accounting, but uses that set to move from one specific area of accounting to another. He then returns to the level of zero learning in the Digital context. If he were to stabilize at Learning I, it would mean hanging out a shingle and doing accounting for anybody who knocked on his door.

Learning II - Former IBM accountant, now freelance accountant, realizes accounting is only one set of ways to deal with money. He goes to business school and gets training as a fiscal manager, a set of skills that subsumes accounting and includes other things like forecasting. He then hires out as a fiscal manager.

Learning III - The business school itself has a new curriculum for enabling people to learn a new set of money skills that change fiscal management and accounting for the better. Once they learn these skills, they return to Learning II activity or Learning I activity and do it better than others.

The method I have developed can be understood in Bateson's terms as a cultural instance of Learning III. I know he says that's rare, but there is a sense in which it is true. That is to say, it is a way a group of people can learn to learn. His paper just focuses on the individual. My assumption is that once people learn this way of learning, then they can accelerate their learning of any other thing to be learned. What this means in practical terms is that we spend the first block of time teaching people this triadic method, then we format every workforce skill so that it can be learned in an accelerated way, based on the fact that everybody knows the method.

I'm suggesting that this new method can itself be considered Learning III in a formal way. It enables people to communicate better in every context, whether learning I or II. We can teach this way of learning to learn and map out how people can use it in the various communication skill contexts that they work in.

Let me use a comparison. The classroom is a way people can learn together, a culturally invented form of Learning III. Once everybody knows the format which includes literacy, and the protocols, any kind of learning can be plugged in with books etc. So using the triadic method we don't have to give people a fish each time they do

something new and good and hope they invent a new way to learn. We have already invented the way. We invite people to go from where they are to Learning III in a formal way, and then back to where they want to be with their skill level.

## Peirce and Jung

One of the interesting things about using Peirce's categories is that they give Success Skills an open architecture that allows the program to interlink with other effective programs. For example, the Myers-Briggs Character Typology of Preferences has been integrated into Success Skills. Myers-Briggs is a widely used and respected tool in the training field. In contrast to the *performance* profile presented elsewhere on this web site, People using Myers-Briggs profile their patterns of *preference* using a questionnaire. This questionnaire, or indicator, is then analyzed in terms of sixteen different possible character types. The types are based on combinations of whether one's preference profile indicates extroversion or Introversion, intuitiveness or sensing, thinking or feeling, judging or perceiving. Insights derived from this analysis are woven into training.

The Myers-Briggs terminology can be misleading and the complexity of the full system forbids a complete explanation here. Our main concern is to appreciate the difference between the Myers-Briggs system based on Carl Jung and the pragmatic system of triadic relationships based on Charles Peirce. Jung developed his four orientating functions, the four preferences cited above, from empirical observations made over many years. He defined a function as "a particular form of psychic

activity that remains the same in principle under varying conditions". Jung stated, " I distinguish these functions from one another because they *cannot be related* or reduced to one another" (Myers and McCaulley 1985:12, *my emphasis*). Behind Jung's fourfold distinguishing of functions is his more basic distinction between perception and judgment.

> "Perception includes the many ways of becoming aware of things, people, events, or ideas. It includes information gathering, the seeking of sensation or of inspiration, and the selection of the stimulus to be attended to. Judgment includes all the ways of coming to conclusion about what has been perceived. It includes decision making, evaluation, choice and the selection of the response after perceiving the stimulus." (Myers and McCaulley 1985:12)

In contrast to Jung, Peirce was able to unify perception and judgment. How Peirce unified perception and judgment can be suggested in his notion of a "perceptual judgment". He argues that if your eyes see something vague, your mind will try to resolve that vagueness into something you can identify as either this or that. You make judgments about what you perceive as part of your ongoing way of being in the world. It is a continuous process. For example, if you are in a strange neighborhood at night and you see a figure at a distance coming toward you, alert to danger, your mind may activate itself to judge if the figure is a man or a woman. Based on the "prejudice' that women are less of a physical threat than men, you will activate a habit, a safety procedure, based on your judgment. This kind of judgment does not easily fall into the two categories of "Thinking Judgment" and

"Feeling Judgment" developed by Jung precisely because a perceptual judgment is not separated from perception. However, Jung's categories of judgment are separated from perception. Peirce "related" what Jung could not.

By distinguishing between perception and judgment, Jung was following an understanding common in European philosophy, which was most firmly established by Immanuel Kant. We know that Peirce studied Kant closely. He appropriated Kant's fundamental insight that "concepts are empirically meaningful only if they contain schematic possibilities for their application to sensible experience. However, Peirce's pragmatic appropriation radically alters Kant's understanding of the schema. Such a schema is no longer a product of productive imagination as distinct from the understanding of the faculty of judgment. *Rather, both understanding and imagination are unified and transformed into a creative function of habit...* (Rosenthal 1994: 26. *My emphasis.* Rosenthal has a very useful discussion (p. 21 ff.) of how Peirce's understanding of habit incorporates both perception and judgment.)

## Implications of Theoretical Differences for Empirical Data

One way to explore the implications of Peirce's incorporation of perception and judgment for the training field is to look at some of the anomalies in the empirical data collected using the Myers-Briggs Type

Table. Can these anomalies be explained by a revision of the Myers-Briggs Jungian theory along the lines laid out by Peirce?

- Myers and MaCaulley pointed out that the large number of J types (Judging Types) in religious work was unexpected (Myers and MaCaulley 1985: 43). "Judge not that you might not be judged." said Jesus. If judgments are understood as integrated with perception and necessary for habits of virtue, this would not be surprising.

- Because "creativity in the arts requires highly differentiated use of tools and materials, one might expect artists to prefer sensing perception rather than intuition." But in contrast to this expectation, 91% of fine artists prefer intuition. (Myers and McCaulley 1985: 41) If, as Aristotle tells us, art is a habit of right reason and ease about something to be made, then there is a continuous flow from the "right reason" of the imagination through the process of making and using materials. The relationship between intuition and sensing is itself critical to art. This relationship can be understood in pragmatic categories. In these categories no choice is forced between sensing and intuition, just as no choice is forced between perception and judgment.

- Another unexpected result of the Jungian approach: N's, or intuitives, occur more frequently than in Myers estimates (Myers and McCaulley 1985: 47). This may be because the Intuitive function as described by Jung - a subdivision of perception which includes perception of patterns, relationships and future events, - cannot really be separated out from judgment functions.

> Perceiving one pattern means I have made a judgment favoring that pattern rather than another. If I anticipate future events, I have made a judgment that the flow of present events will unfold in a certain way. Because judgment and intuition are so related in experience, it may be that respondents cannot separate them out when they take the indicator. As a result, respondents answer more frequently as intuitives because that "type" actually includes a judging function.

In short, some anomalies within the Myers-Briggs indicator may result when the artificial separation between perception and judgment must, perforce of people's experience, be conflated in their self description. Obviously, much more work needs to be done to see if this line of inquiry is fruitful. This is obviously an undertaking beyond the scope of this paper, which can only be suggestive.

## Implications of Theoretical Differences for Success Skills

Imagine designing Success Skills based on Jung's theory. The separation of perception and judgment in the theory would play out in the program. Success Skills is a workshop designed to help people find a job and, in the process, activate the new habits of work identified as SCAN skills. Insights gained through perception are not habits. Judgments are not habits. A whole set of exercises would be needed to help participants gain insights, using time that could go directly to

habit taking. More time would have to be given to processing insight gained in preparation for judgment rather than uniting perception and judgment in habit taking thorough exercises. Pragmatism, with its focus on practical affairs, -i.e., get a job, - and its emphasis on habit taking, i.e., learn SCAN skills, - appears the more appropriate theory on which to base Success Skills.

Yet the Myers-Briggs has much to recommend it for job seekers. Most salient is the fact that participants can profile their personal preferences against vocational patterns based on the pool of empirical data about participants generated by the Myers-Briggs. Also, the extrovert and introvert distinctions are useful for those in job search apart from the judgment and perceptual classifications. There is also extensive useful experience to report on from the career counseling experience with Myers-Briggs.

The question became how could we work with both theories in Success Skills. The triadic pragmatic approach has an open architecture that, in principle, should be able to accommodate the wealth of intelligence accumulated by the Myers-Briggs effort. Moreover, pragmatism evaluates concepts by their results. So by pragmatic criteria, if the Myers-Briggs strengthens the program it should be included. The purpose of Success Skills is to provide a workable program for people who want to use the SCANS skills in their job search. Optimum workability is key. Purity of theory is irrelevant *unless* contradictions in theory result in confusing the participants and undercutting their job search process. This is certainly a possibility and should not be ignored.

To insure workability and avoid confusion, the program maintains a clear distinction for the participants between the performance profile that goes with the pragmatic approach and the preference indicator that goes with the Myers-Briggs. The key use of the Myers-Briggs for the participants in the workshop is to assess their own personal preferences. That assessment will then be compared with their performance pattern. The *expectation* of match between Myers-Briggs and the pragmatic method is charted in the original publication of this article but is not included here.

## Conclusion

I wrote this paper in the spirit of Roberta Kevelson's insistence that pragmatism itself learns by doing. What I have learned by doing in the field of worker training is that Peirce's approach, incorporated into protocols of intransitive triadic relationships, can be adapted for worker training. Moreover, this approach can incorporate other effective training tools such as the Myers-Briggs. This effort with Peirce and work also created renewed hope in me that some of my earlier efforts to use my cybernetic adaptation of Peirce for education and responding to the ecological crisis can be revisited and reinvigorated with the tools developed in the workshop (Ryan: 1993). In fact, I am currently working with The American Forum for Global Education developing a workshop on sustainability for New York City High School teachers using the Earthscore Method. I am also discussing curriculum redesigned according to the Earthscore Method with colleagues at The New School for Social Research in New York City.

This effort also raises questions. What is the relation between Fuzzy Logic and Peirce's Continuum? Can the relation between skills and firstness and secondness be articulated in a clearer way? How will the questionnaire stand up to empirical testing? How can the questionnaire be refined to include the tenfold sign classification of Peirce? Can the questionnaire be used effectively in the academic world? What will the empirical data show my projection of the correlation between the Myers-Briggs preference indicator and the Peircian performance profile? Can Peirce's approach actually be of significant use on a large scale in the new world of work? Can such uses of Peirce maintain a continuity with the rich world of Peirce scholarship exemplified by the work of Roberta Kevelson?

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