147

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SCREENING AND SELECTION OF PERSONNEL: THE PERSONALITY ASSESSMENT SYSTEM (PAS)

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ABSTRACT

In the continuation of a promising FY 1984 effort, the development of remote viewing (RV) subject selection criteria has continued to center, primarily, on performance-based psychological testing and secondarily, on the use of self-report instruments. The particular performance battery that was used both in this study and in the earlier FY 1984 study is the Personality Assessment System (PAS). The PAS provides a comprehensive interpretive framework for profiles of subtest performances that have been generated by the Wechsler Adult Intelligence Scale (WAIS). The principal self-report test under examination is the Myers-Briggs Type Indicator (MBTI).

A subject pool of 95 candidates, who had completed the PAS and the self-report tests, was created by the end of FY 1986. On the basis of hypotheses formed from the previous FY 1984 effort, nine participants were selected from the pool of new candidates for inclusion in SRI International's novice RV training group. A protocol was established to maintain SRI control over subject anonymity and to ensure that all participants involved in the PAS/self-report testbed remained blind to the predictive criteria.

At the conclusion of the FY 1986 novice RV training program, the predictive ability of the PAS was assessed. Results indicate that the PAS provided a conceptual replication of the earlier FY 1984 PAS effort, i.e., in the earlier study, the PAS was used successfully to predict the top performer out of each of three different training groups. In FY 1986 the PAS was used effectively to predict two out of the top three performers in a single training group.

TABLE OF CONTENTS

LIST OF TABLES

I INTRODUCTION

Self-report personality inventories* provide the most commonly used measurement approach in psychological practice, not because inventories have proven able to deal with every situation, but because they are convenient to administer and often provide a reasonable "return on investment," (the latter being measured in terms of subject time plus cost of administration and scoring). A wide variety of inventories are on the market, most of which are more or less tailored for specific applications. Among the general-purpose inventories, the Eysenck Personality Inventory, the 16PF Questionnaire, and the Myers-Briggs Type Indicator (MBTI) have previously been used in psychoenergetic studies, but with only modest success.

The assessment of personality through performance measurement is relatively less common in psychological practice; the relevant techniques are frequently not even taught, are relatively time-consuming at best, and are viewed with skepticism by many practitioners. In this connection, although there is certainly room to improve the prevailing interpretive methodologies, there is substantial evidence that performance assessment of individuals often elicits important information about their personality that otherwise may be difficult to obtain.

Two personality measurement approaches not systematically employed in this study are "behavior ratings" and "indirect assessment." "Behavior ratings" are often easy to obtain, but they are very difficult to objectify (i.e., to eliminate the effect of interjudge differences) and are rarely able to achieve fine distinctions. "Indirect assessment" refers to the possibility of inferring personality from the work products of target individuals, such as their paintings or speeches or decisions; in connection with remote viewing (RV), this is still a strictly theoretical possibility.

Our decision to study both self-report and performance measurement of personality, each having potential advantages and disadvantages, may ultimately lead to a two-stage screening process: a first stage employing self-report techniques and seeking simply to identify promising candidates for second-stage screening; and a second stage employing the

* This report constitutes Objective C, Task 2, detailing the current use of psychological instruments in predicting psychoenergetic performance.

more labor-intensive performance measurement methodology, but aiming to isolate promising candidates for serious training.

The particular performance measurement chosen was the Personality Assessment System (PAS). The PAS is a comprehensive interpretive framework for profiles of subtest performances that have been generated by the Wechsler Adult Intelligence Scale (WAIS). In an FY 1984 SRI study,[1]* the PAS was used successfully to predict the top RV performer in each of three different training groups. The study reported here represents an attempt at replication of that earlier work.

* References can be found at the end of this document.

II METHOD OF APPROACH

A. Overview of the PAS

1. The Fundamental Principle

The fundamental basis of the PAS resides in the premise that every individual can be characterized by a distinctive profile of measurable abilities--some abilities more or less developed and others more or less latent. The individual differences in behavior that psychologists call "personality" can be derived from this profile simply by recognizing that it is easiest for individuals to try to capitalize on their strengths and to avoid their weaknesses. The term "cognitive style" may be suggestive in this context.

For example, people who perceive analytically, rather than in holistic patterns (or Gestalts), tend to perform better on certain standardized spatial tasks. In "real world" situations, however, their natural reliance on structure is helpful only in certain situations and is likely to prove a liability in others--e.g., in picking up subtle interpersonal cues. This particular trait might be viewed as a signal-to-noise bias. Analytical perceivers can only recognize the stimulus when the signal-to-noise ratio is high; they avoid false signals at the expense of frequently failing to recognize true signals. Gestalt perceivers, on the other hand, avoid missing anything, but frequently misinterpret noise as if it were true signal.

While no one or two dimensions can realistically hope to elucidate human personality, the 12 appropriately diverse measures of the PAS begin to afford a realistic picture of what happens as individuals endeavor to exploit their assets and to minimize their liabilities.

2. The Role of the WAIS

Most PAS practitioners regard the PAS as a theory that can be operationalized in more than one way--i.e., the concepts are seen as transcending particular measurement tools or methodologies. Clinical observation and self-report questionnaires are potentially legitimate sources of PAS data. However, the nature of the PAS theory and its

constructs suggests that actual performance measurements ought to provide the most efficient data. Thus, the subtests of the Wechsler Adult Intelligence Scale (i.e., WAIS or WISC) comprise a convenient battery and provide the most commonly used input data. The PAS, therefore, consists of 10 of the 11 conventional Wechsler tests* and two additional subtests, Color Naming and Time Estimation.

3. The Role of Reference Groups

The PAS is most easily understood within the concept of "Reference Groups." In the current evolution of the PAS, 96 Reference Groups serve to encompass a possible 4,096 combinations; these comprise a relatively manageable number of meaningful families of patterns (i.e., profiles) that can be generated from the extended WAIS. When the data are clustered in this fashion, there is still an important amount of within-group variability. It is necessary to master the between-group variability first, however, because the psychological "meaning" of the same operational measurement can vary considerably from one Reference Group to another. It is a relatively defendable approach to apply conventional linear correlation or regression analysis on a within-group basis but not on a between-group basis.

The 96 groups can be arranged in a table (see Table 1) that serves to highlight the most important relationships among them. The first salient observation is that 96 is exactly 3 x 4 x 8, i.e., each Reference Group represents a combination of one of *three* "problem-solving styles" with one of *four* patterns of "brain-hemispheric development" and one of *eight* "primitive temperaments." Each group can be defined operationally by specifying a list of real individuals as exemplars; the test data derived from these exemplars are then reduced to a convenient "key" by which a computerized procedure is able to determine the relative similarity of various individuals to one group, or to determine the relative similarity of one individual to various groups.† Each group has also been given a name, which is easier to remember than the key, but which is in no sense a replacement for the key or its underlying list of exemplars. The greatest difficulty is in generating and refining the lists of exemplars.

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* The Wechsler tests used in the PAS include Digit Span, Arithmetic, Information, Block Design, Similarities, Comprehension, Picture Arrangement, Picture completion, Object Assembly, and Digit Symbol (the vocabulary test is not used).

† It is beyond the scope of this discussion to provide the details of the computerized psychometric analysis.

Table 1

TENTATIVE NAMES FOR 96 PAS REFERENCE GROUPS

PRO-ACTIVE

Teacher	(5)	Conservator			
Programmer	(5)	Iconoclast			
Acolyte	(5)	Physician			
Philosopher	(5)	Mediator			
Coach	(4)	Nurturant	Manager	(6)	Pragmatist
Specialist	(4)	Consultant	Exemplar	(6)	Technician
Individualist	(4)	Counselor	Professional	(6)	Tactician
Pastor	(4)	Catalyst	Auditor	(6)	Analyst
Disciple	(a)	Dogmatist			
Mystic	(a)	Sophist			
Dedicated	(a)	Aristocrat			
Puritan	(a)	Spartan			

POLY-ACTIVE

Seeker	(8)	Theorist			
Dilettante	(8)	Activist			
Voyeur	(8)	Perceiver			
Naturalist	(8)	Spectator			
Showman	(3)	Booster	Implementer	(7)	Aide
Performer	(3)	Volunteer	Organizer	(7)	Leader
Devotee	(3)	Entertainer	Advocate	(7)	Entrepreneur
Director	(3)	Player	Politician	(7)	Salesman
Exhibitionist	(b)	Empiricist			
Enthusiast	(b)	Chameleon			
Perverse	(b)	Polymorph			
Chauvinist	(b)	Speculum			

RE-ACTIVE

Authoritarian	(9)	Achiever			
Obsessive	(9)	Controlled			
Detached	(9)	Autocrat			
Counterdependent	(9)	Counteractive			
Artisan	(2)	Adherent	Rulekeeper	(1)	Participant
Operator	(2)	Compliant	Team-Member	(1)	Game-Player
Galatean	(2)	Narcissist	Opportunist	(1)	Scorekeeper
Interdependent	(2)	Hedonist	Competitor	(1)	Prima Donna
Yeoman	(c)	Reactor			
Automaton	(c)	Actor			
Possessed	(c)	Actress			
Gladiator	(c)	Contrarian			

Key to PAS Primitives	ERU	ERA
	IRU	IRA
	IFU	IFA
	EFU	EFA

The three problem-solving styles encompass 32 groups each, and are called *pro-active* (Reference Groups contained in 4, 5, 6, and a); *poly-active* (Reference Groups contained in 3, 8, 7, and b); and *re-active* (Reference Groups contained in 2, 9, 1, and c). Poly-active people find it easy to do more than one thing essentially simultaneously; they may even require the stress of "too much to do" in order to be fully activated. Pro-active people find such parallel processing more difficult, and they prefer to deal with multiple tasks by planning how to handle them sequentially; the strategy works except when they are caught by surprise by two things at once. Re-active people also find parallel processing difficult but deal with this problem in another way--namely, by looking to and relying on other people for guidance as to what to do next. This strategy also works, as long as the guidance is realistic. The general population includes large numbers of all three of these problem-solving styles.

The four patterns of "hemispheric development" encompass 24 groups each. Referring to Table 1, they may be loosely identified as:

1. Left-brained--Reference Groups contained in 6, 7, and 1.

2. Right-brained--Reference Groups contained in 4, 3, and 2.

3. Both-brained--Reference Groups contained in 5, 8, and 9.

4. Relative absence of internal control (i.e., externally controlled)--Reference Groups contained in a, b, and c.

In general, left- and both-brained people are seen as skilled in logical reasoning, while right- and both-brained people are seen as skilled in pattern recognition. Individuals characterized by a relative absence of internal control do not typically exhibit special skill in either logical reasoning or pattern recognition.

The eight "primitive temperaments" encompass 12 groups each (see the key at the bottom of Table 1) and comprise all of the possible patterns formed by three dichotomies:

1. Externalizer versus Internalizer (E/I).

2. Regulated versus Flexible (R/F).

3. Role-Adaptable versus Role-Uniform (A/U).

For example, an Externalizer who is Regulated and Role-Adaptive would be denoted by the ERA Primitive. Conceptually, these dichotomies are very close to the dimensions of Carl

Jung's personality typology, and they are also very similar to three of the four dimensions assessed by the MBTI. Each of these represents a continuum, but for clarity we will outline the polar opposites for each dimension in the following paragraphs.

The natural frame of reference for Externalizers (E) lies in the world outside themselves. Externalizers are perceptually dominant, environmentally sensitive, and more responsive to external than to internal cues. They are behaviorally active and more interested in interacting than in thinking. Their perception is relatively specific and concrete, and their emotionality is directed outward. Internalizers (I), on the other hand, are ideationally dominant, self-sufficient, and more responsive to internal than to external cues. Internalizers are behaviorally passive, tend to withdraw, and are more inclined toward thinking than doing. They perceive in abstract terms, and emotionality is directed inward.

Regulated (R) and flexible (F) people represent the two poles of the R/F dimension. Regulated persons react to a limited number of specific, well-defined stimuli on which they can concentrate and focus. The range of their reactivity is narrow, and because their threshold for confusion and distraction is high, they are characterized by their ability to concentrate. Flexible persons have a wide range of reactivity. They tend to be aware, almost simultaneously, of a wide variety of stimuli. As a result, they have difficulty concentrating and their threshold for confusion is low. They are characterized by sensitivity, empathy, and insight.

The role adaptive-role uniform (A/U) dimension is more complex. Briefly stated, the ability to shift roles easily is a talent of the Primitive A, but other components of the personality may influence role flexibility as well. A Primitive U, at the other polar extreme of the A/U dimension, experiences special problems as he attempts to respond or react to social cues. Although the social response style of the A child may mask, obscure, and even inhibit development in the other dimensions of personality, the response style of the U child tends to accentuate or even to facilitate such development.

To the PAS, each possible primitive combination directly implies the probable quality of any pressure for change emanating from the childhood environment (i.e., from parents, siblings, peers, or teachers). Because it is constrained by different workable options, each PAS primitive temperament faces different developmental problems and challenges. There are, in fact, 12 ways for each one to evolve, leading to the 96 Reference Groups.

There are two adjustments to the primitive dimensions explained above. These adjustments, termed *compensation* and *modification,* are defined in the 1973 Winne and Gittinger PAS Monograph[2] as follows:

> "A person's need to adapt to a variety of situations requires various adjustments in relation to each of his original personality tendencies. There are two kinds of adjustments available to him. The first, more fundamental adjustment is called *compensation*, a term referring to long-range and comparatively stable adaptations developing in early childhood. *Modification*, the second level of adjustment, includes the less stable adaptations an individual makes in the later phases of his development..."

> "Compensatory activities are not inherent in the primitive personality structure. They are learned or acquired tendencies, externally induced and environmentally determined. They are long-range developmental adjustments that, in combination with the person's original tendency, result in characteristic external and internal frames of reference. When compensation has been achieved, usually by adolescence, the person is believed to have reached the second, or *basic* [our emphasis] level of personality development..."

> "*Modification*, defined as the second phase of adjustment, is achieved during the later stages of development. These new adjustments are not applied directly to the primitive tendencies and so do not achieve the powerful masking effect of compensation. However, the fundamental differences between compensation and modification do not lie in direction, but rather in the temporal sequence of their development and their effect on adaptation..."

> "...primitive orientation and compensatory processes interact to form the *basic* level of personality structure. Modification interacts with the basic level to form the *surface* level of this structure. The surface or contact personality is the least tenacious of the three levels of personality and is subject to breakdown quite easily under stress..."

Within the Reference Group scheme, patterns of "compensation" are roughly equivalent to patterns of "hemispheric development," while patterns of "modification" are roughly equivalent to "within-group" variation.

B. The FY 1986 PAS Program

1. Overall Hypotheses

The FY 1986 PAS effort was designed to test the following hypotheses:

- Individuals selected for participation in the novice RV training group, according to their inclusion in particular PAS Reference

Groups, will have significantly higher figure of merit scores than individuals selected from other groups.

- Self-report tests will show significant correlations with PAS Reference Groups.

2. **Protocol for Subject Selection**

Potential participants for inclusion in the overall FY 1986 subject pool were recruited primarily from SRI International employees and their close family, friends, and relatives. This recruitment procedure was implemented in order to maintain a modicum of control over the participant selection process. All candidate participants were asked to complete the self-report measures [which included the MBTI, the Strong Vocational Interest Blank, and the Minnesota Multiphasic Personality Inventory (MMPI)] and to undergo PAS testing.

A protocol was established to maintain SRI control over subject anonymity and to ensure that all participants involved in the PAS/self-report testbed remained blind to the predictive criteria. To achieve this, the following procedures were established:

- The PAS administration was performed by the Palo Alto Medical Clinic (PAMC), an independent contractor, to eliminate the possibility of biasing SRI staff who were conducting and evaluating experiments in which PAS hypotheses were under test.

- SRI maintained a data base that contained the link between candidate subject names and identification (ID) numbers *only*.

- Score sheets from all tests, identified with candidate subject ID numbers *only* (i.e., no names), were forwarded directly from the PAMC to MARS Measurement Associates for evaluation and assignment to PAS Reference Groups. Therefore, the MARS data base contained the link between PAS/self-report information and subject ID numbers *only*.

Using this protocol, a subject pool of 95 tested candidates was created by the end of FY 1986.

On the basis of hypotheses formed from the previous FY 1984 effort, MARS selected nine participants from the pool of new candidates* for inclusion in SRI's novice RV training group. At the conclusion of the FY 1986 novice training program, SRI supplied a

* Only 49 of the 95 cases had been collected at the time of novice RV trainee selection.

third party (the in-house Contracting Officer's Technical Representative) with the trainee ID numbers and individual evaluation results of the training effort; at the same time, MARS supplied the COTR with the trainee ID numbers and RV performance predictions based on prior PAS experience. All of these necessary pieces of information were combined and evaluated; the specific criteria governing the selection of trainees, and the overall efficacy of the PAS in predicting novice RV performance are discussed in Chapter III.

III RESULTS AND DISCUSSION

A. Results of the PAS Program

1. Selection of Novice RV Training Participants

The choice of the nine participants for the FY 1986 novice RV training program was based on two criteria: (1) the distribution of precalibrated* remote viewers in the PAS data base (see Table 2) at the time of subject selection, and (2) the availability of "promising" profiles (derived from the precalibrated viewers) in the pool of new candidates at the time of subject selection (see Table 3).

On the basis of these two criteria, MARS originally selected 12 individuals according to the following algorithm: two pairs of individuals were drawn from the ERU8 profile group and one pair of individuals was drawn from each of the ERA8, IRA5, ERUa, and EFU5 profile groups. The overall "blanket" prediction governing the selection process was that the ERU8's, ERA8's, ERUa's, and IRA5's would perform relatively well in training. Actually, at the time of selection, ERU8, ERA8, ERUa, and IRA5 were all groups that each included more than one precalibrated viewer, and for which new cases could be found within the subject pool. The two EFU5 cases were chosen with the expectation that they would perform relatively poorly, even though EFU5 was seen as a good group for Intuitive Data Sorting (IDS). ERU6 and/or ERA6 cases would have been selected but did not exist in the subject pool. IFU3 cases were available but were seen as relatively unlikely to respond to the planned training method.†

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* "Precalibrated" as it is used here means a qualitative assessmnt of the viewers over many years of experience.

† Later, at the time when formal predictions were supplied to the SRI COTR, the definitions of the Reference Groups (in terms of lists of exemplars) had evolved considerably, and several of the selected subjects were now seen differently than they had been. At the same time, evidence had been developed that ERUa was probably a very good group--it was now the only group.

Table 2

DISTRIBUTION OF PRECALIBRATED REMOTE VIEWERS
AT THE TIME OF SELECTION

PRO-ACTIVE	(4) (4) + − (4) − (4)	(5) − + (5) + + + (5) (5) + ★ (a) +★ (a) + (a) − (a)	★ ★ (6) ★ (6) (6) + − (6) −
POLY-ACTIVE	(3) (3) + + + (3) ★ (3)	+ + (8) ★ + + (8) (8) (8) (b) ★ (b) (b) (b)	(7) (7) (7) (7)
RE-ACTIVE	+ (2) (2) (2) (2)	(9) (9) (9) (9) (c) (c) (c) (c)	− (1) (1) (1) (1)

Key to PAS Primitives		
	ERU	ERA
	IRU	IRA
	IFU	IFA
	EFU	EFA

Key to Viewer Ability

★ = superstar
★ = star
\+ = good
− = poor

Table 3

DISTRIBUTION OF 49 CASES IN THE SRI SUBJECT POOL

AT THE TIME OF SELECTION

PRO-ACTIVE	x x x (5) x (5) x x (5) x x x x (5)	(4) x x x (4) x (4) x x (4)	(6) x x (6) x (6) x (6)
	x x x (a) • (a) x x (a) x (a)		
POLY-ACTIVE	x x x x (8) x x x (8) x (8) (8)	(3) x x (3) x x (3) (3)	(7) (7) (7) (7)
	(b) (b) (b) x x (b)		
RE-ACTIVE	(9) • (9) x (9) x x (9)	(2) (2) (2) x (2)	(1) (1) x (1) (1) x
	x (c) (c) (c) (c)		

Key

x = assignments are unambiguous

• = assignments are ambiguous

Key to PAS Primitives		
	ERU	ERA
	IRU	IRA
	IFU	IFA
	EFU	EFA

It was originally intended that each of the two RV monitors would have a novice training group consisting of two individuals from ERU8 and one individual each from ERA8, IRA5, ERUa, and EFU5. Two of the original selectees (an ERA8 and an IRA5) were dropped from the original selection of 12, however, because they were RV analysts whose primary responsibility was to provide the evaluation for the training program. A third selectee (the other IRA5) was eliminated from the program because of pregnancy and was replaced by an IRU4. A fourth selectee (the other ERA8) dropped out of the training program after only two sessions and was not replaced. A total of nine individuals, therefore, comprised the final selection for the novice training program.

Descriptions of the five PAS profiles that formed the basis for the *original trainee selections* are provided here to afford an overview of their personality attributes:

> **ERU8: Seeker**--This is an intense, alert individual who is likely to be seriously conflicted about the meaning of life. He sees other persons enjoying life and achieving satisfactions that do not come to him even when he does the "same" things. In particular, he is prone to envy the intense sensual experiences of the EFA and the fantasy life of the IFA, which are inherently alien. Looking for "solutions" to these problems, he may develop an unusual interest in psychology, and readily volunteer for studies of drug effects and other esoterica. Also, as part of his search for "real" experience, he is likely to explore homosexuality. He can be reasonably productive simply because he is bright, but he has difficulty maintaining commitment and is an underachiever.
>
> **ERUa: Disciple**--An ERUa is an externally-oriented (socially dependent) individual who ordinarily perceives only that which is unmistakable (high signal-to-noise requirement) and whose spontaneous social responses are out of step with conventional expectation. His early experiences have done little to teach him techniques for dealing with the implied problem (foot frequently in mouth), and he remains essentially dependent upon real-time external control rather than having developed any effective self-control(s). These external controls are most likely to take the form of personal identification with a model personality, and will be maintained with religious tenacity. Hence *disciple*. Wrapped in the mantle of his mentor, ERUa appears supremely self-confident. He is a good student, and happily exercises any talent he may have discovered or acquired. At least in his youth, he has experienced hostility and rejection but has also learned that he cannot comfortably respond in kind; his whole adjustment is a response to this issue.
>
> **ERA8: Theorist**--The ERA8 is a poly-active individual having well-developed and well-balanced internal controls, which makes him a potentially very versatile individual. The bad news is that this may lead him to approach-approach conflicts, in which the individual puts off action in any direction. In any event, because of the "A," people are prone to expect even more from an ERA8 than he is capable of. Measures of within-group position (either PAS or self-report) become relatively critical for proper interpretation.

The best and most likely possibility is for the individual to strive away from the ERA primitive and toward an INFP* self-report; this person will be seen as actively dealing with complex abstract material. An STJ self-report suggests movement toward the Primitive ERA, implying probable intra-psychic conflict; such patterns have been found, for example, among ineffective managers and from members of SWAT teams.

IRA5: Iconoclast--The IRA5 is a future-oriented person who seeks to bring about change(s) that will benefit both individuals and the system(s) in which these individuals must operate. At the same time, IRA5 is predisposed to believe that this cannot be accomplished gradually--rather, it will usually require a "break with the past." For this reason, the implications of any change(s) must be carefully thought through before implementation. His insistent open-mindedness is often annoying to others. Research and application are both important; i.e., IRA5 will seek both to perfect his research and then to urge its reduction to practice. He is comfortable with numbers and other abstraction, and is often adept with statistical reasoning.

EFU5: Philosopher--This person is a pro-active problem-solver who adopts a particularly global view of the world and its problems. He is not merely educated; he is broadly intellectual. He is as much interested in what can be as in what is, and aligns himself with others who share his view of a more ideal future. He is more concerned with who he is than with any conventional view of who he should be. However, he is easily disillusioned and discouraged and does not function well in an organizational setting unless he can respect his superiors and colleagues. It is difficult for him to take responsibility for others and, in turn, others find him difficult to understand. Obviously, the success of his adjustment depends on a very high level of innate ability.

2. Prediction Criteria

The PAS is a system that is constantly evolving as the number of cases in the PAS data base increases. Therefore, a subject's "goodness of fit" in any given profile may change, because Reference Group membership is empirically derived. The PAS trainee selections were made in April, 1986. The PAS predictions about the RV performance of these trainees, however, were not registered until October, 1986. Consequently, some of the trainees' profiles shifted in the interim as a result of enlargement of the PAS data base; these changes are summarized in Table 4. It is important to note that all of the prediction criteria pertain to the right-hand column--i.e., the trainees' profiles *as they were seen at the time of prediction.*

* Important aspects of self-report personality descriptions in the MBTI can be found in the Appendix.

Table 4

CHANGES IN PAS ASSIGNMENTS

Viewer ID	Profile as of Selection (4/86)	Profile as of Prediction (10/86)
137	ERU8	ERU5
176	EFU5	EFU6
210	ERU8	ERA8
307	EFU5	EFU5
450	IRU4	IRU4
512	ERU8	IRA5
739	ERUa	ERUa
891	ERUa	IRA5
928	ERU8	ERU8

Formal predictions were requested according to two criteria: (1) overall performance, and (2) slope of learning curve. It was apparent that the members of poor groups (i.e., EFU5 and EFU6) had to be ranked at the bottom of both lists--accounting for the two bottom ranks shown in Tables 5 and 6. The IRU4 and ERU5 trainees were ranked next to the bottom simply because there was no evidence that they should be ranked higher. Among the remaining cases, the ERUa was seen as most likely to have come into the experiment on the basis of self-knowledge that he/she could already perform RV--i.e., he/she had the least need to learn anything from the training and could start out at a high level. At the other extreme, the learning of the IRA5 was seen as the most problematic, and therefore least likely to occur within the finite context of the experiment.

Thus, the groups of interest were ranked as ERUa > ERA8 = ERU8 > IRA5 when predicting overall performance and were ranked as the reverse of this when predicting the significance of the learning within the experiment.

3. Results of Predictions: Correlations Between RV Performance and PAS Profiling

Table 5 shows the PAS predictions for overall RV performance as measured against actual performance--i.e., each trainee's performance as measured by an effect size estimate (Pearson's r)[3] derived from the figure of merit analysis[4] p-values. An effect size estimate is used to normalize for number of sessions.

Table 5

PAS PREDICTION VS. ACTUAL VIEWER PERFORMANCE

PAS Prediction				Actual Viewer Performance		
Viewer ID	Profile	Prediction	Comments	Viewer ID	Effect Size (r)	Number of Sessions (n)
739	ERUa	best	very close in ranking	739 *	0.170	10
210	ERA8	best		137	0.110	23
928	ERU8	best		928 *	0.082	28
512	IRA5	best		512 *	-0.131	25
891	IRA5	best		450	-0.139	37
450	IRU4	middle		307	-0.159	25
137	ERU5	middle	might do well in IDS, but not in RV	210	-0.220	23
307	EFU5	worst		891	-0.267	27
176	EFU6	worst	clearly the bottom	176 *	-0.279	23

* PAS prediction coincides with the viewer's actual rank.

While the rank order correlation contrasting the top five and bottom four performers does not achieve statistical significance, it is encouraging that the PAS correctly identified two out of the three best performers. The failure to identify Viewer 137 is easily attributed to lack of prior experience with ERU5 viewers. Thus, the results tend more to confirm than to disconfirm the FY 1984 PAS study.

Table 6 shows the PAS predictions for evidence of RV learning as measured against actual evidence for learning--i.e., each trainee's learning-slope effect size as derived from the figure of merit slope p-values.

Table 6

PAS PREDICTION VS. EVIDENCE FOR VIEWER LEARING

PAS Prediction			Actual Viewer Performance		
Viewer ID	Profile	Prediction	Viewer ID	Effect Size (r)	Number of Sessions (n)
891	IRA5	Most improvement	739	0.223	10
512	IRA5		928	0.213	28
928	ERU8		137	0.155	23
210	ERA8		210 *	0.082	23
739	ERUa		450	0.046	37
450	IRU4		891	-0.041	27
137	ERU5		176	-0.085	23
307	EFU5		307	-0.392	25
176	EFU6	Least improvement	512	-0.524	25

* PAS prediction coincides with the viewer's actual rank.

The PAS predictions concerning viewer learning are largely unsuccessful. When the PAS predictions were forwarded to the SRI COTR, however, they were caveated

with the statement that evidence for viewer learning is the most difficult to predict, because there is no definitive evidence that the putative training procedures are actually *training* the individuals. Significant overall viewer performance may occur irrespective of training procedures (i.e., a viewer may simply excel naturally) and is therefore less speculative. MARS, therefore, expressed more confidence in its overall viewer performance predictions--a confidence that appears to have been warranted given the relative success of the PAS as evidenced in Table 5, as compared to the relative lack of success as evidenced in Table 6.

4. The Consistent PAS Traits

If the assumption is made that the PAS shows promising predictive ability in identifying good remote viewers,* then there ought to be a meaningful distillation of good remote viewing traits that the PAS has as its basis for prediction. Four such traits have been identified to date:

1. 21 out of 25 good viewers, including seven of the eight stars,† are classified by the PAS as Primitive R. This appears to make sense in terms of the signal-to-noise interpretation of the Primitive R/F dimension. R individuals are persons who have learned that they *can* trust the reality of whatever they *do* perceive. At the same time, they should be prone to make errors of omission rather than commission when seeking to describe a remote viewing target. The exceptional case is the one Primitive F star, but inasmuch as his/her reports are outstanding in their depth of accurate detail, his/her data reinforce the present interpretation.

2. 23 out of 25 good viewers, including all eight of the stars, can be classified as Basic Level U (Role-Uniform primitive temperament) by the PAS. Essentially, this means that they direct their attention inward rather than outward--i.e., for whatever reason, they are *not* paying the kind of attention to the external world that commonly leads to socially effective behavior. This is an obvious aspect of social introversion.

3. 20 out of 25 good viewers, again including all eight stars, can be classified as Basic Level Internalizers by the PAS. Interpretively, this means that they place the locus of "primary reality" internally--within their own heads--rather than externally. This subjective orientation is shared by two developmentally distinct groups--primitive Internalizers who have been allowed to maintain this orientation, and Primitive Externalizers who have been forced to reverse their natural orientation. *Both* of these

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* "Good remote viewers" are indicated with " ★ " or "★" or "+" in Table 2.

\+ "Star viewers" are indicated with "★ " or "★" in Table 2.

developmental patterns are present in the data. This is a more subtle aspect of introversion.

4. All of the good viewers show more or less of an adaptation effect on the PAS Time Estimation task. The effect in question is normatively rare but not without precedent, and is not routinely scored as part of the PAS. However, it is very reminiscent of Schmeidler's (1982) findings[5] using the Eysenck Chained Time Reproduction procedure. (Actually, two of Schmeidler's five gifted psychics are among our 25 good viewers.)

   Both sets of findings make sense if we first observe that the two tasks quickly lose their novelty and then assume that psi-gifted individuals' sense of time is "event driven," i.e., is readily slowed by boredom.*

B. Correlations Between PAS Profiling and Self-Report Instruments

There are encouraging trends that suggest that important aspects of psychoenergetic functioning can be predicted from the PAS, and there are also promising indications that important aspects of self-report personality description (i.e., the MBTI)†[6] can be predicted from the PAS. The latter proposition is supported by the observation that there is a most typical MBTI type for any given Reference Group. Many of these specific correspondences are statistically significant with the available data, and they appear to be theoretically sound. This leads to the hypothesis that an instrument such as the MBTI could be used as an efficient prescreening instrument--even prior to the administration of the PAS--when searching for individuals with psi talent.‡

The task is somewhat complicated, however, by two features of the data. First, not all good remote viewers come from the same PAS group. Even if, for example, precalibrated "superstar" viewers such as 002, 009, and 473 are categorized as "Ra" (i.e., Primitive R and Fourth Dimension a), viewer 414 (also a superstar) does not belong in this cluster. Secondly, the PAS Reference Groups recognize significant within-group variability, which is typically strongly correlated with one or more of the MBTI dimensions. This is in accordance with expectation: the MBTI tends to be a measure of the Jungian "persona," which corresponds to the PAS "contact level" (i.e., level of modification), whereas the PAS Reference Groups correspond more closely with the original PAS "basic level."

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* This fourth trait is the most speculative of the group. It has been included because it is an interesting trend in the data.

† A brief overview of the MBTI is provided in the Appendix.

‡ Preliminary results at the Psychophysical Research Laboratories (PRL) tend to support this hypothesis.

Even viewers 002, 009, and 473, for whom the data are complete, share only one preference (i.e., "Intuition") on the MBTI, and even this could be a chance result. The best guess for viewer 414, for whom the data are incomplete, is that he/she is an EFU3 and, therefore, probably ESFJ according to the MBTI. It is also the case that viewers 002, 009, and 473 all present MBTI patterns that are very *atypical* for IRUa, ERUa, and ERAa, respectively.

At this point, no conventional scoring of the MBTI exists that would not eliminate at least one of the four precalibrated superstar viewers mentioned above. This would appear to be an unacceptable option. Unconventional scoring of the MBTI remains a possibility, but this can only be investigated in larger samples than are currently available.

IV CONCLUSIONS

Several important factors must be noted when assessing the overall efficacy of the PAS in this study. It is important to observe, for example, that the novice RV training results are *preliminary:* final training results are not officially scheduled for delivery until the end of the first quarter of FY 1987. Although continuation of training with the original nine participants at this juncture would destroy the double-blind aspect of the PAS study, a workable solution to this problem has been identified--namely, to continue training with a new group comprised of the most promising few candidates out of the original group of nine, augmented with new candidates to whom the monitors and evaluators are blind with respect to PAS pattern.

The explanation for the observed lack of significance in the preliminary novice RV training results is presently unknown. One hypothesis would suggest that the training procedures are simply not proving effective. This appears unlikely, however, given that significance was achieved with novice trainees using the same procedures in FY 1984. A second possibility is that training needs to be of a longer duration.* This hypothesis can be tested by observing whether significance is achieved with the selected viewers from this study who continue training.

The PAS results for this study are encouraging and provide a conceptual replication of the earlier FY 1984 PAS work. In the earlier study, the PAS was used successfully to predict the top performer out of each of three different training groups. In FY 1986, the PAS has been used effectively to predict two out of the top three performers in a single training group. As an empirically driven system, the PAS Reference Groups experience continual refinement as the PAS data base increases. It is anticipated, therefore, that the predictive power of the PAS will increase accordingly.

* This is more consistent with the apparent indication that aspects of the training results are correlated with something else, i.e., the PAS.

Appendix

BRIEF OVERVIEW OF THE MYERS-BRIGGS TYPE INDICATOR (MBTI)

The Myers-Briggs Type Indicator (MBTI) provides personality type categorizations according to the manner in which an individual answers a series of test questions. Questions are designed to elicit preferences and are typically of the form:

"Are you inclined to (A) value sentiment more than logic, or (B) value logic more than sentiment?"

The following is an excerpt from the book, *Gifts Differing*,[6]* which provides a very skeletal overview of the four preference scales that are combined to form 16 distinct personality types:

"...personality is structured by four preferences concerning the use of perception and judgement:

	Preference for	*Affects a person's choice*
EI	Extraversion or Introversion	To focus the dominant (favorite) process on the outer world or on the world of ideas
SN	Sensing or Intuition	To use one kind of perception instead of the other when either could be used
TF	Thinking or Feeling	To use one kind of judgment instead of the other when either could be used
JP	Judgement or Perception	To use the judging or the perceptive attitude for dealing with the outer world

Under this theory, people create their "type" through exercise of their individual preferences regarding perception and judgement. The interests, values, needs, and habits of mind that naturally result from any set of preferences tend to produce a recognizable set of traits and potentialities...

Individuals can, therefore, be described in part by stating their four preferences, such as ENTP. Such a person can be expected to be different from others in ways characteristic of his or her type..."

*An even more thorough discourse on the MBTI can be found in: Myers, I. B., and McCaulley, M. H., *Manual, A Guide to the Development and Use of the Myers-Briggs Type Indicator*, Consulting Psychologists Press, Inc., Palo Alto, California (1985).

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