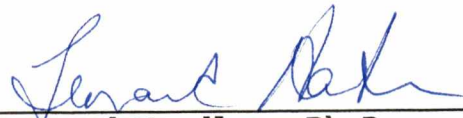


To the Graduate Council:

I am submitting herewith a thesis written by Justin Randall Padawer entitled "Computer-Altered Rorschach Inkblots." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology.



Leonard Handler, Ph.D.
Major Professor

We have read this thesis
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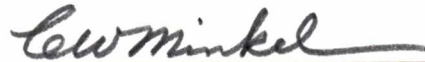


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Computer-Altered Rorschach Inkblots

A Thesis
Presented for the
Master of Arts
Degree
The University of Tennessee, Knoxville

Justin Randall Padawer
August 1995

ABSTRACT

A new approach for systematically investigating standard Rorschach scoring determinants Shading, Texture, and Color is described. Each determinant in the original ten blots is isolated and accentuated using photo-manipulation computer techniques and an original hyperscripted software program, the "Rorschach Image Presenter" (RIP), which allows subjects to interactively alter each of the inkblots along these dimensions. Pre-computer imaging alterations of the inkblots, including the seminal early 1950s work of Earl Baughman, are reviewed in order to contextualize the present work. Seventy-one subjects sat for a regular administration of Rorschach's test, the Fundamental Interpersonal Relations Orientation for Behavior (FIRO-B), and a session with the Rorschach Image Presenter program. The RIP Effect, where subjects diminish on-screen certain determinants according to select aspects of character, is discussed. The contention that Rorschach determinant research should be undertaken making better use of computer technology is supported.

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I: INTRODUCTION AND REVIEW OF LITERATURE

Limitations in technology have dictated the terms of Rorschach stimulus value research throughout the test's history. Clearly a methodology has been needed that would permit improved examination of subject interaction with the very building blocks of the inkblot stimulus -- the determinants -- which are practically universal to all schools of administration and scoring (Rorschach, 1921; Rickers-Ovsiankina, 1943; Exner, 1974). Given the present state of the art in photo-manipulation and imaging techniques, the creative use of computers allows subjects to interact with one or more determinants, especially Shading, Texture, and Color, in controlled real time.

Prior to World War II, most of the commercially available camera film was not of the quality needed to even duplicate something like a Rorschach inkblot without introducing new confounding variables such as light-mirroring gloss. However, by 1948 an experimenter photographed the chromatic inkblots with black and white film good enough to use as part of an experiment examining Color shock. The results: Color shock did not

seem to depend upon Color, a finding confirmed more often in subsequent experiments than refuted, interestingly, nor did the presence or absence of Color seem to impact scoring (Lazarus, 1948). Because the technology of the time was suddenly good enough to allow such experimentation, a flurry of experiments followed investigating Color as an independent variable (Wallen, 1948; Lazarus, 1949; Sappenfield & Buker, 1949; Siipola, 1950; Dubrovner, Von Lackum & Jost, 1950; Siipola, Kuhns & Taylor, 1950; Buker & Williams, 1951; Perlman, 1951; Meyer, 1951; Brody, 1953; Levy & Kurz, 1957; Exner, 1962; Hays & Boardman, 1975). To accommodate a group of researchers doing a similar investigation (Allen, Manne & Stiff, 1951; Allen, 1951; Allen, Manne & Stiff, 1952; Allen, Stiff & Rosenzweig, 1953;), Verlag Hans Huber, the Swiss publisher of the Rorschach cards, printed the five chromatic cards in black ink using the same presses, pressure, and paper of the originals. By the mid-1950s, they published this set to meet the demands of similarly-interested investigators.

Using the Hans Huber set, Crumpton demonstrated that while Color may not impact response latency or shock, it does impact the connotative quality of the

response content (Crumpton, 1956; Crumpton & Groot, 1966).

A doctoral student's unpublished dissertation provided the first attempt in 1950 at examining the impact of Shading upon subject perceptual response (described in Baughman, 1958). Without the benefit of contemporary image scanning, the student created an outline series of inkblots by simply tracing the perimeter of each, preserving the overall form but eliminating any internal Shading or Color. Counterbalanced groups were administered an outline series of blots as well as the regular cards. Results "showed that shock was as frequent on outline series as on standard."

At about the same time, Balloch photographed the first seven cards of the Rorschach and two other inkblot sets, the Behn-Rorschach and the Harrower, at "three different contrast levels." Essentially this was achieved in a creative but crude fashion, not by varying the image's effective mathematical amplitude and frequency as this impacts the visual image (as with the contemporary technology used in the present work), but instead by altering the amount of time and light the camera shutter was allowed to focus upon the inkblot

(Balloch, 1952). He found that the number of achromatic and Vista (FK in the Klopfer system) responses varied significantly with amount of contrast.

Baughman is probably the most interesting of those researchers who applied contemporaneous technology to examining the stimulus value of Rorschach inkblots (1954, 1954, 1958, 1959). He examined the test from another creative vantage by creating several sets of Rorschach cards with stepped levels of internal content (Baughman, 1954; Belden & Baughman, 1954). As with the doctoral dissertation previously described, the first level was a simple outline. Baughman's work essentially showed that general form, rather than determinants such as Shading and Color, were of primary importance to subject response behavior; furthermore figure-ground responses were significantly impacted when the presenting stimulus value was of a black silhouette. In addition to original outline, silhouette forms, and high-quality achromatic sets (the latter created through the use of panchromatic film), he utilized two additional card series, a reverse silhouette, created by simply producing photographic negatives of silhouettes, and a "Complex Silhouette," which preserved major internal sections of each blot by painting them in

varying shades of gray and black and then photographing the result (Baughman, 1959). In this last study, his final in this line of programmatic research, Baughman modified his original thesis that essentially suggested that Form was the major significant arbiter of subject response behavior to the exclusion of other determinants. His use of the Complex Silhouette, the first intermediate deconstruction (the others had been stark outlines or simple silhouettes) demonstrated the impact of Shading on subject response.

In a similar effort to better understand how Shading impacts the types of responses given, in the way that Color had been examined through the use of achromatic card sets, Eckhardt (1957) toned down "brightness" photographically in several blots and presented them to subjects. He found that Texture responses were determined by "brightness gradients, defined as gradual transitions between various degrees of brightness," and that transparency responses were determined by "brightness contrasts, defined as abrupt transitions between different degrees of brightness." Furthermore, "Achromatic color responses were determined by overall intensity and gruesome responses were determined by the darker degrees of

overall intensity" (Eckhardt, 1957). Marks (1961) found through similar photographic diminution of Card VI Texture that while Texture did not influence overall response productivity, it did significantly encourage the production of the popular "fur" response to that card. Even so, Marks noted that such responses often occurred with form alone.

During the same period, the first study to use monochromatic card sets (a set of cards printed entirely in shades of blue, for example) demonstrated that "interaction between form and Color was significant in influencing productivity, but not Color or Shading alone" (Grayson, 1956). The technological ability to simply substitute one Color ink for another at the printing press allowed such experimentation; actually such techniques would have been possible earlier.

Using monochromatic cards, Exner similarly demonstrated that content quality is determined by various chromatic and achromatic colors (Exner, 1959; Exner, 1961), supporting the earlier work by Crumpton (1956) and Crumpton & Groot (1966). In these studies, Exner reproduced Card I in the hues of blue, green, and magenta found in Cards IX and X (1959), and Cards IV and VI in the blue found in Card X (1961). Interestingly,

in these early Exner studies may be found the origins of his Comprehensive System (1974): "This indicates that there may be a need to formulate better methods of inquiry or establish common interpretations of certain 'perceptual' type responses so as to differentiate them from 'projective' type responses" (Exner, 1959); "...it seems more logical than ever to appeal for some agreement between scoring systems so that a distinction can be made between responses determined by achromatic color and responses determined by shading" (Exner, 1961).

Most of these studies described are rigidly linked to "examining subject response behavior" in an almost decontextualized fashion without an eye to addressing any question of determinant validity, although just how this could have been examined using regular pen, ink, and film technology is a difficult dilemma. More advanced techniques now allow further exploration using ideas not unlike those pioneered by Baughman. Two (computer) programming mechanisms must be in place in order for this to be carried out -- 1) a created set of multiple inkblot images altered with precision along select dimensions of determinants, and 2) a mechanism to allow these images to be sensibly selected by the

subject, giving him or her the illusion of altering the stimulus. These tasks have been completed with this work.

A critical element of this work, the mechanism which allows subjects to choose favored levels of select determinants, may allow us to examine aspects of the Rorschach in ways heretofore not possible. Would, for example, individuals with certain relatedness needs "create" blots lower in Texture? Or higher? Or perhaps not alter them at all according to any statistically significant algorithm (which in itself would tell us something about traditional scoring and might, in that case, support the idiographic interpretive view)? As Baughman himself concluded, "It is apparent, from the studies reviewed, that the definition of Rorschach stimulus effects is more a task for the future than an accomplishment of the past" (Baughman, 1958). The present exploratory work is a preliminary attempt some thirty-five years later to accept that challenge.

II: METHOD

Sample

All subjects (N = 71) who volunteered to participate in the study were adult students enrolled in an undergraduate psychology class at the University of Tennessee. Subjects were given academic extra credit for their participation. Subject ages ranged from 19 to 37 with a mean of 21.2 and standard deviation of 2.4; mean years completed education was 15.3 with a standard deviation of .95. There were 25 male and 46 female subjects.

Instruments

Rorschach Image Presenter (RIP), hyperscripted software conceived and written by the author (see Appendix, "RIP Program"), allows subjects to interactively alter each of the ten standard Rorschach inkblots along isolated determinant dimensions -- Texture, Shading, and Color. In contrast to a standard Rorschach administration where the card is the stimulus and the verbalization the response, with this software the altered inkblot image itself constitutes the response. The images presented by the RIP program were

created by first scanning the inkblots using a state-of-the-art high resolution scanner with line scan and dot-per-inch capabilities that are sufficient for high-end contemporary lithography.

Next "low condition" and "high condition" versions of each inkblot were prepared along the three determinants discussed here using a commercial high-end photomanipulation software package. The "middle condition" remained the standard inkblot image for each determinant dimension. The present author could find no precise operationalized descriptions of Texture and Shading and so, like Eckhardt (1957), will attempt to elaborate in a manner that illustrates the method used to prepare the inkblots. The amount of Shading ("lightness" and "darkness" in Exner's terms) is really a measure of overall wave frequency. In a simple sine wave diagram, a small amount of Shading in any photograph nets smaller spacing between waves, producing a higher frequency, and the resultant image is relatively light. On the other hand, a large amount of Shading nets wider spaces between waves, and the image is darker. (If we think in the photographic terms used by the 1950s researchers previously described, the camera is allowed a longer exposure to light for greater

Shading, resulting in a darker overall photograph, as with Balloch's 1952 blots.) Refer to Figures 1 and 2, which, despite being lower in resolution quality than the on-screen RIP images, serve to illustrate differences between Shading and Texture. (The RIP images have the same high resolution quality as the printed cards.) Figure 1 has a small amount of Shading; the spacing between the light waves traveling to the reader's eyes is indeed smaller; the image then has a high frequency (more waves fit in a smaller space) and is lighter. Figure 2 has a high amount of Shading (i.e. lowest frequency light waves) and is darkest.

However, these first two Figures have, to employ a television metaphor, little contrast. The relative overall frequency of the blots changes from Figure 1 to Figure 2, but there is very little sudden variation in frequency within the blot itself. In other words, Figure 1 has practically no detail, and neither does Figure 2. The sudden difference in frequency in a small space is what Rorschach systematizers have termed "Texture" and "Vista," where there are sharp and sudden contrast value variations in the stimulus (Eckhardt, 1957). Now refer to Figures 3 and 4. One notices that there is more detail in both images, more sudden

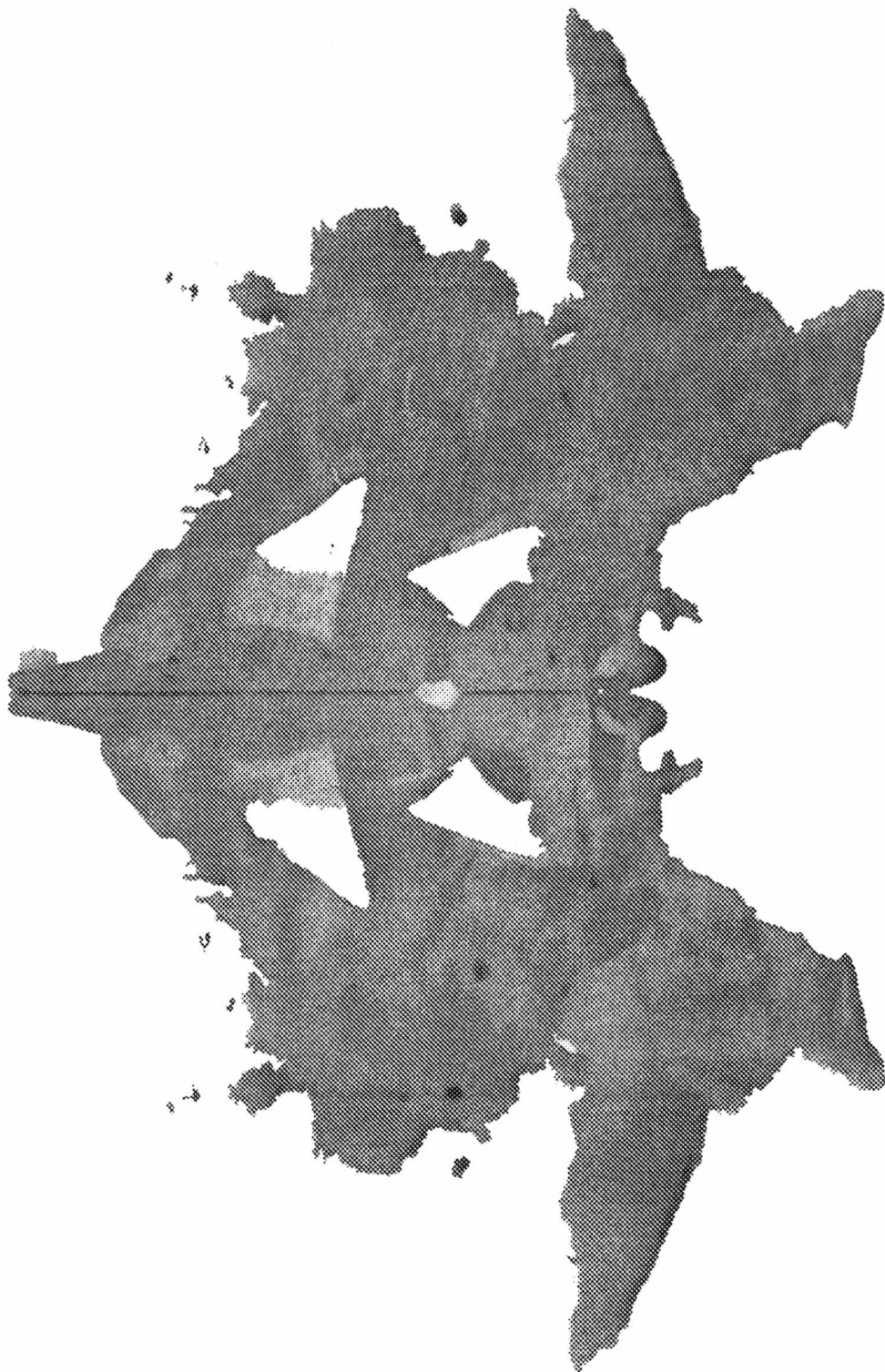


Figure 1. Card I: Low Texture / Low Shading

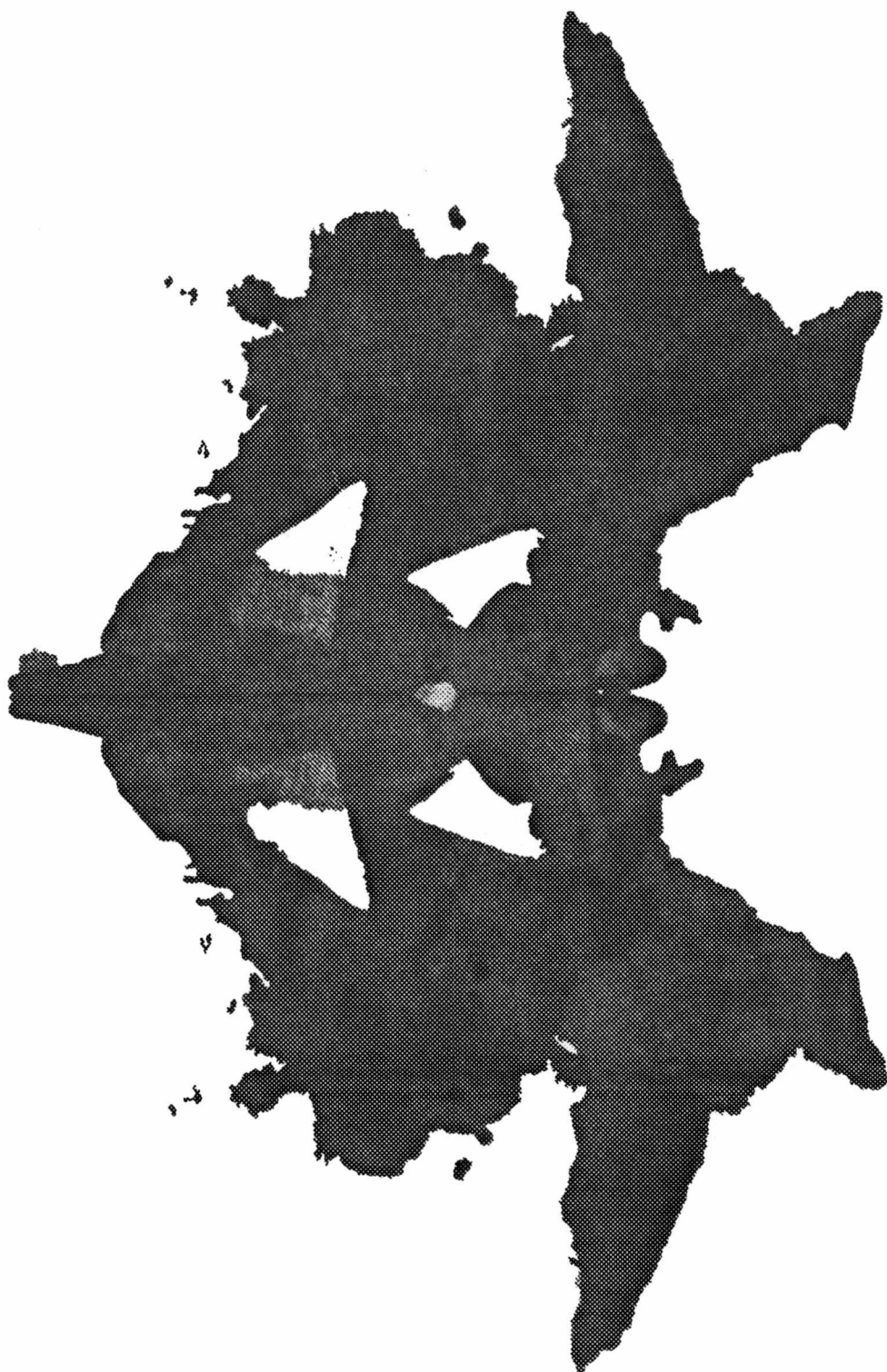


Figure 2. Card I: Low Texture / High Shading



Figure 3. Card I: High Texture / Low Shading



Figure 4. Card I: High Texture / High Shading

variation between light and dark. These blots would likely engender increased Texture and Vista responses than the first two. However, just as Figure 1 is lighter overall than Figure 2, Figure 3 has less relative Shading than does Figure 4.

Texture and Vista could be similarly differentiated in terms of space, with textural differences occurring when the light wave frequency varies widely in a relatively small section of the blot, and Vista manifesting when this frequency varies widely along a relatively larger section of the blot. Given that the difference between Texture and Vista from the geometric standpoint described here is only a matter of space, it is reasonable to posit that both are far more similar to each other than they are to other determinants. As Levitt states, "The experts not only vary in interpretation of vista and texture but also in the decision to score these determinants. More than half, for instance, do not score texture...It is quite possible that texture and vista...have no unique diagnostic value" (1980).

The five chromatic blots being prepared by the author add a third dimension -- Color Saturation. Saturation can be considered, in the terminology of

radio wave transmission, as power output measured in watts. The same Color red, for example, can be subtle or can literally scream off the page, even with Shading and Texture being held constant. Using such images on the computer screen may eventually prove to be much more effective in measuring Color shock.

In the RIP program, subjects manipulate the blots on screen according to two instructions for each determinant range presented: First, "Choose the image you prefer the most," then "Choose the image your prefer the least." This yields six RIP scores: RIP Best Texture ("preferred most"), RIP Worst Texture ("preferred least"), RIP Best Color Saturation ("preferred most"), RIP Worst Color Saturation ("preferred least"), RIP Best Shading ("preferred most"), and RIP Worst Shading ("preferred least"). The reason for asking both preferred most and preferred least is that some subjects choose only the middle (standard unmodified) image, so having two choice points accords directionality to the indicated preferences.

FIRO-B. In addition to the RIP and the Rorschach itself, another instrument, the Fundamental Interpersonal Relations Orientation for Behavior (FIRO-B, 1977 Edition) was utilized in order to provide a

relatively straightforward measure for relatedness (termed "Inclusion" by Schutz) in both behaviorally acted-out ("expressed") and internally desired ("wanted") dimensions (Schutz, 1958/1966). The FIRO-B also includes scales for "Control" and for "Affection" for expressed and wanted dimensions. Sample expressed-Inclusion (eI) items on the FIRO-B include "I try to be with other people" and "I join social groups." A sample wanted-Inclusion (wI) item: "I like people to invite me to things." An expressed-Control (eC) item: "I try to take charge of things when I am with people." A wanted-Control (wC) item: "I let other people decide what to do." An expressed-Affection (eA) item: "I try to be friendly to people." A wanted-Affection (wA) item: "I like people to act friendly toward me."

Procedure

Subjects were administered the Rorschach by an advanced Ph.D. student; regular administration and scoring of the Rorschach followed procedures described by Exner (1986a). Following these standard administrations of Rorschach free association and inquiry, subjects engaged the RIP program, where they were asked to sit before the computer screen and use the

mouse to alter the ten inkblots according to their personal preferences; subjects selected "preferred most" and "preferred least" for Shading and Texture determinants on the achromatic images, with Color Saturation added for the chromatic images. The RIP program randomizes the order in which determinants are presented for each card and subject.

The FIRO-B was given either before or after the Rorschach and RIP, according to random selection.

Data Analysis

The presence of response productivity (R) in the standard Rorschach administration as a possible confound in generating determinant-based responses was examined before statistical correlations between Rorschach and RIP were conducted (Exner, 1992). Since R was found to be highly correlated with Color ($r=.520$, $p<.0001$) and with Shading ($r=.417$, $p=.0003$) in the standard Rorschach administration, R was partialled out of correlations involving these two determinants. Since R was not found to be significantly correlated with Texture ($r=.079$), Vista ($r=.047$), or Achromatic Color ($r=.085$), it was not partialled out of correlations incorporating these variables.

III: RESULTS

Table 1 summarizes results involving the standard Rorschach administration and RIP. Significant correlations were found between quantity of responses involving Texture (T) in the regular Rorschach with how subjects manipulated on-screen Shading (Y) with the RIP program. Subjects who have higher numbers of T-determined Rorschach responses designate the lowest shaded (Y) on-screen inkblots the ones they like best ($r = -.281$, $p = .0174$). These same individuals designate the most highly shaded blots the ones they like least ($r = .249$, $p = .0358$).

Table 2 summarizes the results of comparisons between the FIRO-B & RIP. Individuals with high wanted-Control (wC) scores, i.e. those who the FIRO-B suggests want to be controlled, designate the most highly Textured (T) blots their least-favored ($r = .263$, $p = .0262$). They similarly designate the least Color saturated (C) blots the ones they prefer most ($r = -.303$, $p = .01$) and the most highly Color saturated blots the ones they prefer least ($r = .325$, $p = .0055$). Finally, these same high FIRO-B wC scorers designate the least Shaded (Y) blots their most favored ($r = -.351$, $p = .0025$).

Table 1. Rorschach with RIP (N = 71)

RIP	RIP Best Texture	RIP Worst Texture	RIP Best Color	RIP Worst Color	RIP Best Shading	RIP Worst Shading
Rorschach						
Rorschach Color (C)	$r = -.022$ $p = .8537$	$r = .026$ $p = .8283$	$r = -.057$ $p = .6370$	$r = .040$ $p = .7389$	$r = -.118$ $p = .3277$	$r = .120$ $p = .3198$
Rorschach Texture (T)	$r = -.181$ $p = .1303$	$r = .128$ $p = .2872$	$r = -.068$ $p = .5749$	$r = .102$ $p = .4008$	$r = -.281$ $p = .0174^*$	$r = .249$ $p = .0358^*$
Rorschach Shading (Y)	$r = -.076$ $p = .5327$	$r = -.041$ $p = .7372$	$r = -.004$ $p = .9764$	$r = -.056$ $p = .6457$	$r = -.048$ $p = .6925$	$r = -.035$ $p = .7697$
Rorschach Vista (V)	$r = .010$ $p = .9334$	$r = -.018$ $p = .8824$	$r = .017$ $p = .8886$	$r = .054$ $p = .6588$	$r = -.069$ $p = .5684$	$r = .177$ $p = .1405$
Rorschach Achr. (C')	$r = -.064$ $p = .5993$	$r = .019$ $p = .8759$	$r = .116$ $p = .3379$	$r = -.122$ $p = .3123$	$r = .070$ $p = .5614$	$r = -.013$ $p = .9134$

* $p < .05$

Table 2. FIRO-B with RIP (N = 71)

RIP FIRO-B	RIP Best Texture	RIP Worst Texture	RIP Best Color	RIP Worst Color	RIP Best Shading	RIP Worst Shading
eI: expr. Inclusion -- includes others	r=.019 p=.8736	r=-.116 p=.3349	r=.098 p=.4190	r=-.111 p=.3587	r=-.007 p=.9490	r=.045 p=.7089
wI: wanted Inclusion -- desires inclusion	r=-.063 p=.6050	r=.049 p=.6866	r=.179 p=.1347	r=-.080 p=.5098	r=.024 p=.8448	r=.104 p=.3880
eC: expr. Control -- controls others	r=-.008 p=.9457	r=-.087 p=.4697	r=.077 p=.5248	r=.036 p=.7652	r=.151 p=.2080	r=-.209 p=.0802
wC: wanted Control -- wants to be contr.	r=-.186 p=.1207	r=.263 p=.0262*	r=-.303 p=.0100**	r=.325 p=.0055**	r=-.351 p=.0025**	r=.398 p=.0005***
eA: expr. Affection -- shows affection	r=-.239 p=.0449*	r=.159 p=.1854	r=-.080 p=.5101	r=.082 p=.4991	r=-.209 p=.0798	r=.249 p=.0359*
wA: wanted Affection -- desires affection	r=-.134 p=.2676	r=.087 p=.4741	r=.026 p=.8294	r=-.008 p=.9495	r=-.140 p=.2435	r=.202 p=.0920

*p<.05 **p<.01 ***p<.001

and the most highly Shaded blots their least favored ($r=.398$, $p=.0005$). Subjects with high FIRO-B expressed-Affection (eA) scores, i.e. those who the FIRO-B suggests demonstrate overt interpersonal warmth toward others, designate the least Textured (T) blots the ones they prefer most ($r=-.239$, $p=.0449$) and the most highly Shaded (Y) blots the ones they prefer least ($r=.249$, $p=.0359$).

IV: DISCUSSION

Findings: Rorschach with RIP

Interesting relationships were found between number of Shading as Texture (T) responses in the regular Rorschach administration with how subjects manipulate Best and Worst Shading on screen with the RIP (Best Shading: $r = -.281$, $p = .0174$; Worst Shading: $r = .249$, $p = .0358$). Within the traditional Klopfer-Beck interpretive context which views Texture based responses as evidencing intense and painful desires for interpersonal affection and diffuse Shading (Y) based responses as evidencing depressive affect or ideation (Levitt, 1980), these results might be interpreted in this way: Individuals with less painful relatedness needs successfully negotiate, perhaps even unconsciously without much effort, depressive environmental stimuli. In contrast, high T individuals, those with painful relatedness needs according to the traditional Rorschach interpretive tradition, actively work to avoid such stimuli. On the RIP, where the inkblot becomes the response under subject control, such subjects can indicate what they prefer least and "set right" their perceptions to a less depressing, perhaps less

threatening, circumstance. The computer screen becomes a sanctioned invitation to denial and repression. Since 30 correlations were calculated in comparing Rorschach with RIP performance, these two significant correlations may be due to chance. However this possibility appears to be mediated somewhat given that subjects indicated most favored Shading (RIP Best Shading) and least favored Shading (RIP Worst Shading) in separate trials and that each is significant at $p < .05$ with the opposing directionality ($r = -.281$, $r = .249$) we would expect were these results not due to chance.

Findings: FIRO-B with RIP

Like the high T individuals referenced previously, those with high FIRO-B expressed-Affection (eA) scores prefer highly Shaded images the least (Worst Shading: $r = .249$, $p < .04$). Such individuals who readily access and express affection may also wish to deny painful affect associated with such circumstances. These individuals do the same thing with on-screen Texture as well, choosing the least Textured blots as most preferred to a significant degree (Best Texture: $r = -.239$, $p < .05$), effectively "wiping away" the T stimuli on the computer screen.

This RIP-based effect, essentially a process where a subject diminishes (negative RIP "Best" correlations) or denies (positive RIP "Worst" correlations) that which is least preferred, would also seem to explain the significant relationships between the high FIRO-B wanted-Control (wC) individuals (those who desire to be controlled) and virtually all RIP measures: Shading (Best: $r = -.351$, $p = .0025$), Shading (Worst: $r = .398$, $p = .0005$), Color (Best: $r = -.303$, $p = .01$), Color (Worst: $r = .325$, $p = .0055$), and Texture (Worst: $r = .263$, $p = .0262$). Externally directed high-wC subjects who shrink away from decision-making and assertive activity may similarly want to shrink away from and deny those types of stimuli traditionally interpreted as threatening or depressing (Levitt, 1980). On the other hand, individuals who are comfortable with self-directedness--low wC scorers--are not compelled to diminish or deny such Y, T, and C stimuli.

Interestingly, every significant relationship found conforms to the "RIP effect" described where individuals essentially deny or balance out on-screen that which is perhaps threatening to them. Externally-directed individuals, for example, "lower the volume" with all

determinants investigated on-screen, while internally-directed individuals do the opposite.

Future Directions

It is the author's intent to pursue this line of inquiry with a larger normative sample N size. Furthermore a variety of other measures will be utilized: Depression indices, for example, should evince similar "RIP effects" if this discussion is to be strengthened. It will also be interesting to examine validated scales internal to the Rorschach itself, such as Urist's scales which provide measures of subjects' object relations (1977), as they may relate to subject interaction with the manipulatable on-screen inkblots. Alternatives to the traditional Klopfer-Beck determinant interpretive context should be explored. Despite this being a work in progress, findings thus far would seem to strongly support the author's contention that determinant research can and should be undertaken making better use of the increasingly sophisticated desktop technologies currently available. It is hoped that such techniques will serve to enrich our understanding of stimulus value effects and deepen our field's appreciation for and understanding of Rorschach's test.

APPENDIX

APPENDIX

Rorschach Image Presenter

Rorschach Image Presenter (RIP) program hyperscripting by Justin Randall Padawer follows. (Only setup and execution scripting for Cards 1 and 2 follows, since scripting for Cards 3 through 10 are identical to Cards 1 and 2.)

```

on openstack
  hide menubar
  global tex,col,sha,wtex,wcol,wsha,subNum,dataCollect,theVar,counter
end openstack

on card1worst
  global theVar
  push cd
  go cd card1w
  if the hilite of cd btn id 3 is true then
    if the hilite of cd btn id 7 is true then put "Card 1 Worst: Light Texture, Light Shading" & return
  after theVar
    if the hilite of cd btn id 8 is true then put "Card 1 Worst: Light Texture, Standard Shading" &
return after theVar
    if the hilite of cd btn id 9 is true then put "Card 1 Worst: Light Texture, Heavy Shading" & return
after theVar
  end if
  if the hilite of cd btn id 4 is true then
    if the hilite of cd btn id 7 is true then put "Card 1 Worst: Standard Texture, Light Shading" &
return after theVar
    if the hilite of cd btn id 8 is true then put "Card 1 Worst: Standard Texture, Standard Shading" &
return after theVar
    if the hilite of cd btn id 9 is true then put "Card 1 Worst: Standard Texture, Heavy Shading" &
return after theVar
  end if
  if the hilite of cd btn id 5 is true then
    if the hilite of cd btn id 7 is true then put "Card 1 Worst: Heavy Texture, Light Shading" & return
after theVar
    if the hilite of cd btn id 8 is true then put "Card 1 Worst: Heavy Texture, Standard Shading" &
return after theVar
    if the hilite of cd btn id 9 is true then put "Card 1 Worst: Heavy Texture, Heavy Shading" & return
after theVar
  end if
  pop card

```

```

end card1worst
on card2worst
  global theVar
  push cd
  go cd card2w
  if the hilite of cd btn id 15 is true then

    if the hilite of cd btn id 12 is true then
      if the hilite of cd btn id 24 is true then put "Card 2 Worst: Light Texture, Light Shading, Light
Color" & return after theVar
      if the hilite of cd btn id 25 is true then put "Card 2 Worst: Light Texture, Standard Shading, Light
Color" & return after theVar
      if the hilite of cd btn id 26 is true then put "Card 2 Worst: Light Texture, Heavy Shading, Light
Color" & return after theVar
    end if
    if the hilite of cd btn id 13 is true then
      if the hilite of cd btn id 24 is true then put "Card 2 Worst: Standard Texture, Light Shading, Light
Color" & return after theVar
      if the hilite of cd btn id 25 is true then put "Card 2 Worst: Standard Texture, Standard Shading,
Light Color" & return after theVar
      if the hilite of cd btn id 26 is true then put "Card 2 Worst: Standard Texture, Light Color, Heavy
Shading" & return after theVar
    end if
    if the hilite of cd btn id 14 is true then
      if the hilite of cd btn id 24 is true then put "Card 2 Worst: Heavy Texture, Light Shading, Light
Color" & return after theVar
      if the hilite of cd btn id 25 is true then put "Card 2 Worst: Heavy Texture, Standard Shading,
Light Color" & return after theVar
      if the hilite of cd btn id 26 is true then put "Card 2 Worst: Heavy Texture, Heavy Shading, Light
Color" & return after theVar
    end if
  end if
  if the hilite of cd btn id 16 is true then
    if the hilite of cd btn id 12 is true then
      if the hilite of cd btn id 24 is true then put "Card 2 Worst: Light Texture, Light Shading, Standard
Color" & return after theVar
      if the hilite of cd btn id 25 is true then put "Card 2 Worst: Light Texture, Standard Shading,
Standard Color" & return after theVar
      if the hilite of cd btn id 26 is true then put "Card 2 Worst: Light Texture, Heavy Shading,
Standard Color" & return after theVar
    end if
    if the hilite of cd btn id 13 is true then
      if the hilite of cd btn id 24 is true then put "Card 2 Worst: Standard Texture, Light Shading,
Standard Color" & return after theVar
      if the hilite of cd btn id 25 is true then put "Card 2 Worst: Standard Texture, Standard Shading,
Standard Color" & return after theVar
      if the hilite of cd btn id 26 is true then put "Card 2 Worst: Standard Texture, Heavy Shading,
Standard Color" & return after theVar
    end if
    if the hilite of cd btn id 14 is true then
      if the hilite of cd btn id 24 is true then put "Card 2 Worst: Heavy Texture, Light Shading,
Standard Color" & return after theVar
      if the hilite of cd btn id 25 is true then put "Card 2 Worst: Heavy Texture, Standard Shading,
Standard Color" & return after theVar
      if the hilite of cd btn id 26 is true then put "Card 2 Worst: Heavy Texture, Heavy Shading,
Standard Color" & return after theVar
    end if
  end if
end if

```

```

end if
if the hilite of cd btn id 17 is true then
  if the hilite of cd btn id 12 is true then
    if the hilite of cd btn id 24 is true then put "Card 2 Worst: Light Texture, Light Shading, Heavy
Color" & return after theVar
    if the hilite of cd btn id 25 is true then put "Card 2 Worst: Light Texture, Standard Shading,
Heavy Color" & return after theVar
    if the hilite of cd btn id 26 is true then put "Card 2 Worst: Light Texture, Heavy Shading, Heavy
Color" & return after theVar
  end if
  if the hilite of cd btn id 13 is true then
    if the hilite of cd btn id 24 is true then put "Card 2 Worst: Standard Texture, Light Shading,
Heavy Color" & return after theVar
    if the hilite of cd btn id 25 is true then put "Card 2 Worst: Standard Texture, Standard Shading,
Heavy Color" & return after theVar
    if the hilite of cd btn id 26 is true then put "Card 2 Worst: Standard Texture, Heavy Shading,
Heavy Color" & return after theVar
  end if
  if the hilite of cd btn id 14 is true then
    if the hilite of cd btn id 24 is true then put "Card 2 Worst: Heavy Texture, Light Shading, Heavy
Color" & return after theVar
    if the hilite of cd btn id 25 is true then put "Card 2 Worst: Heavy Texture, Standard Shading,
Heavy Color" & return after theVar
    if the hilite of cd btn id 26 is true then put "Card 2 Worst: Heavy Texture, Heavy Shading, Heavy
Color" & return after theVar
  end if
end if
pop card
end card2worst
..... (This repeats for cards 3 through 10.)

```

```

on mouseUp
  visual effect iris open
  go to card "configure"
end mouseUp

```

```

on mouseUp
  answer "Throw the random dice?" with "Cancel" or "OK"
  wait 3
  set cursor to busy
  wait 3
  set cursor to busy
  wait 3
  set cursor to busy
  wait 3
  set cursor to busy
  if it is "Cancel" then exit mouseUp

  put random(2) into rand
  if rand is 1 then
    answer "Give the external measure BEFORE the Rorschach & RIP."
  end if
  if rand is 2 then
    answer "Give the external measure AFTER the Rorschach & RIP."
  end if
end mouseUp

```

```

on mouseUp
  doMenu "Compact Stack"
  answer "Quit the RIP to:" ~
  with "Cancel" or "Home" or "Finder"
  if it is "Finder" then doMenu "Quit HyperCard"
  if it is "Home" then go home
  if it is "Cancel" then exit mouseUp
end mouseUp

```

```

on mouseUp
  play "RIP"
  -- hide menubar
  -- set userlevel to 3
  global tex,col,sha,wtex,wcol,wsha,subNum,dataCollect,theVar,counter,protect
  put empty into tex
  put empty into col
  put empty into sha
  put empty into wtex
  put empty into wcol
  put empty into wsha
  put empty into subNum
  put empty into dataCollect
  put empty into theVar
  put 0 into counter
  put 0 into protect
  hide menuBar
  lock screen

```

```

go to card "card1"
set the hilite of card button id 4 to true
set the hilite of card button id 3 to false
set the hilite of card button id 5 to false
set the hilite of card button id 8 to true
set the hilite of card button id 7 to false
set the hilite of card button id 9 to false

```

```

go to card "card2"
set the hilite of card button id 13 to true
set the hilite of card button id 12 to false
set the hilite of card button id 14 to false
set the hilite of card button id 16 to true
set the hilite of card button id 15 to false
set the hilite of card button id 17 to false
set the hilite of card button id 25 to true
set the hilite of card button id 24 to false
set the hilite of card button id 26 to false

```

..... (This repeats for cards 3 through 10.)

```

go to card "card1w"
set the hilite of card button id 4 to true
set the hilite of card button id 3 to false
set the hilite of card button id 5 to false
set the hilite of card button id 8 to true
set the hilite of card button id 7 to false
set the hilite of card button id 9 to false

```

```

go to card "card2w"
set the hilite of card button id 13 to true
set the hilite of card button id 12 to false
set the hilite of card button id 14 to false
set the hilite of card button id 16 to true
set the hilite of card button id 15 to false
set the hilite of card button id 17 to false
set the hilite of card button id 25 to true
set the hilite of card button id 24 to false
set the hilite of card button id 26 to false

```

..... (This repeats for cards 3 through 10.)

```

go to card "card1"

```

```

-- ***** randomization
put random(2) into rand
if rand is 1 then
    put true into tex
    put true into wtex
    show card button id 3
    show card button id 4
    show card button id 5
    hide card button id 7
    hide card button id 8
    hide card button id 9
end if
if rand is 2 then
    put true into sha
    put true into wsha
    hide card button id 3
    hide card button id 4
    hide card button id 5
    show card button id 7
    show card button id 8
    show card button id 9
end if
-- ***** end randomization
unlock screen
ShowPicture "Macintosh HD:blotpics:1221", rect of bkgnd button id 3, file
wait 1 second
play "choosemost"
end mouseUp

```

```

on mouseUp
    global protect
    put 1 into protect
    set the hilite of me to true
    set the hilite of card button id 8 to false
    set the hilite of card button id 9 to false
    ShowPicture "Macintosh HD:blotpics:1losh", rect of bkgnd button id 3, file
end mouseUp

```

```

on mouseUp
    global protect
    put 1 into protect
    set the hilite of me to true

```

```

set the hilite of card button id 7 to false
set the hilite of card button id 9 to false
ShowPicture "Macintosh HD:blotpics:1221", rect of bkgnd button id 3, file
end mouseUp

```

```

on mouseUp
global protect
put 1 into protect
set the hilite of me to true
set the hilite of card button id 7 to false
set the hilite of card button id 8 to false

```

```

ShowPicture "Macintosh HD:blotpics:1hish", rect of bkgnd button id 3, file
end mouseUp

```

```

on mouseUp
global tex,col,sha,wtex,wcol,wsha,protect
if protect is not 1 then exit mouseUp
play "chooseleast"
if wtex is true then
lock screen
go to card "card1w"
show card button id 3
show card button id 4
show card button id 5
hide card button id 7
hide card button id 8
hide card button id 9
unlock screen
put 0 into protect
ShowPicture "Macintosh HD:blotpics:1221", rect of bkgnd button id 3, file
exit mouseup
end if
if wsha is true then
lock screen
go to card "card1w"
hide card button id 3
hide card button id 4
hide card button id 5
show card button id 7
show card button id 8
show card button id 9
unlock screen
put 0 into protect
ShowPicture "Macintosh HD:blotpics:1221", rect of bkgnd button id 3, file
exit mouseup
end if
end mouseUp

```

```

on mouseUp
global tex,col,sha,wtex,wcol,wsha,dataCollect,subNum,protect
if protect is not 1 then exit mouseUp
play "choosemoost"

-- ..... all determinants for this card
if tex is empty then
put true into wtex

```

```

put empty into wsha
put true into tex
lock screen
go card card1
show card button id 3
show card button id 4
show card button id 5
hide card button id 7
hide card button id 8
hide card button id 9
unlock screen
put 0 into protect
ShowPicture "Macintosh HD:blotpics:1221", rect of bkgnd button id 3, file
exit mouseup
end if
if sha is empty then
put true into wsha
put empty into wtex
put true into sha
lock screen
go card card1
hide card button id 3
hide card button id 4
hide card button id 5
show card button id 7
show card button id 8
show card button id 9
unlock screen
put 0 into protect
ShowPicture "Macintosh HD:blotpics:1221", rect of bkgnd button id 3, file
exit mouseup
end if

-- ***** data collection
lock screen
go cd card10w
get cd fld subjectnumber
add 1 to it
put it into subNum
put it after dataCollect
go cd card1
put 1 after dataCollect
if the hilite of cd btn id 3 is true then put 0 after dataCollect
if the hilite of cd btn id 4 is true then put 1 after dataCollect
if the hilite of cd btn id 5 is true then put 2 after dataCollect
go cd card1w
if the hilite of cd btn id 3 is true then put 0 after dataCollect
if the hilite of cd btn id 4 is true then put 1 after dataCollect
if the hilite of cd btn id 5 is true then put 2 after dataCollect
put 33 after dataCollect
go cd card1
if the hilite of cd btn id 7 is true then put 0 after dataCollect
if the hilite of cd btn id 8 is true then put 1 after dataCollect
if the hilite of cd btn id 9 is true then put 2 after dataCollect
go cd card1w
if the hilite of cd btn id 7 is true then put 0 after dataCollect
if the hilite of cd btn id 8 is true then put 1 after dataCollect

```

if the hilite of cd btn id 9 is true then put 2 after dataCollect
 put return after dataCollect

-- begin randomization for next card

go to card "card2"
 put empty into tex
 put empty into col
 put empty into sha
 put empty into wtex
 put empty into wcol
 put empty into wsha
 put random(3) into rand
 if rand is 1 then
 put true into wtex
 put true into tex
 show card button id 12
 show card button id 13
 show card button id 14
 hide card button id 15
 hide card button id 16
 hide card button id 17
 hide card button id 24
 hide card button id 25
 hide card button id 26
 end if

if rand is 2 then
 put true into wcol
 put true into col
 hide card button id 12
 hide card button id 13
 hide card button id 14
 show card button id 15
 show card button id 16
 show card button id 17
 hide card button id 24
 hide card button id 25
 hide card button id 26
 end if

if rand is 3 then
 put true into wsha
 put true into sha
 hide card button id 12
 hide card button id 13
 hide card button id 14
 hide card button id 15
 hide card button id 16
 hide card button id 17
 show card button id 24
 show card button id 25
 show card button id 26
 end if

-- end randomization

unlock screen
 put 0 into protect
 ShowPicture "Macintosh HD:blotpics:2222", rect of bkgnd button id 3, file
 end mouseUp

```

on mouseUp
global tex,col,sha,wtex,wcol,wsha,protect
if protect is not 1 then exit mouseUp
play "least"
if wtex is true then
lock screen
go to card "card2w"
show card button id 12
show card button id 13
show card button id 14
hide card button id 15
hide card button id 16
hide card button id 17
hide card button id 24
hide card button id 25
hide card button id 26
unlock screen
put 0 into protect
ShowPicture "Macintosh HD:blotpicts:2222", rect of bkgnd button id 3, file
exit mouseup
end if
if wcol is true then
lock screen
go to card "card2w"
hide card button id 12
hide card button id 13
hide card button id 14
show card button id 15
show card button id 16
show card button id 17
hide card button id 24
hide card button id 25
hide card button id 26
unlock screen
put 0 into protect
ShowPicture "Macintosh HD:blotpicts:2222", rect of bkgnd button id 3, file
exit mouseup
end if
if wsha is true then
lock screen
go to card "card2w"
hide card button id 12
hide card button id 13
hide card button id 14
hide card button id 15
hide card button id 16
hide card button id 17
show card button id 24
show card button id 25
show card button id 26
unlock screen
put 0 into protect
ShowPicture "Macintosh HD:blotpicts:2222", rect of bkgnd button id 3, file
exit mouseup
end if
put 0 into protect

```

```

end mouseUp

on mouseUp
  global tex,col,sha,wtex,wcol,wsha,dataCollect,subNum,protect
  if protect is not 1 then exit mouseUp
  play "most"
  -- ..... all determinants for this card
  if tex is true then
    if col is empty then
      if sha is empty then
        put random(2) into rand
        if rand is 1 then
          put true into col
          put true into wcol
          put empty into wtex
          put empty into wsha
          lock screen
          go to card "card2"
          hide card button id 12
          hide card button id 13
          hide card button id 14
          show card button id 15
          show card button id 16
          show card button id 17
          hide card button id 24
          hide card button id 25
          hide card button id 26
          unlock screen
          put 0 into protect
          ShowPicture "Macintosh HD:blotpicts:2222", rect of bkgnd button id 3, file
          exit mouseup
        end if
        if rand is 2 then
          put true into sha
          put true into wsha
          put empty into wtex
          put empty into wcol
          lock screen
          go to card "card2"
          hide card button id 12
          hide card button id 13
          hide card button id 14
          hide card button id 15
          hide card button id 16
          hide card button id 17
          show card button id 24
          show card button id 25
          show card button id 26
          unlock screen
          put 0 into protect
          ShowPicture "Macintosh HD:blotpicts:2222", rect of bkgnd button id 3, file
          exit mouseup
        end if
      end if
    end if
  end if
  if col is true then

```

```

if tex is empty then
  if sha is empty then
    put random(2) into rand
    if rand is 1 then
      put true into tex
      put true into wtex
      put empty into wcol
      put empty into wsha
      lock screen
      go card "card2"
      show card button id 12
      show card button id 13
      show card button id 14
      hide card button id 15
      hide card button id 16
      hide card button id 17
      hide card button id 24
      hide card button id 25
      hide card button id 26
      unlock screen
      put 0 into protect
      ShowPicture "Macintosh HD:blotpics:2222", rect of bkgnd button id 3, file
      exit mouseup
    end if
    if rand is 2 then
      put true into sha
      put true into wsha
      put empty into wcol
      put empty into wtex
      lock screen
      go card "card2"
      hide card button id 12
      hide card button id 13
      hide card button id 14
      hide card button id 15
      hide card button id 16
      hide card button id 17
      show card button id 24
      show card button id 25
      show card button id 26
      unlock screen
      put 0 into protect
      ShowPicture "Macintosh HD:blotpics:2222", rect of bkgnd button id 3, file
      exit mouseup
    end if
  end if
end if
if sha is true then
  if col is empty then
    if tex is empty then
      put random(2) into rand
      if rand is 1 then
        put true into col
        put true into wcol
        put empty into wsha
        put empty into wtex

```

```

lock screen
go card "card2"
hide card button id 12
hide card button id 13
hide card button id 14
show card button id 15
show card button id 16
show card button id 17
hide card button id 24
hide card button id 25
hide card button id 26
unlock screen
put 0 into protect
ShowPicture "Macintosh HD:blotpicts:2222", rect of bkgnd button id 3, file
exit mouseup
end if
if rand is 2 then
    put true into tex
    put true into wtex
    put empty into wsha
    put empty into wcol
    lock screen
    go card "card2"
    show card button id 12
    show card button id 13
    show card button id 14
    hide card button id 15
    hide card button id 16
    hide card button id 17
    hide card button id 24
    hide card button id 25
    hide card button id 26
    unlock screen
    put 0 into protect
    ShowPicture "Macintosh HD:blotpicts:2222", rect of bkgnd button id 3, file
    exit mouseup
end if
end if
end if
end if

if tex is empty then
    put true into tex
    put true into wtex
    put empty into wcol
    put empty into wsha
    lock screen
    go card "card2"
    show card button id 12
    show card button id 13
    show card button id 14
    hide card button id 15
    hide card button id 16
    hide card button id 17
    hide card button id 24
    hide card button id 25
    hide card button id 26

```

```

unlock screen
put 0 into protect
ShowPicture "Macintosh HD:blotpics:2222", rect of bkgnd button id 3, file
exit mouseup
end if
if col is empty then
    put true into col
    put true into wcol
    put empty into wtex
    put empty into wsha
    lock screen
    go card "card2"
    hide card button id 12
    hide card button id 13
    hide card button id 14
    show card button id 15
    show card button id 16
    show card button id 17
    hide card button id 24
    hide card button id 25
    hide card button id 26
    unlock screen
    put 0 into protect
    ShowPicture "Macintosh HD:blotpics:2222", rect of bkgnd button id 3, file
    exit mouseup
end if
if sha is empty then
    put true into sha
    put true into wsha
    put empty into wtex
    put empty into wcol
    lock screen
    go card "card2"
    hide card button id 12
    hide card button id 13
    hide card button id 14
    hide card button id 15
    hide card button id 16
    hide card button id 17
    show card button id 24
    show card button id 25
    show card button id 26
    unlock screen
    put 0 into protect
    ShowPicture "Macintosh HD:blotpics:2222", rect of bkgnd button id 3, file
    exit mouseup
end if

-- ***** data collection
lock screen
get subNum
put it after dataCollect
go cd card2
put 2 after dataCollect
if the hilite of cd btn id 12 is true then put 0 after dataCollect
if the hilite of cd btn id 13 is true then put 1 after dataCollect
if the hilite of cd btn id 14 is true then put 2 after dataCollect

```

```

go cd card2w
if the hilite of cd btn id 12 is true then put 0 after dataCollect
if the hilite of cd btn id 13 is true then put 1 after dataCollect
if the hilite of cd btn id 14 is true then put 2 after dataCollect
go cd card2
if the hilite of cd btn id 15 is true then put 0 after dataCollect
if the hilite of cd btn id 16 is true then put 1 after dataCollect
if the hilite of cd btn id 17 is true then put 2 after dataCollect
go cd card2w
if the hilite of cd btn id 15 is true then put 0 after dataCollect
if the hilite of cd btn id 16 is true then put 1 after dataCollect
if the hilite of cd btn id 17 is true then put 2 after dataCollect
go cd card2
if the hilite of cd btn id 24 is true then put 0 after dataCollect
if the hilite of cd btn id 25 is true then put 1 after dataCollect
if the hilite of cd btn id 26 is true then put 2 after dataCollect
go cd card2w
if the hilite of cd btn id 24 is true then put 0 after dataCollect
if the hilite of cd btn id 25 is true then put 1 after dataCollect
if the hilite of cd btn id 26 is true then put 2 after dataCollect
put return after dataCollect

-- ***** begin randomization for next card
go to card "card3"
..... (This repeats for cards 3 through 10.)

```

```

-- ***** data collection
lock screen
get subNum
put it after dataCollect
go cd card10
put 0 after dataCollect
if the hilite of cd btn id 1 is true then put 0 after dataCollect
if the hilite of cd btn id 2 is true then put 1 after dataCollect
if the hilite of cd btn id 3 is true then put 2 after dataCollect
go cd card10w
if the hilite of cd btn id 1 is true then put 0 after dataCollect
if the hilite of cd btn id 2 is true then put 1 after dataCollect
if the hilite of cd btn id 3 is true then put 2 after dataCollect
go cd card10
if the hilite of cd btn id 4 is true then put 0 after dataCollect
if the hilite of cd btn id 5 is true then put 1 after dataCollect
if the hilite of cd btn id 6 is true then put 2 after dataCollect
go cd card10w
if the hilite of cd btn id 4 is true then put 0 after dataCollect
if the hilite of cd btn id 5 is true then put 1 after dataCollect
if the hilite of cd btn id 6 is true then put 2 after dataCollect
go cd card10
if the hilite of cd btn id 9 is true then put 0 after dataCollect
if the hilite of cd btn id 10 is true then put 1 after dataCollect
if the hilite of cd btn id 11 is true then put 2 after dataCollect
go cd card10w
if the hilite of cd btn id 9 is true then put 0 after dataCollect
if the hilite of cd btn id 10 is true then put 1 after dataCollect
if the hilite of cd btn id 11 is true then put 2 after dataCollect
put return after dataCollect

```

```

unlock screen

-- ***** scoring
scoring
  put 0 into protect
  go cd "thankyou"
  unlock screen
end mouseUp

on scoring

  global theVar,dataCollect
  lock screen

  get cd fld subjectNumber
  add 1 to it
  put it into cd fld subjectNumber
  put "Subject #" & it & return into theVar

  go to card card1
  if the hilite of cd btn id 3 is true then
    if the hilite of cd btn id 7 is true then put "Card 1 Best: Light Texture, Light Shading" & return after
theVar
    if the hilite of cd btn id 8 is true then put "Card 1 Best: Light Texture, Standard Shading" & return
after theVar
    if the hilite of cd btn id 9 is true then put "Card 1 Best: Light Texture, Heavy Shading" & return
after theVar
  end if
  if the hilite of cd btn id 4 is true then
    if the hilite of cd btn id 7 is true then put "Card 1 Best: Standard Texture, Light Shading" & return
after theVar
    if the hilite of cd btn id 8 is true then put "Card 1 Best: Standard Texture, Standard Shading" &
return after theVar
    if the hilite of cd btn id 9 is true then put "Card 1 Best: Standard Texture, Heavy Shading" &
return after theVar
  end if
  if the hilite of cd btn id 5 is true then
    if the hilite of cd btn id 7 is true then put "Card 1 Best: Heavy Texture, Light Shading" & return
after theVar
    if the hilite of cd btn id 8 is true then put "Card 1 Best: Heavy Texture, Standard Shading" &
return after theVar
    if the hilite of cd btn id 9 is true then put "Card 1 Best: Heavy Texture, Heavy Shading" & return
after theVar
  end if
  card1worst

  go to card card2
  if the hilite of cd btn id 15 is true then
    if the hilite of cd btn id 12 is true then
      if the hilite of cd btn id 24 is true then put "Card 2 Best: Light Texture, Light Shading, Light
Color" & return after theVar
      if the hilite of cd btn id 25 is true then put "Card 2 Best: Light Texture, Standard Shading, Light
Color" & return after theVar
      if the hilite of cd btn id 26 is true then put "Card 2 Best: Light Texture, Heavy Shading, Light
Color" & return after theVar
    end if
  end if

```

```

if the hilite of cd btn id 13 is true then
  if the hilite of cd btn id 24 is true then put "Card 2 Best: Standard Texture, Light Shading, Light
Color" & return after theVar
  if the hilite of cd btn id 25 is true then put "Card 2 Best: Standard Texture, Standard Shading,
Light Color" & return after theVar
  if the hilite of cd btn id 26 is true then put "Card 2 Best: Standard Texture, Light Color, Heavy
Shading" & return after theVar
end if
if the hilite of cd btn id 14 is true then
  if the hilite of cd btn id 24 is true then put "Card 2 Best: Heavy Texture, Light Shading, Light
Color" & return after theVar
  if the hilite of cd btn id 25 is true then put "Card 2 Best: Heavy Texture, Standard Shading, Light
Color" & return after theVar
  if the hilite of cd btn id 26 is true then put "Card 2 Best: Heavy Texture, Heavy Shading, Light
Color" & return after theVar
end if
end if
if the hilite of cd btn id 16 is true then
  if the hilite of cd btn id 12 is true then
    if the hilite of cd btn id 24 is true then put "Card 2 Best: Light Texture, Light Shading, Standard
Color" & return after theVar
    if the hilite of cd btn id 25 is true then put "Card 2 Best: Light Texture, Standard Shading,
Standard Color" & return after theVar
    if the hilite of cd btn id 26 is true then put "Card 2 Best: Light Texture, Heavy Shading, Standard
Color" & return after theVar
  end if
  if the hilite of cd btn id 13 is true then
    if the hilite of cd btn id 24 is true then put "Card 2 Best: Standard Texture, Light Shading,
Standard Color" & return after theVar
    if the hilite of cd btn id 25 is true then put "Card 2 Best: Standard Texture, Standard Shading,
Standard Color" & return after theVar
    if the hilite of cd btn id 26 is true then put "Card 2 Best: Standard Texture, Heavy Shading,
Standard Color" & return after theVar
  end if
  if the hilite of cd btn id 14 is true then
    if the hilite of cd btn id 24 is true then put "Card 2 Best: Heavy Texture, Light Shading, Standard
Color" & return after theVar
    if the hilite of cd btn id 25 is true then put "Card 2 Best: Heavy Texture, Standard Shading,
Standard Color" & return after theVar
    if the hilite of cd btn id 26 is true then put "Card 2 Best: Heavy Texture, Heavy Shading,
Standard Color" & return after theVar
  end if
end if
if the hilite of cd btn id 17 is true then
  if the hilite of cd btn id 12 is true then
    if the hilite of cd btn id 24 is true then put "Card 2 Best: Light Texture, Light Shading, Heavy
Color" & return after theVar
    if the hilite of cd btn id 25 is true then put "Card 2 Best: Light Texture, Standard Shading, Heavy
Color" & return after theVar
    if the hilite of cd btn id 26 is true then put "Card 2 Best: Light Texture, Heavy Shading, Heavy
Color" & return after theVar
  end if
  if the hilite of cd btn id 13 is true then
    if the hilite of cd btn id 24 is true then put "Card 2 Best: Standard Texture, Light Shading, Heavy
Color" & return after theVar
    if the hilite of cd btn id 25 is true then put "Card 2 Best: Standard Texture, Standard Shading,
Heavy Color" & return after theVar

```

```

    if the hilite of cd btn id 26 is true then put "Card 2 Best: Standard Texture, Heavy Shading,
Heavy Color" & return after theVar
    end if
    if the hilite of cd btn id 14 is true then
        if the hilite of cd btn id 24 is true then put "Card 2 Best: Heavy Texture, Light Shading, Heavy
Color" & return after theVar
        if the hilite of cd btn id 25 is true then put "Card 2 Best: Heavy Texture, Standard Shading,
Heavy Color" & return after theVar
        if the hilite of cd btn id 26 is true then put "Card 2 Best: Heavy Texture, Heavy Shading, Heavy
Color" & return after theVar
    end if
end if
card2worst

go to card card3
..... (This repeats for cards 3 through 10.)

```

```

set cursor to busy
go to card "resultscard"
set cursor to busy
put theVar & return & return after cd fld id 1
put dataCollect after cd fld id 8
set cursor to busy
end scoring

on mouseUp
    set cursor to busy
    put cd fld "results" into theFile
    set cursor to busy
    ask file "Write summary to:" with "Summary " & the short date
    if it is not empty then
        open file it
        write theFile to file it
        close file it
    end if
end mouseUp

```

(End RIP program hyperscript.)

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BIBLIOGRAPHY

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VITA

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