

Affect and psychological magnification: Derivations from Tomkins' script theory

Leslie Carlson, *Wesleyan University*, and
Rae Carlson, *Rutgers University*

Abstract

This study tested derivations from Tomkins' script theory by asking college students (17 men, 16 women) to generate plots for television dramatic programs dealing with human emotions. Plots involving "social" affects of joy and shame elicited more interpersonal themes than did the "nonsocial" affects of excitement and fear. Further, as predicted, plots dealing with negative affects (fear and shame) were more highly elaborated than were positive affect plots (excitement and joy). Women gave significantly more interpersonal themes for nonsocial affects than did men, while men were more likely to invoke supernatural events in treatments of fear, and to offer more unhappy outcomes in plots dealing with both negative affects. The findings provide empirical support for Tomkins' script theory, and point to the need to consider specific affects in studies of emotion. The findings also suggest different kinds of script formation in males and females.

Tomkins (1979) has introduced a new theory of personality that is at once old-fashioned in the sense of its comprehensiveness, and radically new in its conceptualization of personality structure, dynamics, and development. Script theory is rooted in principles of general psychology, but provides constructs at another level of analysis to account for the extraordinary diversity of personality structures. The basic metaphor of script theory is that of the human being as a playwright, constructing his/her individual dramas from the earliest weeks of life.

Basic units of analysis are scenes and scripts. A *scene* is an organized whole, a representation of an idealized event (real or imagined) that includes people, setting, time, place, actions, affects, and psychological functions. The minimal definition of a scene is that it includes at least one affect and at least one object of that affect (Tomkins, 1979, p. 210). *Scripts* are formed as the person co-assembles families of related scenes, and then constructs individual rules for predicting, interpreting, responding to, controlling, and creating further scenes. Everyone has a number of scripts varying in density and interconnectedness. These

We are grateful to Silvan S. Tomkins for his theoretical guidance, and to Shira Saperstein for her help in establishing scoring reliability. Reprints may be requested from Leslie Carlson, 784 Orange Street, New Haven, Connecticut 06511 or from Rae Carlson, 40 Deer Path, Princeton, New Jersey 08540.

range from “habitual” scripts, which are so skilled and automatic as to evoke little thought or feeling, through intermediate scenes (which deal with most of everyday life) to “nuclear” scenes and scripts that capture the person’s most urgent and unsolved problems. Initially, scenes determine scripts; over time, script formation so consolidates experience that scripts come to determine scenes.

Affects and cognitive-affective dynamics lie at the heart of the theory. Two dynamic principles are postulated: affective amplification and psychological magnification. For any experience to become important in the first place, it must trigger one or more of an innately given set of affects: the intrinsically rewarding affects of enjoyment or excitement, the intrinsically punishing affects of anger, contempt, disgust, distress, fear, and shame, or the “resetting” affect of surprise (Tomkins, 1962, 1963).

Affective amplification accounts for only the short-term importance of any experience. Its long-term significance depends on the process of psychological magnification: cognitive-affective processes in which scenes become interconnected, and then expanded by recruiting ever more thought, action, feeling, or memory. This occurs as one apprehends *both* similarities and differences between old experiences and new ones.

Even so partial and condensed a summary of the theory points to the complexity of basic units of analysis, and suggests that considerable heterogeneity *within* personality (as well as across persons) should be expected. Previous work exploring script theory has included an intensive case study (Carlson, 1981) and an application of basic principles to existing data on committed altruists (Carlson, 1982). The present study is a more traditional empirical investigation of the dynamic principles of script formation.

Rationale and Hypotheses

The study addressed two aspects of script formation: the nature of specific affects involved in scene construction, and Tomkins’ distinction between two kinds of cognitive processes involved in the psychological magnification of positive vs. negative affect scenes.

“*Social*” affects. In his earlier presentation of affect theory, Tomkins (1962, 1963) pointed out the great flexibility of the affect system, such that any affect may be associated with any object. However, the nature of discrete affects is such that some affects are more likely to generate interpersonal scenes than are others. Among the positive affects, joy, as the basis for “the social bond” (Tomkins, 1962, p. 396) is more likely to involve interpersonal relationships than is excitement, which implies an investment in novelty and change. Among the negative affects, the

closest parallels seem to be shame and fear, respectively. Shame ("I want . . . but") is produced by the incomplete reduction of positive affect; fear is a more individualistic affect, and is most similar to excitement in its innate activators (Tomkins, 1962, pp. 251, 292). The first hypothesis predicted that *interpersonal themes are more frequent in scenes based on joy as compared with excitement, and shame as compared with fear.*

Differential magnification of positive and negative affects. Tomkins (1979) distinguishes two different cognitive processes involved in the magnification of positive vs. negative affect scenes. Elaboration of positive affect scenes/scripts involves the formation of *variants*: the detection of differences around a stable core. (For example, a young lawyer deepens his/her mastery of the law through encounters with a variety of new cases.) Magnification of negative affect scenes/scripts typically rests on the formation of *analogs*: the detection of similarities in different situations. Analog formation implies a more vigilant stance in which new scenes are scanned for old dangers and disappointments. This involves a more abstract (and more unconscious) processing of experience which may come to govern larger and more remote areas of psychic life. (An example would be the development of transference relationships in psychotherapy. For further explication and a nonclinical case example, see Carlson, 1981.)

Tomkins (1979, p. 232) implies that negative affects generate a wider range of implications than do positive affects. This follows from the greater power of analogs (as contrasted with variants) to impose meaning on apparently unrelated events. The present study did not attempt to distinguish analog and variant formation, but made the general prediction that *negative affect themes receive greater psychological magnification than do positive affect themes.*

Gender differences. Script theory implies a number of differences between males and females that are based on both biological endowments and socio-cultural expectations. For example, in Western society, males are "specialized" for excitement, anger, and contempt, and females for enjoyment, distress, and shame. More generally, script formation in women is expected to show greater acceptance of affective experience, and more tolerance of negative affect. No specific predictions were made in the present study, but gender differences were considered worthy of exploratory analyses.

Method

Student volunteers (17 men, 16 women) were recruited through announcements placed on bulletin boards at Yale University for participation in an Imaginative Productions Task (described below). Subjects were guaranteed an-

onymity by use of code names, and could be identified only by sex. Participants completed the task at leisure, and were paid \$5 for their efforts. This report is based on all protocols returned to the first author.

Imaginative Productions Task (IPT)

The study required a task that would call for the generation of dramatic episodes. The IPT requires subjects to generate plots for television dramatic productions dealing with the general theme of human emotions. Specific instructions were as follows:

Imagine that you have been hired as a consultant to the Public Broadcasting Service in developing a series of dramatic programs for the 1983 season. They plan a series of 90-minute dramas with the broad theme of human emotions. The network is responding to criticisms of television programming (e.g., that it is highly stereotyped). Therefore, they wish to commission scripts by new writers. The series will have a substantial budget, prestigious sponsors, and a distinguished host.

Your task, as a consultant, is to sketch four *different* treatments of each of two basic emotions. Because the network needs a rough estimate of production costs, you are asked to indicate for each treatment any special demands (e.g., historical period, size of cast, locations, costume, etc.). Your treatments should be brief—only one paragraph each. Try to make them as different as possible. Your booklet gives examples of possible treatments of the feeling of Distress. These examples should help you to understand what is asked. (Examples provided were one paragraph summaries of the films *Umberto D*, *One Potato, Two Potato*, and Ibsen's play, *The Wild Duck*.)

Test booklets were assembled to provide four plots based on one positive affect (either excitement or joy) and four plots based on one negative affect (either fear or shame). Pilot studies had shown that four treatments of any affect tended to exhaust subjects' tolerance for a rather demanding task, and that group administration was not practical. Combinations of a positive and a negative affect and order of presentation were randomized within test booklets, and booklets were distributed randomly among subjects.

Each plot was separately scored for (a) presence or absence of a central interpersonal theme, and (b) psychological magnification. Independent judges agreed on 87% of the classifications of interpersonal themes in a random sample ($\kappa = .75$, $p < .001$); overall, interpersonal themes were present in 131 (49.6%) of the plots. Psychological magnification was rated on a 5-point scale anchored as follows:

1. No psychologically meaningful content. Barren or nonhuman themes. (Example: "Discovery of extraterrestrial life. Advanced Skylab space station-shuttle exploratory rocket finds an exact replica in space.")

3. Moderately elaborated plot involving plausible, stereotypic story. (Example: "A 22-year-old man sets out from Colorado Springs to make his fortune in San Francisco during the Gold Rush era. He does strike a rich gold mine and

begins to build a hotel empire in San Francisco. He struggles with the corruption and anarchy of San Francisco and falls in love with a madam of the most successful brothel. They marry and try to increase their fortunes through their business and power.”)

5. Highly elaborated treatment with psychological implications developed. (Example: “A compassionate young gym teacher seeks to build confidence in and bring out of her shell an overweight 15-year-old girl. Her special attention for the girl has its positive effect, but also results in much resentment and cruelty on the part of the girl’s classmates. During the school’s annual field day and exhibition, the girl finds herself the laughingstock of all there and confronts the teacher, accusing her of having intended to help her only for her own desire to do good. The teacher must sort out the truth in this, and endeavor to reestablish trust on a more honest basis.”)

Independent ratings by the investigators agreed on 86% of magnification ratings; all differences were resolved in conference to arrive at a final score. A third judge, unfamiliar with the theory and blind to the research hypotheses, agreed with 87% of the composite ratings. Magnification scores ranged from 1 to 5 with a mean of 3.8.

Results

The task elicited a surprisingly rich and diverse set of dramatic plots. Although the majority of the 264 plots dealt with contemporary life, the variety of casts, settings, and themes was so great as to defy classification. Settings ranged from the lairs of prehistoric monsters through ancient Greece and medieval battlefields through intergalactic space. Characters were as diverse as a lonely spider, a classroom of handicapped children, and jet-set entertainers.

Random distribution of test booklets resulted in unequal representation of the four affects, with fear receiving 72 treatments, excitement 68, joy 64, and shame 60. Women received booklets with disproportionately high representation of joy and fear, while men were more frequently asked to develop excitement and shame plots. There are no a priori reasons to expect these chance factors to have influenced the results, and there were no gender differences in either length of treatments or in overall ratings of psychological magnification.

Interpersonal Themes

The first hypothesis predicted that the “social” affects of joy and shame generate more interpersonal themes than do the affects of excitement and fear. For a test of this hypothesis, each subject’s interpersonal score for a plot (0 or 1) was summed for each affect (to yield a score from 0 to 4), and comparisons made between the social and nonsocial affects. As shown in Table 1, the prediction was supported ($\chi^2 = 9.8, df$

= 1, $p < .005$). Cross-cutting the positive or negative valence of specific affects, social affects of joy and shame "pulled" higher interpersonal scores than did their counterparts of excitement or fear.

Differential Magnification of Positive and Negative Affects

The second hypothesis predicted that negative affects lend themselves to greater psychological magnification. For a test of this hypothesis, the sum of each subject's magnification ratings on positive affect plots was subtracted from summed magnification scores on negative affect plots. The script-theoretic prediction was again supported: for 29 of the 33 respondents, the negative affect sum was higher (correlated $t = 3.97$, $df = 32$, $p < .0005$).

Gender Differences

While both major hypotheses were supported in the total sample, the sharp differentiation of social/nonsocial affects in producing interpersonal themes was especially marked among the male subjects. To explore this phenomenon further, males and females were compared on interpersonal scores for the nonsocial affects of excitement and fear. Table 2 summarizes the results. Women were significantly ($p < .002$) more likely to offer interpersonal themes even on the nonsocial affects.

Table 1. Frequency comparison of interpersonal themes on social and nonsocial affects.

Interpersonal score	Social affects (joy and shame)	Nonsocial affects (excitement and fear)	
High (3-4)	17	6	$\chi^2 = 9.8^*$
Low (0-2)	13	30	

* $p < .005$.

Table 2. Frequency comparison of men and women for interpersonal themes on nonsocial affects.

Group	Interpersonal score		
	High (2-4)	Low (0-1)	
Men	1	18	$\chi^2 = 11.69^*$
Women	12	7	

* $p < .002$.

This finding poses an interesting question: How do the sexes differ in dealing with an affect that is both nonsocial and negative? Analysis of the fear plots revealed no gender differences in the thematic content of fear scenes. Fear of murder, madness, assault, death, and nuclear warfare appeared in the plots of men and women alike. However, supernatural events were invoked by four of the six males who produced fear plots, as compared with only one of twelve women ($\chi^2 = 5.2, df = 1, p < .05$). This trend is illustrated by the following examples of plots dealing with the same theme, that of a lost child.

A young mother and her two children attend a home show. They view the three-bedroom model home. The youngest child begins to fuss. The older (F) adores the bedroom set in the child's room, and slips under the rope to look at it more closely. As the mother comforts the younger child, they are pushed along with the crowd and out of the house. Once out, she realizes that she has lost one of her children and tells the staff of the booth. They begin to search for the child, but in the meantime the kid has hidden herself in a closet (with vented doors). No one can find her because she refuses to answer and the house is so crowded. The mother is in a panic because she's afraid her child has been kidnapped. The staff calls the show office and reports the missing child. Someone gets the hysterical mother and the child something to drink. Finally, someone goes back into the house again only to find the child curled up asleep (Female).

A young married couple with a small child visit a restored 19th century ghost town. The child is separated from them as they attend a vaudeville show that evening. The child returns to a street which had earlier attracted him by the presence of a mannequin Chinese man in a display window. The mannequin comes to life and the boy is frozen in fear. Much the same nightmare consumes the parents as they search frantically for the child. They get very little assistance from the town sheriff. The child is discovered as they glance into the display window—a staged mannequin world of a boy in a barber chair, the razor held at his throat (Male).

Apart from the presence/absence of a supernatural event, these two examples differ in outcome. The woman's story ends happily; the man's story ends with the terror unresolved. Gender differences in outcomes of negative affect plots were examined in the total sample by assigning each subject a weighted score. Positive outcomes were scored 3, unresolved outcomes 2, and negative outcomes 1. The difference, evaluated with the Mann-Whitney U test, was highly significant ($z_u = 2.84, p <$

.0005). Women were consistently more likely to offer positive resolutions of plots dealing with shame and fear, while men tended to offer negative outcomes; relatively few subjects left the plots unresolved.

Discussion

Results of the study gave striking support for derivations from Tomkins' (1979) script theory. Three caveats, however, should be noted in assessing the implications of the findings.

First, our approach to the study of psychological magnification is essentially a prologue to the examination of analog and variant formation. While the findings clearly support a derivation from theoretical postulates, they do not speak directly to the cognitive processes involved. Ideally, one would hope to capture evidence of the ways in which differences-become-similarities in the generation of analogs, and similarities-prompt-differences in variant-formation. Monitoring of ongoing thought processes might provide a suitable approach to this problem, but one that is likely to be limited by the unconscious nature of analog formation.

Second, the data do not tell us about the kind of psychological magnification that characterizes our subjects in their "real lives." In the absence of anchoring information, the results simply indicate that subjects handle the development of affective themes in the ways that script theory would predict.

Third, there is no guarantee that subjects' definitions of basic emotions were wholly consistent with Tomkins' (1962, 1963) affect theory. While it seemed preferable to allow respondents to use ordinary language meanings in completing the task, this procedure risks blurring of some theoretically important distinctions. Internal evidence suggests that a number of subjects may have treated excitement and joy as nearly synonymous—a possibility that cannot be checked empirically since any given subject dealt with only one of the two positive affects.

Bearing these limitations in mind, the results are nonetheless quite illuminating. Virtually all of our subjects seemed to invest more thought and feeling in developing the implications of fear and shame, as contrasted with excitement and joy. The familiar observation that human beings have more labels for negative affects—and are unhappily endowed with more ways of being miserable than otherwise—would not account for the findings, since positive and negative affects were equally represented in the present study. While these findings might be assimilated by one or another alternative theory of personality, it seems unlikely that other theories would have predicted this outcome.

Equally striking is the clear support for predictions that cut across the distinction between positive and negative affects. Joy is clearly more

“social” than excitement, and shame more so than fear, as shown in subjects’ portrayals of interpersonal themes. Here the data argue strongly for the importance of considering specific affects in personality research, rather than collapsing the rich variety of feelings into the limited categories of happiness vs. unhappiness, elation vs. depression, or similar dichotomies of positive/negative affect.

The finding of significant gender differences in the construction of scenes and scripts is consistent with a good deal of existing research that portrays females as more “at home” in the world of feeling than males. The implications, however, are more precise than mere agreement with existing literature, and suggest lines of future inquiry. In dealing with negative affects, women appear to be able to invoke interpersonal networks readily; men appear to do so only in dealing with shame, while fear is to be faced alone. The alien quality of fear, which males are not “supposed” to experience, is suggested by the fact that a significant proportion of male subjects introduced supernatural events when asked to develop fear plots. Finally, the striking gender difference in modes of resolving negative affect plots suggests the relative toxicity of negative affects for males. Here our findings are reminiscent of May’s (1980) conclusions (derived from TAT stories) that men and women differ in the sequence of deprivation/enhancement. However, our data suggest that his formulation in terms of masculine “pride” and feminine “caring” may be too simple. Major differentiations of men’s and women’s scripts (how good things turn bad, or bad things turn good, in the present instance) seem to be considerably more diverse; they require study in their own right.

Although the present study explored only a small portion of the terrain covered by script theory, the clarity of the findings is impressive. The results have more than their face value simply because they address a key issue, the nature of psychological magnification, in script theory. Supportive evidence for such a central construct encourages further exploration of a theory with extraordinarily broad implications.

The study of script formation and functioning necessarily demands that we investigate subjects’ active constructions of experience. While the hypotheses of our study required a novel construction task (the IPT), other approaches might well use more familiar methods, such as the TAT. The nomothetic approach used here needs to be supplemented with more intensive studies of individuals; but both nomothetic and idiographic inquiry may extend our knowledge of the growth of psychological structures based on the differential magnification of affects.

References

- Carlson, R. Studies in script theory: I. Adult analogs of a childhood nuclear scene. *Journal of Personality and Social Psychology*, 1981, **40**, 501–510.

- Carlson, R. Studies in script theory: II. Altruistic nuclear scripts. *Perceptual and Motor Skills*, 1982, 55, 595-610.
- May, R. *Sex and fantasy*. New York: Norton, 1980.
- Tomkins, S. S. *Affect, imagery, consciousness*, Vol. 1. New York: Springer, 1962.
- Tomkins, S. S. *Affect, imagery, consciousness*, Vol. 2. New York: Springer, 1963.
- Tomkins, S. S. Script theory: Differential magnification of affects. In H. E. Howe, Jr., and R. A. Dienstbier (Eds.), *Nebraska Symposium on Motivation*, Vol. 26. Lincoln: University of Nebraska Press, 1979.

Manuscript received November 26, 1982; revised August 17, 1983.

This document is a scanned copy of a printed document. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material.