Affective Responses to Keeping and Not Keeping an Activity Product

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This study examined whether keeping or not keeping the products of a craft activity influences affective meaning and mood. Four groups of undergraduate (n = 23) and graduate (n = 20) students created block-printed stationery. Two groups were allowed to keep their stationery, and two groups were not. The measure of mood changes was the Bipolar Profile of Mood States, which subjects completed before and after the activity. After the activity, subjects also completed the Osgood 12-scale short-form semantic differential, which measured the affective meanings of the activity. Data analysis revealed significant differences between conditions on two out of nine variables. The subjects who could not keep their products became significantly more hostile and significantly more energetic than the subjects who kept their stationery. Implications for occupational therapy theory and further research possibilities are discussed.

A ctivity, or what Fidler and Fidler (1978) called "doing," is a primary concern in occupational therapy. Cyorkin (1979) stated that craft activities, which are adaptable and versatile, have played an important role in occupational therapy programs because they simulate situations encountered in the real world.

Sometimes occupational therapists may overlook the whole person if they concentrate more on the necessity that an activity meet certain treatment requirements than on the activity’s meaningfulness and purposefulness to the patient (Allard, 1964). In 1981, Bissell and Mailloix explored tne role crafts have played both in the history of the profession and in current practice by sampling 250 U.S. occupational therapists specializing in physical disabilities. The authors concluded that “overall, the occupational therapists surveyed seemed to stress the physical aspects of therapy with less emphasis on the psychological and social domains of treatment” (p. 374). Cyorkin (1979) pointed out that whereas technical excellence improves physical rehabilitation, an excessively technical focus “negates what is essentially the strength of occupational therapy: the integrative function of activities that unite the mind, will, and body in doing” (p. 8).

In some clinics, therapeutic activity involves the creation of a product which the patient is not always allowed to keep. For example, it is common practice to recycle materials. In addition, clinics serving chronically disabled patients often have their patients create products to be sold at bazaars for institutional benefit. Other institutions place formal or informal restrictions on patient property. What effect does keeping or not keeping an activity product have on the person who created the product? Although the variable of “keeping” has not been directly studied, this issue relates to several principles of normal human development and occupational therapy.

The occupational behavior model (Kielhofner, Burke, & Jgi, 1980) stresses that a disabled person tends to experience imbalances among volition, habituation, and performance subsystems. If a patient cannot do what is valued because of physical or mental limitations, he or she probably senses a loss of independence. The occupational therapist must counteract this.

A sense of independence develops, in part, from being able to make and carry out decisions. Kielhofner and Burke (1980) noted the importance of a sense of personal causation. If a patient expects to keep a handcrafted product and is persuaded not to (or denied this opportunity), he or she might sense a loss of control over the environment, which might reinforce dependence and feelings of powerlessness. In contrast, if able to keep the activity product, the
functioning at egocentric levels of development are violations: People have learned that they are able to keep whatever they make in most situations outside of formal work. A person who has lost mental or physical functions might need to be able to count on fulfillment of expectations. A fourth possibility is that a patient might feel that the object made has personal symbolic meanings. If so, discarding or dismantling the object is a personal affront or loss.

Mosey (1973) outlined the interaction skills necessary at five developmental levels. Perhaps patients functioning at egocentric levels of development are especially distraught when they cannot keep their craft products. Their needs for mastery are particularly acute, and they might be especially vulnerable to situations in which expectations are not fulfilled. Persons with weak ego skills might confuse the value placed on their work in a particular situation with their inherent value as individuals.

Many occupational therapists have long recognized the psychological effects of crafts on patients, but research in this area is limited. The first controlled quantitative and replicable study examining the psychological effects of crafts was published in 1959 by Smith, Barrows, and Whitney. These researchers used Osgood's semantic differential to study how subjects respond emotionally to selected arts and crafts. Three groups of subjects were asked to rank nine activities on scales of paired opposites. Smith et al. found that affective responses to the names of various crafts differed in terms of three factors: appeal, potency, and difficulty.

In a study that built on the work of Smith et al., subjects ranked four activities, three of which were crafts, on Osgood's semantic differential after participating in the activities (Nelson, Thompson, & Moore, 1982). In this study, the semantic differential included only those three factors of affective meaning identified by Osgood as having the most universal significance. The quantitative evidence showed that the four activities did elicit different affective responses in terms of the three factors of evaluation (which summarizes the degree to which a person feels positively or negatively about something), power (which summarizes a person's feelings in terms of the magnitude of effect something potentially has on its environment), and action (which represents a person's feelings about the degree of movement or volatility associated with something).

Another study (Carter, Nelson, & Duncombe, 1983) investigated how different types of people respond differently to activities. The authors suggested that personality types should be considered in planning occupational therapy activities. They also argued that a distinction should be made between creativity and imitation when activities are planned to suit a patient's personality.

These studies, then, established a foundation for quantifying the affective meanings of activities and the effects of activities on mood. The present study took a further step by addressing how keeping or not keeping the product of one's activity influences affective responses and mood. Making stationery was thought to be a generally meaningful and purposeful activity that would motivate the subjects to create attractive, useful products. Subjects would have the opportunity to personalize the products if they wished.

**Method**

**Subjects**

Forty-three occupational therapy students volunteered to participate in the study. Of these, 20 were first-year professional master's students and 23 were junior undergraduates. The undergraduates were approached in their lab sessions on their first day of class. The principal investigator asked the potential subjects to be available for the study during class time, but also told them they could leave if they wished and would not suffer any detrimental consequences. All students chose to participate. The study was conducted during class time without a time lapse between request and participation.

The master's students were initially approached during their second class lecture in a required course. The principal investigator requested that they set aside time to participate after lab the next week and make a second request the following week during lab. About half of the students stayed after class to participate in the study.

All subjects were female except for one male master's student who could not keep his product and another who could.

**Instruments**

The instruments used to measure the subjects' responses to keeping or not keeping their products were the Bipolar Profile of Mood States (POMS-B1) and the Osgood 12-scale short-form semantic differential. The measurement procedure was similar to that of Carter et al. (1983).

The 12-scale short-form semantic differential consists of 7-point scales of paired opposites: nice-awful, fast-slow, quiet-noisy, sour-sweet, powerful-powerless, young-old, good-bad, weak-strong.
alive-dead, deep-shallow, big-little, and helpful-unhelpful. Scoring produces three factors: evaluation, power, and action. Research supports the use of the semantic differential as a valid and reliable method of comparing different concepts in terms of their affective meanings (Bentler, 1969; Green & Goldfried, 1965; Osgood, 1952).

POMS-BI lists 72 adjectives describing positive and negative moods and feelings. Each adjective has a set of four possible responses, and subjects choose one response for each adjective based on their feelings "right now." Possible responses are much unlike this (0), slightly unlike this (1), slightly like this (2), and much like this (3). Scoring produces six factors that have been identified through extensive factor analysis (Lorr & McNair, 1982; Lorr, McNair, & Fisher, 1982; Lorr & Shea, 1979): elated-depressed, agreeable-hostile, composed-anxious, energetic-tired, clearheaded-confused, and confident-unsure.

Procedure
The first tested group, 11 undergraduates who could not keep their stationery, met in the morning. The second group, 12 undergraduates who could keep their stationery, met in the afternoon on the same day and in the same room. The third group, 9 master's students who could not keep their products, met in the afternoon the following week, in a different room. The final group, 11 master's students who could keep their stationery, met in the same room as the other master's students, at the same time on the following day.

Subjects in all four groups read and signed consent forms and then completed the POMS-BI. Next, the researcher demonstrated printing techniques by pointing out the various ink colors available: blue, red, and brown. Choices of stationery colors were light blue and light brown.

Predesigned blocks were available for printing, but potatoes were also available so that subjects could design their own prints if desired. Thus, the activity would be more meaningful to subjects who would rather not use precut blocks, but would prefer to create unique designs. Two charts and examples of block-printed stationery were displayed. One chart described printing procedures; the other chart explained how to cut a potato design. Subjects practiced on newsprint before finally block-printing on high-quality textured stationery.

After they finished the activity, subjects assigned to the "not keeping" groups were told that they could not keep their stationery. The investigator collected it and placed it in a brown grocery bag. The subjects then completed the semantic differential (recording their feelings about the activity) and the POMS-BI. The first three groups were told not to discuss the experiment with other students. The total procedure took 1 hour.

The "keeping" groups followed an identical protocol, except before completing the forms subjects in these groups were told they could keep their stationery.

In a critique of the semantic differential, Green and Goldfried (1965) observed that the subject might think that marking the continuum of paired opposites in the middle indicates that the subject views both sides of the scale as appropriate. Therefore, in this study, the researcher explicitly explained to subjects that a mark in the middle of the form means that the concept is neutral on the scale, not that the subject believes both sides of the scale are appropriate. This point was also prominently written on the forms.

Data Reduction
The 12 scales of the semantic differential are reduced to three dependent variables, each of which consists of the sum of four scales. The lowest rating on each scale is 0, and the highest is 6. Therefore, the score for each dependent variable can range from 0 to 24. The six mood scores are calculations of the difference between pretests and posttests (for each mood, the pretest score is subtracted from the posttest score). The possible range of scores for each mood change is from +36 to −36, but it is rare for an individual to score at either extreme.

Results
Preliminary analysis revealed some differences between graduate and undergraduate groups. Therefore, two-way analyses of variance were computed on each dependent variable. The two independent variables were condition (keeping vs. not keeping) and student group (graduate vs. undergraduate). See Table 1 for a summary of all results.

There was a significant mood difference between conditions on the agreeable–hostile factor. Subjects who could not keep their stationery (particularly the master's students) displayed more hostile moods than subjects who could keep their stationery, $F(1, 39) = 6.66, p < .05$.

There was also a significant mood difference on the energetic–tired factor. Subjects who could not keep their stationery became more energetic than subjects who could keep it, $F(1, 39) = 4.17, p < .05$.

For both of these factors, differences between student groups and interactions were not significant. Also, there were no statistically significant differences on the remaining four factors of mood states: composed-anxious, elated–depressed, clearheaded–confused, and confident-unsure.

There were no significant differences between keeping and not keeping for any of the affective...
Table 1
Affective Meaning and Change in Mood as a Function of Keeping or Not Keeping a Craft Project

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Kept Project</th>
<th>Could Not Keep Project</th>
<th>Significant Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Agreeable-Hostile</td>
<td>-0.1</td>
<td>3.9</td>
<td>-2.7</td>
</tr>
<tr>
<td>Jr. UG in OT</td>
<td>1.6</td>
<td>5.8</td>
<td>5.3</td>
</tr>
<tr>
<td>Energetic-Tired</td>
<td>2.5</td>
<td>6.1</td>
<td>6.6</td>
</tr>
<tr>
<td>Jr. UG in OT</td>
<td>0.7</td>
<td>7.2</td>
<td>9.0</td>
</tr>
<tr>
<td>Composed-Anxious</td>
<td>-2.2</td>
<td>3.9</td>
<td>-2.2</td>
</tr>
<tr>
<td>Jr. UG in OT</td>
<td>0.8</td>
<td>6.1</td>
<td>-1.8</td>
</tr>
<tr>
<td>Elated-Depressed</td>
<td>-0.6</td>
<td>4.5</td>
<td>3.4</td>
</tr>
<tr>
<td>Jr. UG in OT</td>
<td>1.9</td>
<td>4.7</td>
<td>0.1</td>
</tr>
<tr>
<td>Clearheaded-Confused</td>
<td>-3.1</td>
<td>4.7</td>
<td>-0.4</td>
</tr>
<tr>
<td>Jr. UG in OT</td>
<td>0.6</td>
<td>7.5</td>
<td>0.3</td>
</tr>
<tr>
<td>Confident- Unsure</td>
<td>-1.3</td>
<td>6.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Jr. UG in OT</td>
<td>2.4</td>
<td>7.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Evaluation</td>
<td>14.2</td>
<td>5.3</td>
<td>14.2</td>
</tr>
<tr>
<td>Jr. UG in OT</td>
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<td>3.6</td>
<td>18.3</td>
</tr>
<tr>
<td>Power</td>
<td>11.1</td>
<td>4.8</td>
<td>9.9</td>
</tr>
<tr>
<td>Jr. UG in OT</td>
<td>11.4</td>
<td>4.2</td>
<td>12.3</td>
</tr>
<tr>
<td>Action</td>
<td>12.8</td>
<td>2.9</td>
<td>15.3</td>
</tr>
<tr>
<td>Jr. UG in OT</td>
<td>15.0</td>
<td>2.5</td>
<td>15.0</td>
</tr>
</tbody>
</table>

* ns = no significant effect. Jr. UG = junior undergraduates (n = 23). MS in OT = master's students in occupational therapy (n = 20). * p < .05.

Factors, and only one significant difference between student groups. Graduate students scored higher on the Evaluation factor than undergraduates (regardless of whether they kept the product or not), F(1, 39) = 7.35, p < .05.

Discussion
The results indicate that not keeping a product of activity can elicit hostile feelings in normal subjects. In fact, one master's student who could not keep her stationery was not satisfied with merely indicating her displeasure on a standardized form. Her face turned red as she loudly and repeatedly argued about this condition with the tester. Another student tried to calm her down, but frowns on other subjects' faces further indicated their distress.

It is surprising that subjects who could not keep their stationery rated themselves more energetic than subjects who could keep their products. Did keeping the stationery reduce subjects' energy levels? No. A close look at the data shows that although subjects who kept their stationery felt more energetic after the activity than before, subjects who did not keep their products became even more energetic. Perhaps this energy directly relates to their hostile feelings. In other words, either they became energetically more hostile or their hostility energized them. They did not passively accept the fact that they could not keep their products, and their moods became charged.

Perhaps not keeping a product violates a learned expectation that starts in early childhood—that people usually may keep their products. Violations of learned expectations could have particularly detrimental effects in therapy. If a patient molds clay into a useful bowl and then must reshape it into a ball (to be stored away and used for other patients), the patient might well feel that he or she is in an insensitive and uncaring environment and has wasted time. The patient might perceive that the therapist thought the product was poorly done.

Developmentally, the patient may be able to focus only on his or her own egocentric needs, and therefore may have difficulty accepting the fact that the product cannot be kept. Egocentric people especially need positive feedback about their productive efforts, whether from self-assessment or from the assessment of other persons in the environment. Kielhofner et al. (1980) suggested that feedback on handiwork guides skill building and, in part, determines future interests. If the therapist urges the patient to donate his or her craft to the annual bazaar, if the product is dismantled in front of the patient, or if the product is dismantled by the patient in order to recycle materials, the patient receives feedback that...
does not guide skill building or stimulate interest in future occupational therapy activities.

No attempt was made in this study to assess the relationship between the individual's personal investment in the stationery and his or her feelings about the experience. It is possible that subjects who invested a great deal of personal symbolic meaning in their stationery felt especially upset when told that they could not keep it. This possibility would provide an interesting area for future research, but it would be difficult to measure the degree of a subject's personal investment in his or her activity.

Strictly speaking, this study investigated only the effects of not being able to keep one's activity product. Donating or dismantling a product might have different effects, depending on the type of subject. Another limiting factor is that subjects were told whether they could keep the product after they had completed their work to ensure that all groups had equivalent experiences and comparable products up to the point at which the independent variable was administered. Subjects told in advance might respond differently than those subjects did, and future research could investigate this point. A necessary limitation of this study is the possibility that subjects in earlier groups told subjects in later groups what to expect (even though they were told not to). However, this possibility cannot explain the differences found in the study.

Despite the fact that subjects became hostile and energetic when told they could not keep their work, they still evaluated the activity highly (a score of 12 on the evaluation factor is a neutral score). And all subjects liked the activity regardless of whether or not they could keep their work. When subjects filled out the Osgood semantic differential, they were told that the scale measured their feelings about the block-printing activity. Perhaps they did not even consider the fact that they could not keep the stationery when they evaluated the activity but did consider it when asked how they felt right now. If in a future study subjects realize that they should rate the entire session on the semantic differential, significant differences on the evaluation factor might appear.

Both groups of master's students evaluated the activity significantly higher than both undergraduate groups. This effect might have been due to the testing situation. The undergraduates volunteered to participate during class time. The graduate students, however, stayed after class, thereby forfeiting their own free time.

Although the students showed no significant differences between conditions on seven of nine factors (evaluation, power, action, elated-depressed, composed-anxious, clearheaded-confused, and confident-unsure), perhaps people with disabilities might be more vulnerable to negative effects of losing their products. These seven factors should not be discarded in further research. They might be important in other activities and under different conditions. For example, anxiety might reflect conditions of performance more than conditions of outcome (i.e., process rather than product). Also, whether a craft product may be kept might affect different personality or diagnostic groups in different ways. Occupational therapists must therefore examine these variables to determine the importance of keeping an activity product.

Conclusions
The results show that not keeping an activity product can significantly affect certain moods of subjects. This study contributes to the profession's theoretical underpinnings in regarding the impact of activity situations. Clinicians should not automatically generalize the results of this study to everyday practice, but they can make use of its theoretical implications. Therapists should consider the meanings of activity products to patients when developing treatment plans. Because activities and crafts are basic to occupational therapy, the study of the importance of activity products will enhance occupational therapy theory and clinical decision making.

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References


