Interactions and relationships involving goal attributes and goal types were examined to supplement previous studies of goal types alone. In previous studies, goal attributes such as positive-based incentive values had been found to be higher for intrinsic goals, mastery goals, and more difficult goals. Intrinsic goals and mastery goals were more positive-based than were extrinsic and performance goals unless goals were also perceived as difficult. College students (n=102) completed a booklet in which they rated academic goals in terms of several goal attributes, using a 7-point response scale. In this study, performance-approach goals differed from performance-avoidance goals in several types of incentive value, and contrasts between these two goal types appeared both to be confounded with difficulty level and to interact with it. Results are consistent with goal orientation theories, but also suggest possible elaborations of those theories as new information is obtained about interactions among goal attributes. (Author/SLD)
Goal Type, Goal Difficulty, and Affective Values of Goals

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Abstract

Interactions and relationships involving goal attributes and goal types were examined to supplement a prevalent focus on goal types alone. In previous studies, goal attributes such as positive-based incentive value had been found to be higher for intrinsic goals, mastery goals and more difficult goals, qualified by an interaction between difficulty and type of goal. Intrinsic goals and mastery goals were more positive-based than extrinsic and performance goals unless goals were also perceived as difficult. In the current study, performance-approach goals differed from performance-avoidance goals in several types of incentive value, and contrasts between these two goal types appeared both to be confounded with difficulty level and to interact with it. Results are consistent with goal orientation theories but also suggest possible elaborations of those theories as new information is obtained about interactions among goal attributes.

Problem. Research previously presented at AERA showed that goals classified as intrinsic are higher in “positive-based incentive value” and in the relative salience of positive-based incentive value than are extrinsic goals. That is, they are driven more by the search for positive affective values than by the avoidance of negative affective values (Wicker, Hamman, McCann, Turner, & Davila, 1996). Likewise, goals classified as mastery or learning goals were shown to be higher in positive-based value and in the relative salience of positive-based value than were performance goals. These effects were qualified, however, by an interaction with goal difficulty: goal type had an effect only when goals were relatively easy. Positive-based incentive value tended to be high for all difficult goals. Since that work was reported, however, there has been growing interest in other important typologies that have moved beyond a focus on just two goal types (e.g., Ford & Nichols, 1987; Newman, 1998). Of special interest is the distinction between performance-approach goals and performance-avoidance goals (Elliot and Harackiewicz, 1996; Elliot and Church, 1997; Elliot & Sheldon, 1997; Middleton & Midgley, 1997); or the very similar distinction between self-enhancing and self-defeating ego goals (Skaalvik, 1997). Skaalvik defines the self-enhancing ego orientation as a desire for superior performance and the self-defeating ego orientation as a desire to avoid inferior performance and negative judgments from others. The goals used in the earlier research by Wicker et al. varied on this dimension even though it had not been used as an explicit basis for choosing them, since Wicker et al. looked only at the overall distinction between mastery and performance goals. For example, "Showing people I'm smart" and "Being the only one who can answer the professor's questions" seem to be self-enhancing ego goals (or performance-approach goals) while "Not having people think I'm dumb" would be classified as a self-defeating ego goal (or a performance-avoidance goal).

It appeared that the self-defeating ego (performance-avoidance) goals in the sample by Wicker et al. would be more likely to be rated as easy, and the self-enhancing ego (performance-approach) goals would be more likely to be rated as difficult. If so, there would be a confounding such that more self-defeating ego goals were used in the low-difficulty performance goal cell, so outcomes could reflect that difference in goal type rather than low difficulty per se. Conversely, it is possible that, in earlier studies which contrasted the two types of ego orientation, type of ego orientation was confounded with the difficulty level of goals.

The confounding seems to be an intrinsic one that is difficult to avoid because striving to avoid inferiority implies a lower level of aspiration than does striving for
superiority over others. For example, in Skaalvik's scales: "I try not to be among the poorest students" sets a lower standard than "I always try to do better than other students in my class." Though the two variables—goal difficulty and type of ego goal—appear very difficult to disentangle, it seems important to understand the relationship between them. Therefore a list of ego and task goals from Skaalvik (1997) was used in the current research, so that these two variables could be examined together in relation to other motivational variables.

**Methods.** One-hundred and two students from a study-skills training course at a large university in the Southwest participated to fulfill a research requirement in the course. They worked through a booklet in which they rated academic goals in terms of several goal attributes, using a 7-point response scale. The items to be rated on these attribute-scales were based on 18 statements created by Skaalvik (1997) to represent 18 classroom goals. These were the statements he used to define scales for task orientation, self-defeating ego orientation, and self-enhancing ego orientation, using five to seven statements to define each ego orientation. Skaalvik confirmed these three orientation factors, and a fourth which we did not use (avoidance orientation), with exploratory and confirmatory factor analysis.

In the current study, the 18 goals were rated on seven rating scales representing goal attributes ("how good to attain it," "how bad to not attain it," "relative salience of positive and negative reasons for attainment," "how intrinsic the goal," "difficulty in terms of ability," "difficulty in terms of effort," and "how involving to pursue the goal.")

**Results.** First, on each rating scale, each subject received a score for each of the three goal types, which was their mean rating of all goals of that type. Table 1 presents means and significance levels from repeated-measures ANOVAs comparing the three types of goal on each of the rating scales. In a repeated-measures MANOVA with all the rating scales, Pillai's, Hotellings, and Wilks tests gave an exact F of 28.40, p < .001, for the main effect of goal type. In separate ANOVAs there were statistically significant differences among the three goal types on all measures. A planned contrast between task-orientation goals and the average of the two types of ego-orientation goals was significant for four measures. Task-orientation goals were higher in positive-based value, negative-based value, intrinsic quality, and degree of involvement than ego-orientation goals. The contrast between the two types of ego-orientation goals was statistically significant for all seven measures. Self-enhancing ego goals were higher than self-defeating ego goals in positive-based value, relative salience of positive-based value (positive salience), intrinsic quality, difficulty in terms of ability, difficulty in terms of effort, and degree of involvement, and lower in negative-based value.

The significant relationship between type of ego orientation and goal difficulty supports the possibility that the interactions between goal orientation and task difficulty in earlier studies may have simply reflected a confounding between difficulty and type of performance goal. That is, the high difficulty performance goal category may have contained more performance-approach goals (self-enhancing ego goals) and the low difficulty performance goal category may have contained more performance-avoidance goals (self-defeating ego goals) so that the interactions observed in the earlier studies were really with performance-goal type rather than with difficulty per se.

To examine that possibility, two graduate students and one faculty member with good knowledge of the motivation literature independently rated the performance goals used in the previous studies as either self-enhancing ego or self-defeating ego goals (because that goal list had originally been constructed without that distinction in mind). There was unanimous agreement that 8 of the 29 goals could be classified as self-
enhancing ego goals ("Showing people I'm smart," "Scoring high on tests without trying." etc.). When analyses used in the earlier studies were repeated using only these self-enhancing goals to represent the performance-goal categories, significant goal type x difficulty interactions were still obtained (for example, $F(1,42) = 73.76, p < .001$ with positive-based value). Thus, since the interactions between goal type and goal difficulty were still obtained when using only self-enhancing ego goals, it appears that a confounding of difficulty with goal type (the self-enhancing ego vs. self-defeating ego distinction) had not been fully responsible for these interactions in the previous studies.

There remains the converse possibility that the effects of goal type on incentive values shown in Table 1 may have been mediated in part by goal difficulty. That is, differences between self-enhancing ego goals and self-defeating ego goals may partially reflect the fact that self-enhancing ego goals are more difficult. This possibility is intrinsically hard to evaluate because of the natural confounding between goal difficulty and type of ego goal discussed above. For example, when the goals used in this study were divided by median split of difficulty level, all the self-enhancing ego goals fell in the high-difficulty half and all the self-defeating ego goals fell in the low difficulty half. Nonetheless, there was some variation in difficulty levels within each ego-goal type. Therefore, in an exploratory analysis, the goals within each ego-goal type were divided into high-difficulty and low-difficulty halves and three orthogonal planned comparisons were computed for each dependent variable: comparisons between self-enhancing ego goals vs. self-defeating ego goals, between high- vs. low-difficulty self-enhancing ego goals, and between high-vs. low-difficulty self-defeating ego goals.

Results are shown in Table 2. It can be seen that increased difficulty significantly increased positive-based value, negative-based value, and positive salience with self-enhancing ego goals but not with self-defeating ego goals. This may be suggestive of a second form of interaction between goal difficulty and goal type with these variables, different from that observed in earlier studies. Affective values, especially positive-based incentive values, were increased by high goal difficulty if the goal was a self-enhancing ego goal but not if it was a self-defeating ego goal (although an interaction was not actually evaluated because the two factors could not be crossed). When goal involvement was the dependent variable, difficulty had an effect with both goal types; more difficult goals were more involving than easier ones, whether they were self-enhancing or self-defeating ego goals. Cronbach alphas were also computed for each rating scale. Alphas ranged from .83 for "involvement" ratings to .87 for ratings of both positive-based value and negative-based value.

Conclusions and importance. Results support the trend in recent research to move beyond dichotomous distinctions such as those between mastery goals and performance goals. In particular, they support recent developments which divide performance goals or ego orientations into two types (Elliot and Harackiewicz, 1996; Elliot and Church, 1997; Elliot & Sheldon, 1997; Middleton & Midgley, 1997; Skaalvik, 1997). In the current research the two subtypes differed significantly on a number of measures, such as positive-based value, negative-based value, positive salience, difficulty, and degree of involvement. This study therefore supports other recent research in suggesting that dichotomies such as those between mastery goals and performance goals do not tell the whole story—that finer distinctions among goal types can also be important. It also suggests the need for further research, however, investigating which of the obtained differences between types of ego orientations (or types of performance goals) might be mediated by differences in goal difficulty.
Results also suggest that comparisons among goal types, as useful as they are, may not give us a full account of goal effects, even with the more fine-grained distinctions of the newer typologies. Goal attributes such as difficulty and positive-based value appear to have important effects that cannot be reduced to the goal types currently being studied, and they may interact with goal types in important ways. In particular, distinctions between goal orientations may interact with or correlate with the goal attributes of difficulty and positive-based value in ways that require further clarification. For example, (a) whether mastery goals have more positive-based value than performance goals depends on difficulty level, and (b) distinctions between approach-performance and avoidance-performance goals may be both confounded with difficulty level and interact with difficulty level to influence affective values.

References
### Table 1. Means and Significance Levels for Three Types of Goal Orientation.

<table>
<thead>
<tr>
<th></th>
<th>Task</th>
<th>EgoPos</th>
<th>EgoNeg</th>
<th>p</th>
<th>C1</th>
<th>C2</th>
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<tbody>
<tr>
<td>Positive-based incentive value</td>
<td>5.54</td>
<td>5.17</td>
<td>4.33</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
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<tr>
<td>Negative-based incentive value</td>
<td>4.98</td>
<td>3.91</td>
<td>4.20</td>
<td>.001</td>
<td>.001</td>
<td>.015</td>
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<tr>
<td>Positive salience</td>
<td>59.95</td>
<td>67.46</td>
<td>56.41</td>
<td>.001</td>
<td>.237</td>
<td>.001</td>
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<tr>
<td>Intrinsic vs. extrinsic</td>
<td>4.38</td>
<td>3.52</td>
<td>3.00</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
</tr>
<tr>
<td>General difficulty-ability</td>
<td>3.72</td>
<td>4.51</td>
<td>3.14</td>
<td>.001</td>
<td>.247</td>
<td>.001</td>
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<tr>
<td>General difficulty-effort</td>
<td>3.97</td>
<td>4.74</td>
<td>3.19</td>
<td>.001</td>
<td>.970</td>
<td>.001</td>
</tr>
<tr>
<td>Involvement</td>
<td>5.30</td>
<td>5.07</td>
<td>3.64</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
</tr>
</tbody>
</table>

Note: Task = Mean for task orientation, EgoPos = Mean for performance-approach goals, EgoNeg = Mean for performance-avoidance goals, p = Probability from multivariate F test for significance of difference among the 3 orientations; C1 = p for significance of planned contrast between Task Orientation and Ego Orientation; C2 = significance of planned contrast between Self-enhancing and Self-defeating Ego orientation. “Positive salience” = ratings of the salience or importance of positive-based value relative to negative-based value.

### Table 2. Means and Significance Levels for Planned Contrasts Involving Goal Difficulty and Goal Type.

<table>
<thead>
<tr>
<th></th>
<th>L-SE</th>
<th>H-SE</th>
<th>L-SD</th>
<th>H-SD</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
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</thead>
<tbody>
<tr>
<td>Positive-based incentive value</td>
<td>4.71</td>
<td>5.46</td>
<td>4.42</td>
<td>4.26</td>
<td>.001</td>
<td>.001</td>
<td>.083</td>
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<tr>
<td>Negative-based incentive value</td>
<td>3.72</td>
<td>3.99</td>
<td>4.23</td>
<td>4.19</td>
<td>.001</td>
<td>.008</td>
<td>.615</td>
</tr>
<tr>
<td>Positive salience</td>
<td>65.55</td>
<td>68.62</td>
<td>55.99</td>
<td>56.74</td>
<td>.001</td>
<td>.029</td>
<td>.627</td>
</tr>
<tr>
<td>Involvement</td>
<td>4.57</td>
<td>5.37</td>
<td>3.36</td>
<td>3.86</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
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</tbody>
</table>

Note: L-SE = Mean for lower difficulty performance-approach goals, H-SE = Mean for higher difficulty performance-approach goals, L-SD = Mean for lower difficulty performance-avoidance goals; H-SD = Mean for higher difficulty performance-avoidance goals; C1 = p for significance of planned contrast between performance approach and performance-avoidance goals; C2 = significance of planned contrast between lower and higher difficulty performance-approach goals; C3 = significance of planned contrast between lower and higher difficulty performance approach goals.
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<td>WICKER, FRANK W, McCANN, EDWIN J, REN, JOHANN H, TURNER, JENNIFE E, &amp; HAMANN, DOUGLAS</td>
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