Not by Labor Alone: Considerations for Value Influence Use of the Labor Rule in Ownership Transfers

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Abstract

People often assign ownership to the person who has invested labor into making an object (labor rule). However, labor usually improves objects and increases their value, and it has not been investigated whether these considerations underlie people’s use of the labor rule. We presented participants with third-party ownership conflicts between an owner of materials and an artist who used the materials for some artwork. Experiment 1 revealed that participants were more likely to transfer ownership to the artist for low-value materials than for high-value materials, and Experiment 2 showed that this effect was further moderated by the amount of effort the artist had invested. A third experiment confirmed that participants transferred ownership more often if the artist’s labor had increased the value of the materials than when it had added no value. These findings suggest that considerations for value underlie ownership transfers following the investment of labor.

Keywords: Social rules; Ownership; Labor; Locke

1. Introduction

Ownership of property is ubiquitous in everyday life and often influences how we interact with each other and with objects in our environment. For example, it has been found to play a role in self-concepts (Belk, 1988) and to influence decision-making processes (Kahneman, Knetsch, & Thaler, 1990). Yet ownership also functions as a means to regulate the allocation and distribution of resources to prevent conflicts over who gets to take, keep, or use things (Hume, 1739/2000; Snare, 1972). While ownership rules have...
traditionally been discussed by political philosophers and legal scholars, researchers have recently turned to studying lay people’s ownership intuitions (Blumenthal, 2009, 2010).

For some scholars possession constitutes the primary principle of property (Rose, 1985). In fact, possession plays a crucial role in a much discussed textbook example of legal ruling in an ownership conflict, in which the judges sided with the person who established possession first (Pierson, Post, 1805). When presented with similar possession scenarios, people assigned ownership to the character that first possessed an object, thus matching the legal ruling (Friedman, 2008). Moreover, use of the first possession rule has been found in children as young as 2 years of age, suggesting that it is an early developing intuition (Friedman & Neary, 2008). A recent study showed that adults (and 6- to 8-year-old children) do not only apply this rule to physical objects but also to ideas such as stories and solutions to math problems (Shaw, Li, & Olson, 2012).

Besides the first possession rule, it has also been suggested that people acquire property by investing their labor into making things (Locke, 1698/1960). Studies investigating people’s use of the labor rule have revealed that ownership claims are strengthened by the investment of labor in cases where there is no initial ownership of the resources (Beggan & Brown, 1993). When ownership of resources is pre-established, people often prioritize original ownership over the investment of labor (Hook, 1993)—yet, importantly, people are more likely to transfer ownership from the original owner to another person when that person has invested effort into making something rather than simply possessed the materials (Kanngiesser, Gjersoe, & Hood, 2010; Kanngiesser, Itakura, & Hood, unpublished data). However, they also take into account whether the labor was performed intentionally (Palamar, Le, & Friedman, 2012) or whether someone performed the necessary actions for acquiring the object (Friedman, 2010). Finally, children from 2 years of age attribute ownership on the basis of the investment of labor, indicating that use of the labor rule emerges early in development (Kanngiesser & Hood, submitted; Kanngiesser et al., 2010).

However, the investment of labor often improves things and adds value to them, and some philosophers have suggested that this may be the basis for justifying the laborers’ ownership rights to the products of their work (Locke, 1698/1960; Nozick, 1974). Yet research to date has not addressed this possibility and instead focused on comparing the investment of labor to non-labor (Beggan & Brown, 1993; Kanngiesser et al., 2010), contrasting original ownership and the investment of labor (Hook, 1993), or studying how someone acquired an object (Friedman, 2010; Palamar et al., 2012). We thus wanted to investigate whether considerations for added value through the investment of labor underlie people’s use of the labor rule.

In a series of experiments, we presented people with (third-party) ownership conflicts between an owner of materials and someone who took the materials and transformed them into a piece of artwork. These scenarios were chosen to closely resemble scenarios and situations used in previous studies investigating the labor rule (Kanngiesser et al., 2010). In our first experiment, we manipulated whether the original owner’s materials were of low value such as paper or of high value such as gold. We predicted that if considerations for value played a role in people’s ownership judgments, they would transfer ownership to creators more often for low-value materials than for high-value materials.
2. Experiment 1

2.1. Methods

2.1.1. Pre-study

We first determined how much people valued different materials. Twenty participants (Mean age = 33 years, 13 female) were recruited through an Internet platform (amazon m.turk) and received a small compensation for their participation. All participants had m.turk approval rates ≥ 95% and were residents in the United States. They filled in a survey, in which they were asked to indicate the value of different materials on a five-point scale from extremely worthless (1) to extremely valuable (5). We selected the three materials that were rated as the most valuable and the least valuable, respectively. Gold (Mean = 4.70, SD = 0.57), platinum (Mean = 4.65, SD = 0.67), and diamond (Mean = 4.55, SD = 1.10) received the highest value-rankings, whereas clay (Mean = 2.85, SD = 0.88), tinfoil (Mean = 2.75, SD = 0.91), and plastic (Mean = 2.60, SD = 1.23) received the lowest value-rankings.

2.1.2. Participants

Eighty participants (Mean age = 34 years, 52 female) were recruited in the same manner as in the pre-study. All participants were resident in the United States (80% U.S. nationality, 20% other nationalities) and had m.turk approval rates ≥ 95%. Eight additional participants were excluded from the analysis because they failed both control questions (three participants) or had already participated in an ownership survey (five participants).

2.1.3. Procedure

Participants read short stories about an owner of materials and a second person manipulating the materials. Ownership of the materials was clearly assigned to one person to avoid ambiguities about the material’s origins and ownership. Participants in the labor condition read three scenarios, in which the second person turned the materials into artwork, and participants in the control condition read three scenarios, in which the second person only looked at the materials. The type of material and characters’ names changed between stories:

Mary owns some [material]. Sarah takes\(^1\) the [material] and [turns it into a piece of artwork/looks at it]. Mary likes the [artwork/materials] and wants to keep it. Sarah also likes the [artwork/materials] and wants to keep it.

Half of the participants in each condition read scenarios concerning high-value materials and the other half read scenarios concerning low-value materials, resulting in a 2 × 2 (labor × material value) between-subject design.\(^2\) The scenarios were presented in random order. After each scenario, participants were asked, “Who owns the artwork?” (labor condition) or “Who owns the [name of material]?” (control condition), and they replied
by selecting one of the two names mentioned in the scenario, with the order of names counterbalanced for each group of participants. In addition, participants were asked to justify their decision (“Why did you decide this way?”).

Finally, to ensure that participants read the scenarios thoroughly, the survey contained two control questions—one at the beginning of the survey and one randomly interspersed with the ownership scenarios (see Appendix A for details).

2.1.4. Data scoring and analyses

We coded whether participants assigned ownership to the original owner of the materials (coded as 0) or the second person who had manipulated the materials (coded as 1). For each participant, we then calculated an ownership transfer score by summing answers for all three scenarios (minimum = 0, maximum = 3). We also scored whether participants’ justifications referred to (a) the investment of effort, (b) the value of the artistic effort, (c) original ownership, or (d) the value of the materials (see Appendix B for details), and calculated the percentage of participants that mentioned each topic at least once. A second coder scored 25% of the justifications for reliability purposes (inter-rater agreement: $\kappa = 0.86$). Preliminary analysis revealed that there were no significant effects of gender, $F_{1,74} = 0.13, p = .715, \eta^2 = .002$, or order (i.e., order of presenting names), $F_{1,74} = 0.13, p = .718, \eta^2 = .002$, on ownership scores.

2.2. Results and discussion

When analyzing participants’ ownership transfer scores, we found a significant effect of labor, $F_{1,76} = 25.58, p < .001, \eta^2 = .252$, and of material value, $F_{1,76} = 15.41, p < .001, \eta^2 = .169$, and a significant labor × material value interaction, $F_{1,76} = 8.59, p = .004, \eta^2 = .102$ (see Fig. 1). Specifically, participants were significantly more likely to transfer ownership to the creator of the artwork (labor condition) for low-value materials ($Mean = 1.90, SD = 1.37$) than for high-value materials ($Mean = 0.45, SD = 1.10$), $t$
(38) = 3.69, \( p = .001 \), \( d = 1.20 \). In the control condition, in contrast, ownership transfer scores did not differ significantly between low-value materials (\( Mean = 0.21, SD = 0.71 \)) and high-value materials (\( Mean = 0, SD = 0 \)), \( t(38) = 1.35, p = .184, d = 0.44 \), indicating that people were not in principle more willing to transfer ownership of low-value materials. Overall, participants were consistent in their replies with 95% of participants making the same ownership judgment in all scenarios. These findings indicate that the value of the materials influenced people’s use of the labor rule.

Most participants who transferred ownership to the creator in the labor condition referred to the artist’s efforts in their justifications (low value: \( n = 13, 93\% \); high value \( n = 3, 100\% \)), whereas participants who did not transfer ownership primarily referred to original ownership (low value: \( n = 7, 78\% \); high value: \( n = 15, 88\% \)). Few participants, however, mentioned the value of the materials (low value: \( n = 0 \); high value: \( n = 4, 24\% \)) or of the artistic effort (low value: \( n = 3, 21\% \); high value: \( n = 1, 33\% \)). This suggests that considerations for material or artistic value only played a small role in participants’ post hoc justifications—even though it was clearly reflected in their ownership judgments.

Overall, only few ownership transfers occurred for high-value materials, possibly because the artist’s efforts were not perceived as substantial enough to outweigh the value of the original materials. In a second experiment, we thus wanted to shift the focus to the input of the creator by investigating whether the degree of effort a creator invested into the artwork would offset the effect of material value. Previous studies have found that people will consider an artwork that required more effort (i.e., more hours of work) as more valuable or as being of higher quality than an artwork that required less effort (Cho & Schwarz, 2008; Kruger, Wirtz, van Boven, & Altermatt, 2004), but no experiment so far has investigated whether the amount of invested effort can also influence people’s ownership judgments.

3. Experiment 2A

In this experiment, we investigated whether the degree of a creator’s effort influences people’s use of the labor rule.

3.1. Methods

3.1.1. Participants

Eighty participants (Mean age = 34 years, 50 female) took part in the experiment. Participants were recruited in the same manner as in Experiment 1 (resident in the United States: 81% U.S. nationality, 19% other nationalities). Answers from five additional participants were excluded for the same reasons as before.
3.1.2. Procedure

The procedure was identical to Experiment 1, with the exception that we only used the artwork scenario and specified the amount of time the creator invested into making the artwork:

Mary owns some [material]. Sarah takes the [material] and spends [amount of time] turning it into a piece of artwork. [...] We varied whether the artist spent 1 minute or 1 day on creating the artwork and whether the materials were of high or of low value. This resulted in a 2 × 2 (material value × time) between-subject design with 20 participants per condition.

3.1.3. Data scoring and analyses

Data scoring was identical to Experiment 1 (inter-rater reliability for justifications: \( \kappa = 0.95 \)). Preliminary analysis revealed that there were no significant effects of gender, \( F_{1,74} = 0.08, p = .783, \eta^2 = .001 \), or order, \( F_{1,74} = 0.11, p = .740, \eta^2 = .001 \).

3.2. Results and discussion

Participants were significantly more likely to transfer ownership to the creator when s/he had used low-value materials (Mean = 1.15, SD = 1.35) than when s/he had used high-value materials (Mean = 0.40, SD = 1.01), \( F_{1,76} = 7.87, p = .006, \eta^2 = .094 \) (see Fig. 2). However, the creator’s effort (i.e., the amount of time spent making the artwork) had no significant effect on people’s ownership judgments (1 min: Mean = 0.73, SD = 1.26; 1 day: Mean = 0.83, SD = 1.24), \( F_{1,76} = 0.14, p = .709, \eta^2 = .002 \), nor was there a significant material value × time interaction, \( F_{1,76} = 1.26, p = .265, \eta^2 = .016 \).

![Fig. 2. Average ownership scores (+ SEM) in Experiment 2A, in which the value of materials and the amount of the time the creator spent on creating the artwork (1 min or 1 day) was varied.](image-url)
(Note that 90% of participants consistently made the same ownership judgment in all scenarios.) Most participants who transferred ownership to the creator referred to the artist’s efforts (low value: \( n = 16, 84\% \); high value: \( n = 5, 83\% \)), and the majority of participants who sided with the original owner referred to original ownership (low value: \( n = 23, 92\% \); high value: \( n = 33, 94\% \)) in their justifications, whereas few participants mentioned the value of the artistic effort (low value: \( n = 5, 26\% \); high value: \( n = 0 \)) or the value of the materials (low value: \( n = 2, 8\% \); high value: \( n = 5, 14\% \)).

Similar to Experiment 1, we found that use of the labor rule was influenced by the value of the original materials and that there was a discrepancy between participants’ ownership decisions and their post hoc justifications. Yet participants disregarded the degree of effort (i.e., the amount of time) the artist had invested into making the artwork—even in the case of low-value materials. It is conceivable that participants regarded a day of work as too little effort to warrant transfer of ownership. We thus conducted a follow-up experiment, in which we increased the amount of time the artist spent on the artwork to 1 month.

4. Experiment 2B

4.1. Method

4.1.1. Participants

Forty participants (Mean age = 31 years, 29 female) were recruited in the same manner as in Experiment 1 (resident in United States: 88% U.S. nationality, 12% other nationalities). Answers from five additional participants were excluded for the same reasons as before.

4.1.2. Procedure

The procedure was identical to Experiment 2A, with the exception that the creator now spent 1 month working on the piece of artwork (high-effort condition). Half of the participants were presented with high-value materials and the other half with low-value materials.

4.1.3. Data scoring and analysis

Data scoring and analysis were identical to Experiment 2A (inter-rater reliability for justifications: \( \kappa = 0.90 \)). We combined the data from the one minute and one day condition from Experiment 2A into a low-effort condition and compared it to the high-effort condition in the current experiment, resulting in a \( 2 \times 2 \) (effort \( \times \) material value) between-subject design. All data analyses were conducted on the combined data from Experiment 2A and 2B. Preliminary analysis revealed that there were no significant effects of gender, \( F_{1,114} = 0.03, p = .864, \eta^2 < .001 \), or order, \( F_{1,114} = 0.54, p = .465, \eta^2 = .005 \).
4.2. Results and discussion

Participants were significantly more likely to transfer ownership to the creator in the high-effort condition (this experiment) than in the low-effort condition (previous experiment), $F_{1,116} = 4.73, p = .032, \eta^2 = .039$ (see Fig. 3). Moreover, there was a significant effect of material value, $F_{1,116} = 27.25, p < .001, \eta^2 = .190$, and a trend for a material value $\times$ effort interaction, $F_{1,116} = 3.83, p = .053, \eta^2 = .032$. In fact, only participants who read scenarios with low-value materials were significantly more likely to transfer ownership in the high-effort ($\text{Mean} = 2.10, \text{SD} = 1.33$) than in the low-effort condition ($\text{Mean} = 1.15, \text{SD} = 1.35$), $t(58) = 2.58, p = .012, d = 0.68$, whereas this effect was nonsignificant for participants who read scenarios with high-value materials (high effort: $\text{Mean} = 0.45, \text{SD} = 1.00$; low effort: $\text{Mean} = 0.40, \text{SD} = 1.01$), $t(58) = 0.18, p = .856, d = 0.05$. (Note that 90% of participants consistently made the same ownership judgments.) Again, many participants in the high-effort condition mentioned the original ownership of the materials (low-value materials: $n = 4, 57\%$; high-value materials: $n = 15, 83\%$) or the investment of effort (low-value materials: $n = 15, 100\%$, high-value materials: $n = 4, 100\%$) in their justifications.

When we increased the amount of time the creator spent on making the artwork, we found an effect of effort on use of the labor rule for low-value materials, but not for high-value materials. This suggests that people do not only incorporate effort when judging an artwork’s quality or monetary value (e.g., Kruger et al., 2004) but also when judging ownership of artwork. It is thus conceivable that participants’ ownership judgments were influenced by the perception that artwork that took 1 month to create was more impressive and valuable than artwork that only required a minute or day. Alternatively, people may have thought that the owner of the materials forfeited her ownership rights by failing to object for 1 month to the artist’s use of the materials. However, this account cannot explain why materials of high value strongly biased people toward original

![Fig. 3. Average ownership scores (+ SEM) in Experiment 2B, in which the value of materials was varied and the amount of time the creator spent on creating the artwork was increased to 1 month (high-effort condition, black bars). Gray bars depict the data from Experiment 2A, which were collapsed into a low-effort condition.](image-url)
ownership, as an equal amount of time passed without objections. Rather, it is likely that
the artist’s efforts were not perceived as valuable enough to offset the high value of the
materials.

So far, our findings suggest that people calibrate the value of the materials against the
value of the invested labor when transferring ownership. To further support the notion
that considerations for added value underlie ownership transfer decisions, we conducted a
third experiment, in which we directly manipulated whether the artist’s efforts increased
the value of the original materials.

5. Experiment 3

Here, we investigated directly whether people transfer ownership to creators because
the creators’ efforts have added value to the materials they have labored on.

5.1. Methods

5.1.1. Participants
Eighty participants (Mean age = 34 years, 46 female) were recruited in the same man-
ner as in Experiment 1 (residents in United States: 80% U.S. nationality, 20% other
nationalities). Answers from 11 additional participants were excluded for the same
reasons as in previous experiments.

5.1.2. Procedure
The procedure was identical to previous experiments, with the exception that we now
specified the value of the materials and of the resulting artwork:

Mary owns some materials worth [amount of money]. Sarah takes the materials and
turns them into a piece of artwork worth [amount of money]. […]

In the low-material value condition, we used three scenarios with cheap materials (i.e.,
$2, $5, $10), and in the high-material value condition we used three scenarios with
expensive materials (i.e., $2,000, $5,000, $10,000). We also manipulated whether the art-
ist’s efforts increased the value of the materials 10-fold (added-value condition) or added
no value (no-added-value condition). This resulted in a $2 \times 2$ (material value $\times$ added-
value) between-subject design with 20 participants per condition.

5.1.3. Data scoring and analysis
Data scoring and analysis were identical to previous experiments with the exception
that we only coded whether participants’ justifications referred to material value or artis-
tic value (inter-rater reliability for justifications: $\kappa = 1.00$). Preliminary analysis revealed
that there were no significant effects of gender, $F_{1,74} = .002, p = .966, \eta^2 < .001$; or
order, $F_{1,74} = 2.21, p = .141, \eta^2 = .029$. 
5.2. Results and discussion

Participants were significantly more likely to transfer ownership to the creator when the creator’s efforts added value to the artwork (Mean = 1.88, SD = 1.44) than when there was no increase in value (Mean = 0.93, SD = 1.31), F_{1,76} = 9.83, p = .002, η^2 = .115 (see Fig. 4). Moreover, there was a trend for a significant effect of material value, F_{1,76} = 3.92, p = .051, η^2 = .049, but no significant material × added-value interaction, F_{1,76} = 0.25, p = .622, η^2 = .003. (Note that 91% of participants consistently made the same ownership judgments.) Participants rarely referred to the value of the materials or of the artistic input in their justifications in the no-added-value condition (high-value materials: n = 1, 20% artistic value; n = 2, 11% material value). Yet, in the added-value condition, participants often referred to artistic value as a justification for transferring ownership to the creator (low-value materials: n = 8, 53%; high-value materials: n = 4, 36%).

Participants were more inclined to transfer ownership to the artist when his work had added value to the original materials, explicitly mentioning artistic value in their justifications. This suggests that added value is an important factor underlying people’s use of the labor rule. Interestingly, there was a trend for people to transfer ownership more often for low-value materials than for high-value materials—indeed, whether value was added. People’s use of the labor rule thus seems to be guided by the value of the original resources and the added value of the invested labor; yet, when materials are of negligible value, the investment of labor in itself seems sufficient to influence ownership transfers.

6. General discussion

In a series of experiments, we presented participants with conflicts between an owner of materials and an artist who used the materials to create a piece of artwork. We found that participants were more likely to transfer ownership to the artist in situations involving low-value materials than in situations involving high-value materials. Moreover, more
effort resulted in increased ownership transfers to the creator in the case of low-value materials. Findings from a final experiment demonstrated that people only disregarded the value of the original materials when it was explicitly stated that the artist’s efforts added value to the artwork. These results suggest that people’s use of the labor rule is influenced by considerations for value and is not simply a result of a categorical decision about whether labor had been invested (Beggan & Brown, 1993; Hook, 1993; Kanngiesser et al., 2010). This supports the notion that—at least in the case of artwork—laborers may be granted ownership on the basis that their work has improved materials and added value to them (Locke, 1698/1960; Nozick, 1974).

Use of the labor rule has been found to emerge early in development between 2 and 3 years of age (Kanngiesser & Hood, submitted; Kanngiesser et al., 2010). However, children do not show an understanding of (monetary) value until 6–7 years of age, when they will make relative value judgments regarding authentic and non-authentic objects (Hood & Bloom, 2008) and show a more detailed understanding of monetary transactions (Berti & Bombi, 1981). Children’s ownership decisions will thus probably remain unaffected by factors relating to value until they have started school. Thus, even though children and adults share a basic intuition to assign ownership on the basis of the investment of labor, this intuition gets fine-tuned during development to incorporate factors relating to the value of the materials and the invested labor.

Previous research has found that adults’ decisions in ownership conflicts are also affected by the type of action someone performed to acquire an object—particularly, whether this action was necessary for the acquisition (Friedman, 2010) and whether it was performed intentionally (Palamar et al., 2012). In addition, 6-year-old children were recently shown to value the intellectual contribution to a picture more than the physical labor (Li, Shaw, & Olson, 2013). Taken together, these findings suggest that the establishment or transfer of ownership depends on multiple factors such as the kind of action performed on an object, the type and amount of labor invested, and the properties of the object (e.g., the perceived value).

Finally, a recent study has demonstrated that people often value original artwork more than duplicates or artifacts (Newman & Bloom, 2012)—probably due to a special appreciation for authenticity. This may suggest that our findings only apply to artwork scenarios; however, people have been found to assign ownership to a person if s/he has exerted intentional effort on acquiring non-artwork objects (Friedman, 2010; Palamar et al., 2012). This indicates that our findings may not be limited to cases of artwork but may apply more generally to situations involving the effortful acquisition and creation of objects. However, further studies are needed to investigate this claim in more detail and could examine, for example, whether our findings generalize to non-artwork scenarios that involve the refinement of already built objects.

To summarize, our findings contribute to a growing body of evidence on lay people’s intuitions regarding ownership by showing that considerations for value and not just for labor alone are crucial factors underlying people’s use of the labor rule. These findings may also have implications for other areas such as property law. Legal
scholars have recently highlighted the importance of studying the psychology of property ownership for informing legal theory and policy (Blumenthal, 2009, 2010).

Notes

1. The word “take” was used to mirror scenarios used in previous experiments, in which only tacit consent (i.e., the original owner not objecting) for using the materials was given (Kanngiesser et al., 2010, submitted).

2. Due to a setup error in the control condition, 21 participants were assigned to high-value materials and 19 participants to the low-value materials.

References


Appendix A

M.turk survey control question 1

The following control question was used in all surveys and was always displayed after participants had given their consent to participate in the study. The statement was followed by a scale ranging from “strongly disagree” to “strongly agree.”

“In this study we are interested in people’s understanding of ownership. You will read short descriptions and be asked a few questions about them. We are particularly interested in whether you read the descriptions carefully and answer the questions accurately. If you have read this statement, don’t click any of the boxes below and simply click the arrows to reach the next page.”

M.turk survey control question 2

A second control question was randomly interspersed with the other ownership scenarios. The following is an example of the control question used in Experiment 1. In the other experiments, the control question was reworded to fit the respective scenarios.

“Harry owns some copper. Karl takes the copper and turns it into a piece of artwork [looks at it]. Harry likes the artwork [copper] and wants to keep it. Karl also likes the artwork [copper] and wants to keep it. Please don’t answer any of the questions below and simply continue to the next page.”

Appendix B

Coding scheme used to categorize participant’s justifications in Experiments 1 to 3

We scored whether each of the participants’ three justification contained references to one or more of the following topics.
1. **Artistic Effort**: Statements that justify the artist’s ownership by referring to the fact that s/he created the artwork or that it was the result of her/his efforts. Examples of justifications in this category include the following: “The artwork belongs to Sarah because she created it,” “He did all the work,” “Ralph put in the effort to create the piece.”

2. **Artistic Value**: Statements that justify the artist’s ownership by referring to the fact that her/his efforts increased the value of the materials or that the artwork was worth more than the materials. Examples of justifications in this category include the following: “Final product value is much higher for Rachel’s artwork than Claire’s tinfoil,” “Because he changed it from being something of little value (a lump of clay) to something of moderate value (artwork), it’s his,” and “Rachel turned the items into something of worth.”

3. **Original Ownership**: Statements that justify the original owner’s ownership by referring to the fact that s/he was the owner of the materials or provided the materials. Examples of justifications in this category include the following: “Mary owns the gold so the artwork made with it is hers,” “Jane owns the raw materials,” “Again, it’s George’s clay. Tim has just changed the shape of the clay.”

4. **Material Value**: Statements that justify the original owner’s ownership by referring to the fact that s/he provided valuable materials or that the materials were worth more than the resulting artwork. Examples of justifications in this category include the following: “The value of the diamonds as objects is more than the value of the diamonds as art,” “The gold is worth more than art at times,” “The diamonds are what is of value. Depending on Eva’s skill level unless she is a famous artist are probably not going to be worth much.”

5. **Other**: Justifications that fit in neither of the above categories.