



SHORT REPORT

Whose idea is it anyway? The importance of reputation in acknowledgement

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Abstract

Six-year-old children negatively evaluate plagiarizers just as adults do (Olson & Shaw, 2011), but why do they dislike plagiarizers? Children may think plagiarism is wrong because plagiarizing negatively impacts other people's reputations. We investigated this possibility by having 6- to 9-year-old children evaluate people who shared their own or other people's ideas (stories). In Experiment 1, we found that children consider it acceptable to retell someone else's story if the source is given credit for their story (improving the source's reputation), but not if the reteller claims credit for the story (steals credit away from someone else). Experiments 2 and 3 showed that children do not consider it bad to lie by giving someone else credit for one's own good story (improving someone else's reputation), but do consider it bad to give someone else credit for one's own bad story (improving one's own reputation at the expense of someone else's). Experiment 4 demonstrated that children think it is equally bad to take credit for someone else's idea for oneself as it is to take someone else's idea and give credit to someone else, suggesting that children dislike when others take credit away from someone else, regardless of whether or not it improves the plagiarizer's reputation. Our results suggest that children dislike plagiarism because it negatively affects others' reputations by taking credit away from them.

Research highlights

- Investigates the connection between intellectual property and reputation.
- Demonstrates that children dislike idea theft for reasons that go beyond lying.
- Demonstrates that children think copying is acceptable as long as the source of the information is acknowledged.
- Demonstrates that children dislike when others take good reputational credit away from others or give others bad reputational credit.

Introduction

Ideas, like jokes and stories, are signals of creativity and ability that provide status and prestige, not only in

modern industrialized cultures (Buccafusco & Sprigman, 2010) but even in small hunter-gather societies (Bird & Smith, 2005). People often endorse norms against stealing credit for ideas (Park, 2003), and by the time they are 6 years old children think it is wrong to plagiarize someone else's idea (Olson & Shaw, 2011), at least children in the United States, Mexico, and China (Yang, Shaw, Garduno & Olson, 2014). Why do people think it is wrong to steal someone else's idea? Some have suggested that children and adults dislike plagiarism because they understand that stealing someone's idea negatively influences that person's reputation (Goodenough & Decker, 2009; Shaw, Li & Olson, 2013). The current research tests this possibility in children who are just beginning to dislike plagiarism.

Although there has been no research investigating children's understanding of how ideas contribute to their own and others' reputations, there is work suggesting that children appreciate that reputation is important. As

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early as 5 or 6 years of age, children show signs of having reputational concern by acting more generously and fairly when they know that others are aware of their giving behavior (Engelmann, Herrmann & Tomasello, 2012; Leimgruber, Shaw, Santos & Olson, 2012; Shaw, Montinari, Piovesan, Olson, Gino & Norton, 2014). By the time children are 8 years old, they engage in self-presentation for the purpose of promoting their reputation by refusing to disclose information to others if doing so might cause a conflict or reduce someone's popularity (Aloise-Young, 1993; Banerjee, 2002; Heyman, Itakura & Lee, 2011; Heyman, Fu & Lee, 2008) and 8- to 10-year-old children judge people who behave prosocially in public to be less good than people who behave prosocially in private (Heyman, Barner, Heumann & Schenk, 2014).

At about the same time that children start to understand the importance of reputation (by about age 5 or 6), children also begin to appreciate how valuable ideas are and think that it is wrong to plagiarize. Li, Shaw and Olson (2013) found that 6-year-olds, but not 4-year-olds, value artistic endeavors that include their ideas more than ones that just include their labor. Also by age 6, children think ideas are entities that can be owned (Shaw, Li & Olson, 2012) just like physical objects (Friedman & Neary 2008; Neary, Friedman & Burnstein, 2009), and negatively evaluate plagiarism (Olson & Shaw, 2011).

Does children's dislike of plagiarism stem from an understanding that plagiarism negatively influences the reputation of the person who initially had the idea by stealing credit away from him or her? If so, children should react more negatively to attributions of credit if they negatively impact someone else's reputation (taking credit for someone else's idea) than if they improve someone else's reputation (giving people credit for their own ideas, or giving someone credit for one's own idea). In the experiments below, we investigate these predictions and rule out deflationary explanations for why children dislike plagiarism, demonstrating that children dislike plagiarism for reasons beyond simply disliking copying or lying.

Experiment 1

In Experiment 1 we told participants about a girl who received positive feedback after telling another person's story. Importantly, she either gave credit for the story to its creator or took the credit for the story herself. In the former case, the story creator's reputation is not harmed and is possibly helped by virtue of being given credit. In the latter case the plagiarizer takes this credit away from the originator. If children dislike plagiarism by virtue of

the fact that it involves stealing credit away from someone else, then they should negatively evaluate someone who falsely takes credit for an idea as compared to someone who properly gives credit. If children merely dislike intentional copying, then they should negatively evaluate girls in both stories.

Method

Participants

Participants included 50 6- to 9-year-olds: 25 6- to 7-year-olds ($M = 6$ years, 11 months, $SD = 7$ months; 12 females) and 25 8- to 9-year-olds ($M = 8$ years, 10 months, $SD = 5.5$ months; 12 females). We chose this age range because 6-year-olds are the youngest children shown to demonstrate a clear understanding of ideas (Olson & Shaw, 2011). We divided this age range in two because previous work suggests that children at age 8 to 9 years old show more of an explicit understanding of reputation (for a review, see Shaw *et al.*, 2013). Children in all studies were tested in the United States and were predominantly white (81%; 8% Black, 9% Hispanic and 6% Asian) and were recruited from a database of local families interested in taking part in developmental research, onsite at a local museum, or at local schools.

Procedure

Children were told they would hear some stories about boys and girls and be asked to say whether or not they thought what they did was good or bad and would then be asked if they thought it was a little good, medium good, or really good (or a little bad, medium bad, or really bad). These responses were recoded into a Likert-type scale (Goodness Measure) ranging from 1 (really bad) to 6 (really good). After learning about the scale, participants were asked two questions to assure their understanding: they were asked to rate a boy who hit his little sister and a boy who helped his mother with the dishes. After that, children were read vignettes that corresponded to our two conditions. In the Give True Credit Condition, participants were told about a protagonist (a girl) who heard a storyteller (another girl) tell a story that she made up. Then the protagonist retold the story to a boy who said he liked the story. The protagonist then truthfully reported that the storyteller had made up the story, giving the storyteller credit for the story. Participants also saw the Take False Credit Condition which was very similar. Participants were told about a protagonist who retold a storyteller's story to a boy who said he liked the story. However, in this case, the protagonist falsely claimed that she (the protagonist) had

come up with the story, taking credit away from the storyteller for herself. After each of these vignettes, the participant was asked about whether the person's action was good or bad (as described above).

Participants saw an accompanying PowerPoint slideshow with pictures of the two girls and the boy from each vignette; see Appendix for full stories. In these two conditions, pictures of different girls and boys as well as different story types (story about a pirate or dragon) were used within participants. Between participants, the order of the condition, the pictures, and story type that were used in each condition were counterbalanced (there were no significant effects of the variables that were counterbalanced).

Results and discussion

We conducted a 2 (Condition: Give True, Take False) \times 2 (age group: 6- to 7-year-olds, 8- to 9-year-olds) mixed model ANOVA on children's evaluations. There was a significant main effect of condition, $F(1, 48) = 135.04$, $p < .001$, $\eta^2 = .738$; children rated those in the Take False Credit Condition as being less good ($M = 2.00$, $SD = 1.46$) than children in the Give True Credit Condition ($M = 5.36$, $SD = 1.01$), see Table 1.

There was also a main effect of age group, $F(1, 48) = 6.13$, $p = .017$, $\eta^2 = .113$; 6- to 7-year-old children gave higher overall ratings than 8- to 9-year-old children. There was no significant condition \times age group interaction, $F(1, 48) = 1.22$, $p = .275$, $\eta^2 = .025$. Thus, we did not find the predicted age difference; older children and younger children showed the same pattern.

These data support the suggestion that children's objection to plagiarism is rooted in disliking when an agent falsely improves her own reputation by taking credit away from another agent. However, children may respond negatively to the false taking of credit not because it is taking credit away from someone else, but simply because it is a form of lying. Even preschoolers recognize that lies are morally wrong (Bussey, 1992), which could explain the difference between conditions in Experiment 1.

Experiment 2

To examine whether children object to plagiarism simply because it involves lying, in Experiment 2 we presented children with two situations that involved lying, but only one involved someone trying to falsely improve their own reputation while taking credit from someone else. To do this we introduced a condition in which the protagonist came up with a story that was well received, but then gave credit to someone else – falsely giving credit away. We compared this new condition to the case from Experiment 1 in which the protagonist took credit for a story someone else made up. If children object to false credit on the basis of lying alone, then they should negatively evaluate both conditions equally as both involve clear lies. However, if children negatively respond to someone trying to falsely improve their reputation while taking credit from someone else, then they should think it is more positive to falsely give someone credit for one's own idea rather than taking credit for someone else's idea.

Methods

Participants

Participants included 50 6- to 9-year-olds: 25 6- to 7-year-olds ($M = 6$ years, 11 months, $SD = 6$ months; 12 females) and 25 8- to 9-year-olds ($M = 8$ years, 8 months, $SD = 5$ months; 12 females).

Procedure

The procedure was almost identical to that used in Experiment 1, with the same evaluation measure and counterbalancing (there were no significant effects of the variables that were counterbalanced). Children saw the Take False Credit Condition from Experiment 1 in which the protagonist takes credit for the story another child created. Participants also saw the Give False Credit Condition, in which the protagonist makes up a story and tells the story to a little girl. The protagonist then

Table 1 Children's evaluations of people in Experiments 1–3, broken down by age group and condition. Stars next to group means indicate the extent to which the results are different from the midpoint of 3.5, * = $p < .05$, ** $p < .01$, *** = $p < .001$

Exp.	Age group	Condition 1	Mean 1	Condition 2	Mean 2	T, p
Exp. 1	6- to 7-year-olds	Give True Credit	5.4***	Take False Credit	2.4**	5.98, $p < .001$
	8- to 9-year-olds		5.3***		1.6***	
Exp. 2	6- to 7-year-olds	Give False Credit	4.4*	Take False Credit	2.2***	5.5, $p < .001$
	8- to 9-year-olds		4.2*		2.3***	
Exp. 3	6- to 7-year-olds	Give False Credit	3.4	Give False Blame	2.2***	3.46, $p = .002$
	8- to 9-year-olds		3.2		1.8***	

tells the same story to a boy and receives positive feedback about the story. The protagonist then falsely reports that the other girl made up the story, giving her positive credit for a story she did not make up. See Appendix for full stories. Both cases involve lying, but in only one case is the protagonist taking credit away from someone else.

Results and discussion

We conducted a 2 (Condition: Give False, Take False) \times 2 (age group: 6- to 7-year-olds, 8- to 9-year-olds) mixed model ANOVA on children's evaluations. There was a significant main effect of condition, $F(1, 48) = 53.97$, $p < .001$, $\eta^2 = .529$; children rated those in the Take False Credit Condition as being less good ($M = 2.24$, $SD = 1.29$) than children in the Give False Credit Condition ($M = 4.26$, $SD = 1.65$), see Table 1. There was no main effect of age group, $F(1, 48) = .004$, $p = .95$, $\eta^2 = 0$, nor a condition \times age group interaction, $F(1, 48) = .43$, $p = .515$, $\eta^2 = .01$.

These results suggest that children think that falsely taking credit for someone else's idea is worse than falsely giving credit to someone else for one's own idea, suggesting that it must be more than lying that children object to, as lying was held constant across conditions. Indeed, if children think it is wrong to take credit for someone else's idea, it makes sense that they would not think it is wrong for someone to give away credit for their own idea (when someone gives their own thing away, it is not really 'taking' or 'stealing'). The data so far are consistent with the reputation view which suggests that children think it is not so bad to give others true credit for their ideas and false credit for one's own good ideas, but think it is bad to take credit for someone else's good idea.

Experiment 3

Importantly, our reputational account predicts that children should not always think it is better to give credit to others. For example, giving false credit to someone else for one's own *bad* idea should be evaluated negatively, since this involves protecting one's own reputation at the expense of someone else's. In Experiment 3 we introduced a condition in which a person falsely gives credit to someone else for a story that was not well received. We compared this condition to the condition from Experiment 2 in which a person falsely credits someone else for their own story that is well received. If the reputation account is correct, giving someone false credit for a good idea should be seen as

better than giving someone false blame for one that is bad.

Methods

Participants

Participants included 50 children: 25 6- to 7-year-olds ($M = 7$ years, 0 months, $SD = 6.5$ months; 10 females) and 25 8- to 9-year-olds ($M = 8$ years, 11 months, $SD = 6.5$ months; 10 females).

Procedure

The procedure was almost identical to that used in Experiment 2, with the same counterbalancing (there were no significant effects of any variables that were counterbalanced). Children heard two stories, both involving a protagonist who made up a story that she first told to a girl, then told to a boy and in both cases she (falsely) attributed the story to the girl. The critical difference between conditions was that in the Give False Credit Condition (replication from Experiment 2), the boy indicated that he liked the story and in the Give False Blame Condition, the boy indicated that he did not like the story (see Appendix for full stories).

Results and discussion

We conducted a 2 (Condition: Give False Credit, Give False Blame) \times 2 (age group: 6- to 7-year-olds, 8- to 9-year-olds) mixed model ANOVA on children's evaluations. There was no main effect of age group, $F(1, 48) = .51$, $p = .479$, $\eta^2 = .011$, nor a condition \times age group interaction, $F(1, 48) = .26$, $p = .612$, $\eta^2 = .004$. There was a significant main effect of condition, $F(1, 48) = 32.03$, $p < .001$, $\eta^2 = .40$; children rated those in the Give False Blame Condition as being less good ($M = 1.98$, $SD = 1.15$) than children in the Give False Credit Condition ($M = 3.30$, $SD = 1.67$), see Table 1. These results suggest that children do not broadly think it is good to give someone else credit for one's own ideas. Instead, they think it is not bad to give someone credit for one's own good idea, but they think it is bad to give other people credit for one's own bad idea.

Experiment 4

So far we have claimed that these results suggest a connection between reputation and children's objection to plagiarism, but we have suggested two possible (and somewhat related) explanations for this effect: that

children respond negatively to people taking credit away from others and that children respond negatively to people lying in a way that falsely bolsters their own reputation. The latter explanation would suggest that children do not care that the credit is being stolen from someone else, but dislike that the 'stealer' is giving the credit to herself, while the former does not. We investigated this possibility in Experiment 4 by including a condition in which the protagonist lied and took credit for someone else's idea, but this time gave that credit to a third party. In this case, the protagonist would not be improving her reputation by taking credit for the other person's idea, but would still be damaging the originator's reputation by taking away credit that she rightfully deserved.

Methods

Participants

Participants included 54 children: 25 6- to-7-year-olds ($M = 6$ years, 11.5 months, $SD = 7.5$ months; 14 females) and 29 8- to 9-year-olds ($M = 8$ years, 9 months, $SD = 5.5$ months; 18 females). Six additional children were excluded for refusing to answer one of the questions (four) or for failing the comprehension question (two). The results remain the same whether or not these children are included.

Procedure

Participants were read three conditions that were counterbalanced for order: the Give False Credit, Take False Credit, and Take False Credit Other conditions. The first two conditions were a direct replication of the Give False Credit (person gives credit to someone else for her own idea) and Take False Credit conditions (person takes credit for herself for someone else's idea) from Experiment 2. We added the Take False Credit Other condition in which the protagonist retold another girl's story to a boy who said he liked the story; however, in this case, the protagonist falsely claimed that another boy (not the originator of the story) had come up with the story – taking credit away from the originator of the story and giving it to someone else.

Each child heard three vignettes, one in which the story was about a dragon, a pirate, and a unicorn, but the story type that corresponded to each condition was counterbalanced between participants and the order of presentation was fully counterbalanced (there were no significant effects of the variables that were counterbalanced).

Results and discussion

We conducted a 3 (Condition: Take False Credit, Take False Credit Other, Give False Credit) \times 2 (age group: 6- to 7-year-olds, 8- to 9-year-olds) mixed model ANOVA on children's evaluations. There was a significant main effect of condition, $F(2, 104) = 9.52$, $p < .001$, $\eta p^2 = .155$. We followed these up with planned contrasts and found that children rated those in the Give False Credit condition as being less bad ($M = 3.13$, $SD = 1.52$) than children in the Take False Credit condition ($M = 2.13$, $SD = 1.29$; $t(53) = 3.75$, $p < .001$, $\eta p^2 = .209$) and Take False Credit Other condition ($M = 2.28$, $SD = 1.44$; $t(53) = 3.37$, $p = .001$, $\eta p^2 = .177$), but no difference between the Take False Credit condition and the Take False Credit Other condition, $p = .474$, $\eta p^2 = .01$. There was also no main effect of age group, $F(1, 52) = .266$, $p = .608$, $\eta p^2 = .005$, nor a condition \times age group interaction, $F(2, 52) = 1.225$, $p = .612$, $\eta p^2 = .023$. See Figure 1.

These results suggest that children negatively evaluate those who damage others' reputations by falsely taking credit away from others for themselves or for someone else. However, children thought it was not bad to give someone else credit for one's own story. These results suggest that children think it is OK to misattribute credit to damage your own but not others' reputations.

General discussion

These studies suggest that by age 6, children's negative evaluations of plagiarizers may be rooted in understanding the way plagiarism impacts others' reputation. Experiment 1 demonstrated that children consider it bad to take credit away from someone by falsely taking credit for their idea. Experiment 2 demonstrated that children do not simply think it is bad to lie, because some lying (e.g. giving credit) was seen as OK (although all

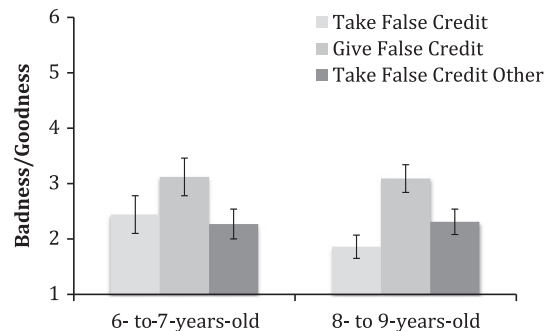


Figure 1 Children's evaluations of people in Experiment 4, broken down by age group and condition.

lying was seen as less good than telling the truth). Experiment 3 further demonstrated that giving credit isn't always ok though – it's not OK to give credit for a bad idea. Finally, Experiment 4 demonstrated that children think it is bad to take someone else's idea, even if you don't take the credit yourself and instead give credit to someone else. These results support the view that children think it is bad to steal ideas by virtue of the negative influence such theft has on the originator of the ideas, unless it is 'taken' from the self by the self.

One deflationary explanation for our results is that we have merely demonstrated that children know the difference between a white lie and a malicious lie, which has been demonstrated previously (Fu, Xu, Cameron, Heyman & Lee, 2007; Lee, 2013; Talwar, Murphy & Lee, 2007). In some sense, giving someone else credit for one's own good idea could be seen as a type of white lie that has the effect of helping someone else. However, the situations in the current studies are different from standard white lies in two ways. First, lying to give someone else credit for one's own idea does not have the effect of preventing harm (e.g. hurt feelings) as is the case in many situations in which children think it is acceptable to tell a white lie (Bussey, 1999; Talwar *et al.*, 2007). Second, there is no tangible benefit (e.g. helping one's team win a prize; Fu, Evans, Wang & Lee, 2008) to lying by giving someone else credit for one's own good idea beyond improving someone else's reputation. Therefore, even if the children in our experiments considered giving someone else false credit for one's own good idea to be a type of white lie, this would necessarily be because they recognized the benefit of telling this lie to the reputation of the person credited.

There is still a lot of work that needs to be done to substantiate the connection between children's objection to plagiarism and reputation. Future work might investigate whether children also recognize the downstream reputational effects of idea acknowledgement (i.e. that people with good ideas might be seen as 'cool'). If children's appreciation of the reputational benefits of good ideas is correlated with their negative evaluations of plagiarism, this would provide additional evidence in favor of the idea that children negatively evaluate plagiarizers because of the reputational harms they inflict. The next step would be to move beyond simple correlation to causation, developing a manipulation that emphasizes the importance of ideas to building a reputation in children who do not yet understand this concept (e.g. 4-year-olds; Olson & Shaw, 2011) and seeing if this manipulation makes them suddenly understand that plagiarism is wrong. This latter demonstration would provide the clearest link between reputational concerns and intellectual property.

Although we did not find evidence in Experiment 4 for an influence of falsely improving one's own reputation on children's evaluations of plagiarism (children thought it was equally bad to falsely take credit for oneself as it was to do so for someone else), we still think that this variable is important to concepts of intellectual property. Most likely, people respond negatively to plagiarism both because it involves falsely improving one's reputation and also damaging someone else's reputation, even if such evidence did not emerge in Experiment 4. Future research should explore how the former concern influences people's judgments about idea theft.

In sum, the current work is the first to demonstrate that at least part of the reason children dislike plagiarism is because they understand that ideas provide their originators with reputational benefits. While previous work showed that children dislike copycats (Olson & Shaw, 2011), these experiments more specifically demonstrate *what* children dislike so much about copycats – they steal valuable credit from the person who generated the original idea.

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Appendix

Give True Credit condition

This girl (R= experimenter pointed to girl on right) came up with a story about a dragon. She told the story to this girl (L = experimenter pointed to girl on left). Then she (R) went home (represented visually by a minimized picture of R). Which girl came up with the story about a dragon (participants then indicated by pointing, in the rare case ($n = 4$) where they got this wrong, they were corrected)? Then (bring up a picture of a boy), this girl (L) tells the story about a dragon to this boy (point to picture of the boy on the right). This boy really liked the story and said it was good. This girl (L) told the boy that this girl (R) came up with the story. When she (L) said that this girl (R) came up with the story, was what she (L) did good or bad?

The Take False Credit condition (Experiments 1, 2, and 4)

This was the same as the Give True Credit condition until the last two sentences in which the experimenter instead said: 'This girl (L) told the boy that she (L) came up with the story. When she (L) said that she (L) came up with the story, was what she (L) did good or bad?'

Give False Credit condition (Experiments 2, 3, and 4)

'This girl (L= experimenter pointed to girl on left) came up with a story about a dragon. She told the story to this girl (R = experimenter pointed to girl on right). Then she (R) went home (represented visually by a minimized picture of R). Which girl came up with the story about a dragon? Then (bring up a picture of a boy), this girl (L) tells the story about a dragon to this boy (point to picture of the boy on the right). This boy really liked the story and said it was good. This girl (L) told the boy that this girl (R) came up with the story. When she (L) said that this girl (R) came up with the story, was what she (L) did good or bad?'

Give False Blame condition (Experiment 3)

This was the same as the Give False Credit condition except that the line 'This boy really liked the story and

said it was good' was replaced by 'This boy didn't like the story and said it was stupid.'

Give True Credit Other condition (Experiment 4)

This girl (R= experimenter pointed to girl on right) came up with a story about a dragon. She told the story to this girl (L = experimenter pointed to girl on left). Then she (R) went home (represented visually by a minimized

picture of R). Which girl came up with the story about a dragon (participants then indicated by pointing, in the rare case ($n = 4$) where they got this wrong, they were corrected)? Then (bring up a picture of a boy), this girl (L) tells the story about a dragon to this boy (point to picture of the boy on the right). This boy really liked the story and said it was good. This girl (L) told the boy that another boy came up with the story. When she (L) said that another boy came up with the story, was what she (L) did good or bad?