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Why do I always have the best ideas? The role of idea quality in unconscious plagiarism

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Groups of individuals often work together to generate solutions to a problem. Subsequently, one member of the group can plagiarise another either by recalling that person's idea as their own (recall-own plagiarism), or by generating a novel solution that duplicates a previous idea (generate-new plagiarism). The current study examines the extent to which these forms of plagiarism are influenced by the quality of the ideas. Groups of participants initially generated ideas, prior to an elaboration phase in which idea quality was manipulated in two ways: participants received feedback on the quality of the ideas as rated by independent judges, and they generated improvements to a subset of the ideas. Unconscious plagiarism was measured in recall-own and generate-new tasks. For recall, idea improvement led to increased plagiarism, while for the generate-new task, the independent ratings influenced plagiarism. These data indicate that different source-judgement processes underlie the two forms of plagiarism, neither of which can be reduced simply to memory strength.

“X is the kind of guy who, when there is a good idea being discussed, thinks it must be his.”

(Anon.)

The comment above is a remark made to one of the authors about a colleague. It is memorable primarily because of the witty nature of the character assassination; however, the choice of words also illustrates two potential reasons for the alleged offence of plagiarism that emerge from the literature. We will call the first reason an *evaluative account*: research has shown that when people attempt to generate novel ideas, they plagiarise previous ideas from a highly credible source more often than from a less-credible one (Bink, Marsh, Hicks, & Howard, 1999). The second explanation is an *improvement account*. Research has shown that thinking of improve-

ments to other's ideas leads to idea appropriation (Stark & Perfect, 2006, 2007, 2008; Stark, Perfect, & Newstead, 2005). Thus, leaving aside the possibility that X is guilty of wilful appropriation of others' ideas, he could be susceptible to such errors because the ideas come from particularly credible sources, or because he ruminates on others' ideas and improves them.

Anecdotal reports of unconscious plagiarism have been in the literature for a considerable time (e.g., see Taylor, 1965, for an early review), but experimental research on the topic began in 1989, with the publication of Brown and Murphy's seminal paper. Almost all research on unconscious plagiarism since then has followed their basic three-stage procedure. The first phase is generation, in which participants, working in groups, each take turns to generate solutions to a problem (*generation phase*). In the original research the problem was semantic category

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generation, but since then a wide range of problems has been investigated (see Perfect & Stark, 2008, for a review). Following a delay participants individually attempt to recall their own ideas, generated during the initial stage, taking care not to recall the ideas of others (*recall-own task*). Finally, participants generate new answers to the previously presented problems, under instruction to avoid repetition of previously generated answers (*generate-new task*). The basic finding reported by Brown and Murphy (1989) was that around 4–11% of participants' responses in both retrieval phases were plagiarised. That is, when participants attempted to generate new ideas they came up with old ones, including their own, and when they attempted to recall their own ideas, they recalled ideas originally suggested by others.

Subsequent work has demonstrated that plagiarism in the generate-new and recall-own tasks have a different basis. In the generate-new task, participants need to make a judgement that resembles an old/new decision because they must refrain from presenting an old idea as new. Consequently, it has been argued that activation strength may determine the output as any increase in memory strength would lead to greater discrimination between old and new ideas, hence reducing plagiarism (Marsh & Bower, 1993; Landau & Marsh, 1997). However, in the recall-own task participants know that an idea is old: the problem is to decide who originally generated it. The source-monitoring framework suggests that individuals assign source on the basis of the experiential details that are associated with their memories. These details differ in quality and quantity, and may be contingent upon the initial encoding processes (Johnson, Hashtroudi, & Lindsay, 1993). Factors that reduce the efficiency of source-monitoring such as source similarity (Landau & Marsh, 1997) or distraction (Macrae, Bodenhausen, & Calvini, 1999) increase plagiarism in the recall-own phase but not the generate-new phase.

In a series of recent studies we have shown a dissociation between plagiarism in recall-own tasks and generate-new tasks by means of an intervention during the retention interval (Stark & Perfect, 2006, 2008; Stark et al., 2005). Moreover, we have shown that it is possible to get people to plagiarise other's ideas at rates of up to 50% of the idea output. In our studies, groups of four participants initially take turns generating novel uses for an item, until a total of 16 ideas are

generated. These ideas are then subjected to one of two forms of elaboration, imagery or improvement, or act as control items. One quarter of the items that each participant generated (four ideas) is subject to each kind of elaboration. One week later participants return to recall their own ideas, with the admonition not to plagiarise the ideas generated originally by others. In one study (Stark & Perfect, 2008, Experiment 1) participants recalled an average of 5.85 improved ideas, despite having only improved 4 of their own ideas. An average of 2.81 of these responses were actually plagiarised from other group members.

We have found this effect of idea improvement on recall-own plagiarism in all our studies (Stark & Perfect, 2006, 2008; Stark et al., 2005). Asking participants to think of ways of improving previously generated ideas during the retention interval leads to these ideas being plagiarised more often than non-represented control ideas, and more often than ideas for which participants create and rate a visual image. This effect is not due to memory strength, because forming a visual image and idea improvement benefit correct recall equally relative to control ideas. Furthermore, forming a visual image and idea improvement do not result in different rates of plagiarism on a generate-new task. In the same studies we have found that idea elaboration consistently produces numerically less generate-new plagiarism than control, although this only reached statistical significance on one occasion.

This idea improvement effect is exaggerated by increasing delay and by repetition of the improvement phase (Stark & Perfect, 2008), and is maintained even when participants were offered financial rewards for not plagiarising (Stark et al., 2005). It is also observed when the final test used a source-monitoring format rather than a recall-own test (Stark & Perfect, 2007). In contrast, forming a visual image of an idea does not increase recall-own plagiarism relative to control (Stark et al., 2005), does not increase with repetition (Stark & Perfect, 2008), and does not increase plagiarism on a source-monitoring test (Stark & Perfect, 2007). Thus, there seems to be something particular about improving someone else's idea that makes it more likely you will later plagiarise it.

Previously we have argued for a source-monitoring account of this pattern, maintaining that processes employed in idea improvement may resemble those used in the original generation phase and consequently representations of improved ideas may be similar to those of internally

generated ideas and result in source confusion. That is, generating improvements requires participants to search memory and generate a novel output in both the original generation task and in the idea improvement task, and so these two sources become confused at test. In contrast, forming mental images of ideas during the retention interval produces memory traces rich in perceptual detail, which are readily distinguished from originally generated ideas at test and so less plagiarism ensues. Thus, to date, the higher rates of plagiarism following idea improvement have been attributed to the kinds of memory processes involved in idea improvement. In the present work we investigate a different possibility; namely that it is not the *process* of improvement that leads to plagiarism, but rather the *result*.

The starting point for the current study is the observation that improving an idea changes the nature of the idea itself, while imagery only changes the representational form of that idea. The instructions to imagine an idea require participants to change a verbal proposition (e.g., use a brick as a door-stop) into a visual form. In contrast, an improved idea differs from the original idea, potentially in many ways, depending on the nature of the improvement process. Here we investigate one consequence of idea improvement: improved ideas may be viewed as qualitatively better ideas. One possibility from this view is that, when struggling to recall ideas, participants may be more likely to recall the good, improved, ideas as their own, rather than the bad, unimproved ideas. Such a view would be consistent with the notion of a self-positivity bias in information processing (Sedikides & Strube, 1997).

The rationale for this line of investigation came in part from a series of studies by Bink et al. (1999). In their paradigm, participants initially heard ideas about how to reduce traffic accidents from one of two sources that varied in credibility. Participants were told that half the ideas had been generated by a panel of town planners (high credibility) and half by students (low credibility). In fact, the ideas were counterbalanced across conditions, and were matched for rated quality. Nevertheless, in a subsequent generate-new phase participants in Bink et al.'s first study were almost twice as likely to reproduce ideas initially associated with the high-credibility sources (15% plagiarised) than the low-credibility sources (8% plagiarised). Experiment 2 replicated this pattern, and also showed that ideas associated with each

source were equally well recalled. In their final study, participants were requested to think of one consequence for each of the ideas they heard (e.g., for the idea "increase the number of traffic lights", they might respond with "it will take longer to get from A to B"). In this instance, plagiarism rates did not differ between the high- (13%) and the low-credibility (11%) sources. Bink et al. (1999) concluded that high-credibility ideas spontaneously receive more elaboration during encoding, and it is this that leads to the source-monitoring failure during the generate-new task.

The source credibility and idea improvement effects arise from methodologies that differ in a number of key respects. The source credibility effect was demonstrated in a generate-new task, following passive exposure to the original ideas: participants were not involved in the original generation phase. In contrast, the idea improvement effect has been demonstrated following an initial idea generation phase involving all participants. Moreover, it has been repeatedly observed in the recall-own task, but not in the generate-new task. Thus, these two paradigms appear rather different. Nonetheless, the two effects do share an underlying similarity: the ideas plagiarised are in some sense *better*. In the source credibility paradigm ideas are plagiarised from the more credible sources, even though in reality the ideas did not vary in quality. In the idea improvement paradigm it is the ideas that are subsequently improved that are plagiarised, even though it is the original, unimproved versions of those ideas that are written down on the response sheet. Given that people's information processing is often self-serving (Sedikides & Strube, 1997), the possibility that these two manifestations of plagiarism might share a common cause seemed worthy of exploration. In order to test this idea, we designed a study in which idea quality was manipulated in two ways: by having participants engage in an idea improvement phase, and by giving them a rating of idea quality for each idea generated. As usual plagiarism was measured using both generate-new and recall-own tasks.

After an initial idea-generation phase based on our earlier studies (e.g., Stark et al., 2005), participants received information about the ideas that they and their partners had generated, which led them to believe that some ideas were better than others. Participants were told that their original ideas had been evaluated by a panel of independent judges and that the ratings of the

different ideas would be presented to them. However, in fact there were no independent evaluations of the ideas. Instead one of four grades was randomly allocated to each previously generated idea: *Excellent*, *Very Good*, *Good*, and *Satisfactory*. We adopted this procedure because we wanted to use a manipulation of idea quality that matched Bink et al.'s (1999) source credibility manipulation, but within a group problem-solving paradigm. Henceforth we refer to this manipulation as being one of *perceived quality* of the ideas.

Additionally, we manipulated the degree of elaboration that an idea would be subject to, in such a way as to give a reverse prediction from that expected on the basis of perceived quality. Participants were told that *Excellent* ideas were so good they needed no improvement. Thus, they acted as "high-quality" control items. Participants were told that *Very Good* ideas needed some improvement, and so they were asked to think of one way of improving such ideas. In contrast, *Good* ideas needed more improvement, and so three improvements were required. Finally, *Satisfactory* ideas were deemed insufficiently strong to merit further consideration, and so no improvements were requested. These ideas served as "low-quality" control items.

This design leads to a number of predictions with respect to plagiarism in the recall-own and generate-new tasks. If the idea improvement effect is really due to idea quality (either real or perceived), then increased plagiarism in the recall-own task should be expected following both manipulations of idea quality. More specifically, having participants believe that the ideas are better may cause participants to plagiarise in the absence of an improvement phase, and so plagiarism should be higher for the *Excellent* ideas than the *Satisfactory* ideas. Conversely if, as we have argued previously, it is the process of improvement itself and not the outcome that causes plagiarism in the recall-own task, then participants should continue to plagiarise improved ideas even if they are regarded as poor ideas. That is, they should plagiarise the *Good* ideas that they improve three times more than the *Very Good* ideas improved once, or the *Excellent* ideas, improved not at all. Furthermore, in this case recall-own plagiarism should not be influenced by perceived quality, in the absence of an improvement phase. Thus, *Excellent* ideas should not be plagiarised any more than *Satisfactory* ideas.

For the generate-new task, two predictions are possible. If plagiarism is driven by perceived quality, then one would expect a monotonic trend, such that increasing levels of plagiarism are found with greater perceived quality. Thus, more plagiarism should be seen for *Excellent* than *Very Good*, *Good*, or *Satisfactory* ideas. One complication is that idea improvement may also increase idea quality, and so confuse matters for the *Good* and *Very Good* ideas. Thus, a clearer test of this hypothesis is that *Excellent* ideas should be plagiarised more often than *Satisfactory* ideas, since neither receive any improvement. However if, as Bink et al. (1999) argue, perceived quality is really a means of influencing how much elaboration an idea receives, one might expect a different pattern, since participants are explicitly directed to improve the *Good* and *Very Good* ideas. Thus, while more plagiarism for *Excellent* than *Satisfactory* ideas is consistent with covert elaboration of the excellent ideas, this same process should predict more plagiarism for *Good* ideas than *Very Good* ideas, since they receive more improvement.

METHOD

Participants

Participants were undergraduates from the University of Plymouth who received £15 for their participation in this study. A total of 32 undergraduate students, in groups of 4, were randomly assigned to testing group. All participants completed the generation phase. However 1 participant failed to attend the second testing session and so only 31 participants completed the experiment. Additionally, one participant appeared to misunderstand the instructions for the generate-new task, and plagiarised 14 out of 16 possible responses. Because they were such an outlier on this task, but not on the recall-own task, their data were dropped from analysis of the generate-new phase, although excluding them altogether made no difference to the overall pattern of results.

Procedure

In the generation phase participants were tested in groups of four. They were informed that they would hear a list of object names and they would have to think of novel uses for those items. As an illustration they were given the example of a

newspaper, which could be made into a paper hat, or a fan. After the experimenter read out the first object name (either brick, shoe, paper-clip, or button), participants were instructed, one at a time, to share their ideas with the group. The order that participants were asked for their idea was randomised, such that participants could not anticipate when they were to speak. Participants were told to listen to the ideas from the group, to avoid duplicating previous ideas. Once all four participants had given their first idea, participants were asked for their second idea, again in randomised order. This was repeated until all four participants had generated four ideas for each of the four objects. Following the generation phase participants completed an unrelated computer-based word recognition task as a distractor. Meanwhile, the 64 ideas that each group of participants generated were split into four sets with one idea from each participant per object placed into each set. These sets were then randomly allocated one of the four headings: “*Excellent ideas – the best ideas*”, “*Very good ideas – ideas that need a bit of development*”, “*Good ideas – ideas that need improving*”, and “*Satisfactory ideas*”. When participants had completed the distractor task, they were informed that while they were completing the computer task the ideas that their group had previously generated were being evaluated by a panel of independent judges. They were then (incorrectly) informed that the ideas had been assessed for quality and categorised into four sets. The experimenter then left the laboratory to “collect the judges’ ratings”. The elaboration phase followed immediately. The experimenter verbally represented the ideas from each set as a block, labelled by set (*Excellent ideas*, *Very Good ideas*, *Good ideas*, *Satisfactory ideas*) with different instructions for each block.

For the *Excellent* ideas participants were asked to listen to the ideas but were not required to write anything down. For the *Very Good* ideas participants were asked to write down one way in which the idea could be improved. For the *Good* ideas participants were asked to provide three idea improvements, and so consequently this condition was identical to that used in our previous studies (Stark & Perfect, 2006, 2007, 2008; Stark et al., 2005). For the *Satisfactory* ideas participants again listened to the ideas, but were not required to write anything down. The order in which these tasks were conducted was counter-balanced across groups.

One week later participants returned to complete the recall-own and generate-new phases. In the recall-own phase, participants were given a sheet of paper with the four object names on it, with four blank spaces under each object. They were asked to recall their own ideas for each object that they had generated during the first session. Recall was not forced, in that participants could leave blank spaces if they could not remember all their ideas.

Immediately following the recall task participants were given a new sheet, with the same object names on, and asked to generate four new ideas for each object, with instructions not to use any of the ideas from the previous session, from any of the objects. For this task, participants were required to generate four ideas.

RESULTS

Recall-own task

In total, 370 ideas were produced at recall. Of these ideas, 294 ideas were correctly recalled, with each participant on average correctly recalling 9.71 ($SD = 2.13$) (60.7%) of their initial ideas. The recall data were subject to a one-way ANOVA to determine whether the ratings or number of improvements had impacted upon correct recall. However, there was no significant effect, $F(3, 90) = 2.35$, $MSE = 1.24$, $p < .08$, partial $\eta^2 = .07$. An average of 2.19 ($SD 1.19$) (54.8%) *Excellent* ideas (0 improvement), 2.39 ($SD 1.09$) (59.8%) *Very Good* (one improvement) ideas, 2.87 ($SD 0.99$) (71.8%) *Good* (three improvements) ideas, and 2.26 ($SD 1.12$) (56.5%) *Satisfactory* (no improvement) ideas were recalled.

Unconscious plagiarism in the recall-own task. Of the 370 ideas that were reported, 76 ideas (20.5%) were unconsciously plagiarised. The majority of participants (24 of 31; 77.4%) unconsciously plagiarised at least one idea that another group member had originally generated, while 19 (61.2%) plagiarised twice or more.

A within-participants ANOVA revealed that there was a significant main effect of elaboration status $F(3, 90) = 6.57$, $MSE = 0.60$, $p < .001$, partial $\eta^2 = 0.18$. This is illustrated in Figure 1, along with the data from the generate-new task, which is discussed next. In order to test our prediction that the number of plagiarism errors would increase with the degree of elaboration, we also

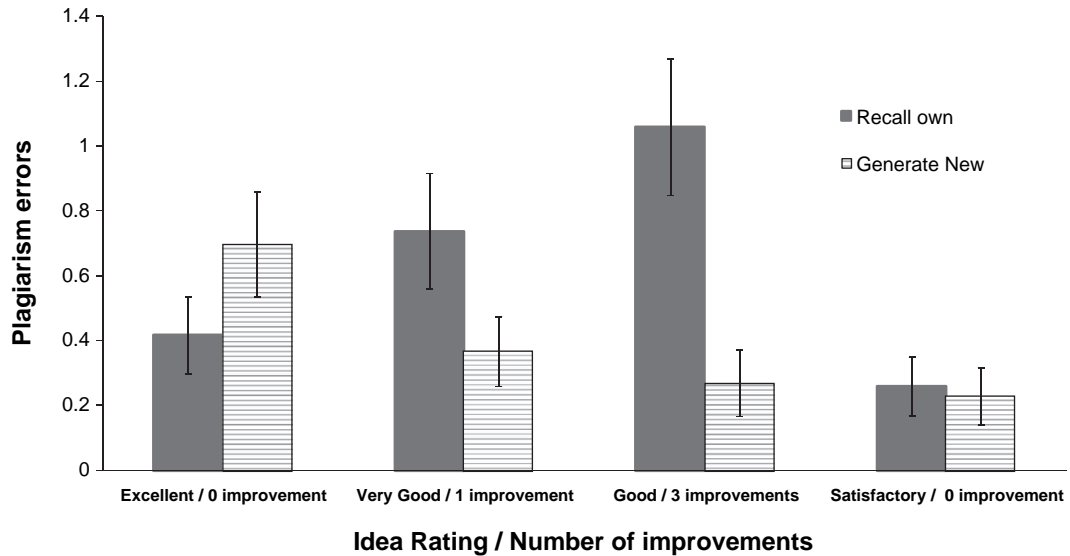


Figure 1. Mean rates of unconscious plagiarism in the recall-own and generate-new tasks for ideas classified as *Excellent* (0 improvement), *Very Good* (1 improvement), *Good* (3 improvements), or *Satisfactory* (0 improvement).

conducted a non-parametric trend test with Page's L.¹ In order to conduct this, we first averaged the rates of plagiarism across the two conditions with no elaboration (*Excellent* and *Satisfactory* ideas). The predicted order (No improvement, 1 improvement, 3 improvements) did demonstrate a reliable trend in the predicted direction, $\chi^2(1) = 4.82, p < .05$.

We also tested the prediction that the number of plagiarism errors would increase with the perceived quality of the ideas in the same manner. However, there was no evidence that increases in perceived quality (*Satisfactory*, *Good*, *Very Good*, *Excellent*) were associated with higher levels of plagiarism, $\chi^2(1) = 0.10, p < .75$.

Finally, we tested the specific prediction that idea quality would influence plagiarism in the absence of improvements, by comparing rates of plagiarism for *Excellent* and *Satisfactory* ideas. Contrary to the expectation from an idea-quality account, there was no evidence of a difference in the plagiarism rate for the two sets of ideas, $t(30) = 1.31, p < .20$.

Unconscious plagiarism in the generate-new task

In total, 484 ideas were generated and of these 416 (86.0%) were new ideas, 54 (11.21%) had

previously been generated by someone else, and 11 (2.3%) were participants' own ideas that they had inadvertently re-presented as new. The small remainder were duplicated ideas at test that were excluded from the analysis. During this phase 18 out of 30 participants (60.0%) plagiarised by reproducing an old idea that had been previously generated by another group member and 13 (43.3%) made two or more of these intrusions. The effects of elaboration on rates of these can be seen in Figure 1.

The pattern in the data is clear: *Excellent* ideas were plagiarised at the twice the rate of the other conditions, which showed little differentiation. A within-participants ANOVA conducted as before revealed an effect of elaboration status on plagiarism errors, $F(3, 87) = 3.47, MSE = 0.47, p < .02$, partial $\eta^2 = 0.13$. As with the recall-own data, we tested the nature of this effect against two predicted trends, one based on idea improvement and another based on perceived quality.

In contrast to the recall-own data, there was no evidence that increases in the number of improvements were associated with higher rates of plagiarism errors in the generate-new task, $\chi^2(1) = 2.20, p < .14$. However, also in contrast to the recall-own data, there was a reliable relationship between perceived quality and the rate of plagiarism in the generate-new task, $\chi^2(1) = 4.62, p < .05$.

Finally, as before we tested the specific prediction that idea quality would influence plagiarism in the absence of improvements, by

¹ We used a non-parametric test because we could not assume an interval scale across our independent ratings.

comparing rates of plagiarism for *Excellent* and *Satisfactory* ideas. In contrast to the recall-own data, there was reliable difference in the plagiarism rate for the two sets of ideas, with *Excellent* ideas plagiarised more often than *Satisfactory* ideas, $t(30) = 2.44, p < .02$.

DISCUSSION

The clearest pattern to emerge from the present study is that unconscious plagiarism in the recall-own and generate-new tasks is influenced by different factors. Our previous work (Stark & Perfect, 2006, 2008; Stark et al., 2005) has shown a dissociation between the two tasks, with idea improvement increasing recall-own plagiarism, but having no effect of generate-new plagiarism. The current study shows a double dissociation between the two tasks, with the idea improvement effect being replicated, but with a perceived quality effect evident in the generate-new task that is absent in the recall-own task. We believe that this pattern is particularly theoretically revealing.

Focusing on the recall-own task, the data both replicate previous demonstrations of the idea-improvement effect, and extend it by showing a linear relationship between the number of improvements and the amount of plagiarism. Our previous studies have always involved three improvements to each idea, and once again this produced the highest levels of plagiarism. If one takes an output-bound measure of plagiarism, then 27.2% of three-times improved ideas that were recalled as own were in fact plagiarised from a partner, compared to 13.2% for the ideas not subject to improvement. However, it is also clear that a single act of improvement can have an elevating effect on the rates of plagiarism (23.6% of output responses were plagiarised). In contrast, the perceived quality account did not fare well as an account of the plagiarism errors in the recall-own task. *Excellent* ideas were no more likely to be plagiarised than ideas merely rated as *Satisfactory*, and there was no monotonic trend linking quality to plagiarism. Thus, we do not believe that the previous demonstrations of idea improvement can be explained away as manipulations of perceived idea quality by another means. One potential explanation for the lack of a perceived idea quality effect would be that our manipulation of perceived quality was weak. Perhaps our

participants either did not believe, or paid no attention to, our putative judges' ratings of the ideas. Fortunately the data from the generate-new task convincingly refute this idea, because a clear effect of perceived quality is evident, as we discuss next.

In the generate-new task more *Excellent* ideas were plagiarised than *Satisfactory* ideas, in line with the pattern reported by Bink et al. (1999), and the monotonic trend relating perceived quality to plagiarism was significant. In contrast while perceived quality did impact upon the rates of plagiarism in the generate-new task, the number of elaborations did not. The rate of plagiarism was identical for ideas elaborated once, or three times, in line with our previous findings of no impact of idea improvement on rates of plagiarism on the generate-new task. Thus, taken together, the plagiarism data from the two tasks constitute a double dissociation: perceived quality influences the rate of plagiarism in a generate-new task, while having no impact on plagiarism in the recall-own task, and idea-improvement inflates plagiarism in the recall-own task but not the generate-new task.

One potential criticism of our data is that the order of the two tasks was not counterbalanced, and so performance on the generate-new task may have been influenced by performance on the recall-own task. In particular, it may be that recalling an idea during the recall-own task lowers the probability of generating it during the generate-new task. Thus, because recall is not equal across conditions, it is possible that more generate-new plagiarism might have been seen if that condition had been run first. More importantly, our effect of perceived quality on plagiarism rates in the generate-new task might not have occurred.

In adopting our methodological approach we followed the convention of a fixed test order used previously in the literature, based on the original work by Brown and Murphy (1989), so that we could compare our work with that which has gone before. Nonetheless, the concern is valid, and complicates interpretation of the generate-new task where levels of recall differ. Fortunately, however, comparison of plagiarism rates for *Excellent* and *Satisfactory* ideas provides a test for the hypothesis that test order causes the perceived quality effect, because recall is matched almost exactly in these two conditions. In fact, there is numerically less recall of *Excellent* ideas

($M = 2.19$ ideas) than *Satisfactory* ideas ($M = 2.26$ ideas), but significantly more generate-new plagiarism of the former than the latter. Thus, while we acknowledge the concerns about test order effects, we do not think that they can explain the perceived quality effect evidence in the generate-new data.

It is interesting to speculate why the independent evaluations of the ideas influence the likelihood of unconscious plagiarism in the generate-new task. Bink et al. (1999) argued that their effect of source credibility was due to the spontaneous generation of the implications of more credible ideas. However, this account is not entirely convincing. If it were the case that some ideas received more elaboration than others, then one might reasonably expect that those ideas would be better recalled. But, neither source credibility in their study, nor perceived quality in this study, impacted on recall. Furthermore, we explicitly requested participants to provide varying degrees of elaborations to the ideas. Relative to *Excellent* ideas, for which no improvements were requested, *Very Good* ideas required one improvement, and *Good* ideas required three improvements. If the perceived quality effect is due to spontaneous generation of implications, one would expect to see more unconscious plagiarism in line with the number of elaborations requested, but this was not the case in the generate-new task.

The standard account of unconscious plagiarism in the generate-new task is that previously experienced ideas have raised activation in memory, but that this raised activation either fails to reach the threshold necessary to reject the item as old, or it is misattributed as a feeling of having spontaneously generated a new idea (Marsh & Landau, 1995). Why then should ideas previously rated as excellent be generated more often than those rated less positively? Simple memory strength does not seem to suffice as an explanation, since some of the less positively rated items were elaborated, and so stronger in memory. Nor do simple self-positivity bias notions suffice. If people were somehow motivated to associate themselves with good ideas, and away from poor ideas, in order to maintain their self-image, one might anticipate that the perceived quality effect would be seen in the recall-own errors, but it was not.

However, clearly the rated quality of the ideas does play a role in the generate-new task. One mechanism by which this could occur could be a

valence-related editing process during the final generation phase. Participants are given the task of generating novel uses for an object. Presumably their solution to this problem involves the generation of many competitor solutions, some of which are accepted and output, others of which are rejected and never see the light of day. Ideas that are recalled as old, or that seem poor solutions, will be rejected. Consequently, ideas that were elaborated in the retention interval, or ideas that have negative connotations such as previously being associated with a low rating, will not be output. Conversely, ideas that have positive valence, but are not recalled from the previous session, will be output. The *Excellent* ideas fit the bill exactly: they were not previously elaborated, and so they will not be well recalled, but they were associated with a positive rating, unlike the merely *Satisfactory* ideas.

This valence-based account might also explain the data from Bink et al. (1999). Their basic finding that participants plagiarised ideas associated with more credible sources is consistent with this view. But why should thinking of implications of those ideas remove the effect, as they found in their Experiment 3? One possibility is that the valence of the implications counteracts the valence of the original ideas. Thinking through the ideas might cause participants to evaluate them more equally: after all the ideas were all from the same pool originally.

While this final account is speculative, it does not detract from the basic message of this paper: unconscious plagiarism in recall-own tasks and generate-new tasks is caused by different factors, neither of which relate straightforwardly to a measure of memory strength. Although this view has previously been accepted for recall-own plagiarism (Marsh & Landau, 1995; Stark et al., 2005), the perceived quality effect on the generate-new data suggests that a simple memory strength account cannot fully account for generate-new plagiarism either. The data are also challenging for a simple source-monitoring account, since they require that source judgements for ideas are influenced by the valence associated with an item (i.e., being associated with excellent or satisfactory ratings), rather than merely the quantitative or qualitative aspects of the memory trace itself.

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