CHAPTER SEVENTEEN

A *NEW* OLD WAY TO FOSTER CREATIVITY: *NUDGE* HOW WE CONCEPTUALISE AND RECOGNISE IT

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Abstract

Creativity is recognised through subjective social judgements which are determined by our implicit theories and evaluation criteria. Nudges can be applied to shape, suppress, and activate our various implicit theories and evaluation criteria. We can be primed to seek out creativity, countering our (e.g., teachers, managers, decision-makers) natural bias against novelty. Well-placed reminders can invoke our professed desire for creativity, closing any intention-action gap. While it is a relatively new concept, nudges are at the core of many existing creativity interventions. We argue that a conscious effort to design and test nudge-type creativity interventions will lead to the development of potentially more effective interventions.

Keywords: Nudges, evaluation, persuasion, classroom, workplace

Introduction

Creativity has always been socially desirable (Cropley et al., 2008; James & Taylor, 2010; Proctor, 1991). Now, it is becoming essential. Creativity rose from the tenth spot in 2015 to become the third most important skill in the 2020 edition of The World Economic Forum's (WEF) Future of Jobs Survey (WEF, 2016; 2020). "Complex Problem Solving" and "Critical Thinking", ranked first and second respectively in 2020, are closely related to creativity (McKay & Kaufman, 2019). In this era of digital transformation, with creativity becoming an essential professional competency, it is more important than ever that we understand what creativity is and how it is fostered in organisational and educational settings. This chapter outlines how *nudges* can help foster creativity, especially by changing how creativity is conceptualised and recognised.

Creativity as a Social Judgement

"But what... is it good for?" - this is what an engineer at IBM was purported to have said in 1968 about the microchip. Thankfully, most others judged the microchip to be useful. Apart from a humanistic psychological approach which views creativity as the self-actualising, self-expressing, "flow" type of process where the primary purpose of creativity is the engagement of the cre-

ative activity itself (Hegarty, 2009), the term "creative" is largely a result of social judgement (Lu et al., 2019; Zhou et al., 2019).

Indeed, two influential models of creativity, Amabile's (Amabile, 1988; Amabile & Pratt, 2016) Componential Model of Creativity and Innovation and Csikszentmihalyi's (1997; 2014) System Model both rest on this conceptualisation of creativity. Amabile's (1982) consensual assessment technique specifies how creativity can be judged socially. The system model regards creativity as a "social construction" determined by three factors: the field or domain, the creators, and the gatekeepers who judge whether to accept the novelty.

Implicit theories and evaluation criteria. How is creativity judged? Our subjective social judgements are guided by our implicit theories (Horn & Salvendy, 2006; Sternberg, 1985) and evaluation criteria (Elsbach & Kramer, 2003; Runco & Bahleda, 1986) for creativity. We recognise creativity to the extent that it fits our implicit theories and evaluation criteria.

Efforts to elicit and compare the implicit theories of creativity held by different populations abound (e.g., Abdulla Alabbasi et al. 2020; Portillo, 1996; Sternberg et al., 1981; Redifer et al., 2019; Tan, 2000). Early work on implicit theories of creativity comes from Sternberg (1985) who defines implicit theories as constructions that exist in the minds of individuals. Abdulla Alabbasi et al. (2020) describe it as perceptions and opinions about concepts that are unexpressed and personal.

Research has uncovered clear evidence that implicit theories determine evaluations of creativity. Luksyte et al. (2018), for example, found: 1) gender stereotypes associating innovative work behaviours with men, and that 2) displays of innovative work behaviours were associated with more favourable performance evaluations for men but not for women. Zhou et al. (2019) highlighted two other examples, one of entrepreneurial pitches with non-native English accents being less likely to receive investments, and another of greater likelihood of selection if job seekers are judged to be more like the employer.

A direct test of the link between implicit theories and creativity judgements comes from Sternberg (1985) who had university professors from the fields of art, philosophy, physics, and business, as well as adult laypersons, provide behaviours they thought were characteristics of creative persons in their field or in general. In a later study, a selection of the most cited creative behaviours from the earlier study were included in letters of recommendation shown to another group of adult laypersons to test the extent to which these behaviours were truly representative of a creative person. To vary the level of creativity for a given hypothetical person in a letter of recommendation, some letters contained more references to these creative behaviours while others cited fewer such behaviours. Adult layperson ratings of the creativity of hypothetical individuals corresponded significantly to the number of creative behaviours referenced in the letters. Sternberg's findings not only identified behaviours characteristic of creative persons but also provides support for our argument that the implicit theories that people have will determine whether an evaluation target is regarded as creative or not.

Similarly, Birney et al. (2016) found that the evaluation criteria of novelty, usefulness, and style accounted for 58% and 63% of variance in the

creativity ratings of greeting cards made by the rater and others, respectively. Birney et al. (2016) also found that the three evaluation criteria were differentially important in determining summary ratings of creativity. That is, the weights assigned to different evaluation criteria can differ too (see also Cropley & Kaufman, 2019). These broad findings were also supported by Cropley, Cropley, and Sandwith (2017) who presented empirical evidence that effectiveness and novelty are, in effect, *pre-requisites* for the judgment of product creativity above and beyond any other criteria.

The idea that people attach different weights to different judging criteria suggests the possibility of criteria that are so crucial in a given situation that evaluation targets need to meet a minimum level (threshold) for it even to be considered for creativity. Elsbach and Kramer's (2003) research indicates that people seem to have threshold criteria for "uncreativity" where displays of "uncreativity" beyond a certain threshold signal to the evaluator that the product or person is uncreative. Other likely threshold criteria are novelty and usefulness – both definitional features of creative products (Parkhurst, 1999; Plucker et al., 2004). Indeed, as we shall see, we often reject a product because it is too novel and/or it is not immediately useful enough.

Implicit theories and evaluation criteria are malleable. Our implicit theories and evaluation criteria for creativity can change. Evaluators of creativity have been found to use different evaluation criteria as a function of their profession (White et al., 2002) and cultural values (Puccio & Chimento, 2001; Zeng et al., 2009). One way of understanding how creativity is perceived differently across contexts is through changes in implicit theories and evaluation criteria.

Expertise and domain training changes implicit theories and evaluation criteria. White et al. (2002) found (perhaps worryingly for the advertising industry) that advertising professionals and laypeople use different criteria to evaluate advertisements. Seah (2012) found that undergraduates from different disciplines used different evaluation criteria when rating creativity. Domain experts and laypeople use different criteria to identify creative persons (Runco & Bahleda, 1986; Sternberg, 1985).

Culture provides another evidence for the malleability of implicit theories and evaluation criteria. Lubart (1999) finds that while all cultures view creativity as a positive construct, Western perspectives of creativity are focused on the ability to produce novel and appropriate works (see Cropley, 2019, 2020) while Eastern conceptions are less anchored on creative products but more related to "a state of personal fulfilment, a connection to a primordial realm, or the expression of an inner essence of ultimate reality" (p. 340). The view that "Western" and "Eastern" conceptions of creativity differ is one that is shared and found by Niu and Sternberg (2001; 2006). Both Shao et al. (2019) and Xie and Paik (2019) found that usefulness seems more important than novelty in the East, whereas novelty seems equally important as usefulness, if not more so, in the West.

Besides culture, expertise, and domain training, psychological distance (Kim et al., 2008), societal change (Seah, 2021), and evaluator's perspective (Birney et al., 2016; Charles & Runco, 2001; Runco & Chand, 1994) are further evidence that our implicit theories and evaluation criteria are malleable. Shaping one's implicit theories and evaluation criteria for creativity can ulti-

mately shape what is recognised as creative. We now explore nudges and how they can foster creativity by changing our implicit theories and evaluation criteria.

Introducing Nudges

Nudges are methods for deliberately changing people's behaviour in a predictable way by "modifying the cues in the physical and/or social context" (Marchiori et al., 2017, p. 3) without forbidding any options or significantly changing their economic incentives" (Thaler & Sunstein, 2008, p. 6)". Central to nudges is the awareness and exploitation of known thoughts processes, cognitive biases, and heuristics (Hansen & Jespersen, 2013; Mathur et al., 2019; Mirsch et al., 2017) such as status quo bias, loss aversion, availability heuristics, cognitive dissonance, anchoring and adjustment, mental accounting, and the endowment effect.

Research into nudges, heralded in the 2008 eponymous book (Thaler & Sunstein, 2008), only started flourishing in 2016 (Leong & Howlett, 2020). An example of a real-world nudge is Thaler and Benartzi's (2004) Save More Tomorrow behavioural intervention which exploits mental processes, such as hyperbolic discounting and loss aversion, to nudge people to save more for retirement. It is claimed that Save More Tomorrow has led to more than 15 million Americans saving more for their retirement (Benartzi, 2022). Other examples of nudge applications include increasing recycling rates (Rosenthal & Linder, 2021), setting goals for greater workplace flow (Weintraub et al., 2021), and reducing factory floor litter (Wu & Paluck, 2021).

Nudges have also been applied to foster creativity. Agogue and Parguel (2020) found that labelling subjects as "creative" or "not creative" (a social label nudge) led to increases in divergent thinking task performance compared to a no-label control group. For participants who were labelled "creative", heightened self-perceived creativity and creative self-efficacy accounted for enhanced performance over participants not given any labels. For participants who were labelled "not creative", they spent more time on the divergent thinking task, and this resulted in higher scores over the control group. While Agogue and Parguel (2020) found no significant difference in the divergent thinking scores between those given the positive ("creative") and negative ("not creative") labels, Seah and Cropley's (2022) study of social label nudges for creativity found that for those who agreed with the given social label, those in the "you are creative" condition outperformed those in the "you are not creative" social label condition. There is direct evidence that nudges can foster creativity.

Sunstein (2014), the co-author of the 2008 Nudge book (Thaler & Sunstein, 2008), listed what he terms "ten important nudges". One such nudge is warnings. A classic example is the health warning that is displayed on cigarette packaging. For creativity, warnings can be used to create a sense of urgency for innovation – the "burning platform" effect (West, 2002). Considering how creativity is becoming essential in an Industry 4.0 world (Cropley & Cropley, 2021), the burning platform warning may be extended to individuals, not just organisations. That is, a warning nudge for creativity might inform individuals of the need to be creative, or risk being unemployed.

Not a panacea. While warnings are commonly used to nudge behaviours, people often ignore (Caraban et al., 2019) or discount (Sunstein, 2014) them over time. Indeed, nudges are not a fool proof panacea - they are not always effective (e.g., Handel, 2013; Hall & Madsen, 2022). As we will argue, nudges have the potential to augment and improve efforts to foster creativity. However, they cannot singularly transform an organisation or an individual's creativity.

We devote the rest of the chapter to discussing how Sunstein's (2014) other nine nudges (social reference, increase ease and convenience, precommitment strategies, simplification, default rules, disclosure, feedback, reminders, and implementation intentions) can foster creativity when they are applied to either the *generative* (output/product creation) or *receiving* (output/product evaluation) side of creativity (Mueller et al., 2012; Zhou et al., 2019).

Social Reference

"Most people think it is important to vote". "The majority of guests reuse their towels". "You have consumed more electricity than the area average this month". These social reference nudge messages seek to change behaviour by emphasising what most people do (descriptive norms) or think should be done (injunctive norms). By emphasising what is done and/or should be done, social reference nudges can change our implicit theories of creativity (e.g., teaching creatively is what teachers in this school do). Social reference nudges include social comparison, reciprocity, social norms, and social labels.

Generative side of creativity. Social labels can directly change creators' implicit theories of creativity. Agogue and Parguel's (2020) and Seah and Cropley's (2022) studies, discussed earlier, both uncovered changes in self-perception and self-efficacy for creativity as a result of being labelled "creative" or "not creative". Social comparisons (Chambers & Windschitl, 2004) can be used to motivate creators to be creative. For example, teachers wanting to nudge student creativity can share examples of similar students who have demonstrated success with creativity ("model"). Such comparisons are more likely to inspire action when the psychological distance between the model and the target (in this case, the student) is small (Kim et al., 2008) – that is, the model is judged by the student to be like themselves.

Existing creativity interventions at the workplace often focus on the organisational climate (e.g., Isaksen, 2009). A creative workplace climate is one marked by positive interpersonal exchange, intellectual stimulation, and challenge (Hunter et al., 2019). To cultivate a creative workplace climate, managers are urged to provide encouragement of creativity (Amabile et al., 1996), vision (Griffiths-Hemans & Grover, 2006), leadership (Sternberg et al., 2003), and organisational support (Zhou & George, 2001) – these signals to those within the organisation that there is a social norm for creativity. The nudge principles of modifying cues in the social context to influence behaviour, and not forbidding any options, are at the core of these workplace creativity interventions.

Receiving side of creativity. Organisational members who perceived that there is a social norm for creativity may change their beliefs and implicit theories about creativity at work. Employees may judge creative behaviours

to be lower risk (Simmons & Ren, 2009) and evaluators, at the receiving side of creativity, may also be accepting of novelty. Social norms for creativity facilitate creativity perception (Zhou et al., 2019) – it makes it easier for organisational members to recognise a target or output as creative. The underlying mechanism may be changes in the evaluation criteria used. For example, an evaluator who believes that their organisation is supportive of creativity may have a lower threshold for the usefulness of new products/ideas. Social reference nudges can change the Person (creators and evaluators) and Press "Ps" (e.g., organisational climate) of creativity (Rhodes, 1961).

Increases in Ease and Convenience

Nudges are often deployed to help people achieve goals and behaviours (e.g., quit smoking, recycle more) that they intrinsically desire. Indeed, nudges such as Thaler and Benartzi's (2004) Save More Tomorrow actively seek to help people make financial decisions that are aligned with their personal goals and needs (Benartzi., 2022). Similarly, Kroese et al.'s (2016) experiment doubled the sales of healthy food in a train station shop simply by replacing unhealthy snacks at the cash register with healthier ones. When people are already motivated, the target behaviours can be encouraged by removing perceived hurdles and increasing the ease and convenience of performing the behaviour (e.g., making healthy food options easily available at the cash register).

Generative side of creativity. Creativity interventions that seek to foster a creative organisational climate also remove some of the perceived hurdles to being creative. One hurdle is the actual and perceived effort and resources needed to be creative (de Jong & Den Hartog, 2007; Shalley & Gilson, 2004; Zhang & Bartol, 2010). One way to nudge for creativity is therefore to allocate time and resources for people to be creative. For example, a division in Hallmark Cards, Inc. set aside 30 percent of their resources and time to creativity-related activities (Mauzy & Harriman, 2016). In schools, teachers can be allocated resources (e.g., art and craft materials) to enable creative lessons. Making time and resources available for creativity can lead to changes in implicit theories of creativity – being creative would be perceived as less difficult and effortful.

Many creativity methods, activities, strategies, techniques, and tools exist (see Reisman, 2014; Ross, 2006). At its crux, most of them are designed to make being creative easier and more convenient. For example, brainwriting makes the group ideation process easier by providing simple steps for group brainstorming that avoids premature evaluation (Reisman, 2014). Likewise, becoming more creative is easier and more convenient when using the Reisman Diagnostic Creativity Assessment (RDCA) (Reisman et al., 2016) to 1) identify areas of weakness, and 2) plan targeted creativity enhancing activities or strategies (e.g., "pictures, words, sounds, software can be used for inspiration", p. 15). Another example of a creativity tool that makes the creative process easier is De Bono's (1999) six thinking hats which helps creators to think divergently about a problem (e.g., red hat: focus on feelings; yellow hat: focus on positives of ideas or problem).

Receiving side of creativity. The six thinking hats can also be used by receivers of creativity. A teacher can use the thinking hats to evaluate a student's essay in six different ways. When used this way, creativity tools can directly shape the evaluation criteria being used. While most creativity tools and research are focused on the generative aspects of creativity (Mueller et al., 2012), there are several tools designed to make the process of evaluating creativity easier.

The Creative Solution Diagnosis Scale (CSDS) (Cropley & Cropley, 2008; Cropley & Kaufman, 2012) was developed to provide a way for non-expert judges to rate creativity reliably and accurately. It does so by having judges evaluate the target using 24 indicators (e.g., transferability - the solution offers ideas for solving apparently unrelated problems) corresponding to the five factors of: (a) relevance and effectiveness, (b) problematisation, (c) propulsion, (d) elegance, and (e) genesis. Non-expert judges using the CSDS is nudged into using these 24 evaluation criteria, which makes it easier to evaluate creativity reliably and accurately.

Another evaluation tool is the Creative Product Semantic Scale (CPSS) (Besemer & O'Quin, 1993; O'Quin & Besemer, 1989) designed to help untrained judges derive "informed judgements of creativity in products" (Besemer & O'Quin, 1999, p. 288). Judges rate the target by answering semantic differential questions corresponding to 14 subscales (e.g., logicalness) subsumed under three broad dimensions: 1) Novelty, 2) Resolution, and 3) Elaboration and Synthesis. As with the CSDS, the use of CPSS can be construed as a nudge that makes receiving creativity easier; judges are given specific evaluation criteria to aid in their evaluation.

While some evaluation criteria, such as novelty and usefulness, are expected to be relevant for most, if not all, evaluation targets, other evaluation criteria are fleeting and changes depending on the evaluation target and context (Kijkuit & van den Ende, 2007; Lonergan et al., 2004; Simonton, 2003). Birney et al.'s (2016) implicit criteria evaluation technique, which gets judges to list their idiosyncratic evaluation criteria before rating a target, is a flexible creativity evaluation tool that allows for changes in evaluation criteria. Regardless of the evaluation instrument used, they all align with the nudge principles of changing cues in the social context (i.e., provide specific evaluation criteria) to influence behaviour.

Pre-commitment strategies, Simplification, and Default rules. Three other Sunstein (2014) nudges can be seen, within the context of fostering creativity, as aligned with the nudge of increasing ease and convenience. Pre-commitment strategies involve getting people to commit ahead of time to a certain course of action. Pre-commitment has been used to increase healthy eating (Schwartz et al., 2014), aid in smoking cessation (Anderson et al., 2021), and combat procrastination (Ariely & Wertenbroch, 2002). An example of pre-commitment in creativity is the finding that professional artists plan ahead to constantly modify their creation process so as to avoid typical artistic patterns and constraints (Wang et al., 2022). Pre-commitments for creativity (e.g., a teacher pre-committing to be more open to novel submissions from their student) can make creativity easier and more convenient by providing clear decision rules ahead of time.

Simplification nudges seek to reduce the perceived complexity associated with enacting certain behaviours. Simplification, such as simplifying how statistics is presented, can be seen as a type of boost – interventions designed to support people's decision-making capability (Grune-Yanoff & Hertwig, 2016). The use of creativity tools, presented earlier as a way to increase ease and convenience, can also simplify the process of generating and evaluating creativity.

The most commonly used, and most effective, nudge seems to be the use of defaults (Hummel & Maedche, 2019). The use of defaults explains why countries with an opt-out organ donation policy (i.e., by default, you are enrolled to donate your organ) have significantly higher organ donation rates than countries with an opt-in policy (Shepherd et al., 2014). To foster creativity, the use of creativity interventions or tools can be made default in commonly occurring situations which require creativity (e.g., by default, use the CSDS when evaluating new employee suggestions). As with pre-commitment, the default use of creativity tools can remove the need to decide to be creative. An extension of this might include the mandating of creativity assessment in schools – a concept that is gaining momentum in countries that are now beginning to incorporate creativity as an explicit, albeit general, part of the curriculum (see Patston et al., 2021).

Disclosure

Providing or disclosing information can lead to changes in behaviour. Sunstein (2014) cites the example of how stating the full cost of certain credit cards lead to change in financial decision-making and behaviours. Newell and Siikamäki (2014) found that consumer purchasing decisions were influenced by water heater energy efficiency labels that disclosed information about the amount of money saved, amount of energy used, and how much carbon is emitted. For creativity, disclosure can affect how creativity is generated and received.

Generative side of creativity. Creators' implicit theories can be changed by disclosing to them relevant findings about creativity. For example, we know that there is a curvilinear relationship between novelty and evaluation (Lee et al., 2017; Zhou et al., 2019) – that is, creations that are too novel tend to be poorly received. Being conscious of this can nudge creators into balancing novelty and originality with effectiveness and appropriateness. Similarly, telling creators that a balance between divergence (generating multiple options) and convergence (zeroing in on suitable options) can lead to more effective creativity generation (Gebert et al., 2010; Hirst et al., 2009; Sheremata, 2000; West & Anderson, 1996) may change how they generate creativity.

Novelty decay (Cropley, Kaufman, & Cropley, 2008) describes how the creativity of a product is fleeting and finite. The novelty of a product begins to decay the moment it is introduced to the world. At some point, the product is no longer "new", and therefore, arguably, no longer creative. Creators made aware of this will be motivated to exploit their product while it is still "new". Findings on what creators can do to be successful can be instructive. Lu et al.'s (2019) findings that creators who engaged in idea enactment

(the illustration of abstract ideas using more concrete terms such as sketches or drawings) and upward influence tactics (e.g., appealing to the evaluator's values or reason) were more successful in getting their products implemented can change how prospective creators' perceptions and behaviours.

Diagnostic tools such as Cropley's (2015) Innovation Phase Assessment Instrument (IPAI) and Amabile et al.'s (1996) KEYS scales for assessing the climate for creativity can disclose to creators the environmental opportunities for, and barriers to, creativity and innovation. The IPAI assesses an organisation along 42 dimensions relevant to creativity (e.g., level of preparation and problem recognition in environment). Similarly, the KEYS scales assess whether the environment offers freedom, challenging work, and supervisory encouragement, among other factors. A diagnostic knowledge of the environment can help creators generate creativity that can are suitable in the given environment.

Receiving side of creativity. Many of the ways in which disclosure can affect the generative side of creativity can apply at the receiving side too. For example, understanding that novelty can decay may lead evaluators to approve or reject a product quickly. Diagnostic tools can reveal to evaluators the strengths and weaknesses of the organisation and therefore, whether a given product can be adequately supported. For example, a product that requires significant resources to promote, perhaps because of its extreme novelty, may not be adequately supported in an organisation that does not have sufficient resources, as indicated by results from the KEYS scales. The evaluation criteria that evaluators use can also be changed with disclosures about creativity fallacies such as the "creativity is art" bias, and the "creativity has to be Big C" fallacy (Patson et al., 2018).

Perhaps the most important thing to disclose to evaluators is our documented bias against novelty. While teachers openly value creativity in the classroom, educational research studies have found that teachers dislike personality traits associated with creativity. For instance, Westby and Dawson (1995) found that teachers' judgements and liking of students were negatively correlated with creativity (i.e., creative students were usually the least favourite) and this was largely because creative students were judged to be disruptive. This association between creativity and a lack of order and predictability is why creative employees have been viewed as having less leadership potential (Katz et al., 2022).

Our bias against novelty can be an outcome of our organisational roles. Lu et al. (2019) review evidence that managers have been found to apply existing frames and experiences in evaluating new ideas and are conditioned to evaluate using an economic perspective or criterion which disadvantages novel products. Our bias against novelty may also stem from the extra effort needed to evaluate something novel (Lu et al., 2019). Finally, we may be biased against novelty because of the uncertainty that it brings (Lee et al., 2017). Disclosing 1) our natural bias against novelty, and 2) the conditions under which we are likely to be biased can nudge evaluators to be more accepting of novelty. This may manifest in the lowering of the minimum level (threshold) for product usefulness.

Feedback. Disclosure can take the form of feedback, another one of Sunstein's (2014) important nudges. Informing people of the outcomes of

their previous actions or choices can help foster the generation of creativity. Cropley and Cropley (2000) gave students "creative counselling", centred on providing feedback, based on their results on a divergent thinking task. Counselled students go on to generate products that were more elegant and creative than those made by students who merely attended a generic (non-feedback-based) "how to be more creative" lecture. Similarly, Wang et al. (2022) gave novices feedback on their drawings and how they relied on common techniques, resulting in more creative post-feedback drawings. On the receiving side of creativity, feedback, in the form of evaluation accuracy can help evaluators calibrate their judgements.

Reminders and Implementation Intentions

A commonly used and often effective nudge is reminders (Hummel & Maedche, 2019). The reason people do not perform desired behaviours is often because they are procrastinating, have competing demands, or have forgotten (Sunstein, 2014). Reminders, such as a text message reminding you of your next day dental appointment, can be simple but effective nudges.

When used to foster creativity, reminders can be combined with implementation intentions, another of Sunstein's (2014) nudges, to close any intention-action gap. We have seen evidence that some teachers openly value creativity while simultaneously rejecting creative students (Bereczki & Karpati, 2018; Kettler et al., 2018; Westby & Dawson, 1995). Well-placed reminders (e.g., when assignments are due) can help teachers be more receptive to creativity. At the generative side, creativity can be fostered simply by reminding people to be creative. Divergent thinking task scores have been found to be malleable to the effects of explicit instructions (Runco & Okuda 1991). Chen et al. (2005) reviewed over 20 studies that used explicit instructions for creativity and found that all but two studies found a positive effect of instructions on creative performance. In their own study, Chen et al. (2005) found that explicit instructions to 'be creative' led to higher creativity scores on real-world creativity tasks from artistic (drawing and chair design) and mathematical ('nine-dot areas task' and 'cutting rectangles task') domains. Reminders and implementation intentions can increase the perceived salience of the need to be creativity which can then lead to actual gains in creativity.

Conclusion

Nudges, as a thriving topic of study, may be relatively new (Leong & Howlett, 2020). Yet, it should be clear from the discussion above that creativity researchers and practitioners have long applied its principles. That is, nudges are an old way to foster creativity. What can be new, this chapter argues, is creativity interventions that actively incorporate nudge principles. Some examples of these nudge-informed creativity interventions are summarised in Table 1. We hope our article will spur future research into the use of nudges as a complementary tool for fostering creativity – preliminary evidence suggests that such interventions can be more effective.

Table 1: Examples of Nudge-Informed Creativity Interventions

Nudge Principles	Existing Creativity Intervention	Nudge-Informed Creativity Intervention
Social Reference and Psychological Distance	Create a sense of urgency for innovation ("burning platform") (West, 2002)	Augment effort to create a sense of urgency by encouraging social comparisons with highly similar others (e.g., a similar sized company in the same industry; a fresh graduate who has complete the same degree).
Reminders and Disclosure	Resist premature closure (Reisman, 2014)	Provide timely reminders to resist premature closure; Disclose the negative effects of premature closure.
Defaults and Increase ease and convenience	Use ideation tools such as the excursion technique or free word association (Ross, 2006); Use evaluation tools such as the CSDS (Cropley & Cropley, 2008)	For routinely occurring and important problems (e.g., a monthly sales call), make the use of ideation tools default, as part of standard practice. Similarly, make the use of evaluation tools default to increase the reliability and accuracy of evaluations.

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