THE SIGNIFICANCE OF CREATIVITY
FOR TEACHING PHILOSOPHY

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Abstract

Although creativity is a central human ability that needs to be fostered in school, research in the didactics of philosophy has not so far developed any accounts of how to train creativity systematically. In this paper I will provide the foundations for a didactics of creativity for philosophy and ethics education. The approach is based on the insight that creativity is an important competence to be promoted in philosophy and ethics classrooms. I will define the concept of creativity and review key empirical findings from educational psychology and the psychology of learning, which will help me to work out a framework for fostering creativity in the philosophy classroom. Central to this framework is the idea that creativity can only be taught if the use of creative task types is preceded by a phase of acquiring domain-specific philosophical and ethical competences and knowledge. I will then argue that this objective can be implemented particularly well through the design thinking method. In this context, task types that promote divergent thinking are particularly effective. I will use three classroom examples to illustrate how creativity could be fostered in philosophy and ethics classes.

1. Introduction

Creativity is commonly understood as the ability to intentionally produce a novel and valuable product (Kaufman/Sternberg 2019; Gaut/Kieran 2018; Paul/Kaufman 2014; Gaut 2010; Boden 2007). Creativity is also a profoundly human ability (see Kozbelt 2019: 110). For this reason, various national and international organizations have proclaimed creativity to be an important educational goal. First and foremost, UNESCO took this into account in its formulation of the Sustainable Development Goals in 2015, when it highlighted innovation and creativity as a central goal of education (see UNESCO 2017). UNESCO particularly emphasizes creativity's essential role for a culturally diverse and happy life in a pluralistic world (UNESCO 2017: 17).

Although creativity is a central human ability that needs to be fostered in school, research in the didactics of philosophy hasn't so far developed any accounts of how to train

creativity systematically (cf. Thein 2020; Richter 2016; Pfister 2013; Rösch 2011).[1] In a similar vein, the curricula for philosophy and ethics—at least in Germany—have also largely neglected creativity as an educational goal (see e.g. *Bildungsplan BW Ethik und Philosophie 2016*; *Lehrplan Ethik Bayern*; *Lehrplan Praktische Philosophie NRW 2008*).[2] This paper addresses the question of how creativity could be taught and fostered systematically and purposefully in philosophy and ethics classrooms.

In what follows, I will first clarify the concept of creativity, which will be the basis for the thoughts developed in this essay (§2). In the third section, I will review the present state of research in the didactics of philosophy and consider the curricula of four federal states in Germany, to show that the promotion of creativity is currently not given enough space as a dedicated educational goal (§3). This underlines the urgency of the outlined project. In the fourth section, I will present a framework for teaching creativity in philosophy and ethics (§4). For this purpose, I will draw on insights from educational psychology and the psychology of learning. In the fifth section, I will introduce and apply the design thinking method as a way of fostering creative and divergent thinking, and sketch three classroom examples that show how creativity could be promoted in philosophy and ethics classrooms (§5). In the final section, I will locate the outlined approach among existing accounts in the didactics of philosophy and highlight future research questions (§6).

2. What Is Creativity?

"Creativity" is a dazzling and frequently used term that elicits various associations (Beaty/Kenett 2021: 15). To think fruitfully about creativity, it is important to start by characterizing the phenomenon more precisely. To this end, I would like to present a definition of creativity that could be considered standard in the literature, and which is consistent with the notion of creativity used in empirical research (for which see Kaufman/Sternberg 2019) and in analytic philosophy (for which see Gaut/Kieran 2018; Paul/Kaufman 2014; Gaut 2010).

Let me begin with an important background assumption. According to a commonly shared conception, the human mind comprises various mental faculties that fulfil different functions (Bermudez 2005: 211). The basic capacities are *perception*, which is involved in taking in information from the environment through the sense organs; *cognition*, the capacity to process and store information, but also to think, reason and make decisions; and motor *action*, understood as the capacity to produce purposeful bodily movements. Each of these functions is realized in the human brain (Bermudez 2005: 216). Cognition is assigned a central position, as

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[1] In this paper, I will focus on examples from the German-speaking didactics of philosophy and the syllabi of federal states in Germany. A more comprehensive analysis, in terms of a cross-school-type and cross-country comparison, cannot be provided here and must be carried out in a separate study in the future.

[2] This is not to say that there are not already methods in the didactics of philosophy that involve creative thinking. Here I am thinking of accounts such as Volker Haase's creative essay writing method (2017), and Christa Runtenberg's production-orientated account (2008; 2016: 48-53, 89-91). Although these authors discuss specific methods to foster creative thinking in specific areas (i.e., creative writing), they neither discuss the role of creativity in the didactics of philosophy on a general level, nor do they work out how to train creativity systematically in the philosophy classroom.

it mediates between perception of the environment and any subsequent actions directed at the environment (ibid.).[3]

According to a common understanding in psychology and cognitive science, creativity is a mental process in the domain of cognition (Ward/Kolomyts 2019: 175). To characterize this process more precisely, I will draw on the following three conditions commonly used in the creativity literature (cf. Gaut/Kieran 2018; Paul/Kaufman 2014; Gaut 2010; Boden 1994, 2004). Following this conception, creativity is (i) an intentional mental process, which produces a (ii) novel and (iii) valuable product. In the following, I will elaborate and explain each of these conditions in turn.
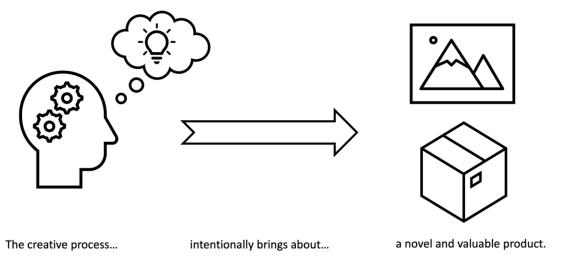

The creative process...   intentionally brings about...   a novel and valuable product.

Fig. 1. Creativity as a mental process

(i) Creativity as an intentional process: The "agency approach" to creativity was outlined by Berys Gaut (2018: 129-132; 2010). According to this approach, a product is an expression of a creative process if it was intentionally brought about by an agent, and in bringing about the product, the agent exercised some domain-specific knowledge-how to solve the relevant problem. Thus, two conditions must be met for a creative process to obtain. First, the agent must have formed an intention to produce a solution to an outlined problem.[4] This condition rules out the possibility of accidentally produced products counting as the output of a creative process. The second condition is that the agent must have a certain degree of domain-specific skill or knowledge-how, which is exercised in solving the problem. If it is a mathematical or scientific problem, then mathematical or scientific skills are required; if the problem is artistic, musical or sporting, then relevant skills are required. The decisive factor for

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[3] This image of the mind has been criticized from various directions (e.g. Hurley 1998, 2001). I use it here to illustrate the domain in which creativity is to be located. In doing so, however, I do not want to commit myself as to whether viewing cognition as the middle part of a "sandwich" between perception and action captures its role correctly (for discussion see Bermudez 2005: 211-214).

[4] It is important to note that the content of the intention can be quite general, since it is not yet clear what the solution to the problem will look like at the time the intention is formed. Yet it should become apparent that the genuinely creative process is thus distinguished from procedures in which it is a matter of producing new things by chance and then picking out valuable results afterwards. I am thinking here of certain methods used by the surrealists, such as automatic writing and associative methods.

deciding whether a product is brought about by a creative cognitive process is determining whether domain-specific skills or knowledge-how have been exercised.

The agency approach clearly differs from the traditional picture of creativity that Plato set out in his dialogue *Ion*. According to Plato's view, the creative product is produced in an act of divine inspiration: purely passive, and without the agent's intervention (Plato, *Ion*, 533d-536d). This characterization obviously poses numerous problems, as it prevents a psychological explanation of creativity, which is why this view seems to have little appeal today.[5]

(ii) Creativity as the creation of a novel product: In the creative process, a novel product is created. The product can be a material product, such as a painting or a sculpture by an artist, or a new construction by an engineer, or a new chemical compound; but it can also be an immaterial or ideal product, such as a novel explanatory model or theory. The important requirement is that the resulting product is novel; only then can one speak of a creative process. To better understand in what sense the product produced by a creative process must be novel, it is helpful to draw on Margaret Boden's distinction between historical creativity (h-creativity) and psychological creativity (p-creativity) (see Boden 1994: 77; 2004: 2).

H-creativity: A product is the expression of historical creativity if and only if the product of the creative process is novel from a historical perspective, i.e., a product of this kind has never been developed before. Examples of h-creativity include the invention of the combustion engine, the development of cubism, Einstein's theory of relativity, and Schoenberg's invention of atonal music.

P-creativity: A product is the expression of psychological creativity if and only if the product of the creative process is novel relative to the mental life of the agent. That is to say, the mental or material product must be novel relative to the person's cognitive system, such that the solution has never been thought of before. Thus, it does not matter whether, from a historical perspective, anyone else has already come up with this thought or product before.

Given these definitions, it is apparent that every instance of h-creativity also involves p-creativity, but not vice versa. Whether h-creativity is present can only be decided on the basis of an extrinsic criterion, and thus has nothing to do with the cognitive process itself. This pushes us to conclude that for the discussion of creativity in the educational context, and thus for the purpose at hand, the relevant kind of creativity is p-creativity. So, when I speak of the "novelty" of a creative product, I mean that the product is novel relative to the person's cognitive system. That is to say, the thought has not been thought, or the material product has not been conceived of and produced in this way before, by that person.

(iii) Creativity as the creation of a valuable product: The product that results from a creative process should be not merely novel but also valuable (see Gaut 2018, 2010). First, this condition is intended to exclude cases in which creativity is attributed to a person who has

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[5] For an interesting discussion of Plato's conception of creativity in light of the findings of contemporary psychology, see Blackburn (2014).

brought forth a novel but meaningless product (Gaut 2010: 1030; cf. Kant AA, Bd. V: 308). It is important to note that the term "valuable" should not be understood here in the moral sense. According to the definition presented here, it is quite possible for malicious persons to be creative and thus to produce products that cause harm to people. Here one might think of terrorists who act in a particularly original, and yet harmful and destructive way (cf. Cropley/Kaufman/Cropley 2008; Beaney 2005: 190-191).[6]

Given this characterization, however, there is still the question of how to understand the term "valuable" as applied in the definition of creativity. The idea is that for any product there is a specific norm or standard. If this standard is met, then the product is valuable. Take a boat, for example. A boat's value lies in it having the capacity to travel across water and carry as much weight as possible without sinking. Conversely, a boat is not valuable if it has no such capacity. In other words, the product that results from a creative process should be valuable relative to the standards or norms that exist for that kind of product. Ultimately, this condition ensures that the creation of the creative product is based on a deeper understanding of the domain to which the product belongs, and that it is not produced accidentally.

Creativity plays a role in quite diverse domains. The kind of creativity that is used in mathematics, science and engineering seems rather different from the kind of creativity that plays a role in the arts or in sports. An interesting question, from a psychological perspective, is to what extent there is a general faculty of creativity, or whether creativity in the aforementioned domains actually consists of distinct mental processes. Simonton (2014), for instance, has argued that creativity in the sciences and the arts is based on different mental processes. While creative products in art, and to some extent in linguistic domains, are based on blind variation, Simonton sees natural science and mathematics as being primarily based on variation guided by insight and understanding. Following his insights, Simonton (2014: 253-256) proposes a hierarchy of creative processes, with mathematics and the natural sciences at one end, and the arts at the other. Philosophy (and presumably also ethics, as a subdiscipline of philosophy) occupies an intermediate position between the arts and science in this model (Simonton 2014: 258).

The characterization of creativity as an intentional mental process that produces a novel and valuable (material or mental) product seems to be enough for the purpose at hand. Equipped with these conceptual tools and distinctions, I now turn to the didactics of philosophy.

3. An Inventory: Creativity in the Didactics of Philosophy

To what extent has creativity been considered in the didactics of philosophy? This is the question that I will take up in this section. First, I will review the German-speaking literature in the didactics of philosophy, and then, by way of example, I will consider the ethics and philosophy curricula of the largest German federal states.

Upon examining recent publications in the didactics of philosophy, it becomes apparent that creativity has not received a lot of attention so far. In her book *Kompetenzorientierung im Philosophie- und Ethikunterricht. Entwicklung eines Kompetenzmodells für die Fächergruppe Philosophie, Praktische Philosophie, Ethik, Werte und Normen* (2011), Anita Roesch discusses

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[6] For a more detailed discussion of this point, see Novitz (1999), Beany (2005), and Cropley et al. (2008).

central philosophical and ethical competences (i.e., orientation in action, perceiving and understanding, analysing and reflecting, arguing and judging), however, creativity is not among them. A similar picture emerges in Jonas Pfister's (2013) *Werkzeuge des Philosophierens*, which proves to be a helpful source for teaching philosophy. Pfister addresses numerous central aspects of philosophizing (e.g. arguing, analysing, philosophical logic, etc.) and related competences such as reading and writing philosophical texts. However, creativity or tools that could foster and promote creative thinking in philosophy and ethics classes are not mentioned. Similarly, Philipp Richter's edited volume *Professionell Ethik und Philosophie unterrichten* (2016) and Barbara Brüning's *Ethik/Philosophie Didaktik. Praxishandbuch für die Sekundarstufe I und II* (2016) cover central concepts and developments in the didactics of philosophy, yet neither of them discusses the role of creativity in the philosophy classroom. In the recent anthology *Philosophische Bildung und Didaktik – Vermittlungen, Dimensionen, Perspektiven*, edited by Christian Thein (2020), an explicit treatment of the significance of creativity for the didactics of philosophy is also missing.

The two-volume *Handbuch Philosophie und Ethik*, edited by Julian Nida-Rümelin, Irina Spiegel, and Markus Tiedemann (2017) is an exception. Although none of its chapters provides a general treatment of creativity in philosophy and ethics education, the topic of "creativity" is taken up in Volker Haase's (2017) chapter on creative writing. While Haase discusses the method of creative writing in philosophy, the concept of creativity is not explicitly discussed on a general level, nor does this article provide an analysis of the concept of creativity, as one might have expected. Another exception to this trend is Christina Runtenberg's production-oriented writing methods (2008; 2016: 48-53). Although Runtenberg presents techniques for fostering creative writing, she does not provide a general account of how creativity could be systematically taught in philosophy classrooms.

A similar picture emerges when looking at the curricula for the subject of philosophy and ethics at grammar schools in Germany.[7] As an initial step towards a more comprehensive review, I want to provide a brief evaluation of the philosophy and ethics curricula of the three most populous German states (Baden-Württemberg, Bavaria, and North Rhine-Westphalia), as well as the Free State of Saxony.[8]

In Baden-Württemberg, the focus in ethics education is particularly on competences underlying moral cognition (see *Bildungsplan BW 2016* for the subject of ethics). This concerns the perception of value conflicts, taking the perspective of the participants in such conflicts (e.g. through empathy), the analysis of moral conflicts and participants' interests in moral conflicts, argumentation and moral judgement, and finally moral decision-making and acting according to one's moral judgements. Creative thinking as a specific area of competence is not mentioned. The same can be said for the elective subject of philosophy (see *Bildungsplan BW 2016 Philosophie – Wahlfach in der Oberstufe*). The focus in philosophy is more on theoretical rather

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[7] In addition to analysing the curricula of the various federal states in Germany, a comparison with the curricula of the German-speaking neighbouring countries Switzerland and Austria promises further insights into how the promotion of creativity is taken into consideration in philosophy and ethics education.
[8] A more comprehensive analysis, in terms of a cross-school-type and cross-country comparison, cannot be provided here and must be carried out in a separate study in the future.

than moral competences (e.g. developing and presenting, describing and questioning, reconstructing and analysing, examining and judging). Creativity remains unmentioned.

Looking at Bavaria and North Rhine-Westphalia leaves us with a similar picture. For the curriculum of the Gymnasium of the Free State of Bavaria, creative thinking is at best of marginal interest. The curriculum for grade 5 requires students to experience games as providing freedom for creative thinking, without outlining what is understood by "creativity". For grade 8, the curriculum optionally suggests an examination of the topic of "creativity" as a way of finding meaning through "self-transcendence". In North Rhine-Westphalia, ethics is labelled "practical philosophy". But even here, the curriculum does not aim at systematically promoting creative thinking. Although "developing intellectual creativity" is identified as a competence in the core curriculum for secondary level 1 ethics, it remains underdeveloped and is not further explained (see *Kernlehrplan Sekundarstufe 1 in Nordrhein-Westfalen Praktische Philosophie* 2008: 15; *own translation*). In the core curriculum for secondary level 1 for Gymnasium and Gesamtschule, creativity is no longer mentioned at all (cf. *Kernlehrplan für die Sekundarstufe 2 Gymnasium/Gesamtschule in Nordrhein-Westfalen Praktische Philosophie* 2014).

A notable exception is the ethics curriculum for grammar schools of the Free State of Saxony from 2019 (see *Lehrplan Sachsen Gymnasium Ethik 2019*). Although the curriculum does not provide a systematic approach for promoting creativity in philosophy and ethics, creative thinking is called for in various ways and at different grade levels. First, the curriculum explicitly formulates the ability to "think of alternatives, to develop one's imagination and creativity, and at the same time to check solutions for feasibility" as one of the educational goals (*Lehrplan Sachsen Gymnasium Ethik 2019*: VIII; *own translation*). Likewise, the teaching style should be designed in such a way that the teacher "arouses curiosity in the student, encourages creativity and demands independence and personal responsibility" (*Lehrplan Sachsen Gymnasium Ethik 2019*: IX; *own translation*). As creativity-promoting methods, creative writing is then suggested, in addition to painting, playing theatre, and conducting thought experiments (cf. *Lehrplan Sachsen Gymnasium Ethik 2019*: 7, 11-12, 26). The methods that are suggested are rather unspecific and do not obviously require philosophical skills and understanding. This, it seems, is still a desideratum.

It becomes apparent that creativity has so far been insufficiently considered in the didactics of philosophy, with a few exceptions. To take a first step towards closing this gap, I would like to outline what a didactics of creativity in philosophy and ethics education might look like.

4. Empirical Foundations for a Didactics of Creativity

There exists a rich research literature on creativity in schools and educational settings (for a good overview, see Beghetto 2019; Beghetto/Kaufmann 2016; Beghetto/Kaufmann/Baer 2015; Stanko 2015). My goal is to draw on key empirical findings from educational psychology and the psychology of learning in order to outline the foundations of a didactics of creativity.

Four factors can be identified that have a decisive influence on the acquisition of creative skills. These are: (i) the specific design of the learning environment, (ii) the motivation of

students, (iii) the connection between creativity-enhancing tasks and phases of genuine skill or competence acquisition, and (iv) the development of task sets that reliably require creative mental processes to come up with solutions. I will discuss each of these factors in more detail below.

(i) Learning environment: Research in educational psychology suggests that an open classroom climate plays an important role in enabling creative processes (Beghetto 2019: 591-592; Davies et al. 2012). Openness comprises two dimensions: first, the learning environment should be structured in such a way that students are encouraged to solve problems in a self-determined way. This has been proven to have a positive effect on creative performance in various studies (see Davies et al. 2013: 85, 88, for a good overview). Second, there should be a climate of openness, in the sense that new ideas are valued, i.e., a general climate of openness towards new thoughts and ideas. Usually both teachers and students are accustomed to (hastily) evaluating and judging contributions that are put forward. Openness to and appreciation of new ideas thus requires teachers and students to adopt a new attitude and to refrain from (premature) evaluation. Conversely, various studies have shown that an overly evaluative stance towards students' ideas and thoughts prevents the development of creative processes (see Beghetto 2019: 592; Amabile 1996). The design of a suitable learning environment is an important enabling condition for fostering creativity and creative processes in schools.

(ii) Intrinsic motivation: It has been shown that intrinsic motivation is beneficial in various areas of learning (Hennessey 2019: 376-377). This has also been shown in the case of creativity (Kaufmann 2016: 119-122). Intrinsically motivated students usually produce more creative solutions than students who are only extrinsically motivated to solve the tasks. This is supported by several studies (De Jesus et al. 2013). For example, in a widely cited experiment, Amabile (1985) showed that college students who were intrinsically motivated to write poetry produced results that were judged by a panel of experts to be significantly more creative than the poems of a control group of students who were mainly extrinsically motivated to write poems. It does not seem to be decisive whether the subjects receive a reward for their creative achievements or not. What is crucial is the kind of motivation with which one approaches solving the tasks at hand (cf. Byron/Khazanchi 2012; Eisenberger/Shanock 2003). Consequently, settings in which students are only extrinsically motivated to complete tasks have been shown to be less conducive to creativity (see Hennessey 2019: 377 for an overview). To promote intrinsic motivation, the appropriate kinds of tasks are required. What such tasks look like will be explained in more detail in the following paragraphs.

(iii) Appropriate task formats for promoting creative thinking: Whether creativity is exercised when solving a problem essentially depends on the appropriate task formats. Creative tasks should address two dimensions (Benedekt/Jauk 2019: 212-213.). First, creative task formats should encourage learners to produce a high number of different solutions. This is particularly encouraged by task types that promote divergent and associative thinking (see §5). But this is not enough, because the task formats should also put an evaluative demand on the learners, so that the solutions produced have a considerable level of quality and are actually able to solve the problem they are intended to solve. Ideally, good task formats link both dimensions in a meaningful way (Benedekt/Jauk 2019: 213).

(iv) Connecting the acquisition of domain-specific knowledge and competences with creative task formats: A common misconception in the creativity literature is that the promotion of creativity is achieved solely by using creative methods. Moreover, it is sometimes even assumed that the targeted promotion of creativity stands in the way of teaching domain-specific knowledge and competences (see Egan 2014). But on closer examination neither claim is empirically warranted (Beghetto/Kaufmann/Baer 2015). Various studies show that creativity is particularly stimulated and sustained when the use of creativity-enhancing task formats is preceded by a phase of acquiring domain-specific competence and knowledge (see Baer 2015; Beghetto/Kaufmann/Baer 2015). This approach ensures that learners draw on previously acquired domain-specific knowledge and competences when working on creativity-enhancing tasks. Thus, the exercise of creativity is tied to the use of domain-specific knowledge and skills (e.g. mathematics, science, languages, philosophy, or ethics).

The diagram below summarizes the various factors that promote creative teaching and learning processes:

Learning Environment
- Learning environment should foster students' autonomy and encourage them to solve problems in a self-determined way in order to promote creativity (Davies et al. 2013).
- Learning environments should create a general climate of openness towards new thoughts and ideas, rather than social comparison & evaluation (Beghetto 2019; Amabile 1979)

Intrinsic Motivation
- Intrinsic motivation leads students to produce more creative products (Amabile 1985).
- Extrinsic motivation is not as conducive to creativity (see Amabile 1996, Baer 1997).
- Learning environments and task types should be design to enhance students' intrinsic motivation (see Hennessey 2010b).

Acquisition of Competences and Knowledge
- Creative thinking is particularly stimulated when creative tasks are preceded by phases of acquiring domain-specific competences and knowledge (Baer 2015; Beghetto, Kaufman & Baer 2015).
- Acquired domain-specific competences and knowledge are then targeted by the creative task types.

Task Types
- Task types should encourage students to produce a high number of different solutions (Benedekt & Jauk 2019).
- Task types that promote divergent and associative thinking are particularly suited.
- Task types should put an evaluative demand on students to come up with solutions of considerable quality (Benedekt & Jauk 2019: p.213).

Learning Environment — Instrinsic Motivation — Acquisition of Competences & Knowledge — Task Types
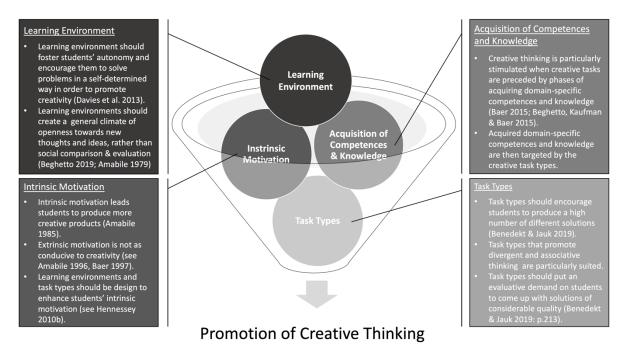
Promotion of Creative Thinking

Fig. 2. Empirical foundations for a didactics of creativity

What conclusions can be drawn from the presented findings for the promotion of creativity in the philosophy classroom? Two of the points mentioned above are an important prerequisite for a didactics of philosophy. An open and tolerant learning environment is of particular importance, especially when discussing moral problems, since personal beliefs and convictions are often addressed in class. Without a shared attitude of tolerance and openness towards different opinions among the students and teacher, a fruitful exchange of (philosophical) ideas and arguments cannot succeed. Problem orientation, the second important building block for a didactics of creativity, is also naturally a central requirement in the didactics of philosophy. Nowadays it has become the standard (at least in German-speaking countries) that philosophy and ethics classes start by introducing a philosophical or moral problem, in such

a way that students are cognitively activated and intrinsically motivated to engage with the question or problem (see Tiedemann 2017; Sistermann 2016). This approach has become known as "problem orientation" ("Problemorientierung"). Exemplary of this approach is Rolf Sistermann's so-called "bonbon model" ("Bonbonmodell") (Sistermann 2008, 2016), which has since become something of a standard for teaching philosophy and ethics in German high schools. Motivating students to engage with philosophical or moral problems is achieved by starting with a problem that creates a cognitive conflict (e.g. a contradiction between two beliefs or values held to be true, or a moral dilemma), which challenges students' presuppositions. This is followed by further steps (i.e., the development and elaboration of possible solutions, and the transfer and problematization of the developed solution). Although the so-called "bonbon model" is a problem-oriented approach, it ignores creativity altogether.

Conditions (iii) and (iv) are particularly important for a didactics of creativity. This is certainly the biggest field of development in the didactics of philosophy. To my knowledge, there are currently no such tasks or methods available—with the exceptions mentioned in section 3—that would systematically initiate and promote creative thinking. However, if we follow the insights from educational psychology and the psychology of learning, acquiring skills and competences is an important prerequisite for the targeted promotion of creativity. For this purpose, the systematic connection between acquiring domain-specific philosophical knowledge and skills and the use of creativity-promoting task types is of particular importance. In the following section I would like to suggest what such a linkage might look like in practice.

5. Creativity in the Philosophy Classroom

The promotion of creativity through appropriate tasks and exercises should always go hand in hand with the acquisition of content-related and process-related competences. This insight is the core idea of a didactics of creativity for teaching philosophy, as outlined in the previous section (see fig. 3).

CORE IDEA: **Combining the acquisition of domain-specific competences and knowledge with task types that require creative thinking.**

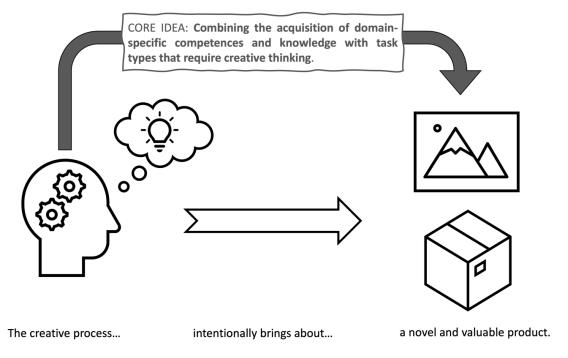The creative process...   intentionally brings about...   a novel and valuable product.

Fig. 3. Core idea of a didactics of creativity for philosophy classrooms

This raises the question of which kinds of tasks and exercises are most apt to systematically promote creative thinking. To answer this, I suggest that we draw on the distinction between divergent and convergent thinking. In this regard, Runco writes:

> DT [divergent thinking] is thinking that explores various directions of thought, whereas CT [convergent thinking] refers to processes that move towards a single option, or very few. CT is useful when conventional ideas or a particular and correct solution are required. This is typical in the schools and in certain problems faced in the natural environment. If a student is asked what year Neil Armstrong first walked on the moon, there is only one correct answer: 1969. CT is, in this case, useful and adequate. (Runco 2019: 225)

According to this definition, convergent thinking is thinking that analyses and synthesizes information, and which makes judgements and decisions based on evaluations. Thus, the core competences in theoretical philosophy (i.e., developing, presenting, describing, questioning, reconstructing, analysing, examining, and evaluating philosophical arguments and problems) and the core competences in practical philosophy/ethics (i.e., perceiving and understanding the emotions and interests of others, analysing and reflecting on moral problems, developing and evaluating philosophical arguments, and providing practical orientation in moral questions), as outlined in section 3, clearly fall within the realm of convergent thinking. In contrast, divergent thinking is required to generate new ideas, to associate freely, and to find new connections between seemingly unrelated ideas, things or objects. Tasks and exercises that aim to promote

creative thinking usually target divergent thinking.[9] Reviewing the research literature, one finds numerous methods for promoting divergent thinking (for a good overview, see Stanko 2014: chapter 6). The following methods seem particularly useful for the philosophy classroom:

- **Brainstorming** is certainly the most common and well-known exercise for promoting divergent thinking. Brainstorming can be used whenever a large number of new ideas on a topic are to be developed. Brainstorming mainly aims at quantity, rather than the quality of the ideas developed. This means that unsuitable or useless ideas are developed as well. To make brainstorming more goal-oriented, various modifications have been suggested. For example, there are forms of structured brainstorming, such as mind mapping, in which ideas can already be put into a certain structure during the divergent thinking process (see Stanko 2015: 149-153).

- **SCAMPER** is a technique designed to specifically promote divergent thinking. Each of the letters stands for a specific kind of task or exercise. "S" stands for "substitute", which means to replace a component with a new component without changing the function of the product. "C" stands for "combine", i.e., asking whether existing ideas can be combined to create something new. "A" stands for "adapt" or "adjust", which means looking for examples in a task that work similarly and seeing what can be adopted. "M" stands for "modify, magnify, minify", i.e., considering whether something can be easily changed to improve the product. "P" stands for "put to other uses", i.e., repurposing the developed product for a new context or application. "E" stands for "eliminate", i.e., the question of which parts or aspects of a product can be omitted without limiting or changing the existing function. Finally, "R" stands for "reverse, rearrange", i.e., considering whether a different sequence is also suitable for a product or process. At the final stage, one might also consider what would happen if the product were rebuilt, reversed, or otherwise inverted (see Stanko 2015: 153-158).

- **Attribute listing** is a strategy that involves "breaking down" an item or topic into its constituent parts. When it comes to designing a candy bar, the first consideration is what key attributes a candy bar possesses. On the basis of the previously established understanding, novel ideas are then developed by considering each component in turn. Regarding the design of a candy bar, the question could be to ask how one could rethink each property of the candy bar to attract new consumers (example from Stanko 2015: 158). The attribute listing method could also be used to address philosophical problems. On the basis of an analysis of the components of a philosophical or moral problem, solutions could then be systematically developed using the attribute listing method (see Stanko 2015: 158-160).

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[9] It is important to note that creativity is not tantamount to divergent thinking, although creativity typically requires divergent thinking as one aspect of the creative process. In his essay, Runco (2019: 224-225) points out that solving more complex, real-life problems often requires a combination of divergent and convergent thinking.

In addition to the methods mentioned, there are numerous other techniques that promote divergent thinking, which could be used to generate new ideas.[10] However, these methods have two weaknesses in common. First, they are usually used in isolation, in the sense that they are not systematically linked to the acquisition of domain-specific competences and knowledge. However, as shown by results from educational research, this is a crucial demand (see §4). Second, divergent thinking techniques do not usually require using philosophical or moral cognition. They rather approach creative thinking on a very general level. Thus, the methods so far fall short of two crucial requirements for fostering philosophical creativity.

One method that has gained significant attention in recent years is "design thinking" (see Feldhaus/Primavera/Kleibl 2018; Lee 2018). This refers to a multi-stage iterative design process consisting of six steps (see fig. 4).[11] The first three steps of the process aim at developing an understanding of the problem space. First, the problem space is explored to understand the shape of the problem, then one tries to take the perspective of (i.e., empathize with) the different parties who are affected by the problem, in order to discover their needs and interests. Finally, one defines the problem from a more global perspective. In the subsequent three steps, the solution space is developed. This starts by brainstorming possible solutions to the problem. On this basis, the most promising ideas are further developed into prototypes—either material or imaginary prototypes. Finally, the prototypes are put to the test to see whether the developed idea or prototype also works in practice.
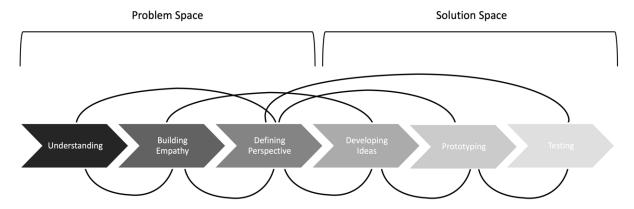

Fig. 4. The six stages of the design thinking process (adapted from Feldhaus/Primavera/Kleibl 2018)

Step four is of particular importance for the promotion of creativity (Feldhaus/Primavera/Kleibl 2018: 138-153). This step concerns developing new solutions to the outlined problems by explicitly drawing on creative thinking. For this purpose, various creativity techniques and methods have been suggested. These all address rapid divergent

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[10] Due to space restrictions, a more comprehensive presentation of creativity techniques cannot be provided here. For a good overview, see Stanko (2015: ch. 6).

[11] There is no consensus in the literature on whether the design thinking process should contain five or six steps. If the design thinking process proceeds in five steps (see Lee 2018), then step 1 already includes understanding the problem space in more detail. Other models differentiate between two stages of understanding the problem space (see Feldhaus/Primavera/Kleibl 2018). I consider this differentiation useful for the philosophy classroom, particularly with respect to the problem orientation. Accordingly, I prefer the design thinking model that evolves in six steps.

thinking and aim to generate as many ideas as possible.[12] In contrast to traditional creativity techniques, the use of creativity techniques in the design thinking process is problem-oriented and directed towards a specific goal. Moreover, in developing novel solutions to the problem, the participants are required to draw on their acquired competences and skills and their knowledge within the relevant domain. The design thinking method thus fulfils the essential criteria that are crucial for initiating creative thinking and learning processes (see §4).[13]

My suggestion is that design thinking can be used to promote creative thinking in philosophy and ethics classes. This requires a philosophical or moral problem to be chosen as the starting point for the design thinking process. Explicitly focusing on a philosophical or moral problem ensures that students use philosophical problem-solving skills. Let us now look at the following classroom examples (CE1, CE2 and CE3) to get a better understanding of possible applications of the design thinking method in philosophy and ethics classes:

CE1: What could a fulfilling coexistence of old and young look like?
In a unit in grade 9/10 on the topic of "Aging, Dying, Death", students have to deal with the problem of the social participation of elderly people and the changing quality of life in old age. One key value conflict consists in the demand for elderly people's autonomy and social participation on the one hand, and their increasing dependence on other people on the other hand. This ethical conflict is discussed with students by using models of the cohabitation of old and young as the key example. The moral problem is first approached on a phenomenological level by taking the perspectives of the affected people and analysing their interests, values and understanding of the good life. On the basis of this understanding, suggestions are then developed as to what a fulfilling and ethically justifiable cohabitation of old and young could look like. Although the unit may initially appear to be merely of a practical nature, it is not, because in order to come up with solutions and develop ideas for the cohabitation of young and elderly people, the ethical dimension of the problem must first be intellectually grasped. Creative thinking is required in the development of possible cohabitation models or prototypes. However, the goal is not merely to come up with as many ideas as possible; the ideas should also be original and meet the ethical requirements for a happy and fulfilling life. In this way the subsequent steps are linked back to the initial moral problem. The prototyped solutions are then put to the test and discussed against the background of the ethical requirements for a life that is appropriate for both young and elderly people.

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[12] For a good overview of the methods in question, see Feldhaus/Primavera/Kleibl (2018: 148-149).

[13] At first glance, the design thinking method bears some similarity to the so-called "Bonbonmodell" developed by Sistermann (2008). This is mainly due to two features that these methods share: they are both orientated towards a specific problem, and they both develop solutions to the problem by gradually going through different stages of problem-solving. However, this similarity is only superficial. Sistermann's "Bonbonmodell" is exclusively focused on convergent thinking (e.g. analysing, evaluating, judging). Thus, it completely ignores divergent thinking and hence creativity, which is essential for design thinking. I thank Dominik Balg for challenging me on this point.

CE2: What do ethically justifiable forms of surveillance look like?

In a unit in grade 11/12 on the "Ethics of Privacy", the question "Is it ethical to use surveillance techniques to prevent crime?" is addressed. The unit first informs students about different methods of preventive surveillance (ranging from classic camera surveillance to various wiretapping and spying methods, to AI-supported data analysis) and analyses the value conflicts that are created by deploying these surveillance techniques. While the (supposed) benefit for crime prevention speaks in favour of using various surveillance methods, the violation of privacy and diminished self-determination regarding the use of personal data speak against them. Based on this value analysis, the students then develop prototypes to enable ethically justifiable surveillance. In doing so, students go through the six stages of the design thinking process. They analyse the interests and values of the people involved in or affected by surveillance, and then brainstorm ethically permissible forms of surveillance. This is where creativity methods come into play. In the subsequent step, the most promising ideas are developed further and put to the test. In testing the prototypes, one applies the previously worked out ethical requirements on justifiable forms of surveillance, to find which of the proposed solutions are the most convincing ones.

CE3: How must a consoling God be conceived?

In a unit on the philosophy of religion in grade 9/10, students engage with different conceptions of God. First, students analyse what function a strong belief in God has for believers. At this stage, students not only think through the different functions of maintaining a belief in God (e.g. dealing with one's own finiteness, ascribing an overarching meaning to life, dealing with grief, etc.), but also grasp the problems associated with certain conceptions of God (e.g. the question of God's omnipotence, the theodicy question, and compatibility with a scientific worldview). As a next step, the central question is posed: "How must a consoling God be conceived of, such that it is in harmony with a causal scientific worldview?" The creativity methods and techniques mentioned earlier are then used to come up with possible answers to this question. The results are then checked against the criteria developed. Afterwards, the students compare their proposed conceptions of God with the conceptions of God found in the major world religions. In order to do justice to the ethical dimension of the unit, students discuss in the final part of the lesson whether and under what conditions the idea of a God can provide comfort at all for enlightened and critically thinking human beings in the 21st century, or whether one should instead aim for a life without belief in God.

So far, I have presented an approach to fostering creativity in the philosophy classroom by drawing on the design thinking method. The core idea of my approach is to connect the acquisition of domain-specific competences and knowledge in philosophy and ethics with tasks that promote creative thinking. The described classroom examples should provide us with an understanding of what implementing this approach might look like. In the last step I want to address a possible concern that might arise regarding the suggested framework. A possible

concern might be that at the end of the design thinking process there are no tangible criteria that would allow us to evaluate the students' results. This raises the question: how is it possible to develop a horizon of expectations for such free and open tasks that can be used to evaluate novel and creative solutions?

The design thinking method offers a solution to this problem (see Fig. 4). First, in the initial two steps, the design thinking method requires the problem space to be analysed in detail, and different perspectives on the problem to then be understood in depth. I take these two steps to be crucial, not only because they are the basis for developing the solution space, but also because they offer the opportunity to develop criteria for evaluating the solutions later in the process. Considering our previous examples, when discussing fulfilling forms of coexistence of old and young people, or morally permissible forms of surveillance, students need to dive deep into the problem space in order to understand the moral dimensions of the problem. By discussing the moral problem and uncovering the various values that are at stake, they develop a sense for what might count as a good solution to the problem later in the process, and thus establish criteria that could be used to measure and evaluate the quality of the solution.

Second, at the end of the six-stage design thinking process, the developed solutions are put to the test. This involves a close scrutiny of the solutions developed in the creative process. This ensures that the prototypes are not just new nonsense but offer at least some solution to the philosophical or moral problem at hand (see §2). Testing proves to be particularly successful and instructive when done collaboratively in class. By first presenting their solutions to each other and discussing the advantages and disadvantages of each solution, the quality of each solution becomes apparent to the students. This, of course, requires the students to have a deeper understanding of the philosophical or moral problem, in order to evaluate the developed solutions. By discussing the different solutions and exchanging reasons for their judgements, students also practice and strengthen key philosophical competences such as developing and evaluating arguments.

6. Conclusion

In the previous sections I have provided the foundations for a didactics of creativity for philosophy and ethics education. This approach is based on the insight that creativity is an important competence to be promoted in philosophy and ethics education. First, I defined the concept of creativity (§2). I then reviewed key empirical findings from educational psychology and the psychology of learning, which helped me to outline a framework for fostering creativity in the classroom (§4). Central to this framework is the idea that creativity can only be taught if the use of creative task types is preceded by a phase of acquiring domain-specific philosophical and ethical competences and knowledge. I then argued that this objective can be implemented particularly well through the design thinking method (§5). In this context, task types that promote divergent thinking are particularly effective. I have used three classroom examples to illustrate how creativity could be fostered in philosophy and ethics classes.

How can the approach outlined here be embedded among the existing theories and models in the didactics of philosophy? As we saw in section 4, my approach makes certain basic assumptions. First, it requires a clear problem orientation. This means that each lesson

and each unit should focus on a clearly defined philosophical or moral problem. This is not only an implication of the requirements for teaching creative thinking and making use of the design thinking method but is also required for activating students cognitively and generating an intrinsic motivation to deal with the specific philosophical or moral problem. In this respect, the approach I have presented here is in the tradition of problem-oriented teaching as characterized by Tiedemann (2017) and Sistermann (2016), which could be considered standard within the didactics of philosophy today.

Second, the approach outlined here is also in the tradition of competence orientation ("Kompetenzorientierung"). Competence orientation is necessary for a didactics of creativity in two respects. As shown in section 4, the promotion of creative thinking can only succeed by linking the appropriate task types that promote creative thinking with the previous acquisition of domain-specific competences and knowledge. Thus, the tasks must first be geared towards the acquisition of philosophical and ethical competences and knowledge. Furthermore, it is important for the task types themselves to be presented in such a way that they stimulate creative (and divergent) thinking (see §5). A didactics of creativity is thus also in line with common approaches in the didactics of philosophy, which identify the acquisition of domain-specific competences as an essential goal for teaching philosophy and ethics (see Meyer 2017; Rösch 2011).

On the basis of these considerations, it becomes apparent that the didactics of creativity outlined here is compatible with a number of very different approaches in the didactics of philosophy. Provided that philosophy and ethics teaching is thought of in terms of problem orientation and competence orientation, it could thus be aligned with a didactics focused on practice-oriented life design ("Lebensweltorientierung"), as propagated by Ekkehard Martens (2017). Furthermore, my account could also conceivably be reconciled with an approach that is more oriented towards the history of philosophy (see Rohbeck 2017). Interesting connections also emerge with regard to a conception that sees the function of teaching philosophy in schools as working on the logos of children, teens, and young adults (Steenblock 2017). This connection, however, would need to be elaborated in more detail.

Where does this leave us? I began this essay by stating that creativity is an important educational goal. We have also seen that creativity has so far been insufficiently considered in the didactics of philosophy. With the approach presented here, I have laid a foundation that may serve as a starting point for further exploring the role of creativity in philosophy and ethics education. Following this path will raise various theoretical and empirical questions concerning the proper promotion of creativity in philosophy and ethics classrooms, the answers to which will require new and more extensive research. What should have become clear in the course of my reflections is that it is worth thinking more carefully about the role of creativity in philosophy and ethics education.[*]

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