

Motivating Children's Critical Thinking: Teaching Through Exemplars

KUNIMASA SATO

University of Keiai
5-7-7 Akitsu, Narashino-shi
Chiba, 275-0025
JAPAN
miamikunickham@gmail.com

Abstract: This study focuses on fostering the motivation to think critically through teaching with exemplars. First, I argue that teachers and parents can be seen as exemplars who exhibit thought processes and attitudes relevant to critical thinking, as can fictional characters in media such as novels and films. Second, I demonstrate that, through learning from exemplars, children may begin to develop their own way of critical thinking. Third, I conclude that admiration for exemplars may motivate children to think critically, even small children who have not yet developed a sensitivity toward evidence and reasons.

Résumé: Cette étude porte sur l'usage de cas exemplaires afin de promouvoir la motivation à penser de façon critique. Dans un premier temps, je soutiendrai que les enseignants et les parents peuvent être considérés comme des modèles qui témoignent d'habitudes de pensée et d'attitudes qui sont pertinentes pour la pensée critique—et qu'il en est de même des personnages de fiction qu'on trouve dans les médias, comme les romans ou les films. Par la suite, je démontrerai que les enfants peuvent commencer à développer leur propre mode de pensée critique grâce à leur apprentissage à partir de cas exemplaires. Finalement, je conclurai que l'admiration pour des modèles peut motiver les enfants à penser de manière critique, même dans le cas de jeunes enfants qui n'ont pas encore développé une sensibilité à l'égard des preuves et des raisons.

Keywords: critical thinking, exemplars, motivation, the emotion of admiration

1. Introduction

In contemporary epistemic life, we accept a huge number of beliefs that are obtained through the testimony of others. Reading a newspaper, I believe that carbon dioxide emissions can lead to the destruction of the ozone layer, causing global warming, although I neither justify this belief by myself nor can comprehend

the scientific evidence needed in order to verify this belief. As Hardwig (1985) observes, it is probably unrealistic for people to consider the reasons and evidence to support each belief in their daily lives all by themselves. To a greater or lesser extent, people today must epistemically depend on others in the sense that they form beliefs through the testimony of others.

This does not mean, however, that people no longer need to consider reasons for themselves. On the contrary, in order to attain truth in the present epistemic surroundings, it is more important that people should be sensitive to the contexts in which critical thinking is called for and be motivated to think critically in the relevant circumstances. "The motivation to think critically in the relevant circumstances" largely means that, when encountering situations that require critical thinking, one is motivated to seek reasons and to evaluate the weight of different reasons. For example, if the source of our belief seems unreliable, it is sensible of us to seek reasons for the belief and examine whether or not it is true.

It may thus be reasonable to think that, while epistemically relying on others, people nowadays should be ready to think critically in their intellectual lives. Given this, in preparation for life, children must learn to be motivated to think critically in the proper circumstances. Education, or the cultivating of rationality, may involve the fostering of children's motivation to think critically.

In this paper, I will focus on the fostering of the motivation to think critically. I will first identify two problems with motivation that are considered important in educational contexts: primarily, what can be a motivating force for small children¹, who still have not developed a sensitivity to evidence and reasons, to think critically? Second, how can this motivating force be fostered? I will relate these problems to the literature on critical thinking. Then, I will answer these problems with motivation by arguing in favor of three ideas: first, that teachers and parents can be seen as exemplars who manifest rationality, as can also fictional characters in media such as novels and films; second, that, by observing paradigmatic cases in which rationality is manifested, children can learn to appreciate what it is like to think critically and how they can think critically; third, that the emotion of admiring exemplars may act as a motivating force for children, including small children who still have not devel-

¹ In this paper, it is assumed that "children" includes children below and up to the age of junior high school. Referring to relevant literature such as developmental psychology may be necessary to specify what age of children my argument applies to.

oped a sensitivity to evidence and reasons and thus are not moved by reasons, to think critically.²

My argument consists of six parts. In section 2, I clarify the definition of a critical thinker. In section 3, I identify the problems with motivation that are worth examining in educational contexts. In section 4, I expound on the notion of felt reasons, as Siegel (1997, Chapter 3) explicates, to argue that the way in which the evidence and reasons are presented can arouse feeling and emotion in children. In section 5, I explain the concept of exemplars that manifest rationality. In section 6, I argue that the emotion of admiring exemplars can be a motivating force to think critically. In section 7, I summarize these points and suggest further research.

2. The definition of a critical thinker

We will begin by clarifying what is meant by “a critical thinker.” It is broadly accepted that the conception of critical thinking comprises components of assessing reasons and having the critical spirit³ (e.g., Bailin & Siegel, 2003, p. 183; Ennis, 1986). First, the reason assessment component concerns one’s skills and capabilities to assess their strength of reasons: for example, a critical thinker may be able to properly evaluate the weight of reasons to support a claim; she may be able to select better reasons that the claim may be true. Second, the critical spirit component deals with one’s tendency to consider reasons critically: a critical thinker may be disposed to base belief obtained from the testimony of others on reasons when necessary; she may be motivated to seek evidence on which to base views, theories, and actions. The critical spirit thus involves one’s habits of mind, disposition, motivation, and character traits.⁴

² As will be shown, in order to corroborate the argument regarding the relationship between the emotion of admiration and motivation, I will draw on relevant empirical studies.

³ Passmore (1967, pp. 195–7) uses the term “critical spirit” to refer to a character trait that enables one to be a good thinker. The name and description concerning the critical spirit component differs among scholars (cf. Bailin et al., 1999). In this paper, I follow Siegel’s terminology.

⁴ See Ennis (1986) and Paul (1982) for other arguments regarding the importance of the critical spirit component. For example, Ennis (1986) enumerates thirteen kinds of dispositions, such as open mindedness and the disposition to examine alternative possibility before coming to a conclusion. Then, he argues that these dispositions are constituents of a critical thinker as well as necessary skills and capabilities, including the correct inference (p. 16; p. 24).

How, then, can the concept of a critical thinker be understood? Let us first clarify two features of reasons that are relevant to the description of a critical thinker. According to Siegel (1997, p. 3), who is an exponent of critical thinking in education, a critical thinker must be sensitive to the probative force and the normative impact of reasons. The probative force of reasons includes the strength of reasons to support a claim, while their normative impact includes their force to move one to assess the weight of evidence and reasons in the relevant situations and to dispose one to base one's belief on reasons. Let us illustrate these two features of reasons in the case below.

Case [1]

Taro comes to know (A) that carbon dioxide can destroy the ozone layer, bringing about global warming, and (B) that gasoline cars emit a huge amount of carbon dioxide. Taro thus has the belief (C) that driving a gasoline car can contribute to global warming, so he purchases an electric car.

For example, the probative force of these reasons includes the cogency of (A) and (B) as the evidence for (C). The normative impact of these reasons is exemplified by the force of the reason (C) to move Taro to select an electric car.

With respect to the relationship between two features of reasons and a critical thinker, Siegel provides us a concise explanation:

First, reasons have *probative* or *evidential force*, and the critical thinker must be proficient at evaluating the probative force of reasons. This is required for the critical thinker to be *appropriately* moved by reasons. Second, reasons have what might be called *normative impact*: they guide rational belief, judgement and action, and the critical thinker must be so guided if she is to be *appropriately moved* by reasons. (*Ibid.*, p. 3)

In brief, a critical thinker is not only competent at evaluating the probative force of reasons but is also guided by reasons according to their normative impact (e.g., Siegel, 1988a, p. 2; 1997, p. 3). In other words,

- (1) A critical thinker is a person who is appropriately moved by reasons.

Although stipulation (1) is, I believe, more or less legitimate, the expression “moved by reasons” seems to have the risk of being misinterpreted. In Siegel’s account, the normative impact of reasons is regarded as a feature of reasons and, thus, the normative force may probably take effect only when specific reasons are displayed to the person involved. However, the critical spirit includes not only one’s tendency to think critically by being conditioned by the reasons displayed but also one’s tendency to seek reasons for beliefs unconditionally in the relevant circumstances. I will refer to the tendency to think critically by being conditioned by reasons given as the “passive tendency” and the tendency to seek reasons unconditionally in relevant situations as the “spontaneous tendency.” Let me illustrate the point of the difference between spontaneous and passive tendencies concerning the critical spirit.

Case [2]

Watching her favorite celebrity advertising an electric car on TV, Hanako obtains the belief that gasoline cars are the primary cause of global warming. On the basis of this belief, she will soon decide to purchase an electric car.

Hanako obtains the belief that gasoline cars can contribute to global warming and, for this reason, she chooses to buy an electric car. Although, in this case, Hanako is motivated to base her action (purchasing an electric car) on reasons, this does not suffice as proof that Hanako possesses a critical spirit. This is because she is not motivated to seek evidence for the belief that gasoline cars are the primary cause of global warming prior to the acceptance of this belief. It may be legitimate to think that, in order to have a critical spirit, Hanako must be disposed to verify the truth of the belief that gasoline cars have the most detrimental effect on global warming, because there is no telling whether the source of this belief is reliable. This example demonstrates that simply being moved by the normative impact of reasons is insufficient to say that someone has a critical spirit and strongly suggests that, in order to have the critical spirit, we must possess both the spontaneous and the passive tendencies to think critically.

Still, the point of the distinction between the tendency to think critically by being conditioned by the normative impact and the tendency to think critically unconditionally, that is, the distinction between the spontaneous and the passive tendencies, can be explained in accordance with definition (1) of a critical

thinker that Siegel presents. For example, stipulation (1) could be altered:

- (2) A critical thinker is a person who has both the spontaneous and the passive tendencies to consider reasons in an appropriate manner.

For example, the disposition to seek reasons is accounted for in Siegel (1988, p. 39) and, given this, Siegel may well acknowledge stipulation (2).

The distinction between passivity and spontaneity concerning the tendency to think critically will be crucial in examining the problem with fostering the motivation to think critically. In the next section, I will identify the problems with the motivation to think critically.

3. Identifying problems with fostering the motivation to think critically

Let us begin by explaining the importance of fostering the critical spirit in educational contexts. Developing the critical spirit is fundamental to education ideally enabling children to be critical thinkers. In order to have the tendency to think critically, one must have the critical spirit, and the critical spirit pertains to the personal qualities of a critical thinker. For example, a person possessing the critical spirit may wholly and partially possess reasonableness (Burbules, 1995, p. 97), inquisitiveness (Baehr, 2013, p. 249), and fair-mindedness (e.g., Bailin et al., 1999, pp. 294–5). These character traits can help a child to be disposed to think critically in the situations where they are required to do so. The fostering of character traits that are relevant to the critical spirit can thus lead a child to be “a certain sort of *person*” (Siegel, 1988a, p. 10), that is, a good-thinking person. By contrast, the analogous description is not possible for skills because these skills are not manifested until one determines to do something. Hence, the fostering of the critical spirit is of educational importance.⁵

The critical spirit includes the motivation to think critically, as explained in the previous section. Given the contemporary epistemic situation in which we should be ready to think critical-

⁵ The argument in this paragraph suggests that the critical spirit is relevant to good character traits related to critical thinking. See Battaly (2006) for the argument concerning the practice of teaching students' character traits related to critical thinking.

ly while at the same time epistemically depending on others, an epistemic aim of education may well be to enable children to have both spontaneous and passive motivations to think critically in the relevant circumstances, including the cases in which children obtain their beliefs from unreliable epistemic sources.

What, then, are the problems of fostering the motivation for critical thinking that are examined in educational contexts? I can point out two problems with fostering motivation. First, what can be a motivating force for small children, who still have not developed a sensitivity to evidence and reasons and thus are not moved by the normative impact of reasons to think critically? Second, how can the motivating force be fostered? For convenience, I shall call these two problems the “problems with motivation.” Let me reveal two presuppositions that must be taken into consideration in solving these problems with motivation.

First, although the critical spirit concerns the motivation to think critically, it does not specify what motivates one to think critically. For example, Cuypers (2004), who is a critic of the two conceptions of critical thinking theory as described in the previous section, mistakenly assumes that the critical spirit is identified with what he calls “the passions.”

Being appropriately moved by reasons requires reasons to have not only evidential force but also normative impact. This separation ... mirrors the Humean distinction between the domain of ‘reason’ and the domain of ‘the passions’... So being appropriately moved by reasons requires more than ‘reason’ alone: it also demands the critical spirit of ‘the passions’. (p. 85)

Cuypers arbitrarily interprets that the critical spirit is identified with the passions in his terminology, which is clearly erroneous. What can serve as a force to move one to think critically is the problem that needs to be solved, although some passions might be related to the force to move one to think critically in some way or other. I will address this problem in the next section. Another important point is that the normative impact of reasons is an ontological quality of the reasons, and thus it is irrelevant to the passions, or feeling and emotion, even if the normative impact of reasons could move one to think critically. In other words, it is one thing for the normative impact as a quality of reasons themselves to motivate us to think critically; it is another thing for feeling and emotion to motivate critical thinking. It is unlikely that reasons themselves will have a sensible quality that affects our feelings and emotions unless a compelling explanation is provided.

Second, for small children, the normative impact of reasons cannot be a motivating factor. From the argument so far, it can be accepted that those who have the critical spirit are moved by the normative impact of reasons. However, the normative impact of reasons can serve as a motivating factor only to those who are already sensitive to evidence and reasons, not to children who are only starting to acquire the critical spirit. In the educational process, children must learn to feel and comprehend the normative impact of reasons in order to grow up to be critical thinkers. Hence, for small children, a motivating factor must be something other than the normative impact itself.⁶

Hence, the problems with the motivation are to be answered on the condition that the motivating factor must be something other than the normative impact of reasons. How, then, can we approach these two problems with motivation? I think that Siegel offers us a concept that can help to solve the problems with motivation: what he calls "felt reasons" (Siegel, 1997, Chapter 3). In the next section, I will explicate this notion of felt reasons.⁷

⁶ Hanks (2008) explains, "Cuypers and Haji address the motivational component of critical thinking... they argue that motivational elements of critical thinking, the habits of reason-giving and acting on the basis of good reasons, must also be instilled in a nonindoctrinative fashion" (p. 196). I agree on the point that children's motivation to think critically should be fostered in a manner other than an indoctrinative fashion.

⁷ Cuypers claims that the notion of felt reasons, as Siegel shows, does not contribute to the strength of their motivating force. In the next section, however, I will demonstrate that the notion of felt reasons is a key to addressing the problems with motivation. So, let me confirm that Cuypers's assertion fails as a criticism of Siegel's argument regarding critical thinking.

With respect to the notion of felt reasons, Cuypers (2004) observes,

Reason alone has no *internal* motivational power. Since pure instrumental reason is motivationally powerless, Siegel tries to remedy this predicament by infusing practical reason with affect or feeling. Yet Siegel's move towards such an impure practical reason, by appealing to affective reason or felt reasons, does nothing to fortify the internal motivational power of the *pure* reason assessment of his two-component theory.
(p. 89)

While Cuypers claims that felt reasons, as Siegel presents, cannot motivate one to consider reasons critically, he does not explain why they cannot. If his claim here is seen as a criticism of Siegel's theory of critical thinking, not as a statement explaining his own theory regarding motivation, he must give a convincing reason why felt reasons cannot motivate one to consider reasons critically. Let me explain why.

Although the notion of felt reasons can be seen as a concept that is relevant to motivation in the theory of critical thinking, any consideration applying the notion of felt reasons to the motivation in the theory of critical

4. The characteristics of felt reasons

Let me first elucidate on the notion of felt reasons. By doing this, I will demonstrate that the way in which reasons are presented in novels and movies, as well as in real dialogues, can arouse feeling and emotion in children, and that this feeling and emotion can work as a motivating factor for them to think critically. According to Siegel, reasons can have a visceral quality. Taking the example of Dostoevsky's *The Brothers Karamazov*, Siegel observes,

Throughout the history of philosophy the problem of evil has played a central role in deliberations concerning god's existence. What is so powerful, then, about Dostoevsky's presentation of the problem of evil? The answer, I think, has to do with the visceral quality reasons sometimes have; with the impact that reasons sometimes have on us as feeling persons. (Siegel, 1997, p. 48)

The Brothers Karamazov deals with existential and ethical problems, such as free will, by describing the way in which Ivan and Alyosha, two of the main fictional characters, seriously contemplate the problems of god and evil. In this way, readers are shown their thought processes, and some may be tempted to consider the reasons expressed by the characters and find them persuasive or unconvincing. A novel can work as a device that presents reasons to us in such a way that they appeal to us emotionally, and the same thing could apply to other media such as films and texts using dialogue.

What precisely, then, is the meaning of the statement that reasons can have a visceral quality? This statement may seem to discuss the ontological status of reasons. Interpreted in this way, Siegel would have to elucidate the relationship between reasons, particularly their normative impact, and their visceral quality that can appeal to the senses. However, I think that it is reasonable to interpret the statement about felt reasons as not referring

thinking is the interpretation presented by interpreters and critics of Siegel's idea. This is because Siegel himself does not examine whether felt reasons are relevant to the motivation to think critically. More precisely, the problems with motivation are not highlighted in Siegel's theory of critical thinking. Given this, if Cuypers criticizes Siegel's idea of critical thinking by arguing that felt reasons cannot be a motivating factor to think critically, Cuypers, as an interpreter of Siegel's idea of felt reason, must offer a compelling explanation.

As mentioned, in the next section, I will show that the notion of felt reasons is a key to addressing the problems of motivation. In order to do this, I will first articulate the notion of felt reasons.

to reasons themselves but about the way in which they are presented. In my interpretation, the statement that reasons have a visceral quality means that the way in which reasons are shown can affect the senses, arousing feeling and emotion. There are two reasons that the notion of felt reasons can be interpreted in this way.

Primarily, the argument concerning felt reasons focuses on the way in which reasons are presented rather than on the ontological status of reasons. The way in which reasons are presented includes not only the portrayal of characters discussing reasons in novels and movies, but also the interaction between children and adults exchanging reasons in real dialogue. The way in which reasons are presented can be generalized as follows:

- (3) The way in which reasons are presented refers to the contexts in which the exchanges of reasons are interwoven, encompassing the description of people's manners and attitudes.

Siegel points out that the notion of felt reasons may shed light on the importance of how reasons are exhibited:

Felt reasons, rather, are ordinary reasons whose power to move people is made obvious or manifest by the way in which those reasons, and the person for whom they are reasons, are portrayed. Felt reasons are not a different *kind* of reasons; they are a particular kind of *presentation* of reasons. (Ibid., p. 52)

It can thus be interpreted that, in the notion of felt reasons, Siegel is addressing not the reasons themselves but the way in which they are presented to children.

Second, the strength of the visceral quality of reasons can differ depending on the way in which reasons are manifested. Suppose now that the visceral quality is an ontological property of the reasons. It would follow that, regardless of how reasons are presented to us, their visceral quality would be invariant. It is clearly asserted, however, that the force of a same reason can affect us differently depending on different situations (*ibid.*, pp. 49–50). From this, it can reasonably be inferred that Siegel does not regard their visceral quality as an inherent property of reasons. On the other hand, with regard to the way in which reasons are presented, the way in which reasons are shown can be illustrated differently, which may have varying degrees of influence on our senses. For example, the portrayal of a fictional character

enthusiastically discussing reasons may cause a strong emotion in us. Similarly, participation in rational dialogue with parents and teachers may induce children to develop their standpoints based on their reasons.

Therefore, we can conclude that, in his explanation of the notion of felt reasons, Siegel expounds on how the reasons are presented and its effect on us. Siegel makes two important points. First, how reasons are displayed can affect our senses, arousing feeling and emotion. Second, the strength of feeling and emotion that arises in us comes in degrees according to the respective ways in which reasons are presented. In brief,

- (4) The way in which reasons are presented can affect our senses, arousing different degrees of feeling and emotion in us.

Let me evaluate the advantage of statements (3) and (4), as clarified, in solving the problems of motivation shown in section 3 and the problems left that need to be addressed. Our questions are “What can be a motivating force for small children to think critically?” and “How can the motivating force be fostered?” and these are to be answered on the condition that a motivating factor must be something other than the normative impact of reasons. What can be inferred from (3) and (4) is that the way in which reasons are presented can generate some feeling and emotion, and that this feeling and emotion can be a candidate for a motivating factor for children to think critically, including small children who still have not developed a sensitivity to evidence and reasons.

On the other hand, the argument so far does not specify feeling or emotion. Nor does the argument explain why the feeling or emotion that arises in the presence of reasons is about critical thinking. Feeling and emotion that arise only due to critical thinking, not in the presence of reasons, can in some way or other motivate children to think critically. Hence, the next problem to be addressed is to specify feelings and emotions about critical thinking and to demonstrate that these feelings and emotions can work as a motivating force to think critically.

I will argue that the emotion of admiring exemplars that manifest rationality is a motivating force for critical thinking. In the next section, as an auxiliary to this claim, I will first explicate the notion of exemplars that manifest rationality.

5. Exemplars that manifest rationality

Let us explicate the notion of exemplars that manifest rationality. To manifest rationality in the present context is to exhibit thought processes for one to think critically and the manners and attitudes necessary to consider reasons individually and collaboratively. While one's thought processes may be relevant to the evaluation of the probative force of reasons, one's manners and attitudes concern our actions related to reasons, and are thus relevant to the normative impact of reasons. According to Burbules (1995, pp. 88–90), reasonableness, as a character trait pertinent to the critical spirit, includes a proficiency at exchanging reasons with other people in critical dialogue.

An exemplar is a person who exemplifies a paradigmatic case of something. For example, Mother Teresa, who is known as a figure who dedicated her entire life to help people struggling against poverty, may be seen as an exemplar of compassion and generosity. Similarly, an exemplar of rationality can be understood:

- (5) S is an exemplar of rationality if and only if S manifests a paradigmatic case of critical thinking.

In light of this definition, teachers and parents, as well as fictional characters, can be exemplars that manifest rationality in distinct manners, including thought processes and attitudes. Teachers and parents may let children clarify the reasons presented in novels and movies and inquire into the strength of these reasons together. Additionally, by having rational conversation with children, teachers and parents may also be able to exhibit manners and attitudes to consider reasons with others. For example, they may respect the perspectives of others and show a willingness to follow others' arguments as they develop.⁸

Let me note, however, that it may not always be possible for children to recognize characters, teachers, and parents as exemplars of rationality, even if they manifest rationality. Let me explain this by taking the case of moral exemplars. Santa Claus is usually depicted as generous enough to give each child a present but, unlike Mother Teresa, Santa Claus is unlikely to be seen as an exemplar of generosity, that is, children are never told to be like Santa Claus. Elgin (1991, pp. 199–200) claims that not all examples can give epistemic access to the features that they exemplify, according to which Santa Claus does not give access to generosity while Mother Teresa does. With respect to the exem-

⁸ As inquiry into reasons is often conducted in a community, these attitudes may be included in the manners and attitudes related to the critical spirit.

plars of rationality, it is suggested that manifesting rationality may not be enough for children to gain epistemic access to rationality.

An additional necessary condition for rationality to be recognized by children is to highlight rationality in describing the way in which reasons are presented so that rationality is made salient to children. Take the example of moral exemplars again. Mother Teresa is recognized as an exemplar of compassion and generosity, not only because she was, in fact, compassionate and generous, but also because her morality is delineated so that we can recognize it. This may hold true for exemplars of rationality. Exemplars can enable children to observe their rationality, not only because exemplars, as critical thinkers, manifest rationality, but also because their pertinent reasoning and rational character traits stand out in novels, movies, and real dialogues between children and adults. For example, novels and films can bring character's reasoning to the fore, directing children's attention to rationality even when they are reflectively aware of it. Similarly, teachers and parents can enlighten children concerning the rationality that characters embody by interchanging reasons in conversation.

Observing how exemplars think critically can promote children's understanding of rationality in two ways. First, children can learn to appreciate what it is like to think critically. Learning what it is like to think critically means that one learns to recognize the probative force of reasons and to feel the normative impact of reasons. Admittedly, this recognition and felt impact do not suffice for children to appropriately evaluate the weight of reasons and to possess the critical spirit. However, manifesting rationality can offer children a good opportunity to recognize the probative force and to feel the normative impact of reasons. For example, literature and films, such as portraying Alyosha and Ivan exchanging reasons, can be more likely to help children to feel inclined to consider reasons than can academic books.

Second, witnessing and interacting with exemplars equips children to go on to think critically for themselves. Children may emulate how teachers, parents, and fictional characters manifest rationality, and emulating them in the present context means that children may attempt to think critically. Let me note, however, that emulating exemplars that manifest rationality does not mean that children will merely replicate what exemplars do, but that children will begin to assess the strength of the reasons presented and to shape their attitude that is appropriate in considering reasons with others. In other words, by learning with exemplars, children start to develop their own way of critical

thinking. For example, teachers' assistance may help small children attempt to examine what reasons are compelling in novels and movies. Or, parents' manners and attitudes in examining reasons with children may lead them to adopt their manners and attitudes to consider reasons (Scheffler, 1973, p. 64).

Therefore, educating with exemplars that manifest rationality may form the initial step for critical thinking, transforming children's minds into the critical spirits. How, then, can this learning lead children to possess spontaneous and passive motivations to think critically? In the next section, I will answer this question.

6. Admiring exemplars as a motivating force to think critically

How can children be motivated to think critically by emulating exemplars? My answer is that, by observing how exemplars think critically, some children admire these exemplars and become motivated to emulate them.

Teachers, parents, and fictional characters as exemplars of rationality can generate the emotion of admiration in children to emulate them. With respect to the relationship between the emotion of admiration and exemplars, I shall depend on the analogy of moral learning. Olberding (2012) states, "Conceptually, admiration is an emotion that will motivate us, an attraction that already includes the desire to be like the object of our admiration" (p. 64), which could apply to the present case. For example, reading a book that illustrates characters passionately contemplating reasons, children may contemplate which reason is better and why they think so and, in turn, reconsider whether the reason that they provide is persuasive. Additionally, teachers' attitudes, such as openness to questions and criticisms of others, may make children willing to display those attitudes in rational dialogue. In these ways, children can admire exemplars so as to resemble the way in which they manifest rationality.

Recall here that, according to stipulation (4) clarified in section 4, the way in which reasons are presented can generate some feeling and emotion. Next, as Zagzebski (2004, p. 60) discusses, emotions can be affective states about or toward something of a certain description, in other words, some emotions have intentional objects. For example, fear is an emotion that someone can have when seeing something fearful. Then, the emotion of admiration arises in children because they witness the way in which exemplars manifest rationality on the condi-

tion that they can recognize their rationality, and this admiration is thus seen as an emotion about critical thinking. Hence, if, by observing how exemplars consider reasons, children learn to appreciate what it is like to think critically and how they can think critically for themselves, it follows that exemplars can bring about the emotion of admiration in children and can induce them to emulate the way in which exemplars think critically.

Finally, some empirical studies show that the emotion of admiring someone can encourage people to work harder in order to achieve their own goals.⁹ For example, Algoe and Haidt (2009), by categorizing the emotion of admiration as a social emotion, report that participants in their experiment were inspired to emulate admirable people and attempt to improve their own method. Based on this, we can conclude that the admiration of exemplars who manifest rationality can motivate children to think critically as exemplars do. In other words, the emotion of admiration can serve as a motivating factor for children to think critically. Furthermore, since this admiration is an emotion, it can arise even in small children who are still not moved by the normative impact of reasons. This is my answer to the first question as to what can be a motivating force for small children, who still have not developed a sensitivity to evidence and reasons, to think critically. In addition, my answer to the second question, as to how the motivating force can be fostered, is that presenting reasons in an emotionally appealing way may foster a motivational force in children. As Siegel clearly shows in his argument concerning felt reasons, some media can serve as a powerful means of fulfilling this purpose.

7. Conclusion

I have explored the problems with motivation to think critically. Given our contemporary epistemic surroundings, while epistemically depending on others, children should be ready to think critically, in other words, to have the spontaneous and passive tendencies to think critically. These tendencies include the motivation to think critically in the relevant circumstances. With regard to the fostering of proper motivation in children, I have demonstrated three points. First, teachers, parents, and fictional characters can act as exemplars that manifest rationality. Second,

⁹ In recent years, some philosophical studies argue for the relevance of emotion to rationality (cf. Greenspan, 2004), and some psychological studies are beginning to investigate the effect of emotions related to social relationships on motivation (e.g., Algoe & Haidt, 2009; Haidt & Seder, 2009).

they can produce the emotion of admiration so that children can learn to appreciate what it is like to think critically and how they can think critically. In this sense, emulating exemplars who manifest rationality can form the initial step for children to appropriately evaluate the weight of reasons and possesses the critical spirit. Finally, the emotion of admiring exemplars may act as a motivating factor for children, including small children, who have still not fully developed a sensitivity to evidence and reasons and are thus not moved by reasons, to think critically. These results can shed light on the epistemological roles of social emotions and exemplars in fostering the critical spirit.

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