

Fostering the Virtues of Inquiry

Sharon Bailin · Mark Battersby

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Abstract This paper examines what constitute the virtues of argumentation or critical thinking and how these virtues might be developed. We argue first that the notion of virtue is more appropriate for characterizing this aspect than the notion of dispositions commonly employed by critical thinking theorists and, further, that it is more illuminating to speak of the virtues of inquiry rather than of argumentation. Our central argument is that learning to think critically is a matter of learning to participate knowledgeably and competently in the practice of inquiry in its various forms and contexts. Acquiring the virtues of inquiry arises through getting on the inside of the practice and coming to appreciate the goods inherent in the practice.

Keywords Argumentation · Critical thinking · Inquiry · Virtues · Practice · Community of inquiry · Pedagogy

1 Introduction

The notion of virtue, recently popular in epistemology, has now also found application in argumentation theory. Indeed, a number of theorists are attempting to ground a theory of argumentation around virtue, much in the way that epistemologists have tried to do with virtue epistemology (Cohen 2007, 2009a, 2013; Aberdein 2007, 2010).

S. Bailin (✉)
Faculty of Education, Simon Fraser University,
2568 West 1st Avenue, Vancouver, BC V6K 1G7, Canada
e-mail: bailin@sfu.ca

M. Battersby
Critical Inquiry Group, Capilano University,
2416 W. 14th, Vancouver, BC V6K 2W5, Canada
e-mail: mbattersby@criticalinquirygroup.com

Whether or not one accepts this type of agent-centered account of argumentation, it is clear that the notion of virtues forms a central component of most theories of critical thinking. What has been given insufficient attention, however, is how one might go about fostering these virtues. It is this issue that is the focus of this paper.

We begin by examining the notion of virtue and what constitute the virtues of argumentation or critical thinking. We argue that the notion of virtue is more appropriate for characterizing this aspect than the notion of dispositions commonly employed by critical thinking theorists. We also make the argument that it is more illuminating to speak of the virtues of inquiry rather than of argumentation. The remainder of the paper focuses on the issue of how these virtues might be developed.

2 The Virtues of Inquiry

What, exactly, are the virtues of argumentation or critical thinking (Cohen uses the two interchangeably). Cohen describes them thus:

In order to bypass the debates as to exactly what sort of thing a virtue is, let us stipulate that argumentative or *critical* virtues are the acquired habits and skills that help us achieve the goals of critical thinking (Cohen 2009a, b, 54).

Cohen's inclusion of "skills" as well as "habits" in his conception of virtue runs counter to common usage. Indeed, theorists tend to include the dimension referred to by the term virtue in their conception of critical thinking to refer to precisely the aspect which goes beyond skills.¹

¹ See the next section for a discussion of the problems with the concept of skill to capture this aspect.

The aspect of critical thinking of interest here, and the aspect commonly picked out in theories of critical thinking by the term “virtues”, is this additional dimension.²

This dimension, although central to most theories of critical thinking, has been described in various ways by different theorists. Virtue argumentation theorists, as well as some philosophers and philosophers of education (Paul 1990; Burbules 1995; Bailin and Battersby 2007), use the term virtues. Others, e.g., Bailin et al. (1999a), refer to habits of mind. Peters talks about “rational passions” (Peters 1972). The most common characterization, however, is in terms of dispositions (see, e.g., Ennis 1996; Siegel 1988). This dispositional dimension has several components. One is a fundamental commitment to rational belief and action, well captured by Siegel’s notion of critical spirit (Siegel 1988), Bailin and Battersby’s spirit of inquiry (Bailin and Battersby 2010), or Hamby’s willingness to inquire (2013). The other component is behavioral: an inclination to act in accordance with the norms of reason. Whether they are called virtues, habits of mind, or dispositions, the list of aspects to be included is strikingly similar, for example: open-mindedness, fair-mindedness, curiosity, concern for truth and accuracy, the desire to act on the basis of reason (Bailin and Battersby 2010); love of truth, repugnance of distortion and evasion, respect for the arguments of others (Peters 1972); intellectual humility, intellectual courage, intellectual integrity, intellectual perseverance, faith in reason (Paul 1990). There is some discussion in the literature regarding the inclusion of particular candidate virtues, e.g., sincerity (Cohen 2009b, Allen 2009), ingenuity (Morin 2014), receptivity (Norlock 2014), proportionality (Cohen 2009b, Aikin and Clanton 2010). Nonetheless, an overarching commitment to reasoning and a set of sub-virtues which are grounded in that commitment are common features of the various accounts.

Why, then, characterize this aspect of critical thinking in terms of virtues rather than dispositions? The term disposition is used in this context to describe a tendency, propensity, or inclination to act in a certain way (Siegel 1999); it can also be used to refer to an imputed quality or property of an individual by virtue of which they behave in this manner (Siegel 1999). Thus having a disposition to be fair-minded means that the individual has a tendency to act

in a fair-minded manner. It may imply, further, that the impulse to act in this way has an internal rather than an external source (e.g., they are not being forced etc.).

A significant limitation of the characterization in terms of dispositions is with respect to explanatory force. While the concept of disposition does have some explanatory power in that it situates the motive for action within the person and rules out external sources of behavior, it does not address the issue of underlying motive. It would not, for example, rule out cases where the individual behaves in a certain manner because of blind habit, e.g., if they have been indoctrinated or are unconsciously trying to live up to the expectations of a past teacher. This seems fundamentally different from acting in this manner because they understand the enterprise and value its procedures and goals (Bailin and Battersby 2007). It is the latter that is picked out by the concept of virtue. Burbules (1995) makes the point thus:

“Disposition” tends to refer to individual tendencies, often ascribed from an external perspective through observation and behaviorist inference. A virtue, on the other hand, is not a mere expression of habit, but an expression of judgment and choice (1995, 86).

And further:

they [virtues] are not simply the activating sentiments that motivate us to apply the formal rules we have learned, but the aspects of character that bring us to care about learning or paying attention to such standards in the first place... A person who is reasonable wants to make sense, wants to be fair to alternative points of view, wants to be careful and prudent in the adoption of important positions in life, is willing to admit when he or she has made a mistake, and so on (1995, 86).

The aspect that is captured in the notion of virtue that is missing in the notion of disposition is that of valuing or appreciating. A virtue is not just a tendency to behave in a certain way but a tendency to do so based on an appreciation or valuing of the enterprise (Bailin and Battersby 2007). This seems very much in keeping with Zagzebski’s idea that the motivation component of intellectual virtues involves being motivated by the desire to achieve certain intellectual goods (Zagzebski 1996). It is, we would argue, this type of motivation which is of interest and which we are trying to foster when developing critical thinking.³ The notion of virtue gives us more pedagogical purchase than does the notion of dispositions.

² See Aberdein (2007) for a discussion of the importance of distinguishing between argumentative virtues and skills, e.g.: “The exact same fallacy, say an equivocation on a word with two subtly but crucially distinct senses, could result from either a failure of virtue, if deliberately intended to deceive, or from a failure of skill, if the utterer did not notice the double meaning” (7). Howell and Kingsbury (2014) do, at times, use the language of virtue for all the aspects, distinguishing between epistemic reliabilist virtues (skills), motivational virtues (the commitment to rational belief and action), and regulatory virtues (the sub-virtues), but they also refer to the reliabilist virtues as skills.

³ It may be the case, as one of our reviewers argued, that a disposition theorist could build the notion of appreciation into her account; but the account would then start to look very much like a virtues account.

The notion of dispositions gains its currency from its application in the physical realm. According to Quine, “a dispositional term is a promissory note for an eventual description in mechanical terms” (1973, 14). In the physical realm, such an eventual mechanical description is the goal, but in the case of critical thinking, it is not a mechanical description which is at issue. A promissory note is not required because we already understand how to characterize this aspect—in terms of such concepts as understanding, beliefs, values and attitudes (Bailin and Battersby 2007).

The views highlighted here refer to the virtues of argumentation or critical thinking, but we would maintain that they are better thought of as the virtues of inquiry. We use the term inquiry to refer to the careful, critical examination of an issue, problem, controversy, or challenge, according to relevant criteria, in order to come to a reasoned judgment. Making a reasoned judgment is not, however, simply a matter of evaluating individual arguments. Rather, it is a dialectical process involving the comparative evaluation of a variety of contending positions and arguments (Bailin and Battersby 2010).

We maintain—and have argued elsewhere (Bailin and Battersby 2009)—that arriving at reasoned judgments is the central goal of argumentation/critical thinking. It is true that arguers may have a number of different intentions in arguing, not just to inquire, e.g., rational persuasion, decision-making, justification (Johnson 2000); greater understanding of their own or an opponent’s position, or of “the big picture” (Cohen 2009b). It is also the case that they may play different roles in particular argumentative exchanges, e.g., as proponents or opponents, judges or spectators (Cohen 2013). Nonetheless, whatever the particular role or intention, because the ultimate epistemological goal is to reach a reasoned judgment, the normative structure of the practice necessitates inquiry and thus the various virtues of inquiry. For example, even if one begins with the intention to persuade, if the persuasion is to be rational, then one must care about truth and accuracy, be willing to put one’s arguments to the test of reason and follow the arguments where they lead, be willing to concede to the most defensible position etc. (Bailin and Battersby 2009). In other words, one must exhibit the virtues of inquiry.

3 Fostering the Virtues of Inquiry

3.1 Immersion in the Practice

According to many accounts, then, critical thinking is seen to involve two related, but conceptually distinct aspects: skills and dispositions. The limitations of the notion of disposition has already been discussed. But even the notion of skills can be problematic if it is seen to refer to some inner mental

entity. Critical thinking is skilled thinking in the sense that it meets certain criteria, and there do not seem to be any grounds, either empirical or conceptual, for positing a connection between the quality of thinking and any putative mental entities or processes (Bailin et al. 1999a, b). Even if skill is not used to refer to mental entities but only to indicate skilled performance, nonetheless conceptualizing critical thinking in terms of two distinct and discrete aspects gives rise to other problems. It is clearly possible to improve students’ performance in discrete critical thinking tasks (e.g., diagramming arguments, recognizing fallacies etc.). There is considerable evidence, however, that the “disposition” to apply these “skills” in other contexts does not necessarily follow, nor do the particular critical thinking virtues (Facione 2000, Behar-Horenstein and Niu 2011). Bowell and Kingsbury (2014) describe the problem thus:

Critical thinking teaching is beset by what is often called “the transfer problem”: it is difficult to get students to use their critical thinking skills in their other studies and in their everyday lives (2).

Viewing the issue of how to foster the virtues of critical thinking in terms of transfer assumes (1) that there are discrete critical thinking skills which can be learned out of context (or in one context) and then transferred to another context, and (2) that whether or not one achieves transfer is a question of motivation and/or perception, which can be examined separately from the issue of skill acquisition.

We would argue that this dualistic way of conceptualizing critical thinking is problematic (Bailin et al. 1999a). We would argue instead for a conception of critical thinking as a practice—the practice of inquiry. In the practice of inquiry, the achievement of skilled performance and the acquisition of the virtues inherent in the practice are intimately intertwined.

What exactly do we mean by a practice? Here we draw on MacIntyre’s notion of a practice, which he characterizes thus:

By a ‘practice’ I am going to mean any coherent and complex form of socially established cooperative human activity through which goods internal to that form of activity are realized in the course of trying to achieve those standards of excellence which are appropriate to, and partially definitive of, that form of activity, with the result that human powers to achieve excellence, and human conceptions of the ends and goods involved, are systematically extended (MacIntyre 1984, 187).

There has been some debate as to whether argumentation qualifies as a practice. Although argumentation exhibits most of the features of a practice, it has been argued that there are limitations with respect to the applicability of

MacIntyre's particular characterization to argumentation (Kvernbekk 2008). As Kvernbekk has pointed out, although some of the goods of argumentation are internal to the practice of argumentation, not all are. We do sometimes argue for the sake of engaging in argumentation (Cohen 2013), but we more often argue for other reasons—to persuade, to justify, to make a decision. We would, however, also agree with Kvernbekk, citing Miller (1994), that not all practices are self-contained, as MacIntyre's conception implies. There are some practices which exist to serve some end beyond themselves—what Miller calls purposive practices. Argumentation (or critical thinking) can thus be seen as a purposive practice, with goods both internal and external to it. This seems very similar to Cohen's notion of argumentation as a tradition (Cohen 2013).

The practice of inquiry is essentially a critical practice, characterized by the give and take of reasons and arguments with the goal of reaching a reasoned judgment. An important characteristic of inquiry is that it is reflexive, that it "aims to discover its own weaknesses and rectify what is at fault in its own procedures" (Lipman 1988, 41). It is a practice constituted by a web of interconnected concepts (e.g., reasons, evidence, argument, justification, premise, conclusion, opinion) which are connected, in turn, to certain principles and procedures, and all the preceding are connected to the goal of reaching a reasoned judgment (Bailin 1999). Inquiry is instantiated in a number of different particular practices, e.g., politics, ethics, science, law, the arts, which involve a diversity of concepts, principles, procedures and specific purposes. But what these practices have in common is that they are all critical practices, involving the evaluating of reasons, the justifying of claims, and the making of judgments (Bailin 1999).

Learning to think critically, then, is not a matter of learning a number of discrete skills (the approach typically taken in traditional critical thinking courses) and, additionally, picking up certain dispositions in the process. Rather, it is a matter of learning to participate knowledgeably and competently in the practice of inquiry in its various forms and contexts. And acquiring the virtues of inquiry arises through getting on the inside of the practice and coming to appreciate the goods inherent in the practice. The willingness to abide by its normative constraints comes through sharing in the constitutive purposes. Someone exhibiting the virtues of inquiry evaluates opposing views in a fair and open-minded manner because she understands that such a weighing is what is called for in order to reach a reasoned judgment; she is willing to concede to the most defensible position because she understands that her own view could be mistaken (Bailin and Battersby 2009).

Getting on the inside of the practice of inquiry does not, however, equate with being uncritical of the practice itself.

One of the inherent goods is that inquiry is self-correcting. The reflexive nature of reason provides critical purchase on the practice of inquiry itself and its various sub-practices.

Immersion in the practice of inquiry does not imply simply teaching the disciplines in the traditional manner. Traditional disciplinary teaching has had notoriously limited success in fostering critical thinking (Hestenes et al. 1992; Jungwirth 1987; Ferraro and Taylor 2005). This is not surprising given that reasoning and argumentation are seldom a focus of disciplinary pedagogy. The nature of inquiry and how it is instantiated in the particular area is seldom made explicit (Battersby and Bailin 2015). And any focus on the virtues of inquiry is, in general, notably absent.⁴

What is required, instead is an immersion in the practice which brings to the fore the goals, principles, and underlying structure of inquiry, both in general and within the particular context, and makes explicit its modes of argumentation, methodologies, and normative constraints (Bailin and Battersby 2010; Battersby and Bailin 2015). With such an approach, the virtues of inquiry are part and parcel of learning to inquire as participants come to understand that such virtues are embedded in and required by the practice of inquiry. In order to achieve this, however, an appropriate context for inquiry must be created in which virtues are highlighted, promoted, and expected (Case and Balcaen 2008).

3.2 Creating a Community of Inquiry

The practice of inquiry is at its core a communal, social practice. Cohen (2013) makes the point thus:

Arguing would have to be a way of participating in the community. If arguing is to be part of a tradition, it cannot be about who I am or what I do; it's about who *we* are and what *we* do. We argue *with* one another, not in isolation (475).

Thus the practice of inquiry requires being a part of and taking part in a community in which people can argue with one another, that is, a community of inquiry (Dewey 1938; Lipman 2003). Communities of inquiry are central to our various collective critical pursuits, and they are particularly central to democratic deliberation (Dewey 1938; Aikin and Clanton 2010).

A community of inquiry is not just a community in which people argue with each other, however. It is a community in which they do it in a way which instantiates the virtues of inquiry. Cohen again:

⁴ A notable exception appears to be graduate education, particularly in science, where fostering the spirit of inquiry is a frequent goal and achievement.

Obviously, something more is needed to make logical inferences into dynamic, vital arguments capable of centering a tradition. And that something more is *arguing with* others. But even that is not enough, otherwise being excessively argumentative would make one a pillar of the community! What's needed is not just arguing *with others*, but doing it *well*, that is, *virtuously* (Cohen 2013, 475).

A community of inquiry is a community which has as its aim rational inquiry and reasoned judgment. And it is a community which is characterized by certain sorts of relationships and interactions, i.e., by open-minded and fair-minded exchanges, by rigorous but respectful critique, and by a commitment to respectful treatment, meaningful participation, and productive interaction (Bailin and Battersby 2010).⁵ The character of these relationships plays a central role in fostering the virtues of inquiry.

Virtues are flexible aspects of character, related to our sense of self and integrity, but also fostered and encouraged by the communities and relations with others that provide the context in which we decide and act (Burbules 1995, 86).

And further:

they [virtues] cannot be analyzed solely as individual possessions: persons acquire, maintain, and express the virtues that they do partly because of the relations they have to others, and how those others act in response to them (Burbules 1995, 86).

3.3 The Practice of Inquiry in the Classroom

What does an inquiry approach mean for how we go about teaching? It means, first, that an immersion in the practice of inquiry, in a way which makes explicit the relevant principles and criteria, needs to be the focus of classroom activity. Second, the setting, structure, and relationships of the classroom need to instantiate the characteristics of a community of inquiry. How can these features be instantiated into actual pedagogical practices?

This may be best illustrated by contrasting an inquiry classroom with traditional classroom structures and activities. For example, in a traditional critical thinking class, the focus of activity is generally on learning and practicing discrete "skills", for example, identifying the structure of arguments, argument diagramming, identifying fallacies. Although there may be some group work, the onus and

focus is generally on the individual student and not on student interactions. Assessment is generally summative, i.e., the awarding of grades at the end of an activity or unit for the purposes of summarizing a student's proficiency.

An inquiry orientation will dictate a very different sort of classroom. The focus is not on micro-skills or decontextualized arguments. Rather students engage in the actual enterprise of inquiry, learning to come to reasoned judgments on complex issues. In the process, the criteria and modes of argumentation, both general and within specific areas, are brought to the fore and made explicit. The textbook we have published (Bailin and Battersby 2010) provides one example of an inquiry approach. The text uses dialogues among an ongoing cast of characters involved in realistic situations as a context for focusing on and making explicit the various aspects that go into the practice of inquiry, including identifying issues, identifying the relevant contexts, understanding the competing cases, and making a comparative judgment among them. These aspects are instantiated in inquiries on topics such as vegetarianism, capital punishment, the legalization of marijuana, the effects of violent video games, and the evaluation of a film. Students learn the process of inquiry and work through the criteria and modes of argumentation relevant to the particular issue, then go on to conduct inquiries on issues of interest to them, both individually and in groups.

An inquiry classroom will instantiate the features of a community of inquiry. Student interaction is central. Students argue, question, challenge and critique. They also and continually engage in collaborative activities, providing feedback on each other's work, working on joint projects, and doing collaborative inquiries. This type of collaboration is significantly different from much group work undertaken in educational settings. The latter tends to involve a division of labor, with each student preparing a different piece of the project, then assembling the parts at the end. The former, on the other hand, consists in collaborative thinking, involving students discussing ideas, developing criteria, critiquing each other's work, questioning assumptions, and building on the ideas of their peers. The community created in the classroom will be characterized by the sorts of relationships and interactions described above, i.e., open-minded and fair-minded exchanges, rigorous but respectful critique, and a commitment to respectful treatment, meaningful participation, and productive interaction (Bailin and Battersby 2010). These attitudes or habits of mind can be fostered through instructor modeling and the setting up of explicit expectations among students and between instructor and students.

It might be objected that arguers may assume a variety of roles, including proponent or opponent, judges or spectators (Cohen 2013), and that each of these roles may require or emphasize different virtues. So if one is a

⁵ Aikin and Clanton (2010) argue that there are characteristics of individual deliberators (group deliberative virtues) that can help to foster virtuous deliberation, including deliberative wit, friendliness, empathy, charity, temperance, courage, sincerity, and humility.

defense lawyer, open-mindedness will not be the salient virtue required but rather an unrelenting pursuit of the weaknesses in the arguments of others. And in group deliberation, sometimes the person who doggedly maintains her position despite counter-arguments plays a useful role in ensuring that alternative arguments are given due consideration. Nonetheless, in multi-role argumentation, arguments have to be put forward, understood and elaborated, defended, criticized, revised, and evaluated. Thus the virtues related to the various roles would have to be represented among the group in order for effective deliberation to take place. Individuals would also need to be proficient in taking on the various roles depending on the context (von Radziewsky 2014). Indeed, with an inquiry approach, there is usually not a sharp differentiation among the various roles. Rather, individuals alternate between proposing, critiquing, defending, revising and evaluating. Moreover, the context we are considering here is education, and as educators we have an obligation to promote the full range of virtues in all our students.

For inquiry to flourish, one needs assessment practices which are consonant with an inquiry orientation, practices which value the activities, achievements, and virtues of inquiry. If what one is looking for is critical thinking, then one has to assess for critical thinking and not just for content. Moreover, assessment can have an important pedagogical function. Too often the only or primary form of assessment is summative. Yet formative assessment, that is assessment that is ongoing and for the purpose of enhancing performance, can assist students to improve their thinking (Scriven 1967; Nicol and Macfarlane-Dick 2006). Assessment becomes a part of the learning process as students come to understand the criteria relevant to evaluating aspects of their inquiries, and learn to employ these criteria to assess their own work, to critique the work of their peers, and to revise and improve their own efforts. An inquiry classroom is one characterized by ongoing instructor and peer feedback and continual revision.

Despite our best efforts to foster the virtues of inquiry, there are certain common human attitudes and reactions which are counter-productive to inquiry and which are often reinforced in social contexts. Some examples are: the need to be right, the desire for certainty, the identification with our beliefs, defensiveness, and groupthink (Bailin and Battersby 2010, 199–201; Battersby and Bailin 2014). Another aspect of acquiring the virtues of inquiry, then, involves becoming aware of these cognitive and emotional obstacles which can hamper inquiry, and instituting measures to avoid them or at least lessen their influence. One way to do this is to monitor one's own inquiry process, asking oneself questions such as: "Are my preconceptions and initial perspectives biasing how I evaluate this issue?" "Am I seriously considering other views and arguments?"

"Am I being open to criticism?" "Am I identifying with being a reasonable person rather than with a particular point of view?" There are also some pedagogical strategies which can help to counter some key obstacles and foster important virtues. For example, the failure to look at and seriously consider both sides of an issue or to seek alternatives is a significant problem for critical thinking, but there are strategies that can help mitigate this tendency. Requiring students to lay out and evaluate various sides of an issue as an integral part of the inquiry process is one example. Having students come up with the best arguments they can for a position that it is the opposite of what they believe is another.⁶

Another important consideration in trying to promote inquiry and its virtues is motivation (Facione 2000). A key concept which runs through the cognitive bias literature is that of mental effort (Kahneman 2011, 39–49). Thinking critically and engaging in serious inquiry requires mental work, and much of this literature seems to indicate that people are often not initially inclined to put in this effort. Kahneman has argued that this failure is due, at least in part, to insufficient motivation. Here MacIntyre's notion of seeing the point of a practice is relevant. A significant part of the motivation to engage in inquiry comes through getting on the inside of the practice and coming to appreciate the goods inherent in it (Bailin and Battersby 2007).

But inquiry is also a purposive practice which enables one to investigate complex issues in a rigorous way. The discovery on the part of students that they can tackle real issues which are meaningful and of interest to them, and that they have the means to think their way through them and make reasoned judgments can be significantly empowering and motivating.

4 Conclusion

There is widespread agreement that fostering the virtues of critical thinking is central to a rational community and a democratic society. Our argument is that a serious commitment to fostering these virtues requires thinking about critical thinking in a different way and taking that conception into the classroom. Argumentation theorists tend to

⁶ Zenker (2014) describes a teaching and learning activity for this purpose involving what he calls "counterfactual meta-cognition" (engaging in reasoning episodes that one does not agree with personally). Another strategy is a U-shaped debate, in which students are encouraged to physically change their position around a semi-circle as they hear reasons from their peers that cause them to want to shift their view on the issue under discussion. For a more complete description of the process, see University of British Columbia (2014). Structured controversy, in which students argue for both sides of a controversial issue and ultimately come up with a balanced view, is yet another example (see Johnson and Johnson 1988).

have a real interest in education and have devoted a great deal of attention to the content of courses in critical thinking. Insufficient attention has been paid, however, to the kind of educational outcomes that we hope to achieve through critical thinking instruction and to the pedagogical practices that might best achieve these outcomes. Our contention is that conceiving of our enterprise in terms of initiating students into the practice of inquiry in its various forms and organizing our teaching to achieve this is the most effective way to foster the virtues of inquiry.

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