



Cognitive Biases

How to Interpret Them to Better Understand Them

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As college students, we were approached to participate in a research project on inclusion and cognitive biases funded by the Programme d'aide à la recherche sur l'enseignement et l'apprentissage [Teaching and Learning Research Assistance Program, Ed.] (PAREA). We are part of a research team of 12 people from a variety of backgrounds (students, teachers, and professionals) and we co-construct our research findings. In this three-year project, our group's goal is to develop a reflective and meta-cognitive approach—consisting in introspective strategies—for teachers to encourage inclusion in college. Having diverse educational paths, we find it interesting to share our experiences and findings as students to further the research on inclusion. We are

convinced that this process will be enriching for us and are motivated by the new perspective that this research brings to our respective social, personal and professional lives.

In this article, we will share some of the reflections and findings from this project. We will present how this increased awareness now allows us to observe and recognize cognitive biases in order to counteract the stereotypical views to which they can lead. To this end, we will discuss the notions of inclusion and cognitive bias, share our experiences as co-researchers, and propose avenues to explore to make teaching more inclusive.

Why inclusion?

Knowing that human diversity has countless facets that make each human being a unique individual, we believe that it is essential to promote living together in our society. We have learned, especially through our research project, that we would benefit from a more inclusive worldview. Today, minority communities have increased visibility, and many can now access higher education. Therefore, it is becoming increasingly important to consider the criterion of inclusion in courses (Doutreloux, 2019, p. 1). Unfortunately, we find that certain cognitive biases (prejudices, stereotypes) still hinder the path to inclusion today.

As we participated in this collaborative research, we quickly realized that it was essential to have a clear understanding of the concept of inclusion in order to be able to put it into practice in our daily lives. We first learned to differentiate between the concepts of inclusion and integration. Many people confuse these two concepts even if they don't mean the same thing. Integration means offering accommodations to compensate for disabilities or asking a person with a disability to adapt to the existing structures of the school (AuCoin and Vienneau, 2010; Beaugard and Trépanier, 2010; Plaisance, 2010). On the other hand, inclusion is about creating an environment where all people are respected equally and have access to the same opportunities. To be inclusive, we must develop an understanding of other cultures, experiences and communities, and make a conscious effort to be welcoming and respectful of all.

Inclusion thus aims to counteract processes of exclusion (Prud'homme

et al., 2016). It offers many benefits at the individual and societal level. From a learner perspective, it aims to avoid situations where the student would feel isolated or excluded within their institution. Inclusive education also leans toward equity, which allows it to take into consideration the needs and realities of each individual to enable everyone to succeed. From a societal perspective, inclusive education promotes values such as respect for differences, the uniqueness of each learner, and caring for one another, thereby creating responsible citizenship. It allows students to feel more fulfilled and helps them to find their place in the world of higher education. As an example, one of us once attended a class in which was also enrolled a student with a mild form of autism. He often asked questions and dwelt on details. The teacher was very attentive to his needs and told him calmly when his questions were irrelevant. He talked to him patiently and took his situation into account. As a result, the other students were much more likely to talk to him. Based on this experience, we believe that our society and our college institutions should be more inclusive, as this educator was. And to do this, we believe it is important to work on cognitive biases.

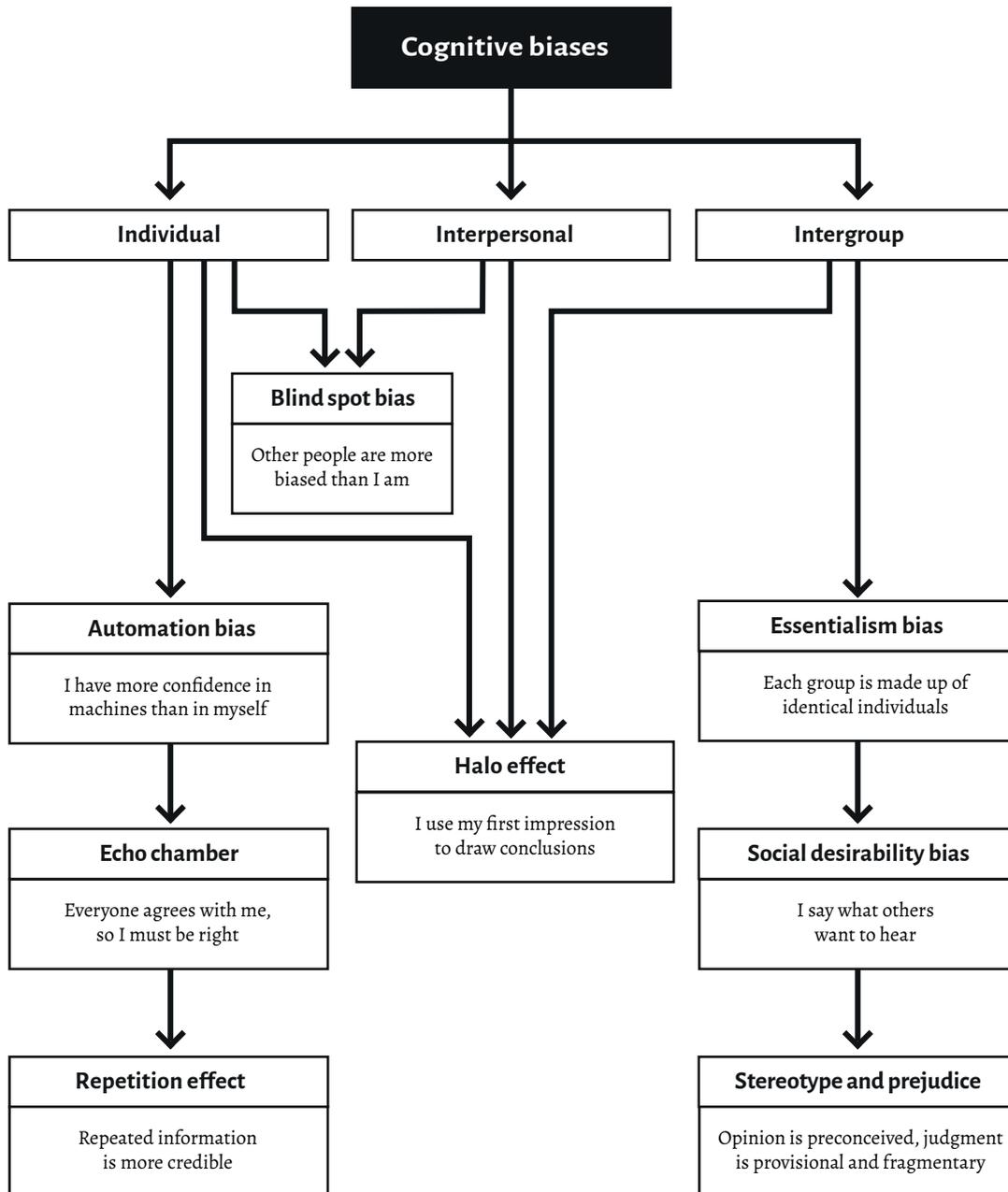
These biases that play tricks on us

To prevent resorting to prejudice in interactions with others, we have learned that our view of inclusion should not be coloured by our cognitive biases. For this reason, it is important to understand our own biases and eventually be able to deconstruct them. This can be a difficult step, as we may not even be aware

of our own preconceptions. One of the best ways to analyze prejudices is to understand that they come from cognitive biases, that is to say from identifiable errors that are found in our judgment in a predictable and systematic way (Gagnon-St-Pierre and Gratton, 2000). These errors of judgment are in fact mental shortcuts that allow us to make a decision quickly, rather than taking the time and energy necessary to engage in deep reflection (Gauvreau, 2021). This speed of decision-making was once essential to the survival of the human species: for example, being afraid of all the long, thin shapes on the ground allowed one to avoid a face-to-face encounter with a poisonous snake (Gendreau, 2020). Although cognitive biases were very useful in some life-and-death situations, they also simplify the perception of reality in other contexts, negatively tainting reasoning and hindering the development of critical thinking. Figure 1, which presents a typology of the most common cognitive biases as well as a few examples of each one, helps us to see this more clearly.

Figure 1

Typology of cognitive biases



Source: Inspired by Gagnon St-Pierre and Grattori's Handy Guide to Cognitive Bias [shortcogs.com]

A common mental shortcut leading to prejudice is the essentialism bias: this bias leads to the belief that every individual belonging to the same social group shares the same character traits (Gagnon-St-Pierre, 2020). However, it is impossible to define an individual's personality simply by their membership in a social group. This bias, for example, is at the origin of certain discriminations such as those of the Indigenous peoples in Canada. According to this shortcut, Indigenous individuals are overrepresented in Canadian prisons because this social group is violent by nature (Gauvreau, 2021), whereas in reality, a multitude of non-essentialist social factors explain this phenomenon.

Another cognitive bias that can affect inclusion is the repetition effect. This tends to give credibility to information that has been repeated several times, regardless of the veracity of the statements (Gratton, 2020). This is how prejudices frequently conveyed by one's entourage or by the media can quickly be interpreted as truths. The repetition effect is a bias often seen in teachers. In a classroom setting, if the teacher projects their biases into the classroom (e.g., makes comments about a particular student, brings up their personal opinion that may be biased), it can greatly affect the students in general, who end up believing these comments. For example, one of us has sometimes heard from general education teachers (French literature, philosophy, physical education, etc.) that science students are harder workers than other students, and this student, not being a science student, found this demotivating, because she felt that her teachers believed less in her academic success or abilities when they brought up this prejudice. This

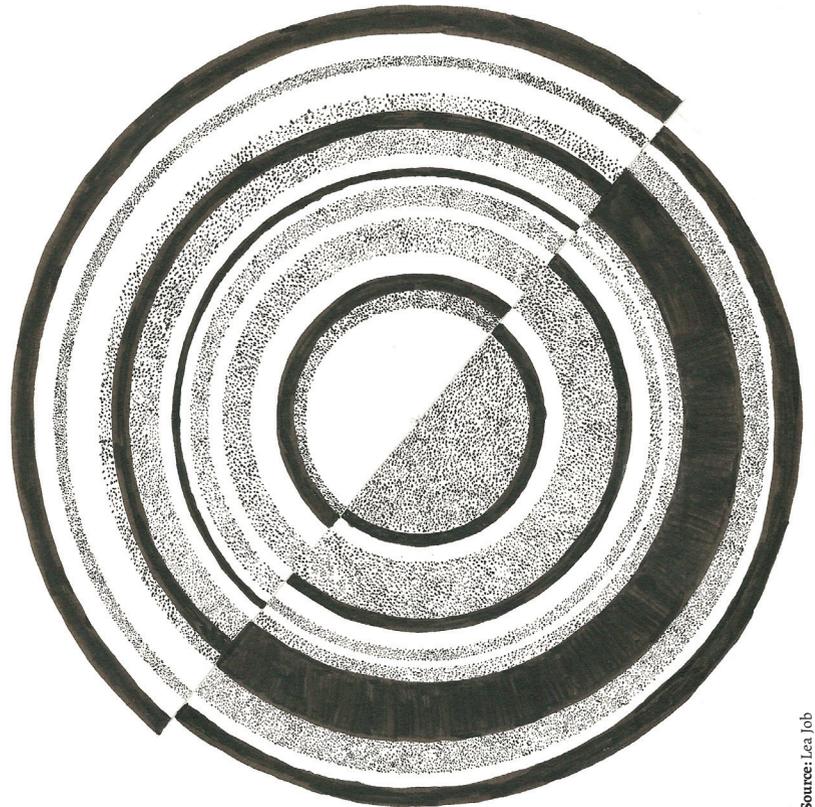
kind of talk can really undermine the morale and motivation of any learner.

Nonetheless, knowledge of cognitive biases does not make anyone immune to them. Since the presence of mental shortcuts is part of our survival instinct, it would be very difficult, if not impossible, to avoid them all. Some people cannot completely rid themselves of their cognitive biases, but being aware of them is the first step to mitigating their negative effects on society.

In the context of our research, familiarity with cognitive biases is seen as a step toward inclusion. However, it is still necessary to demonstrate reflexivity and metacognition in order to be able to act on our own biases, once we have identified them. Indeed, we realized

that discovering what influences cognitive biases, including the media, social movements, family, and school, makes it easier to question the veracity of preconceived ideas. In order to acquire an open mind that will lead us to reflect on our unconscious biases, we must first reflect on ourselves, using a critical approach, in order to make adjustments.

Metacognition and reflexivity are also very useful in understanding cognitive biases. Biases are thoughts and actions that, as mentioned above, are instinctive reflexes, whereas metacognition and reflexivity are reflective processes that take place more slowly. Whether it is before or after an action is taken, the individual has time to reason their behaviour. They are able to take a step



back and reflect on the situation more objectively. By using metacognition and reflexivity, it is possible to become aware of the causes and consequences of our own cognitive biases and then seek solutions to counter them. The reflective individual evaluates all possibilities, whether it be their own beliefs and perspectives or those of others, to deconstruct their own thinking. Using the example of essentialism bias toward First Peoples, a reflective individual would have to ask themselves, "Is this a real fact?" or "Why do I have this bias and where does it come from?" After thinking about these questions, the reflective individual might understand that, for example, they would have often heard family members repeat these statements. Because these facts are conveyed by their own family members, they have taken it for granted that they correspond with reality, and it has never occurred to them to cross-check the information. By taking such a cerebral approach, the individual will be able to act more efficiently and find more informed solutions to their bias (Pallascio et al., 2004). Knowing the origin of our ideas and the reasons behind certain thoughts allows us to free ourselves from intellectual rigidity (Dewey, 1933, in Pallascio et al., 2004).

The journal as a support tool

With respect to the research we are involved in, one element of the methodology is to draw on the experiences of each individual to co-construct the research findings. In this context, we individually engage in a reflective and metacognitive process that we share within our research community in order to jointly identify an approach that can be replicated by others. To

do this, we use a journal. This tool is used to fuel our discussions, to form our opinions and to keep track of our reflections (Vanlint, n.d.). The journal is personal and private; no third party has access to it.

After doing this introspective work, it is important to discuss our reflections with others. This allows us to open our minds and take a step back from the issue. This is why journaling is very relevant to research, as it allows us to explore different points of view through the diversity of opinions of others. By understanding our own biases, we are now better positioned to help others in their process. In addition, the journal allows us to become aware of the evolution of our thoughts while enriching our point of view in a personally relevant manner. For example, it allows us to better understand some of our behaviours and to analyze our way of thinking.

It is therefore helpful to use this method to structure and describe our thoughts, which is a way of identifying our cognitive biases and, consequently, of possibly mitigating their harmful effects. It is important to note that some people may have an easier time with certain modes of representation. Moreover, the journal can be deployed in several ways; for example, some prefer to express themselves through drawings, while others may want to record their observations in audio form.

The most important thing is to answer open-ended questions, through reflexivity, by asking ourselves the what, how, and why of the question. We can also facilitate the process by writing freely for about ten minutes on a topic or thinking about an event

or memory that relates to the question (Moon, 2006). Journal questions might resemble: "What did you learn about your unconscious biases during the last meeting?" Note that the questions may change depending on the topic at hand. Here is a journal question and the response of one of us:

What are the biases that colour your view of inclusion?

"I have an essentialism bias. I realized over time that I was really struggling with including men. Whenever the opportunity arose, at the beginning of the year when you have to find a new place to sit or when it was time to find a partner for assignments, I was always more inclined to turn to a female student. In fact, I realized that I trust them more, even my teachers. I rarely ask a male teacher questions, but I have more courage if it's a woman. I think that maybe I have this bias because of all the prejudices I have heard since my childhood about men (e.g. stronger, smarter, always on top). I've probably been intimidated by those comments."

Through this research, we realized that using a journal led us to a greater openness that allowed us to reach out to others more often because of a decrease in our prejudices. We also realized with the journal that moving toward inclusion involves personal change, long before we can achieve collective change.

How can we work on teaching practices to promote inclusion?

In light of the experiences and observations made so far in this project, it is possible to identify a few points that, if applied diligently, can support a more inclusive teaching practice:

Realize that everyone has biases to work with.

Be willing to work to reduce our own bias.

Identify the causes of our biases (e.g., is it repeated information, a prejudice, the result of past experience?).

Ask ourselves questions about the what, how, and why of our biases, using a journal or other strategies (e.g., free writing for 10 minutes).

Collect our questions in a journal to be able to follow up on them.

Share our findings with others in the form of a discussion (to gain perspective on the situation and achieve greater openness).

Find strategies, such as reflexivity, that can help reduce the impact of bias on our judgment.

Apply the strategies developed through the journal in a classroom setting.

Conclusion

With this article, we wanted to highlight the steps that we felt were important to promote inclusion, as well as different strategies to achieve it, including journaling. In order to adopt a more inclusive attitude, it is desirable, first and foremost, to get to know ourselves. To achieve this, techniques such as metacognition and reflexivity are proud allies since, without an objective analysis of our thoughts, opinions often remain biased.

Our hope is that the environments in which we study, work and live (why not!) will be adapted to the realities of the people who evolve within them. And, ultimately, that inclusion becomes an everyday term that no longer needs to be explained and defended. ■



Source: Lea Job

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