DIALOGUE, ARGUMENTATION AND EDUCATION

New pedagogical visions and technological developments have brought argumentation to the fore of educational practice. Whereas students previously learned to argue, they now also argue to learn: collaborative argumentation-based learning has become a popular and valuable pedagogical technique across a variety of tasks and disciplines. Researchers have explored the conditions under which arguing to learn is successful, described some of its learning potentials (such as for conceptual change and reflexive learning) and developed Internet-based tools to support such learning. However, the further advancement of this field presently faces several problems, which this book addresses. Three dimensions of analysis – historical, theoretical and empirical – are integrated throughout the book. Given the nature of its object of study – dialogue, interaction, argumentation, learning and teaching – this book is resolutely multidisciplinary, drawing on research on learning in educational and psychological sciences, as well as on philosophical and linguistic theories of dialogue and argumentation.

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Dialogue, Argumentation and Education

HISTORY, THEORY AND PRACTICE

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To my father, Adi, with whom I dialogised without books,
and to my uncle, Rabbi Meïr Zini, who taught me
to dialogise with books.

To the memory of my mother, Marlene Baker (1938–2015),
who taught me to love books and music.

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Foreword

Several years ago, I organized a conference on dialogic learning that brought together scholars in a wide range of fields from across the world. During the planning phase, my colleagues and I contacted scholars whom we knew to be interested in the role of discussion and social interaction in school learning and asked them to send us any evidence they had, published or unpublished, on the effects of carefully orchestrated discussions among students. The responses were startling. The data we were sent included evidence that many students who were taught by dialogic methods performed better on standardized tests than similar students who did not have such discussion experience. The data also showed that some students retained their learned knowledge for two or three years. In some cases, they even transferred their academic advantage to a different domain. The results raised many questions for me. These questions have persisted through the assembling and editing of a volume (Resnick, Asterhan & Clarke 2015) based on the conference, to which my friend and esteemed colleague Baruch Schwarz contributed a chapter. The opportunity to further comment on the parallel work that Schwarz and his colleague, Michael Baker, were doing offered a chance to consider these questions in a different light.

I have been interested in classroom talk since I was a young student. Arguing with my classmates, when I was given the chance, was for me the most exciting part of any lesson. At the University of Pittsburgh, I helped to develop *accountable talk*, to define the kind of talk that meets standards for a good classroom discussion. This form of talk is accountable to knowledge (getting the facts right even if it is a struggle to find the perfect wording), accountable to reasoning (providing a rational justification for a claim), and accountable to community (showing respect for the ideas and feelings of others). By the time I organized the conference, I had been

immersed in classroom talk for years. Yet I was stunned by the evidence of transfer and what it implied about the nature of intelligence. If learning through discussion in a domain such as science can lead to higher scores on an English exam, for example, then it seemed to me we had proof that intelligence is learnable – the mind can grow. This seemed revolutionary in a scholarly world that believes that people can get better at doing specific intellectual tasks but that intelligence is a natural endowment.

Thinking this through, I also found at least a partial answer to a question that had been puzzling me and my colleagues: Why was resistance to the idea of *accountable talk* so strong? It could be that the requirements of testing – currently a dominating force in education – favor teacher-centered talk and tend to repress much student discussion. It could be because it is admittedly difficult for teachers to manage discussions that have no clear end.

However, the transfer evidence led me to another possibility. Most people hold a deep-seated belief that cognitive ability is fixed at birth; therefore, only some children can learn to use complex forms of reasoning. Why try to teach – or expect teachers to teach – in a way that allows all children to debate and defend their ideas if only a few students have ideas worth debating?

Often students themselves share these beliefs. In Chapter 1 of this book, Baker describes French teenagers in a technical school who told him they were the "bad students," so naturally, they could not be expected to discuss important social issues. My colleague, Sherice Clarke, interviewed American teenagers about their participation in discussions in a high school biology class. Most seemed to believe the purpose of discussion was to display knowledge they had already acquired. Unless they were "knowers," they did not have the right to speak. As a result, nearly half the class remained silent over the observed period of six weeks.

The "right to speak" is intimately related to democratic ideals. The great civil rights movements of the nineteenth and twentieth centuries were aimed at securing the right to vote for everyone. In the twenty-first century, however, more is asked of citizens than regular visits to the voting booth. Participation in a democracy depends on the ability to enter fully into the public debates and discussions of the day. This means being able to form a position based on evidence, counter a claim, persuade someone to take another view of an idea, or convince another of the worth of a plan. This means knowing how to keep a conversation going when the parties deeply disagree. These are the skills that allow individuals to shape their own destinies. The same skills will be needed for an educated citizenry to reshape society.

If we view the capacity to reason as a birthright, not as the purview of an elite group, then we must offer opportunities to develop the skills of argument (which are really the skills of reasoning) to everyone. The question of how to accomplish that goal brings us to this book.

Schwarz and Baker provide a comprehensive view of how dialogue has evolved through history and been positioned with regard to theories of mind and the right to speak. They identify the need for supporting argumentation-based learning with stronger theoretical foundations, and they begin to provide such foundations.

Turning to the history of dialogue as a branch of philosophy, the authors bring their knowledge of the various strains of argumentation theory to bear on talk in the classroom. Their discussion (in Chapters 3 and 4) will be challenging for readers without a deep background in philosophy, but the payoff for "staying the course" will be considerable. This perspective allows the authors to analyze classroom dialogue with different "tools" than those used by the typical researcher or teacher. One could say that learning theory and argumentation theory engage in dialogue here and emerge in a newly integrated form. The new theory influences the authors' discussion of how argumentation should be designed for the classroom and their fascinating analysis of what is actually happening when students argue to learn to argue.

By the end of this book, the authors have laid out the main lines of a case for argumentation as a competency that all schools should teach – because argumentation is central to democracy. As I write this, in November 2015, I imagine what might have occurred if a copy of this book had appeared on every café table in the Eleventh Arrondissement of Paris a few weeks ago. Fewer guns, more arguments. Is that not an imaginable paradise?

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Preface

To our knowledge, this book is the first monograph on argumentation in dialogue in education. We explore how students learn in specific teaching domains by engaging in argumentative dialogues, as well as the conditions for the emergence of such dialogues. Our main theme is thus *arguing to learn* and moreover, arguing to learn *together*.

Our work has many inspirations, beginning of course, with the classics in logic and argumentation. However, such theories deal mainly with – and indeed originated from – the spheres of law, politics and the media, leaving education and the learning subject aside. Given its domains of predilection, argumentation theory tends to stress the distinction between acceptable and unacceptable modes of reasoning and persuasive discourse, whereas it is the *constructive* function of argumentation dialogue with respect to new knowledge, that is important for education.

In modern times and in the domain of education, the most influential work on argument has been that of Deanna Kuhn (see, e.g. *The Skills of Argument*, 1991, or her more recent book for teachers, written with Hemberger and Khait, *Argue with Me*, 2014). Kuhn treats argument as an abstract higher-order skill acquired gradually throughout development. In other words, her work is about *learning to argue*. Most of the educators interested in promoting argumentation in classrooms have been profoundly influenced by Kuhn's research, especially researchers in science education (e.g. Erduran and Jiménez-Aleixandre 2007), who see argumentation as a key skill in doing and learning science.

In their book entitled *Arguing to Learn*, Jerry Andriessen, Michael Baker and Dan Suthers (2003) established a new research direction. With respect to the work on 'skills of argument' just mentioned, the arguing-to-learn approach is focused on the interactive dynamics at work in groups of learners rather than on the individual. It focuses on interactive learning

processes involving argumentation in specific taught domains and classroom contexts, with no *a priori* assumption that the processes involved are either universal or else purely 'cognitive' (they are also communicative and involve the interplay of interpersonal relations and affects). In practice, the distinction between learning to argue and arguing to learn is not sharp because the latter presupposes the former, and what can be learned from arguing about a topic may in fact be of an argumentative nature (knowledge of the main views and arguments for and against them). But researchers working on arguing to learn – as we already stated, this being the subject of this book – aim to work from the argumentative skills that students already possess, as people already well able to communicate with others, and stress this distinction in order to demarcate themselves from a pedagogical approach mainly targeted at the development of high-order thinking skills. Arguing to learn has thus been identified as one of the key processes of social learning in specific teaching domains. Argumentation is now studied in situation instead of as an abstract skill to be acquired (learning to argue) and applied anywhere and everywhere, as indeed is the implicit and seemingly obvious view of the major theories of argumentation. Arguing to learn is contextualised in the flourishing domain of collaborative learning, as a sub-field that has come to be known as *collaborative argumentation-based learning*, across a variety of tasks and taught disciplines. Huge developments in computer design have provided varied computer supports for collaborative argumentation-based learning.

Over the past twenty-five years there have been several collective works on collaborative argumentation-based learning in which we participated as authors and as co-editors (Andriessen, Baker & Suthers 2003; Andriessen & Coirier, 1999; Baker, Andriessen & Järvelä 2013; Ludvigsen, Lund, Rasmussen & Säljö 2010; Muller Mirza & Perret-Clermont 2009; Schwarz, Dreyfus & Hershkowitz 2009). All these books are collections of separate articles, many of which deal with arguing to learn and related topics such as the roles of emotion and tool mediation. The process of the writing of these books was extremely influential on us as the background for the writing of this book. Conferences that gathered together all contributors preceded the writing of the chapters of each book. During each conference, we found ourselves immersed in a wonderful outburst of ideas in various domains: educational psychology, social psychology, socio-cultural theories, computer design and of course, informal logic and theories of argumentation. Although such a disparate list of domains could have led us to feel confused or eclectic, we felt that these conferences helped in creating a new scientific community around something big – a new domain that we

had difficulties in defining, but that united people from different domains. However, when each of us turned to the writing of our chapters the compartmentalisation of domains dominated. Indeed, as contributors to all these books we felt that the chapters did not present an integrative view that combines learning, dialogue and argumentation because each of the contributors adopted his or her view on learning, dialogue and argumentation. No through-written book existed that could serve as a common reference for the emerging domain of argumentation and education. Also, during the last five years our discomfort about the absence of suitable references increased considerably in the light of the impressive number of articles published on argumentation in learning contexts. In addition, the ubiquitous use of social networks by young people in debates or in discussions – for better and for worse – brings the study of new forms of argumentation to the fore of educational issues.

We therefore felt that there was a need for a through-written book on argumentation in collaborative learning contexts. This book is an attempt to synthesise and extend what we have absorbed and learned over the last twenty-five years on dialogue, argumentation and education. We feel that we are the instruments of a growing society that seeks to establish its identity. However, the literal explosion of research in argumentation in learning contexts during the last decade turned our enterprise into an almost impossible challenge. We are aware that many research efforts have not been included in this book, primarily due to our inability to cope with an exponential number of publications. We have not been exhaustive for another reason. It is not only the number of publications but also the new directions that are so diverse that they cannot reasonably been inserted into one book. An example of this diversity is the use of social networks. The kinds of discussions between young people that develop in and out of schools are relevant to education. Propaganda, violence and demagogy are involved in social network discussions that can impinge on the opinions or actions of children or adolescents for better and for worse. We have hardly touched on this immensely important topic which is obviously relevant to the general themes of this book. We could also have reviewed very interesting research on argumentation in multi-cultural educational contexts, a highly relevant topic in Western countries. However, reviewing research on these and other extremely interesting topics would have made our book too eclectic and too complex and indeed too big.

Although this book is about argumentation in learning contexts and therefore might be expected to be purely a work of educational psychology,

the title of the book, *Dialogue, Argumentation and Education: History, Theory and Practice*, is intended to indicate that we also include general theoretical perspectives from philosophy and language sciences on dialogue and argumentation themselves, as well as their inscription in educational practices throughout modern history. This is therefore a resolutely multidisciplinary book. Readers interested in results of research in psychology and educational sciences on how students learn in argumentation dialogue and how situations that favour this may be designed may wish to consult mostly the later chapters of this book. We hope however, that they will also be interested in the earlier chapters on dialogue and argumentation theory. We included them here because, although references to both dialogue and argumentation have become very frequent in modern pedagogical approaches, they are often based on largely intuitive or everyday notions of these phenomena. We believe therefore, that a few reminders of more precise theoretically motivated definitions of dialogue and argumentation may be of some use.

As our scientific community grew we became aware of the fact that the move towards dialogic and argumentative pedagogies involves an aspiration to deep educational changes with societal implications. Such pedagogies are new with respect to the earlier part of the twentieth century. But, as we describe here, they have a long history prior to this. Such a *historical perspective* can guide future steps in instilling argumentative norms and implementing argumentative practices in educational institutions. The evolution of dialogue and argumentation practices in religious education (notably within Christian, Jewish and Islamic religious education) and secular education over the last two thousand years is relevant for those who contribute to the promotion of new argumentative skills in education.

We hope that this will be a useful resource book for researchers, students and teachers interested in these issues as well as designers of educational technologies. Although we have invested efforts in maintaining coherence between the very different chapters of this book, readers may wish to focus on certain chapters at the expense of others. We took into consideration the possibility of a selective reading by providing concluding sections in Chapters 2, 3, 4, 5 and 6 that serve as short summaries for each of these chapters.

Over the two preceding decades or more our ideas on argumentation, dialogue and education have been shaped by collaborations with many people. Pierre Dillenbourg created a framework in which the role of argumentation in collaborative learning could be studied by his organisation in the 1990s of a ‘collaborative learning task force’ within the ‘Learning

in Humans and Machines' programme, financed by the European Science Foundation. Over the years our closest collaborator in developing the arguing-to-learn approach has been Jerry Andriessen at the University of Utrecht, then at Wise and Munro Learning Research, with whom we have published several co-edited books, book chapters and research papers. In particular, for Michael Baker, the argumentation theorist Christian Plantin has been a major influence over a period spanning a decade, within the CNRS-ICAR Laboratory in Lyon. We thank Christian Plantin for his careful critical and constructive reading of Chapters 2 and 3 of this book.

Since the 1990s the European Commission has funded many research and development projects that helped us to participate in developing new technologies for facilitating learning and teaching processes. Since the beginning of the millennium, we worked on several such projects focusing on arguing to learn: DREW, DUNES, SCALE, LEAD, ARGUNAUT, ESCALATE and METAFORA. All of them yielded innovative environments with which we could envision new argumentative practices, among them argumentative writing based on *maps* of previous discussions and the subtle role of teachers in *moderating* groups of arguing learners. These projects were opportunities to strengthen our growing society. For example, through his participation in those projects Baruch Schwarz interacted not only with omnipresent Jerry Andriessen but also with Anne-Nelly Perret-Clermont at the University of Neuchâtel. Such encounters brought forwards the perspective of social psychology to the study of argumentation. With the perspective of time we recognise the importance of the massive funding of the European Community that we have received and express our gratitude for the trust that was put in our ideas.

Many people helped in the actual writing of this book over the four years it was in the making. Amongst them we thank specifically Christa Asterhan, Zvi Bekerman, Paolo Boero, Nadia Douek, Michael Ford, Christian Plantin, Françoise Détienne, Anne-Nelly Perret-Clermont and Benzi Slakmon for their precious detailed comments on several chapters of the book.

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