

# The Practice of Teaching Composition

Dániel Péter Biró

The Grieg Academy, University of Bergen | Norway

**Abstract:** in this essay, composer Dániel Péter Biró reveals his methodology and trajectory as a professor of music composition in the last 16 years. Biró explains how can one teaches a creative artistic process nowadays, in a globalized musical culture, which is full of possibilities for development of cultural diversity while simultaneously providing students distractions driven by capitalist paradigms. How can one help each student to develop his/her own musical language? For this task, Biró talks about how composition today is creative process highly grounded in intellectual and interdisciplinary approaches, sharing similarities with other areas of research such as philosophy and history. For this task, the composer relies on musical analysis in his seminars and individual lessons as one of the strongest methodologies to learn composition, alongside integrating music technology and contemporary performance practice research. [note by editor].

**Keywords:** music composition, pedagogy and methodology, contemporary music, music and technology, interdisciplinary studies.

*Dedicated to my students and teachers*

Yehoshua ben Perachiah and Nitai of Arbel received from them. Yehoshua ben Perachia says, "Make for yourself a mentor, acquire for yourself a friend and judge every person as meritorious."<sup>1</sup>

I have learned much from my teachers and even more from my friends, but from my students I have learned more than from all of them.<sup>2</sup>

I have been teaching composition full-time since 2004. Educating composers for me remains a non-hierarchical activity and in a very Talmudic sense, I feel that I am as much a learner as a student when I teach composition.<sup>3</sup> Within this timeframe, I have practiced and further developed a teaching methodology, which has changed over time. In this paper, I will deal with how I teach composition and why I teach this way, thereby looking into the various needs, challenges and opportunities involved in teaching composition in the 21<sup>st</sup> century.

As we live in an international community with no common musical language, a composer has to create a musical language that is personal without being solipsistic; the composer must invent a kind of personal musical Esperanto. The composition teacher's goal is to help the student find his or her own musical language and to help the student develop the technique to express that language. For

---

עֵיהוּשׁ בֶּן פֶּרַחְיָה וְנֵטַי הָאֲרֵבֵלִי קִבְּלוּ מֵהֵם.  
יְהוֹשֻׁעַ בֶּן פֶּרַחְיָה אוֹמֵר. עֲשֵׂה לְךָ רֵב. וְקַנֵּה לְךָ חֵבֵר. וְהוּי דֵן אֶת כָּל הָאָדָם לְכַף זְכוּת.

Goldwurm, H., Schorr, Y., Malinowitz, C., Schottenstein, E., & Mesorah Heritage Foundation., Talmud Bavli: The Gemara: The classic Vilna edition, with an annotated, interpretive elucidation, as an aid to Talmud study = Talmud Bavli (Mixed ed., ArtScroll series). (Brooklyn, N.Y.: Mesorah Publications, 1997). Ta'anit 7a. Following this thinking, I wish to thank my students: Peter Cavell, Brandon Chow, David Ceccetto, Jonathan Crellin, Committee Liam Gibson, Ruth Guechtal, Robert Hansler, Georgi Harizanov, Deborah Hopper, Ryan Hemphill, Christian Hébert, Alanna Ho, Ava Hoegl, Jamie Hook, Adam Jasieniuk, Iljen Therese Kallevig, Ivana Jokic, Matthew Kaufhold, Matthew Kelly, Sean Kiley, Nolan Krell, Sean Kiley, Stefan Maier, Kimberley Manerikar, Seán Maynard, Darren Miller, Max Murray, Hollas Longton, Alex Loewen, Emily Mahbobi, Marcílio Onofre, Sara Page, Lynne Penhale, Timo Pekhonen, Nicolas Piper, Felipe Ribeiro, Syssilia Reid, Dave Riedstra, Pedro Samsel, Shabahang Saffari, Fuhong Shi, Heymin Suk, Juan Vassalo, James Waddel, Torbjørn Heide Arnesen, Lisa Braathen, Kjetil Djønné, Thomas Djønné, Alexander Fiske Fosse, Ole-Andreas Førde, Erik Håkon Halvorsen, Tijs Ham, Anders Hannevold, Aslak B. Hermstad, Maren Elise Ingeberg, Jone Finne Kuven, Parsa Shomali, Morten Brunsberg Refsli, Bendik Savstad, Gunhild Seim, Amund Bramness Vaage.

הֲרַבָּה לְמַדְתִּי יִמְרֵבוֹת וּמַחְבִּירֵי יוֹתֵר מֵרַבּוֹתַי וּמַתְלַמִּידֵי יוֹתֵר מִכּוֹלֵן<sup>2</sup>  
Avigdor Shinan, *Pirke Avot, A New Israeli Commentary* (Jerusalem: Avi Hay Foundation and Yedioth Ahronoth, 2009), 26 [*Pirke Avot* 1.6].

<sup>3</sup> The words in German "Lehrer" (teacher) and "lernen" (to study) are very much related. "The Latin root of education (educatio) signifies drawing out or leading out, which refers to the notion that good teaching brings out the best the student already has within." S. Epstein, "Epi on education," *Canadian Jewish News* (2005, Sep 08). Retrieved from <https://search-proquest-com.pva.uib.no/docview/351391672?accountid=8579> on Jan. 20, 2020.

me, the challenge of teaching composition is to allow for absolute pluralism while remaining thoroughly critical; this is the challenge of teaching music in the era of globalization. The teacher must accept the student's point of departure while taking no aspect of musical language for granted. However difficult, this challenge is an opportunity, as the teacher can assist the student to relate to the world via musical creation and interpretation. In addition, to teach composition is to integrate questions of philosophy, sociology, and history into the discourse as well as into the compositional process. This cannot be done simply as a superficial afterthought but instead must go to the basis of every sound produced or interpreted.

My seminars and classes investigate musical creation, performance and analysis, as well as making music with old and new technologies. Since 2010 I have taught an interactive seminar focusing on the creation and performance of new music. In this course, composer-participants propose new works for small mixed ensembles determined by the particular performance resources of that year's entering class of undergraduate and graduate performers. In this class, composition and performance students work together on all the stages of creating and rehearsing the works for the final performance. This class integrates training in contemporary notation and performance practices, extended techniques, instrumentation, conducting techniques, communication skills, concert production, and technical resources with the final project being a festival of new music produced by the seminar members. While the first part of the seminar is more theoretical, the second term is more project-based. In such a course, composition students and performance students have the chance to learn about ways to perform new music through the works of the composition students as well as through works from the new literature. Several guests came to this class (composer Helmut Lachenmann, the Ensemble Nickel, the JACK Quartet, Professor Chaya Czernowin, contralto Noa Frenkel, the Talea Ensemble, composer Suzanne Farrin, the Neue Vocalsolisten, the Schola Heidelberg, pianist Ermis Theodorakis, the BIT20 Ensemble and others) in order to lecture on topics of modern performance practice and composition. This course also proved itself invaluable for composition students in Canada and Norway, as many would form an intimate contact with performance majors even beyond the classroom environment. In this way, students, evolving out of a situation of collective inquiry within a seminar situation, become colleagues and, in the Talmudic sense, "friends" sharing the experience and joy of learning and making adventurous new music together.

Such courses allow for knowledge and skill sets within the intersections between composition, performance and technology. Besides teaching this course, I have been involved in the area of music technology at the University of Victoria, University of Utrecht, Harvard University and the Grieg Academy, University of Bergen. Collaboration with my colleagues in the performance areas at these institutions has also informed my teaching, as composition students can learn from direct contact with musicians and through observing rehearsal situations. Writing commissioned electro-acoustic works for such ensembles as Vancouver New Music, Ensemble Surplus, the Frankfurt Radio Symphony, the Quasar Saxophone Quartet and the Experimentalstudio, I have sought to integrate research into my teaching of music composition, music technology and contemporary performance practice.

### **Learning and Teaching: Then and Now**

My philosophy of teaching composition is a reflection of my own training. This training formally began at the High school of the Arts in Pécs, where I studied with guitarist Erika Sára and composer István Gyórfy and continued at the Bartók Conservatory in Budapest, Hungary. In Budapest, I studied harmony, counterpoint, style composition and the Kodály method as a student in composition. This education was the basis for my musical development, as I received the primary tools to analyze and create tonal (and non-tonal) music. In Budapest, I was taught by teachers who were truly excited about theory and analysis – the inner-construction of music – which included understanding music historically. In Hungary, one learned Bartók, Kodály, Ligeti, Denisov and Kurtág while one learned Hildegard, Bach, Beethoven, Mendelsohn, Schumann and Mozart. At that time, there was a kind of optimism in the air about discovering new forms of expression while, simultaneously, understanding historical music in a very serious and creative manner. In such a setting, I was taught that making music was more than just some kind of “entertainment” production but was an integral part of society and had a political, social and spiritual function. My teachers, who included Miklós Kocsár (composition), Iván Madarász (composition and music theory) and Ede Roth (guitar), were always ready to question me in a very direct and provoking manner. Looking back, such provocations allowed me to grow and I am grateful for having such experiences, which challenged me in a profound manner. Such teaching methods allowed me to

question my methods to learn and to begin to formulate my own musical and compositional language.

I later studied with Hans Zender (1936 - 2019) at the Frankfurt Musikhochschule. Also here, music was always considered alongside societal, philosophical and technological developments. In Germany, I was immediately aware of the rich musical history of the country. Simultaneously, I was surrounded by German students, who grappled with the problem of creating contemporary music after fascism. For me, the question about how a German tradition of music might exist after the Holocaust became a central and, often, uncomfortable question within the confines of the Musikhochschule. The animated conversations that I experienced in this period were indeed “learning experiences” in the most profound sense. In Frankfurt, once a semester, each student in the class would undertake a large-scale analysis of a musical work. In this class, I got to know a great deal of historical repertoire (analyzing a variety of works ranging from the middle ages to the 20<sup>th</sup> century). These seminars were augmented by work in music theory with Isabel Mundry. I was lucky to learn score reading, interpretation, conducting and chamber music from Bernhard Kontarsky, who introduced me to the works of 19<sup>th</sup> and 20<sup>th</sup> century opera composers and the skills of contemporary music performance. These skills also allowed me to become a better guitarist, as I studied guitar with Stephan Schmidt at the Musikhochschule in Bern and with Jürgen Ruck at the Musikhochschule in Würzburg. Both of these teachers were exemplary. Stephan Schmidt and I often discussed the relationship between performance and political realms, and these discussions follow my work as a musician until the present day. During this time, I learned various methods of music analysis and, equally important, about the importance of historical awareness while analyzing, performing and composing a given piece of music.

My experience in Frankfurt was continued and expanded during my doctoral studies at Princeton University. There, I was very active in the Music Department’s Music Theory Discussion Group, where I presented research on various topics in music analysis and ethnomusicology. In this group, scholars like my advisors Kofi Agawu, Scott Burnham and musicologist Carolyn Abbate would attend these meetings and they would often constructively challenge me in terms of the methodologies used and analytical paths taken when I presented on a given topic. I was also fortunate to be the teaching assistant of Peter Westergaard (1931 - 2019) and Steve Mackey in the subjects of species counterpoint. Paul Koonce and Paul Lansky provided excellent instruction

about computer music at Princeton. As a fellow in the Princeton University Program for Judaic Studies, I was active in courses offered through this program. I was lucky enough to attend the seminars of Peter Schäfer, a renowned expert on Merkavah mysticism, which also affected, in profound ways, my compositional work. One of the main “surprises” during my studies in Princeton was to encounter the world of chant, first with Peter Jeffery, an amazing scholar of Christian chant traditions, and through the Judaic Studies program. In the end, much to my astonishment, I completed a PhD thesis not about contemporary music but rather, about Hungarian, Jewish and early Christian chant traditions, looking into the development from oral to notational practices. While this became the focus of my theoretical dissertation, it also had an enormous impact on the development of my compositional language.<sup>4</sup>

### **Composition as Analysis**

I find that one of the most effective ways to teach composition is also through musical analysis. Analysis helps students to contextualize their work and put it in a social, geographical, intellectual and historical context. In my teaching, I try to inspire historical curiosity of the musical work, as I refer to and investigate the historical background in which a musical composition was created, and how this might relate to music created now. In order to establish an atmosphere of intense critical inquiry, I employ the Socratic method, so that the students discover the important questions for themselves. As I guide students through an analysis, I try to get them also to investigate the production process of a given work, to “re-live” the compositional process. In analyzing a piece of music, I always present background information to the students so that they also can question how a composer’s musical language is formed by a larger historical context, and how the particularity of a given composer’s voice is received by contemporary listeners.

---

<sup>4</sup> I was fortunate to attend classes and seminars of Joan Wildman (improvisation) and Vartan Manoogian (interpretation) at the University of Wisconsin, Madison. I was also able to learn from Toru Takamitsu (composition) and Manuel Barrueco (guitar) at the Centre Acanthes in Avignon, France in 1990. I also took part in the Bartók Seminar in Hungary from 1995-1999. I was able to attend lectures and masterclasses of Brian Ferneyhough, Péter Eötvös, Johannes Kretz, Michael Jarrell, György Kurtág, Jacopo Baboni Schilingi, Marco Stroppa and Andrea Szigetvári, among others, at these courses. In 2003 I was able to attend the Schloss Solitude Composition Academy, studying with Richard Barrett, Chaya Czernowin and Steven Kazuo Takasugi only to return there as a teacher in 2013.

## Composition and Research

In this way, the student can often discover how musical currents and developments were important at the time they were written.

Teaching and research have always led to cross-fertilization. The knowledge derived from my research into the string quartets of Béla Bartók, presented in the volume *The String Quartets of Béla Bartók: Tradition and Legacy in Analytical Perspectives*, which I co-edited with my colleague Harald Krebs, and published by Oxford University Press in 2014, has been utilized in my courses dealing with 20th century music analysis. My findings in computational ethnomusicology, discussed in countless articles, are often presented in my courses that incorporate indigenous music of world traditions.<sup>5</sup> The research creation in the field of electroacoustic music, as demonstrated in the volume *Live-Electronics at Work: The Experimentalstudio des SWR*, edited by myself, Jonathan Goldman, Detlef Heusinger and Constanze Stratz, published by Wolke Verlag in 2019, becomes integrated into my own teaching.

In 2011, I was Visiting Professor in the Department of Computing and Information Sciences, Utrecht University, Netherlands. There, together with colleagues, I began employing computer technology as a device for ethnomusicological research, developing methods for computer analysis of various chant traditions including Hungarian laments, Jewish Torah trope, Qur'an recitation and early Christian plainchant. Through this research, we have been able to analyze relationships between musical gesture, musical memory and syntax in these various chant traditions and have presented our findings at IRCAM, ISMIR and international conferences. In Canada and Norway, I have taught a seminar on Jewish, Islamic and early Christian notation practices, thereby integrating research findings in my teaching. Such a course has proven to be

---

<sup>5</sup> See for instance D. P. Biro, P. Van Kranenburg. "A Computational Re-Examination Of Bela Bartok's Transcription Methods as Exemplified by his Sirato Transcriptions of 1937/1938 and their Relevance for Contemporary Methods of Computational Transcription of Qur'an Recitation," in Holzapfel, A. (ed.). *Proceedings of the Fourth International Workshop on Folk Music Analysis (FMA2014)*. Istanbul: Bogazaci University, 2014, 70-77, D.P. Biró, P. van Kranenburg, S.R. Ness, G. Tzanetakis, and A. Volk. "Stability and Variation in Cadence Formulas in Oral and Semi-Oral Chant Traditions – a Computational Approach," in *Proceedings of the 12th International Conference on Music Perception and Cognition and the 8th Triennial Conference of the European Society for the Cognitive Sciences of Music*. Thessaloniki. 2012, 98-105 and P. van Kranenburg, D.P. Biró, S.R. Ness, and G. Tzanetakis. "A Computational Investigation of Melodic Contour Stability in Jewish Torah Trope Performance Traditions". IN: *Proceedings of the 12th International Society for Music Information Retrieval Conference*, Miami, 2011, 163-168.

important for composers, as it provides skills in transcription while providing a deep historical context for various developments of chant and recitation cultures.

In addition to teaching at universities, I have also been teaching composition and contemporary performance practice internationally. In 2006 I was a featured composer and lecturer at the Darmstadt International Summer Courses for New Music. In 2008 I was composer-in-residence at the International Messiaen Festival in Neustadt, Germany where I lectured on Jewish, Christian and Islamic chant traditions. From 2012-2013 I taught classes in electro-acoustic composition at the Studio Hateiva in Yafo, Israel. Since 2010, I have been a faculty member at the Matrix Academy for Electronic Music at the Experimental Studio in Freiburg, Germany and at the International Symposium for New and Computer Music in Curitiba, Brazil, as electro-acoustic music remains a central part of my compositional and music research endeavors. From 2011-2018, I was Artistic Director of the SALT New Music Festival and Symposium in Victoria, BC, Canada. When I started to direct this annual event, I did this in the realization that there needed to be a more serious platform in Canada for the teaching, discussion and presentation of contemporary music and it became not only an important event in Canada but brought together composers, musicians and students of composition and contemporary music from around the world. In Norway, I lead the Grieg Academy Composition Research Group, where composers come to discuss their artistic research in music composition. In such a context, composition is considered in terms of its larger practice and connection to other fields including performance practice, other artistic practices, sociology, psychology, philosophy and science.

### **Focus, Reflection, Environment, Language**

I see the challenge in learning and teaching today as very different from the time when I began my formal studies at the Bartók Conservatory in Budapest. Our present world is full of distractions (provided through combinations of technology, capitalism and politics) and one thing that I find the need to teach students today is to focus, to reflect and create an environment to develop a compositional language that is, on the one hand individual and on the other hand, a creative force in the larger society.

In order for this individual language to be developed, the composition student must retain a sense of focus in order to achieve a larger perception of the student's own production process, and how this relates to the music of the past, present and future. In order to achieve such focus, I often discuss how a composition student can prepare for their creative work. This might include doing breathing exercises, writing in a notebook ahead of working on a piece, shutting off all beeping devices, working on the piano (which often has the effect of slowing composers down in a productive way) or doing pre-compositional planning. This will allow for the student to "get lost" in the composition, allowing for, in the sense of Gérard Grisey, not the composer but the material to write the piece and for the composition to reflect on itself.<sup>6</sup>

Focus can allow for reflection and for composition students to contextualize their work within society. Without reflection, there is the danger that the work stays solipsistic. I still believe in the discovery of the new, even as future means of expression demand innovative research methods and technologies. In this way, I try to question, give guidance and encourage the student to reflect on the larger context of compositional production. This might include experiencing new artworks, reading a philosophical text or discovering a musical culture they did not know. Here often the biggest (and rewarding) surprises occur, which often allows the student to discover a part of their being that was, until then, not yet in their own realm of consciousness. To reflect on such matters group meetings are very useful. I encourage my students to ask one-another the very difficult questions. In this way, argument becomes a virtue for the intensive questioning of (any) status quo and to build a larger perspective as to what music can be and become. While group instruction is suitable for larger societal questioning, the psychology of creation remains paramount for compositional production. Because of this, the most important insights about a student's work are relayed in the individual lessons. Weekly individual tuition remains the most productive way to discuss the larger musical intentions and compositional desires of the student, allowing for, over a period of years, an intensity and depth of musical thought to be developed by the student in coordination with the instructor. In this sense, I try to hold up a mirror for the student, while providing the student with social and psychological support to explore the unknown.

---

<sup>6</sup> See Gérard Grisey, "Tempus ex Machina: A composer's reflections on musical time." *Contemporary Music Review* 2/1 (1987): 239-275.

Simultaneously, I must constantly re-evaluate my own values as an instructor, as the learning involved is, by default, two-directional.<sup>7</sup>

Composition students also require the right environment to work in. This means having the right room, desk, paper and erasers (and yes, I still think that calligraphy is important in terms of learning composition, even if one might eventually use other technology). The right environment also includes finding and collaborating with adventurous and curious musicians. In my experience, such young musicians receive some of the best training in collaborating with young composers and vice-versa. This allows for the musical culture of a given society to grow and for traditions of the past to be re-contextualized and developed further.

Finally, the composition student of today must “build” a language in an increasingly complex world. This is no easy task! In order for the composition student to create such a language, one that is unique and individual, a strange mix of a simultaneous openness to discover and stubbornness to create is required within the period of studies. Provocations and questioning from their fellow students, colleagues and mentors help in this process. I have found a way of stimulating thinking by suggesting that students look at musical realities that are far from their own, which will allow them to question and strengthen their own compositional language. For instance, a student who is working with highly mathematical operations might be asked to look into the music of Dufay while a student interested in counterpoint might be suggested to look into algorithmic computer assisted composition. In terms of institutions, the academic environment should facilitate this process of research, discovery and innovation by creating a culture wherein the posing of challenging questions is viewed as a valuable, meritorious endeavor.

Like my own previous teachers, I am excited about the interaction of learning and teaching. I hope that my students and I can achieve a larger understanding of what composing is and can be in our present and future. For me, such an understanding is, while challenging and exiting, also the point of departure for a critical compositional praxis, making possible the creation and reception of new musical languages and experiences.

---

<sup>7</sup> M. S., Barrett, & J. E. Gromko. (2007). Provoking the muse: a case study of teaching and learning in music composition. *Psychology of Music*, 35(2), 213–230. <https://doi.org/10.1177/0305735607070305>

## REFERENCES

- BARRETT, M. S., & GROMKO, J. E. (2007). Provoking the muse: a case study of teaching and learning in music composition. *Psychology of Music*, 35(2), 213–230. <https://doi.org/10.1177/0305735607070305>
- BIRÓ, Dániel Péter; VAN KRANENBURG Peter. “A Computational Re–Examination Of Bela Bartok’s Transcription Methods as Exemplified by his Sirato Transcriptions of 1937/1938 and their Relevance for Contemporary Methods of Computational Transcription of Qur’an Recitation,” in Holzapfel, A. (ed.). *Proceedings of the Fourth International Workshop on Folk Music Analysis (FMA2014)*. Istanbul: Bogazaci University, 2014, 70-77,
- BIRÓ, Dániel Péter; VAN KRANENBURG, Peter, NESS, Steven; TZANETAKIS, George; VOLK, Anja. “Stability and Variation in Cadence Formulas in Oral and Semi-Oral Chant Traditions – a Computational Approach,” in *Proceedings of the 12th International Conference on Music Perception and Cognition and the 8th Triennial Conference of the European Society for the Cognitive Sciences of Music*. Thessaloniki. 2012, 98-105
- BIRÓ, Dániel Péter; GOLDMAN, Jonathan; HEUSINGER, Detlef; STRATZ, Constanze. *Live Electronics in/in the SWR Experimentalstudio*. Wolke Verlag, 2018.
- BIRÓ, Dániel Péter; KREBS, Harald. *The String Quartets of Béla Bartók: Tradition and Legacy in Analytical Perspective*. New York: Oxford University Press, 2014.
- EPSTEIN, S. Epi on education. *Canadian Jewish News*, 08 sep. 2005.
- GOLDWURM, SCHORR, H., MALINOWITZ, Y., C., SCHOTTENSTEIN, E., & MESORAH HERITAGE FOUNDATION. (1997). *Talmud Bavli: The Gemara: The classic Vilna edition, with an annotated, interpretive elucidation, as an aid to Talmud study = Talmud Bavli (Mixed ed., ArtScroll series)*. Brooklyn, N.Y.: Mesorah Publications.
- GRISEY, Gérard Grisey. *Tempus ex Machina: A composer’s reflections on musical time. Contemporary Music Review*, 2/1 (1987): 239-275.
- SHINAN, Avigdor. *Pirkei Avot: A New Israeli Commentary*. Jerusalem: Avi Hay Foundation and Yedioth Ahronoth, 2009.
- VAN KRANENBURG, Peter; BIRÓ, Dániel Péter, NESS, Steven; TZANETAKIS, George, “A Computational Investigation of Melodic Contour Stability in Jewish Torah Trope Performance Traditions”. In: *Proceedings of the 12th International Society for Music Information Retrieval Conference*, Miami, 2011, 163-168.

## **ABOUT THE AUTHOR**

Dániel Péter Biró is Professor for Composition at the Grieg Academy, University of Bergen in Norway. He studied in the U.S., Hungary, Germany, Switzerland, Austria and Israel before receiving his Ph.D. from Princeton University in 2004. From 2004 -2009 he was Assistant Professor and from 2009-2018 Associate Professor for Composition and Music Theory at the University of Victoria in Victoria, BC, Canada. In 2010 he received the Gigahertz Production Prize from the ZKM-Center for Art and Media. In 2011 he was Visiting Professor at Utrecht University and in 2014-2015 Research Fellow at the Radcliffe Institute for Advanced Study, Harvard University. In 2015 he was elected to the College of New Scholars, Scientists and Artists of the Royal Society of Canada. In 2017 he was awarded a Guggenheim Fellowship. Dániel Péter Biró has been commissioned by prominent musicians, ensembles and festivals and his compositions are performed around the world. Website: [www.danielpeterbiro.ca](http://www.danielpeterbiro.ca)