



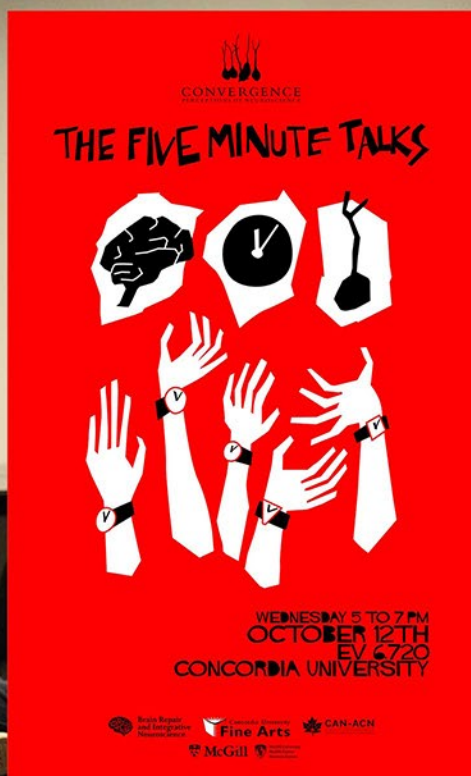
Convergence, Perceptions of Neuroscience. Supporting materials:

Convergence, Perceptions of Neuroscience aims to inspire collaborative work, foster interdisciplinary thought, push the boundaries of what is considered science and art, and make neuroscience research accessible to a general audience. *Convergence's unique approach* is based on a “two-way engagement” framework that promotes transversal knowledge sharing without emphasizing one side over the other.

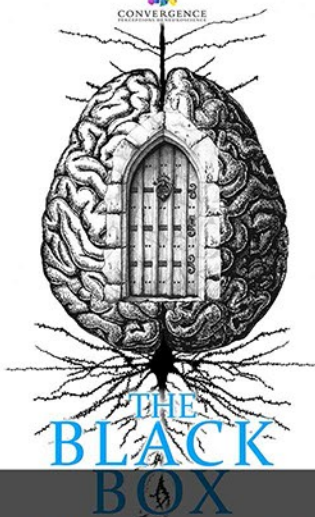
The current document contains extracts from press coverage, representative material produced by the Convergence initiative, and photographs taken during activities held between August 2016 and May 2017.

Such events and activities included *the 5 Minute Talks* event series, during which art and neuroscience students explained their work to a multidisciplinary audience. Activities also included social and educational gatherings for participating faculty and students, such as guided tours of laboratories and art galleries. Participating art students received course credits through DART461, a class offered by Concordia University's Faculty of Fine Arts in coordination with *Convergence*.

Many *Convergence* activities also brought art and neuroscience to a larger public: open talks directed at general audiences, a science outreach event in coordination with 24 heures de science, as well as exhibitions that featured the *Convergence* artwork. Two exhibits were held at the Visual Voice Gallery (April 22nd to May 20th, 2017), a Montreal gallery that specializes in work that combines art and science. Another exhibit was held at Montréal's Grande Bibliothèque (May 27th, 2017) as part of the 11th Annual Meeting of the Canadian Association for Neuroscience (CAN/ACN). A catalogue that details the *Convergence* exhibitions and the science behind each art piece has also been produced for the general public.



**The Five Minute Talks
16 BRaIN Program trainees talking to an
audience of 45 arts students and academics.**



Convergence, Perceptions of Neuroscience public events:

- October 21st, 2016. **Convergence, Perceptions of Neuroscience** at "Blood, Brains + Other Trains: Thoughts on Emerging Collaborations & Camaraderie in the Arts+Sciences" colloquium. Concordia University.
- November 25th, 2016. **The Black Box**. 5 labs, 24 art students, 126 assistants to the public talk.
- January 13th to April 13th, 2017. **DART461**. 3-credits, 20 art students.
- February 2nd, 2017. **Convergence**, public talk at the Ph.D. in Interdisciplinary Humanities. Brock University.
- February 17th, 2017. **Sensory**. 3 labs, 20 art students, 54 assistants to the public talk.
- March 10th, 2017. **Convergence, Perceptions of Neuroscience** at Mozilla Science Lab meets Open Research McGill. McGill University.
- April 22nd to May 20th, 2017. **Convergence Exhibition, material and dynamic** at the Visual Voice Gallery. 650 visitors.
- May 5th, 2017. **Scientific Literacy and Citizen Involvement: The Convergence of Science and Art**. Panel at Les Journées Internationales de la Culture Scientifique (JICS), Science and You.
- May 13th, 2017. **Le Cerveau, c'est simplement beau !** Activity part of 24 Heures de Sciences.
- May 26th, 2017. **The engagement of neurosciences and the arts, the Convergence initiative**. Public talk at the Psychiatry Grand Rounds talks. Department of Psychiatry Continuing Medical Education, McGill University.
- May 27th to 31st, 2017. **Convergence Exhibition** at la Bibliothèque et Archives Nationales du Québec (BANQ), more than 300 hundred visitors.
- May 28th to 31st **Convergence Exhibition** at the 11th Canadian Association for Neuroscience Annual Meeting, more than a thousand participants in the meeting. Hotel Bonaventure.

SENSOR
A convergence neuroscience event
Friday, February 17th, 2017, 3 PM
Montreal General Hospital, Livingston Hall
6th Floor, Room 500
www.convergenceinitiative.org



CONVERGENCE
PERCEPTIONS OF NEUROSCIENCE

convergence
CAN exhibition

Sixteen Neuro-Art teams, one afternoon, one final event.

Saturday, May 27th, 2017 1:00 to 2:00 PM Convergence, dynamic
Auditorium La Grande Bibliothèque (BANQ) 3:00 to 4:30 PM Convergence, material
475 Boul de Maisonneuve E, Montréal www.convergenceinitiative.org

CAN-ACN McGill Fine Arts Visual Voice Galerie

1. material
referring to, derived from,
or consisting of matter, especially physical

April 22 - May 6, 2017

- Ian Beamish
- Shayna Dwor
- Dasha Sandra
- Alexa Piotte
- Hunter Shaw
- Claire Gizowski
- Sandra Magalhaes
- Pamela Simard
- Rosi Maria Di Meglio
- Christopher Dake Oushel
- Johannes Kacerovsky
- Mayala-Kali Elter
- Hélène Salamanca-Gagnon
- Andrew Greenhalgh
- Tia Besser-Paul
- Callan Ponsford
- Meghan Riley
- Angela Zhang
- Tatiana Ruiz
- Steve Beukema
- Sejal Davla
- Meatoune

Convergence, 2. dynamic
marked by usually continuous and productive activity or change

May 10 - May 20, 2017
Visual Voice Gallery
Belgo Building
172 St-Catherine W, Room 424
www.visualvoicegallery.org

- Claire Gizowski
- Alex Baldwin
- Marie Franquin
- Bettina Szabo
- Michael Martini
- Nien Tzu Weng
- Kevin Jung-Hoo Park
- Caroline Laurin-Beaucage
- Matt Hammond-Collins
- AndreAnn Cossette
- Alexandra Bachmayer
- Andrew Kaplan
- Sujay Neupane
- Chris Salmon
- Andrea Peña
- Jade Seguela

Visual Voice Galerie



PANÉL DE DISCUSSION / DISCUSSION PANELS
JEUDI 5 MAI 15 h-16 h 30 / FRIDAY MAY 5, 2:00 - 4:30 PM

Organisé par / Organized by
Convergence Initiative

Panelists / Panelistes
- Alexandra Bachmayer
- Andrew Kaplan
- Sujay Neupane
- Chris Salmon
- Andrea Peña
- Jade Seguela



Some selected comments from news release, and press articles about *Convergence*:

“The one-hour talk, a condensed and distilled introduction to neuroscience [...] gave the students a simplified road map to the brain. [...] From the molecular transmission of stimulants and inhibitors to the networking of neurons, the students were left with a lot to consider. [...] Prior to the evening’s neuroscience lecture, the art students were given a private tour of some of the MUHC’s neuroscience laboratories.

“We’re definitely learning,” agreed Caroline Laurin-Beaucage, a part-time faculty member in the Department of Contemporary Dance. “It’s also guiding us to view our field in a different way. How can we relate to that? The science is so specific and what we’re working on is so specific, also. The question of how do we bridge, from one to the other, is a part of the class.”

– *Convergence initiative unites the arts and the sciences.* By Kelsey Litwin for The Link. Nov. 28th, 2016.



CONVERGENCE
PERCEPTIONS OF NEUROSCIENCE
PERCEPTIONS DE LA NEUROSCIENCE

“Pour la population générale, le lien entre les arts et les neurosciences peut être difficile à percevoir. Cependant, pour les artistes qui voient tout sous un angle différent et pour les scientifiques qui ont l’habitude d’observer des phénomènes invisibles à l’œil nu, cette *Convergence* devient parfaitement logique.”

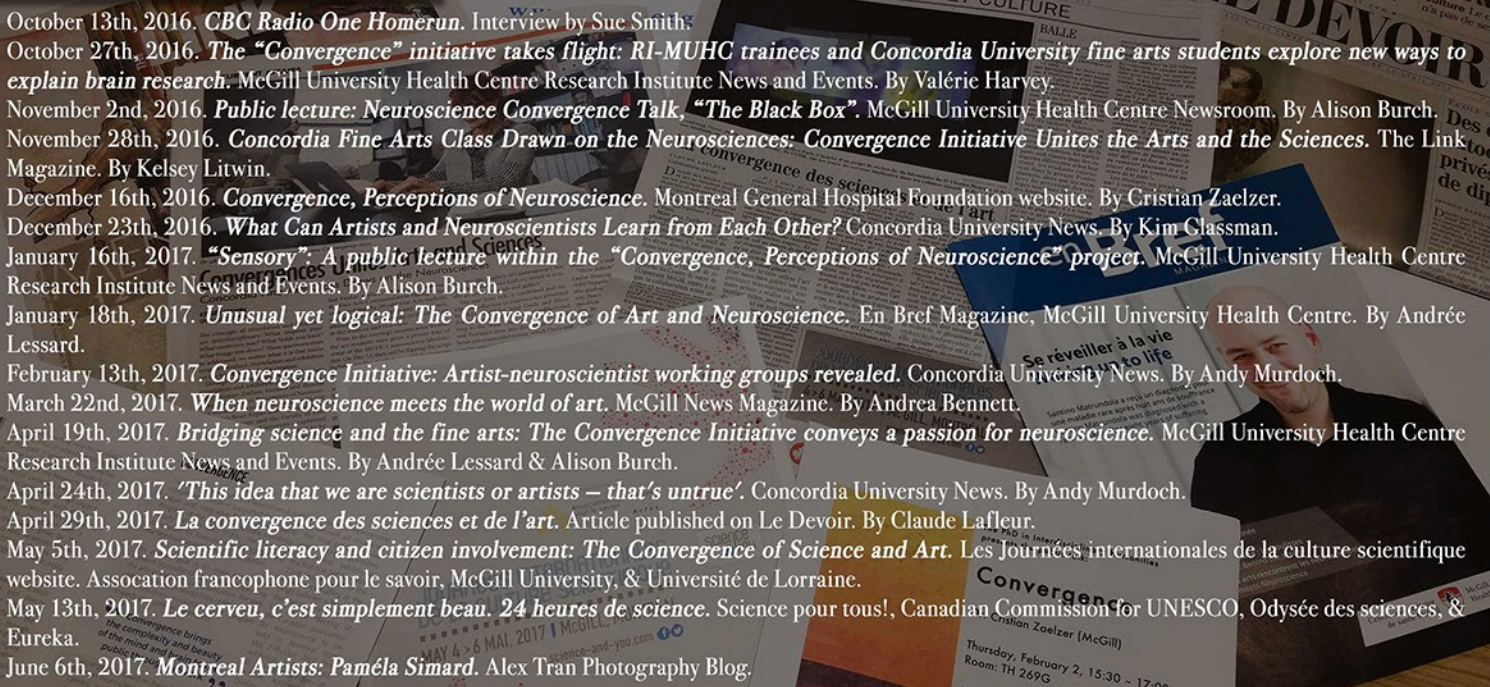
– *Inhabituelle mais logique: la convergence des arts et des neurosciences.* By Andrée Lessard for En Bref. January 18th, 2017.

“For me, before this project, seeing a fruit fly was like seeing a black dot, like a pixel or something,” says Simard [artist involved in *Convergence*]. “But then you see it in a microscope, and it’s a well-developed organism. And then you see images of their brains, and it’s crazy to see how understanding their brain and the way that they see and perceive things is also relevant to humans. It creates a connection for me, at least, with something much smaller, through which I can better understand myself.”

– *When neuroscience meets the world of art.* By Andrea Bennett for McGill News Magazine. March 22nd, 2017.

« [...] l’art et la science sont des disciplines qui doivent se rejoindre [...] On a invité diverses personnes qui envisagent avec grand intérêt la collaboration entre science et art. Je pense même que c’est là une tendance qui prendra de l’ampleur, puisque nous voulons que le projet *Convergence* prenne de plus en plus d’envergure. [...] Notre objectif est d’ouvrir la discussion sur les liens possibles entre science et art pour rendre les recherches scientifiques plus accessibles au grand public [...]. Il s’agit en fait de donner l’occasion aux scientifiques de vulgariser leurs travaux par l’entremise des arts, ainsi que de donner de nouveaux sujets d’inspiration aux artistes. »

– *La convergence des sciences et de l’art.* By Claude Lafleur for Le Devoir. April 29th, 2017.



October 13th, 2016. *CBC Radio One Homerun.* Interview by Sue Smith.
October 27th, 2016. *The “Convergence” initiative takes flight: RI-MUHC trainees and Concordia University fine arts students explore new ways to explain brain research.* McGill University Health Centre Research Institute News and Events. By Valérie Harvey.
November 2nd, 2016. *Public lecture: Neuroscience Convergence Talk, “The Black Box”.* McGill University Health Centre Newsroom. By Alison Burch.
November 28th, 2016. *Concordia Fine Arts Class Drawn on the Neurosciences: Convergence Initiative Unites the Arts and the Sciences.* The Link Magazine. By Kelsey Litwin.
December 16th, 2016. *Convergence, Perceptions of Neuroscience.* Montreal General Hospital Foundation website. By Cristian Zaclzer.
December 23th, 2016. *What Can Artists and Neuroscientists Learn from Each Other?* Concordia University News. By Kim Glassman.
January 16th, 2017. *“Sensory”: A public lecture within the “Convergence, Perceptions of Neuroscience” project.* McGill University Health Centre Research Institute News and Events. By Alison Burch.
January 18th, 2017. *Unusual yet logical: The Convergence of Art and Neuroscience.* En Bref Magazine, McGill University Health Centre. By Andrée Lessard.
February 13th, 2017. *Convergence Initiative: Artist-neuroscientist working groups revealed.* Concordia University News. By Andy Murdoch.
March 22nd, 2017. *When neuroscience meets the world of art.* McGill News Magazine. By Andrea Bennett.
April 19th, 2017. *Bridging science and the fine arts: The Convergence Initiative conveys a passion for neuroscience.* McGill University Health Centre Research Institute News and Events. By Andrée Lessard & Alison Burch.
April 24th, 2017. *‘This idea that we are scientists or artists – that’s untrue’.* Concordia University News. By Andy Murdoch.
April 29th, 2017. *La convergence des sciences et de l’art.* Article published on Le Devoir. By Claude Lafleur.
May 5th, 2017. *Scientific literacy and citizen involvement: The Convergence of Science and Art.* Les Journées internationales de la culture scientifique website. Association francophone pour le savoir, McGill University, & Université de Lorraine.
May 13th, 2017. *Le cerveau, c’est simplement beau. 24 heures de science.* Science pour tous!, Canadian Commission for UNESCO, Odysée des sciences, & Eureka.
June 6th, 2017. *Montreal Artists: Pamela Simard.* Alex Tran Photography Blog.

Convergence Exhibition Catalogue 100 copies distributed between the public.



catalogue INDEX/INDICE
Convergences, journées de la neuroscience 2017

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0048 | hunter SHAW
M.Sc. Psychology, McGill University
Ph.D. Canadian Biology, McGill University

Originally from a small farming community in British Columbia, Hunter Shaw has spent the last eight years studying Health Sciences at McGill University. After receiving a BSc in Psychology, he began to pursue a PhD in Biology under the supervision of Dr. Yong Rao at the Centre for Research in Neurosciences and the Research Institute of the McGill University Health Centre (RI-MUHC).

Hunter Shaw's research focuses on how afferent molecules help various male groups and functioning connections in the brain. These afferent molecules act like glue on the surface of neurons, allowing them to stick to their correct synaptic partners. To understand the underlying mechanisms of the functioning of afferent molecules, Shaw uses the fruit fly visual system. The well-understood genetics and anatomy of the fruit fly visual system make it an excellent model to study how afferent molecules contribute to synaptic connectivity. In addition, the visual system in fruit flies preserves many similarities to humans regarding their genetic and anatomical features. Therefore, Shaw's research project uses the genetic tools available in the fruit fly to study afferent molecules that have homologues in humans. Uncovering the mechanisms of these molecules in flies will undoubtedly provide a better understanding of how these homologues might be functioning in human neurological conditions.

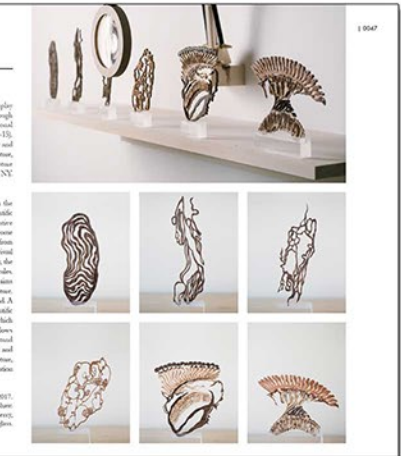


0049 | paméla SIMARD
B.Sc. and M.Sc. in Neuroscience, McGill University
Ph.D. in Psychology, York University, Toronto, Canada

Pamela Simard has been exploring the interplay between function and design of objects through sculpture. She participated in two international exhibitions in France (2015) and Canada (2014). In 2017, she will obtain a BFA in Art History and Studio Art from Concordia University. In the future, she will continue to pursue a MFA in Sculpture and Documental Studies at Alcorn University, NY.

Bf
The project explores the similarities between the processes involved in artistic creativity and in scientific research. In what extent can we create abstracted visual models and ideas for these models become poetic? The various sculptures were created from functional anatomy images representing the visual system of the face by brain, and more precisely, the synaptic connections formed by afferent molecules. Through the analysis of these images, the project aims to create the functional process with sculpture. Every part of the sculpture was made by hand. A fundamental element found by the artist and scientific approaches is their similarity toward detail, which translates into a much deeper knowledge. It allows her to challenge to develop and to understand the functions of animals that both the artist and the scientist find useful. It is a process of respect, progress and transition that allows it a full appreciation of all of the complexity of the subject.

BC 2017
Head (brass)-wood (vine), maple, pine, olive, mahogany and walnut, pigments, sculpting glass.



0050 | bettina SZABO
M.F.A. Contemporary Dance, Concordia University

Bettina Szabo is a choreographer and integrative living in Montreal since 2007. She studied at Yorkville Contemporary Dance Company (YCDC), the Ecole de danse contemporaine de Montréal (EDCM), and Concordia University. She is interested in how cognitive neuronal and sensorial patterns engage her choreographic mind and artistic interpretation. Her creations are characterized by the coexistence of intricate and diverse on stage, blurring the boundaries of the artistic form.

caroline LAURIN-BEAUCAGE
Ph.D. Fine Arts Department, Concordia University

Inspired by the human body, Caroline Laurin-Beaucage has placed it at the heart of her choreographic research. She has been active on the Montreal scene as a dancer, choreographer and writer since 1999. Active and involved in her field, Laurin-Beaucage is dancer and a co-founder of the Montreal contemporary dance network, L'OBANISME.

0051 | claire GIZOWSKI
B.Sc. Neuroscience, McGill University
Ph.D. Canadian Neuroscience, McGill University

Claire Giszowski is currently a PhD student working with Dr. Charles Benge at McGill University. Before moving to Montreal, Giszowski grew up in Edmonton, Alberta, where she completed her undergraduate degree in neuroscience at the University of Alberta.

Claire Giszowski's research is focused on investigating how the brain generates cardiac rhythms. Using optogenetics, electrophysiology and imaging and behavioral techniques, Giszowski studies how the brain's clock can regulate wave states. She has discovered that more than a lot of wave pairs to sleep and that this behavior is driven by biological clock. Neurons in the clock send excitatory projections to neurons in the heart center and receive three responses during the longest preceding sleep. The resulting behaviors, "anticipatory theta", neurons were used to prevent the neurons from becoming desynchronized during their sleep period.

0052 | andrea PESA
M.F.A. Fine Arts, Concordia University

Andrea Pesa est une artiste multidisciplinaire d'origine colombienne établie à Montréal qui se concentre sur le design expérimental, le design graphique, le sculpture et la photographie. Pesa est la directrice artistique de la compagnie Andrea Pesa et d'Arte, compagnie de danse qui a fait des tentatives artistiques et expérimentales innovatrices par le Canada des arts et des lettres du Québec. Pesa a été récompensée par le Membre des beaux-arts de Montréal, le Centre canadien d'architecture et le 17e anniversaire de Montréal pour plusieurs de grands projets.

alexandra BACHMAYER
M.F.A. Major Computer Arts - Film et Motion, Concordia University

Alexandra Bachmayer est une artiste multidisciplinaire et une illustratrice qui habite à Montréal. Elle est actuellement étudiante au master chez NS Labs et travaille à l'Université Concordia, travaillant sur des installations dans le domaine des médias numériques. Elle a obtenu un baccalauréat en sciences de la psychologie et de l'éducation de l'Université McGill et travaille actuellement sous contrat avec le Consortium Arts à l'Université Concordia.

0053 | chris SALMON
B.Sc. Computer Science, McGill University
Ph.D. Canadian Neuroscience, McGill University

Né et élevé à New Brunswick, Chris Salmon s'est installé à Montréal en 2005 pour ses études, alors qu'il se livrait pour la biologie de l'évolution d'abord en arrière et des années antérieures des Masters, Salomon a également travaillé à l'échelle internationale en tant que chercheur et a obtenu la maîtrise de son doctorat de l'Université de la Colombie-Britannique. Depuis, il a travaillé en tant que chercheur et a obtenu la maîtrise de son doctorat de l'Université de la Colombie-Britannique. Il a travaillé en tant que chercheur et a obtenu la maîtrise de son doctorat de l'Université de la Colombie-Britannique. Il a travaillé en tant que chercheur et a obtenu la maîtrise de son doctorat de l'Université de la Colombie-Britannique.

0054 | jade SEGUELA
M.F.A. Major Contemporary Dance, Concordia University

Jade Seguela, Française née au Canada, s'est installée à Montréal en 2005 pour ses études. Elle explore plusieurs médiums différents dans son travail, dans le but de créer un langage artistique unique. Elle a travaillé en tant que chorégraphe et danseuse, et a obtenu la maîtrise de son doctorat de l'Université de la Colombie-Britannique. Elle a travaillé en tant que chorégraphe et danseuse, et a obtenu la maîtrise de son doctorat de l'Université de la Colombie-Britannique.

