

Brice Beffara

Assistant Lecturer & Research Scholar - Psychology
Besançon, France

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Current position

Academic

[Université de Franche-Comté, France](#)

Assistant lecturer (ATER)

September 2018 - present

Independent

[The Walden III Slowpen Science Laboratory](#)

Research scholar (co-founder)

January 2017 - present

Research Interests

I am interested in understanding flexibility, stress, and conservatism at (social) behavioural, cognitive and physiological levels. I am studying how flexibility and conservatism are related to (un)learning, threat perception and prosociality. I use heart rate variability (HRV) as an index of physiological flexibility. The aim is to understand how to regulate unflexibility by positive social context. I also develop projects in psychological methods. My current research works follow open science practices as much as possible.

Social cognition and psychophysiology

Regulation of (social) threat perception, stress, and HRV by social context

Stress and psychophysiological (un)flexibility

HRV and emotional facial expressions processing

HRV and prosocial behaviours

Methods

Safe sequential data analysis

Open science practices in the european francophone psychological science community

Teaching Interests

My main teaching interests are social psychology, methods and data analysis. I use social psychology examples to help students understand the basics of methods and data analysis. Social psychology experiments often provoke a strong interest in students which seems to increase attention toward “cold” methodological notions. I progressively introduce novel scientific practices to students and help them mastering it. I value cooperation instead of competition in learning, mastering instead of performance goals, as much as possible.

Scientific Affiliations

Society for the Improvement of Psychological Science	2019
Association pour la Diffusion de la Recherche Internationale en Psychologie Sociale	2018 - 2019
Association for Psychological Science	2016 - 2017
International Society for Research on Emotions	2015 - 2016
Society for Affective Science	2015 - 2016

Past positions

Université de Lyon, France

Post-doctoral researcher January 2018 - August 2018

Interdisciplinary project : Regulation of psychophysiological well-being by urban greenery

Project hosts

Centre de Recherche en Neurosciences de Lyon Fabien Perrin

École Normale Supérieure de Lyon Marylise Cottet

École Nationale des Travaux Publics de l'État Catherine Marquis-Favre & Dominique Dumortier

Education

Université Catholique de Louvain PhD Psychological and Educational Sciences Oct. 2013 - Dec. 2016
Université Grenoble Alpes PhD Cognitive Science, Psychology, and Neurocognition
Cotutelle

Advisors: Pr. Martial Mermillod & Pr. Nicolas Vermeulen

Jury: Pr. Bernard Rimé, Pr. Gilles Pourtois, Dr. Valérie Dufour, Pr. Pierre Maurage, Pr. Martial Mermillod & Pr. Nicolas Vermeulen

INP Grenoble MSc 2 Cognitive Science -high honors-	2012 - 2013
Blaise Pascal University of Clermont-Ferrand MSc 1 Social and Cognitive Psychology -honors-	2011 - 2012
Blaise Pascal University of Clermont-Ferrand BSc Psychology -honors-	2008 - 2011

Qualifications

16th section of the French National Council of Universities Qualified for french lecturer positions in Psychology 2018

69th section of the French National Council of Universities Qualified for french lecturer positions in Neuroscience 2018

Publications

In preparation

Beffara, B., Mermillod, M., & Vermeulen, N. (*first preprint* 2016). Can we test the influence of prosociality on high frequency heart rate variability? A double-blind sham-controlled approach. bioRxiv, 078006. <https://doi.org/10.1101/078006>

Beffara, B., Vermeulen, N., & Mermillod, M. (first preprint 2016). Resting high frequency heart rate variability is not associated with the recognition of emotional facial expressions in healthy human adults. bioRxiv, 077784. <https://doi.org/10.1101/077784>

Under review

Beffara, B., Bret, A., & Nalborczyk, L. (first preprint 2018). A fully automatised, transparent, reproducible and blind protocol for sequential analyses. PsyArXiv. <https://doi.org/10.17605/OSF.IO/V7XPG> (Being revised for further consideration at Meta-Psychology - minor revisions)

Bret, A., **Beffara, B.**, Mierop, A., Mermillod, M., & Corneille, O. (first preprint 2017). Right-Wing Authoritarianism Predicts weakened Attitude Change in an Evaluative Counter-conditioning Paradigm. PsyArXiv. <https://doi.org/10.17605/OSF.IO/3MFA8> (Being revised for further consideration at Social Psychological and Personality Science major revisions)

Peer-reviewed journal articles

Spatola, N., Santiago, J., **Beffara, B.**, Mermillod, M., Ferrand, L., & Ouellet, M. (2018). When the Sad Past Is Left: The Mental Metaphors Between Time, Valence, and Space. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.01019>

Mermillod, M., Grynberg, D., Pio-Lopez, L., Rychlowska, M., **Beffara, B.**, Harquel, S., ... Droit-Volet, S. (2018). Evidence of Rapid Modulation by Social Information of Subjective, Physiological, and Neural Responses to Emotional Expressions. *Frontiers in Behavioral Neuroscience*, 11. <https://doi.org/10.3389/fnbeh.2017.00231>

Kauffmann, L., Roux-Sibilon, A., **Beffara, B.**, Mermillod, M., Guyader, N., & Peyrin, C. (2017). How does information from low and high spatial frequencies interact during scene categorization? *Visual Cognition*, 1–15. <https://doi.org/10.1080/13506285.2017.1347590>

Bret, A., **Beffara, B.**, McFadyen, J., & Mermillod, M. (2017). Right wing authoritarianism is associated with race bias in face detection. *PloS One*, 12(7), e0179894. <https://doi.org/10.1371/journal.pone.0179894>

Beffara, B., Bret, A. G., Vermeulen, N., & Mermillod, M. (2016). Resting high frequency heart rate variability selectively predicts cooperative behavior. *Physiology & Behavior*, 164, 417–428. <https://doi.org/10.1016/j.physbeh.2016.06.011>

Beffara, B., Wicker, B., Vermeulen, N., Ouellet, M., Bret, A., Molina, M. J. F., & Mermillod, M. (2015). Reduction of interference effect by low spatial frequency information priming in an emotional Stroop task. *Journal of Vision*, 15(6), 16. <https://doi.org/10.1167/15.6.16>

Bret, A., & **Beffara, B.** (2013). Anthropomorphising Ourselves : The Origin of the Free Will Illusion. *Student Journal of Psychology*, 2, 1, 28-30. http://docs.wixstatic.com/ugd/fefdb6_62582ff81c851d5cb7117522f7457fbd.pdf

Beffara, B., Ouellet, M., Vermeulen, N., Basu, A., Morisseau, T., & Mermillod, M. (2012). Enhanced embodied response following ambiguous emotional processing. *Cognitive Processing*, 13(S1), 103–106. <https://doi.org/10.1007/s10339-012-0468-6>

PhD thesis

Beffara, B. (2016). Variabilité cardiaque de haute fréquence et comportements prosociaux : Approche causale de la théorie polyvagale [*High frequency heart rate variability and prosocial behaviours: A causal approach to the Polyvagal theory*] (Thesis). Université Grenoble Alpes - Université Catholique de Louvain. <https://tel.archives-ouvertes.fr/tel-01691751>

Oral communications

Beffara, B. (2019, July) Society for the Improvement of Psychological Science (SIPS), Rotterdam, Netherlands.

Beffara, B., Bret, A., & Nalborczyk, L. (2019, March) A Practical Tutorial for Safe Sequential Analyses. International Convention of Psychological Science, Paris, France.

Beffara, B., Nalborczyk, L., Héjja-Brichard, Y., and Bret, A. (2017, November) Open, slow and sustainable science. Talk presented at the PhD student day of the LPNC, Grenoble, France.

Bret, A., Mierop, A., **Beffara, B.**, Corneille, O., and Mermillod, M. (2017, August) Political conservatism and evaluative counterconditioning: Motivational and cognitive differences. Talk presented at ESCON, Gdansk, Poland.

Bret, A., Mierop, A., **Beffara, B.**, Corneille, O., and Mermillod, M. (2017, July) Right-Wing Authoritarianism is negatively associated with counter-conditioning. Talk presented at EASP, Granada, Spain.

Bret, A., Mierop, A., **Beffara, B.**, Corneille, O., and Mermillod, M., (2017, March) When sensitivity to evaluative counterconditioning is associated with sociopolitical ideologies: Is this due to style differences? Talk presented at TEAP, Dresden, Germany.

Bret, A.G., Mierop, A., **Beffara, B.**, Mermillod, M. & Corneille, O. (2016, December) Quand une plus faible sensibilité au contreconditionnement évaluatif est associée aux idéologies socio-politiques : ces différences sont-elles dues au style cognitif [*When a weaker sensitivity to counter evaluative conditioning is associated with socio-political ideologies: are these differences due to cognitive style*] ? Talk presented at the Journées de la Cognition Sociale, Grenoble, France.

Beffara B (2016, October) Variabilité cardiaque de haute fréquence et comportements prosociaux : Approche causale de la théorie polyvagale [*High frequency heart rate variability and prosocial behaviours: A causal approach to the Polyvagal theory*]. Louvain-la-Neuve, Belgium.

Bret A, Mierop A, **Beffara B**, Corneille O and Mermillod M. (2016, August) Socio-political ideologies Predict (Un) Learning Evaluatively Conditioned Attitudes. Talk presented at ESCON, Lisbon, Portugal.

Bret A, Mierop A, **Beffara B**, Corneille O and Mermillod M. (2016, July) Socio-political ideologies Predict (Un) Learning Evaluatively Conditioned Attitudes. Talk presented at the EASP Medium Size Meeting: The Psychology of Attitudes: Cologne, Germany.

Brice Beffara, Amélie Bret, Nicolas Vermeulen & Martial Mermillod. Social neurocardiology. The case of heart rate variability and cooperation in healthy human adults. The 8th European Conference on Behavioural Biology (ECBB 2016), 2016, July 12-15, Vienna, Austria

Bret A, Mierop A, **Beffara B**, Corneille O and Mermillod M. (2016, June) Les idéologies socio-politiques prédisent la formation de préjugés sans médiation par la flexibilité cognitive. Talk presented at the 11ème Congrès International de Psychologie Sociale en langue française: Genève, Switzerland.

Beffara, B., Bret, A., Ferreri, L., Bard, P., Vermeulen, N., Bugajska, A., & Mermillod, M. (2016). Healthy adults with lowest levels of cooperation are more cooperative after heart rate variability biofeedback. Annual Conference of the Society for Affective Science. Chicago (Illinois). USA. March 2016.

Bret, A., **Beffara, B.**, & Mermillod, M. (2016). Right-wing authoritarianism explains differences in the visual search of faces from different races. Annual Conference of the Society for Affective Science. Chicago (Illinois). USA. March 2016.

Amélie Bret, **Brice Beffara** & Martial Mermillod. Infrahumanization or threat perception ? Measuring racial discrimination by the visual search of faces. ESCOP 2015, September 17-20, Paphos, Cyprus

Brice Beffara, Amélie Bret, Nicolas Vermeulen & Martial Mermillod. Socio-emotional skills and homeostasis in mammals: the key role of heart-brain interactions. ESCOP 2015, September 17-20, Paphos, Cyprus

Nicolas Spatola, Julio Santiago, **Brice Beffara**, Martial Mermillod & Marc Ouellet. The non-conglomerate conceptual mappings between Time, Valence and Space and how a bad mood makes you look towards the past. ESCOP 2015, September 17-20, Paphos, Cyprus

Amélie Bret, **Brice Beffara** & Martial Mermillod. Cognitive roots of racial discrimination: infrahumanization or threat perception? A visual search approach. ISRE 2015, July 8-10, Geneva, Switzerland

Brice Beffara, Amélie Bret, Amélie Baldini, Nicolas Vermeulen & Martial Mermillod. High frequency heart rate variability is positively associated with cooperation in a chicken game. ISRE 2015, July 8-10, Geneva, Switzerland

Amélie Bret, **Brice Beffara** & Martial Mermillod. Bases cognitives de la discrimination raciale : du spécisme au racisme [*Cognitive roots of racial discrimination: from speciesism to racism*]. 6e Rencontres du Pôle Grenoble Cognition, 6 juin 2015 : Cognition, Santé, Education

Brice Beffara, Amélie Bret, Nicolas Vermeulen & Martial Mermillod. Comportements pro-sociaux et homéostasie chez les mammifères : le rôle central de l'interaction coeur-cerveau [*Pro-social behaviors and homeostasis in mammals: the key role of heart-brain interactions*]. 6e Rencontres du Pôle Grenoble Cognition, 6 juin 2015 : Cognition, Santé, Education

Beffara, B., Bret, A., Chausse, P., Guinet, E., Vermeulen, N., & Mermillod, M. (2015). Increased Heart Rate Variability after Short Term Biofeedback : Visual Feedback without Paced Breathing is Sufficient to Regulate. Annual Conference of the Society for Affective Science. Oakland (California). USA. April 2015.

Mermillod, M., **Beffara, B.**, Bret, A., Lepage, J., Morisseau, T., & Vermeulen, N. (2014). Is the Devil (or Angel) Located in Frontal Cortical Areas? The 12th International Conference on Cognitive Neuroscience. Brisbane. Australia. July 2014.

Brice Beffara, Nicolas Vermeulen, Amélie Bret, and Martial Mermillod : From Fast Visual Perception to Frontal Emotional Inhibition (Consortium of European Research on Emotion conference, March 27 - 28, 2014, Berlin, Germany)

Brice Beffara, Marc Ouellet, Nicolas Vermeulen, Amélie Bret, Tiffany Morisseau and Martial Mermillod : Toward new physiological evidence of Social Top-down Response Modulation (International Symposium Vision, action and concepts : Behavioural and neural basis of embodied perception and cognition, 28-30 October 2013, Lille, France)

Brice Beffara, Bruno Wicker, Nicolas Vermeulen, Marc Ouellet, Amélie Bret, Maria Jesus Funes Molina & Martial Mermillod : Is Low Spatial Frequency Information Really Have a Preferential Role in Emotional Frontal Inhibition ? A Behavioral Study. (ESCOPE 2013, Eighteenth Meeting of the European Society for Cognitive Psychology, 29 August - 1 September 2013 - Budapest, Hungary)

Brice Beffara, Coriandre Vilain, Bruno Wicker, Nicolas Vermeulen, Marc Ouellet, Amélie Bret, Maria Jesus Funes Molina & Martial Mermillod. Le Rôle des Basses Fréquences Spatiales dans le Processus d'Inhibition Emotionnelle [*The Role of Low Spatial Frequency Information in Emotional Inhibition*]. 4e Rencontres du Pôle Grenoble Cognition, 4 juin 2013 : Cognition naturelle et cognition artificielle - des données aux modèles, aux systèmes et aux artefacts

Brice Beffara & Martial Mermillod. L'Anticipation dans la Perception Sociale des Emotions [*Anticipation in the Social Perception of Emotions*]. Small Group Workshop on Embodied Cognition, 18-19 Avril 2013, LPNC, Grenoble.

Ouellet, Spatola, Sémary, **Beffara**, Mermillod & Santiago de Torres : When the sad past is left (6 Septembre 2012, 5th International Conference on Spatial Cognition, Sapienza, Rome)

Beffara, Ouellet, Vermeulen, Basu, Morisseau, & Mermillod : Enhanced embodied response following ambiguous emotional processing (7 Septembre 2012, 5th International Conference on Spatial Cognition, Sapienza, Rome)

Teaching

Year	University	Level	Course	Type	Hours
2018-19	Franche-Comté	1 st year BSc	Methods in psychology	TD	72
2018-19	Franche-Comté	2 nd year BSc	Statistics	TD	24
2018-19	Franche-Comté	3 rd year BSc	Data analysis (JASP)	TD	24
2018-19	Franche-Comté	3 rd year BSc	Experimental methods	CM	8
2018-19	Franche-Comté	3 rd year BSc	Experimental methods	TD	8
2018-19	Franche-Comté	3 rd year BSc	Psychometry	CM	12
2018-19	Franche-Comté	3 rd year BSc	Psychometry	TD	12
2018-19	Franche-Comté	1 st year MSc	Social cognition	CM	2
2014-15	Grenoble Alpes	1 st year BSc	Introduction to psychology	TD	20
2014-15	Grenoble Alpes	2 nd year BSc	Cognitive Psychology	TD	12
2014-15	Grenoble Alpes	3 rd year BSc	Data Analysis (SPSS)	TD	16
2014-15	Grenoble Alpes	1 st year MSc	Eprime Programming	TD	18
2014-15	Grenoble Alpes	PhD students	Stress and learning	Other	6
			<i>Total_{CM}</i>	CM	22
			<i>Total_{TD}</i>	TD	206
			Total	Raw	234
			Total	Eq TD	245

Reviewer

Frontiers in psychology (N = 1)

Psychophysiology (N = 2)

Scientific tools

Signatory of the [Commitment to Research Transparency and Open Science](#)

Signatory of the [Peer Reviewers' Openness Initiative](#)

Open Transparent Reproducible Science Open Science Framework, bioRxiv, PsyArxiv, GitHub

Programming experiments PsychoPy, OpenSesame, Eprime

Data Analysis R, jamovi, JASP, SPSS, Statistica

Behavioral-Cognitive Measurements Evaluative conditioning, Response times, Social dilemmas, Signal detection, Attentional blink

Physiological Measurements Electrocardiography, Electromyography, Electrodermal Activity (basics), Functional Near Infrared Spectroscopy (basics)

Physiological Softwares Acqknowledge, Labchart, Zephyr Bioharness, Oxysoft (basics)

Physiological Signal Analysis Kubios HRV, gHRV, R, Python (basics), Matlab (basics)

Image Processing Matlab (basics)

Redaction LaTeX (Overleaf), RMarkdown, Authorea, LibreOffice

Surveys Qualtrics, Testable, Prolific Academic

Bibliography Zotero, Mendeley, EndNote

Advisor

Amélie Bret (MSc Cognitive and Social Psychology, Grenoble Alpes University) 2014-2015. Is the out-group not enough interesting or too much threatening? Dual route dehumanization leads to racial discrimination. Co-advised with Pr. Martial Mermillod

Dorine Chatel (Research Internship 1st year MSc Cognitive and Social Psychology, Grenoble Alpes University) 2014-2015. Investigation of induction techniques in order to reduce implicit dehumanization. Co-advised with Pr. Martial Mermillod and Amélie Bret, MSc

Elie Bes (1st year MSc Cognitive and Social Psychology, Grenoble Alpes University) 2014-2015. Social networks, multi-tasking and attentional skills. Co-advised with Pr. Martial Mermillod

Mickaël Perrier (1st year MSc Cognitive and Social Psychology, Grenoble Alpes University) 2014-2015. Can We Get a Boosted Bounce? Spatial Frequencies Play a Role in the Attentional Blink. Co-advised with Pr. Martial Mermillod

Leo Riera and Rafaël Lopes (1st year MSc Web Informatics and Knowledge, Grenoble Alpes University) 2014-2015. Development of a portable biofeedback application on Android. Co-advised with Pr. Martial Mermillod and Eric Guinet, Engineer

Amélie Bret (1st year MSc Cognitive and Social Psychology, Grenoble Alpes University) 2013-2014. Modulation Of Cognitive Processes By Racial Discrimination. Co-advised with Pr. Martial Mermillod

Oriane Gordzki (1st year MSc Cognitive and Social Psychology, Grenoble Alpes University) 2013-2014. Modulation of emotional facial expressions identification by perceptual and social variables. Co-advised with Pr. Martial Mermillod

Grants and Awards

Mermillod, M., **Beffara, B.**, Champeaux, G., & Bret, A. (2016) Psychophysiological vectors of extremist behaviors following the terrorist attack of the 13th November 2015 : evaluation and remediation 15 K€ CNRS

Beffara, B., Bègue, L., Bugajska, A., Vermeulen, N., & Mermillod, M. (2015) Remediation of socio-affective functioning by biofeedback 2.2 K€ *Grenoble Cognition Center*

Beffara, B. (2013) Doctoral allocation *Université Grenoble Alpes and French Ministry for Higher Education and Research*

Beffara, B., Vilain, C., & Mermillod, M. (2013) Top-down perception of emotions: behavioral and electromyographical approach 4 K€ *Grenoble Cognition Center*

Beffara, B. (2011 - 2013) MSc grant for best BSc students 3,6 K€ *Ministry of Higher Education and Research*

Projects accepted by ethical committees

Beffara, B., Marquis-Favre, C., Dumortier, D., Avillac, M., Perrin, F., & Cottet, M. (2018). The role of greenery in urban environment on audio-visual perception and stress. *CNRS Ethical committee (Institutional review board) and "Comité de Protection des Personnes" (South-Ouest and Overseas III Regional Review Board) registered under the number: ID-RCB: 2018-A01621-54*

Beffara, B., Mermillod, M., & Vermeulen, N. (2015). Can we test the influence of prosociality on high frequency heart rate variability? A double-blind sham-controlled approach. *Université Catholique de Louvain ethical committee*

Beffara, B., Vermeulen, N., & Mermillod, M. (2014). Impact of heart rate variability biofeedback on social responses: a double-blind sham-controlled exploration. *Université Grenoble Alpes ethical committee*

Tutorials

Beffara, B. (2017). How to embed http websites in your R presentation ? <https://medium.com/@slowpenscience/how-to-embed-http-websites-in-your-r-presentation-f2b2bcb7a277>

Scientific mediation

Beffara, B. (2019). What is Experimental Psychology? Sup'Info Haut-Doubs, Pontarlier, France

Beffara, B. & Bret, A. (2018). What is Experimental Psychology? Montdory High school, Thiers, France

Beffara, B. (2018). "Homéopathie : peut-on soigner les gens avec du sucre ?" <https://medium.com/@slowpenscience/retour-sur-la-vid%C3%A9o-le-monde-hom%C3%A9opathie-peut-on-soigner-les-gens-avec-du-sucre-f2e2b30ddd8c>

Beffara, B. (2017). Good Researcher, Bad Researcher. Student radio of Lyon University [French] <http://www.troisieme-lieu.fr/2017/12/04/logos-4-bon-chercheur-mauvais-chercheur/>

Bret, A., **Beffara, B.**, & Mermillod, M. Psychology, Neuroscience and Political Orientation (2015). Pint of Science, Grenoble, France

Bret, A. **Beffara, B.** (2014). What is Experimental Psychology? Montdory High school, Thiers, France

Beffara, B. & Bret, A. (2013). What is Experimental Psychology? Montdory High school, Thiers, France

Academic activities

Member of the Ethics in research working group [*Groupe de travail Ethique de la recherche*] of the *Grenoble Cognition Center* [*Pôle Grenoble Cognition*] (2018-2019)

Last update of this CV was made on 2019-02-05.

This CV has been written with Rmarkdown <https://rmarkdown.rstudio.com>

The template of this CV has been developed by Steven V. Miller and can be found at <https://github.com/svmiller/svm-r-markdown-templates>