



COMPSOC

IDENTITÉ / PERSONAL DETAILS

Genre / Gender : Homme

Nom / Name : Anllo

Prénom / First name : Hernan

Titre / Title : Post-doctorant.e / Post-doctoral Fellow

Date de soutenance de thèse de doctorat / Date of doctoral thesis defense : 09-2017

POSTE(S) ACTUEL(S) / CURRENT POSITION(S)

Organisme(s) public(s) français / French public partner(s)

Code R.N.S.R. / R.N.S.R code	Organisme / Organisation	Laboratoire / Laboratory	Code postal / Postcode	Localité / Town
201019072S	Ecole Normale Supérieure Paris	LNC2	75005	PARIS

Organisme(s) privés(s) français / French private partner(s)

Siret / Siret	Établissement / Organisation	DIRECTION / LEADERSHIP Direction Service / Department Unit	Code postal / Postcode	Localité / Town
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Organisme(s) étranger(s) / Foreign partner(s)

Établissement / Organisation	Laboratoire / Laboratory	Localité / Town	Pays / Country
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AUTRES ACTIVITÉS / OTHER ACTIVITIES :

- Representative elect for postdoctoral researchers at the LNC2 admin committee (since 2022, currently serving a second consecutive term).
- Founder and manager of the Intercultural Cognitive Network (www.icn.community). An international research consortium involving 11 countries and >30 senior and junior researchers.
- Founding member of the Complementary Care and Behaviour team. This novel research team was composed majoritarilly of clinicians, which I managed in their completion of research tasks.
- Throughout my PhD and postdocs I have co-supervised 6 masters students (1/year).
- Ad hoc reviewing activity for >10 peer-reviewed scientific journals.
- Member of "DECLICS, Dialogues entre chercheurs et lycéens pour les intéresser à la construction des savoirs", Cercle FSER. Ambassador/presenter at Lycée Jacques Decour (Paris).

-Member of "JSPS Science Dialogue Program". Lectures on the psychology of attention to highschoolers in the countryside of Nagano, Japan.

RESPONSABILITES PEDAGOGIQUES ET ADMINISTRATIVES / PEDAGOGICAL, TEACHING AND ADMINISTRATIVE RESPONSABILITY :

2021-Present: Lecturer (COGMASER, "LitRev: how to make meta-analyses like a pro", mandatory course, ENS-PSL, 30 hours/year)

2020: Lecturer (Waseda University, "Introduction to Cultural Psychology", 20 hours/year, suspended due to COVID-19)

2017 - 2018: Invited Lecturer ("Diplôme Universitaire" of Nice University Hospital, "Hypnosis and Neuroscience", 3 hours/year)

2015 - 2018: Lecturer ("Psychology Minor" and "Psychology Major", Oxbridge Summer Program, in partnership with UC San Diego, 120 hours/year taught during July)

2015 - 2018: Invited Lecturer ("Neuroscience of attention and hypnosis". Specialization course for clinical psychologists, psychiatrists and medical personnel, Association Française d'Hypnose, 2 lectures/year).

2015: Invited Lecturer ("Hypnose d'hier et d'aujourd'hui: L'hypnose dans l'étude expérimentale de la conscience", École des Hautes Etudes en Sciences Sociales (EHESS). Paris, France. 1 lecture).

POSTES ANTÉRIEURES / PREVIOUS POSITIONS :

DÉBUT / START DATE	FIN / END DATE	ORGANISME / ORGANIZATION	VILLE / TOWN	FONCTION / FUNCTION
2017	2023	Centre Hospitalier de Bligny	Briis Sous Forges, France	Autre : Chargé scientifique (self- funded)
2018	2021	Waseda University - Japanese Society for the Promotion of Science	Tokyo, Japon	Post-doctorant.e
2013	2017	Ecole Normale Supérieure en partenariat avec Paris 7	Paris, France	Doctorant.e
2012	2013	Ecole Normale Supérieure	Paris, France	Autre : Assistant de recherche

INTERRUPTION(S) DE CARRIÈRE / CAREER INTERRUPTION(S) :

2009-2012: 3-year gap where I had to stop and work to support my parents and younger sister in Argentina

FORMATION SUPERIEURE / EDUCATION :

2021: Qualification in Psychology - Section 16 (French Ministry of Education, France).

2017: PhD, cog. sci. (Frontières du vivant PhD fellow, ENS & Paris 7, France). Dir: Jérôme SACKUR

2012: Masters, cog. neur. (ENP-Ile-de-France fellow, COGMASER, France). Dir: Sid KOUIDER

[3-year gap: I had to stop and work to support my parents and sister in Argentina]

2009: BSc, Linguistics (+ 2-year specialization track: psycholinguistics, cum laude). UBA, Argentina.

PRIX, DISTINCTIONS, BOURSES / AWARDS, GRANTS :

Research grants & funding:

2023: Marie Skłodowska-Curie Intra-European Fellowship for career development [230K€]

2021: "Paris Région fellowship Programme" - "Lauréat complémentaire" (insufficient funding).

2018-2021: Co-PI grant ?????????????? " GRANT_NUMBER: 18F18307 – JSPS - KAKENHI [22K€]

2018-2022: Co-PI grant Hypnosis for the management of anxiety in COPD patients (HELEBOR), Centre Hospitalier de Bligny (CHB), Briis-sous-Forges, France. [44K€]

2017-2018: Brain Computer Interface Student Club, Frontiers du Vivant doctoral school club grant, Center for Interdisciplinary Research (CRI), Paris, France. [2K€]
 Scholarships and academic grants:
 2018-2021: JSPS Standard Postdoctoral Fellowship (ID No: P18307). Japan Society for the Promotion of Science, Tokyo, Japan. [87K€]
 2016-2017: PhD extension scholarship. DEC [12K€]
 2013-2016: PhD scholarship. Frontiers du Vivant (ED474) [72K€]
 2011-2012: Masters fellowship. École des Neurosciences Paris-Île de France (ENP) [24K€]

PRODUCTIONS SCIENTIFIQUES / SCIENTIFIC PRODUCTIONS :

N°	Titre de la publication / Publication Title	Pourquoi estimez-vous que cette publication est majeure ? / Please explain the significance of this publication
1	Anlló H, Palminteri S et al. Outcome context-dependence is not WEIRD: Comparing reinforcement- and description-based economic preferences worldwide. Nature Human Behaviour (in press) [FIRST & CORRESPONDING AUTHOR] preprint: https://www.researchsquare.com/article/rs-2621222/v1	Recent evidence indicates that reward value encoding in humans is highly context-dependent, leading to suboptimal decisions in some cases. But whether this computational constraint on valuation is a shared feature of human cognition remains unknown. To address this question, we studied the behavior of individuals from across 11 countries of markedly different socioeconomic and cultural makeup using an experimental approach that reliably captures context effects in reinforcement learning. Our findings show that all samples presented evidence of similar sensitivity to context. Crucially, suboptimal decisions generated by context manipulation were not explained by risk aversion, as estimated through a separate description-based choice task (i.e., lotteries) consisting of matched decision offers. Conversely, risk aversion significantly differed across countries. Overall, our findings suggest that context-dependent reward value encoding is a hardcoded feature of human cognition, while description-based decision-making is significantly sensitive to cultural factors.
2	-Yax N*, Anlló H*, Palminteri S§ et al. Studying and improving reasoning in humans and machines. Under review in Nature Communications [CO-FIRST AUTHOR] preprint link: https://arxiv.org/abs/2309.12485	In the present study, we investigate and compare reasoning in large language models (LLM) and humans using a selection of cognitive psychology tools traditionally dedicated to the study of (bounded) rationality. To do so, we presented to human participants and an array of pretrained LLMs new variants of classical cognitive experiments, and cross-compared their performances. Our results showed that most of the included models presented reasoning errors akin to those frequently ascribed to error-prone, heuristic-based human reasoning. Notwithstanding this superficial similarity, an in-depth comparison between humans and LLMs indicated important differences with human-like reasoning, with models' limitations disappearing almost entirely in more recent LLMs' releases. Moreover, we show that while it is possible to devise strategies to induce better performance, humans and machines are not equally-responsive to the same prompting schemes. We conclude by discussing the epistemological implications and challenges of comparing human and machine behavior for both artificial intelligence and cognitive psychology.

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3	<p>Anlló H, Watanabe K, Sackur J, de Gardelle V. (2022) Effects of false statements on visual perception hinge on social suggestibility. J Exp Psychol Hum Percept Perform. 2022 Jun 6. [FIRST AND CORRESPONDING AUTHOR] doi: 10.1037/xhp0001024.</p>	<p>Verbal hints can bias perceptual decision-making, even when the information they provide is false. What makes individuals more or less susceptible to such influences, however, remains unclear. Here, we inquire whether suggestibility to social influence, a high-level trait measured by a standard suggestibility scale, could predict changes in perceptual judgments. We asked naive participants to indicate the dominant color in a series of stimuli after giving them a short, false verbal statement about which color would likely dominate. We found that this statement biased participants' perceptual judgments of the dominant color, as shown by a correlated shift of their discrimination performance, confidence judgments, and response times. Crucially, this effect was more pronounced in participants with higher levels of susceptibility to social influence. Together, these results indicate that social suggestibility can determine how much simple (albeit false) verbal hints influence perceptual judgments.</p>
4	<p>Anlló H., Hagège J., Sackur J. (2021) Deployment dynamics of hypnotic anger modulation, Consciousness and Cognition, Volume 91, 2021, 103118, ISSN 1053-8100. [FIRST AND CORRESPONDING AUTHOR] https://doi.org/10.1016/j.concog.2021.103118</p>	<p>To understand the role that attention plays in the deployment timeline of hypnotic anger modulation, we composed an Attentional Blink paradigm where the first and second targets were faces, expressing neutral or angry emotions. We then suppressed the salience of angry faces through a "hypnotic numbing" suggestion. We found that hypnotic suggestion only attenuated the emotional salience of the second target (T2). By implementing drift-diffusion decision modelling, we also found that hypnotic suggestion mainly affected decision thresholds. These findings suggest that hypnotic numbing resulted from belated changes in response strategy. Interestingly, a contrast against non-hypnotized participants revealed that the numbing suggestion had the instruction-like feature of incorporating emotional valence into the attentional task-set. Together, our results portray hypnotic anger modulation as a two-tiered process: first, hypnotic suggestion alters the attentional task-set; second, provided processing and response preparation are not interrupted, a hypnotizability-dependent response based on said altered task-set is produced through late cognitive control strategies.</p>

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5	Anlló H. , Hèrer B., Delignières A., Bocahu Y., Segundo I., Alingrin V. M., Gilbert M. & Larue F. (2020) Hypnosis for the management of anxiety and dyspnea in COPD: a randomized, sham-controlled crossover trial. International Journal of Chronic Obstructive Pulmonary Disease. [FIRST AND CORRESPONDING AUTHOR] https://doi.org/10.2147/COPD.S267019	Patients with chronic obstructive pulmonary disease (COPD) are prone to dyspnea, increased respiratory rate and other anxiety-inducing symptoms. Hypnosis constitutes a complementary procedure capable of improving subjective feelings of anxiety. We assessing the efficacy of a 15-minute hypnosis intervention for immediate improvement of anxiety in severe COPD patients. Twenty-one participants, COPD patients (mean FEV1 < 32.3%), were randomly assigned to two individual sessions in crossover (sham and hypnosis, 24-h washout period, arms: hypnosis-sham [n=11]/sham-hypnosis [n=10]). We tracked pre- and post-intervention anxiety (STAI-6 score) as primary endpoint. We observed that nineteen (90.5%) participants completed the study. Anxiety diminished significantly after hypnosis (STAI-6 scores - 23.8% [SD = 18.4%] hypnosis vs -3.1% [32.8%] sham; $t_{(2)}=8$, $P<0.01$, Bayes Factor 5.5). Respiratory rate also decreased after hypnosis. Improvements in SpO2 and Borg exertion scores were registered after both conditions. Overall, a 15-minute hypnosis session improved participants' anxiety and lowered respiratory rate (as opposed to sham). Improvements in anxiety were correlated with an alleviation in respiratory strain. Results imply that hypnosis can contribute to the improvement of anxiety levels and breathing mechanics in severe COPD patients.

N°	Jeux de données, codes sources, logiciels, data paper, etc. / Data set, software, source code, data paper, etc.	Description succincte / Brief description
1	https://www.clinicaltrials.gov/study/NCT04868357?cond=COPD&term=Hypnosis&rank=1	Clinical trial record

VALORISATION / ADD-ON VALUE/TECHNOLOGY TRANSFER :

2022: "DECLICS, Dialogues entre chercheurs et lycéens pour les intéresser à la construction des savoirs", Cercle FSER. Ambassador/presenter at Lycée Jacques Decour (Paris).

2019: "JSPS Science Dialogue Program". Lectures on the psychology of attention to highschoolers in the countryside of Nagano, Japan.

2017 - present: active involvement in the VisionForum art collective and EEGSynth to bring artists and scientists to collaborate to their mutual benefit. See for example:
<https://www.perhuttner.com/news/113-in-vaxjo/> ,
<http://www.visionforum.eu/aah/>
<http://www.visionforum.eu/113-cv/>

2015-2017: >12 public open sessions of dissemination and outreach at the Centre de Recherche Interdisciplinaire (CRI, Paris, France) explaining the concept of hypnosis in science, and its use in the clinical environment (as opposed to what we usually see in films and novels)

2015 - present: active involvement in mainstream and independent media.