

James Winters

Assistant Professor | Cognitive Scientist

contact

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website

<https://j-winters.github.io>

blog

www.replicatedtypo.com

twitter

@replicatedtypo

interests

cultural evolution, cognitive science, open-ended dynamics, collective intelligence, problem solving, linguistics, language evolution, iterated learning, communication games, cross-cultural datasets, statistical models, agent-based modelling

academic appointments

2020-	Assistant Professor School of Collective Intelligence	University Mohammed VI Polytechnic, Ben Guerir
2016-2020	Postdoctoral Researcher The Minds and Traditions Research Group	Max Planck Institute SHH, Jena

education

2012-2017	Ph.D. Linguistics Thesis: Context, Cognition, and Communication in Language	University of Edinburgh, Edinburgh
2010-2011	M.A. Language and Communication	Cardiff University, Cardiff
2008-2009	M.Sc The Evolution of Language and Cognition	University of Edinburgh, Edinburgh

publications

preprints

Winters, J. (working paper). Is the cultural evolution of technology cumulative or combinatorial? *SocArXiv*. <https://doi.org/10.31235/osf.io/aypnx>.

2022

Morin, O., Müller, T.F., Morisseau, T., & **Winters, J.** (2022). Cultural evolution of precise and consensual semantic conventions in a multiplayer gaming app. *Cognitive Science*. <https://doi.org/10.1111/cogs.13113>.

Kelly, P., **Winters, J.**, Miton, H., & Morin, O. (2022). The predictable evolution of letter shapes: An emergent script of West Africa recapitulates historical change in writing systems. *Current Anthropology*. <https://doi.org/10.31235/osf.io/eg489>.

2021

Pavlek, B., **Winters, J.**, & Morin, O. (2021). Standards and quantification of coin iconography: possibilities and challenges. *DSH: Digital Scholarship in the Humanities*. <https://doi.org/10.1093/llc/fqab030>.

Müller, T.F., **Winters, J.**, Morisseau, T., Noveck, I., & Morin, O. (2021). Color terms: Natural language semantic structure and artificial language structure formation in a large-scale online smartphone application. *Journal of Cognitive Psychology*. <https://www.tandfonline.com/doi/full/10.1080/20445911.2021.1900199>.

2020

Henschel, M., **Winters, J.**, Müller, T.F., & Bräuer, J. (2020). Effect of shared information and owner behaviour on showing in Dogs (*Canis familiaris*). *Animal Cognition*. <https://doi.org/10.1007/s10071-020-01409-9>.

Pavlek, B., **Winters, J.**, & Morin, O. (2020). Reverse engineering cash: Coin designs mark out high value differentials and coin sizes track values logarithmically. *Cognition*, 198: 104182. <https://doi.org/10.1016/j.cognition.2020.104182>.

2019

Winters, J. (2019). Escaping optimization traps: The role of cultural adaptation and cultural exaptation in facilitating open-ended cumulative culture. *Palgrave Communications*. 5: 149. <https://doi.org/10.1057/s41599-019-0361-3>.

Pavlek, B., **Winters, J.**, & Morin, O. (2019). Ancient coin designs encoded increasing amounts of economic information over centuries. *Journal of Anthropological Archaeology*. 56: 101103. <https://doi.org/10.1016/j.jaa.2019.101103>.

Müller, T.F., **Winters, J.**, & Morin, O. (2019). The influence of shared visual context on the successful emergence of conventions in a referential communication task. *Cognitive Science*. 43(9): e12783. <https://doi.org/10.1111/cogs.12783>.

Winters, J., & Morin, O. (2019). From context to code: Information transfer constrains the emergence of graphic codes. *Cognitive Science*. 43(3): e12722. <https://doi.org/10.1111/cogs.12722>.

2018

Morin, O., **Winters, J.**, & Kelly, P. (2018). Writing, graphic codes, and asynchronous communication. *topiCS*. <https://doi.org/10.1111/tops.12386>.

Müller, T.F., & **Winters, J.** (2018). Compression in cultural evolution: Homogeneity and structure in the emergence and evolution of a large-scale online collaborative art project. *PLoS One*. 13(9): e0202019. <https://doi.org/10.1371/journal.pone.0202019>.

Morin, O., **Winters, J.**, Müller, T.F., Morisseau, T., Etter, C., & Greenhill, S. (2018). The *Color Game*: What smartphone apps may contribute to language evolution research. *Journal of Language Evolution*. 3(2): 91–93. <https://doi.org/10.1093/jole/lzy005>.

Winters, J., Kirby, S., & Smith, K. (2018). Contextual predictability shapes signal autonomy. *Cognition*, 176: 15-30. <https://doi.org/10.1016/j.cognition.2018.03.002>.

2017

Hartmann, S., Pleyer, M., **Winters, J.**, & Zlatev, J. (2017). Interaction and iconicity in the evolution of language: Introduction to the special issue. *Interaction Studies*, 18(3): 303-313. <https://doi.org/10.1075/is.18.3>.

2015

Roberts, S.G., **Winters, J.**, & Chen, K. (2015). Future tense and economic decisions: Controlling for cultural evolution. *PLoS One*, 10(7): e0132145. <https://doi.org/10.1371/journal.pone.0132145>

Pleyer, M., & **Winters, J.** (2015). Integrating cognitive linguistics and language evolution research. *Theoria Et Historia Scientiarum*, 11: 19-44. <https://dx.doi.org/10.12775/ths-2014-002>

Winters, J., Kirby, S., & Smith, K. (2015). Languages adapt to their contextual niche. *Language and Cognition*, 7(3):415-449. <https://doi.org/10.1017/langcog.2014.35>.

2014

Littauer, R., Roberts, S.G., **Winters, J.**, Bailes, R., Pleyer, M., & Little, H. (2014). From the Savannah to the Cloud: Blogging Evolutionary Linguistics Research. In: *The Past, Present and Future of Language Evolution Research*, Eds., L. McCrohon, B. Thompson, T. Verhoef, H. Yamauchi.

2013

Roberts, S. G., & **Winters, J.** (2013). Linguistic diversity and traffic accidents: Lessons from statistical studies of cultural traits. *PLoS One*, 8(8): e70902. <https://doi.org/10.1371/journal.pone.0070902>

2012

Roberts, S. G., & **Winters, J.** (2012). Social structure and language structure: The new nomothetic approach. *Psychology of Language and Communication*, 16, 89-112. <https://doi.org/10.2478/v10057-012-0008-6>

conference abstracts and proceedings

Winters, J. (2021). Why is open-ended cumulative cultural evolution rare? *Invited Speaker ALIFE 2021 for The Fifth International Workshop of Social Learning and Cultural Evolution (SLACE)*

Winters, J., Kelly, P., Miton, H., & Morin, O. (2018). Compression effects in the cultural evolution of the Vai script of West Africa. *Cultural Evolution Society Conference 2018*.

Morin, O., Pavlek, B., & **Winters, J.** (2018). The evolution of money: How information grew on ancient coins (Greece 650-30 BCE). *Cultural Evolution Society Conference 2018*.

Morin, O., **Winters, J.**, Müller, T., Morisseau, T., & Greenhill, S. (2018). The Color Game: Cultural evolution research with a gaming app *Cultural Evolution Society Conference 2018*.

Winters, J. & Müller, T. (2018). The emergence and evolution of structured patterns in a large-scale online collaborative art project. *Cultural Evolution Society Conference 2018*.

Müller, T., & **Winters, J.** (2018). Homogeneity and structure in the emergence and evolution of visual art: The cultural evolution of compressed, interdependent artworks in Reddit Place. *Applications in Cultural Evolution (Tartu)*.

Winters, J., Kelly, P., Miton, H., & Morin, O. (2018). Compression effects in the cultural evolution of the Vai script of West Africa. *Applications in Cultural Evolution (Tartu)*.

Winters, J., & Morin, O. (2018). From context to code: Shared information constrains the evolution of optimal codes. In: C. Cuskley, M. Flaherty, H. Little, Luke McCrohon, A. Ravignani and T. Verhoef (eds.) *The Evolution of Language: Proceedings of the 12th International Conference (EVLANGXII)*.

Müller, T., Morisseau, T., **Winters, J.**, & Morin, O. (2018). The influence of shared visual context on performance with novel codes in a referential communication game. In: C. Cuskley, M. Flaherty, H. Little, Luke McCrohon, A. Ravignani and T. Verhoef (eds.) *The Evolution of Language: Proceedings of the 12th International Conference (EVLANGXII)*.

Müller, T.F., & **Winters, J.** (2017). Cumulative culture and systematicity in *Place*: Compression, variation, and stability in a large-scale online pixel art collaboration. *Cultural Evolution Society 2017*.

Winters, J., & Morin, O. (2017). Information transfer constrains the cultural evolution of graphic codes. *Cultural Evolution Society 2017*.

Winters, J., & Morin, O. (2017). Emergence of optimal codes is contingent on the mode and function of communication. *European Human Behaviour and Evolution Conference 2017*.

Müller, T., Morisseau, T., **Winters, J.**, & Morin, O. (2017). The Influence of Common Perceptual Context on the Evolution of Graphic Codes. *European Human Behaviour and Evolution Conference 2017*.

Winters, J., Kirby S., & Smith K. (2016). Signal Autonomy Is Shaped By Contextual Predictability. In: S.G. Roberts, C. Cuskley, L. McCrohon, L. Barceló-Coblijn, O. Fehér T. Verhoef (eds.) *The Evolution of Language: Proceedings of the 11th International Conference (EVO LANG11)*.

Winters, J., Kirby, S., & Smith, K. (2014). Experimentally investigating the role of context in the structuring of linguistic systems over cultural evolution. In: E. A. Cartmill, S. Roberts, H. Lyn, & H. Cornish (Eds). *The Evolution of Language: Proceedings of the 10th International Conference (EVO LANG 10)*. Singapore: World Scientific.

Littauer, R., **Winters, J.**, Roberts, S.G., Little, H., Pleyer, M., & Benzon, B (2012). Academic research in the blogosphere: Adapting to new risks and opportunities on the Internet. In: Jan Christoph Meister (Ed.): *Digital Humanities 2012. Conference Abstracts. University of Hamburg, July 16-22*. Hamburg: Hamburg University Press, 268-269.

Roberts, S. & **Winters, J.** (2012). Constructing Knowledge: Nomothetic approaches to language evolution. In: L. McCrohon, T et al, *Five Approaches to Language Evolution: Proceedings of the Workshops of the 9th International Conference on the Evolution of Language*. EvoLang9 Organizing Committee.

teaching

since 2021	Supervisor	School of Collective Intelligence, UM6P
	Co-supervising Gafari Lukumon on his PhD project.	
since 2020	Lecturer	School of Collective Intelligence, UM6P
	Lecturing students on the Executive Masters and Masters in Collective Intelligence in three modules: <i>Experimental Methods and Statistics</i> , <i>Cognitive Science</i> , and <i>Computational methods in collective intelligence</i> .	
2019	Lecturer	Friedrich-Schiller-Universität Jena
	Lectured students from Cognitive Psychology and Neuroscience MSc on <i>Communication systems in animals: from sensory manipulation to signalling</i> .	
2018-2020	Supervisor	Max Planck Institute SHH
	Co-supervised Barbara Pavlek on her PhD project.	
2017	Guest lecturer	Universität Hamburg
	Guest lectured on <i>language evolution in the laboratory</i> for linguistic undergraduate students.	
2016-2020	Supervisor	Max Planck Institute SHH
	Co-supervised Thomas Müller on his PhD project.	
2015-16	Tutor	University of Edinburgh, UK
	Tutored second year students in Research Methods and Statistics module.	
2015-16	Senior Tutor	University of Edinburgh, UK
	Tutored fourth year students on the Origins and Evolution of Language module and contributed course content.	
2014-16	Tutor	University of Edinburgh, UK
	Tutored first year students on Linguistics and English Language 1 module.	
2014	Supervisor	University of Edinburgh, UK
	Co-supervised Sara Selzer (M.Sc Evolution of Language and Cognition) on her dissertation project.	

academic responsibilities

As Assistant Professor, my main responsibilities involve basic research, teaching on the masters and executive masters programmes, organising the departmental speaker series, and coordinating the PhD programme.

technical skills

Programming Languages: Python, R, Julia, Mathematica, LaTeX, HTML, Javascript, CSS

Methodological approaches: Agent-Based Modelling, Online and Laboratory-Based Behavioural Experiments, Statistical Modelling

grants received

2021	APRA 2020 Grant (Projets Recherche Appliquée)	Grant Number: TBA
	Received a 5,000,000 MAD (£390,769) grant to investigate innovation in Morocco as part of the <i>Eureka project</i> team.	
2012-2015	AHRC Grant	AH/K503010/1
	Received a fully-funded, 3-year AHRC grant covering tuition fees and an annual stipend for a PhD in Linguistics and English Language.	

peer-review

I have served as a peer-reviewer for the following publications: *Scientific Reports*, *Philosophical Transactions of the Royal Society B*, *Topics in Cognitive Science*, *Language Dynamics and Change*, *Cognitive Science*, *Evolution and Human Behavior*, *Palgrave Communications*, *Evolutionary Human Sciences*, *Royal Society Interface*, and *Open Mind: Discoveries in Cognitive Science*.

other academic outputs

Besides traditional academic outputs, I am actively engaged in the science and linguistic blogging community. In particular, I founded *A Replicated Typo*: a group blog focused on language, cognition and cultural evolution. I was also involved with organising the inaugural Cultural Evolution Society (CES) conference in Jena.

selected media coverage

My work has been mentioned in *Vice* ("Why Are Letters Shaped the Way They Are?"), *Slate* ("Did You Hear the One About Sex, Traffic Accidents, and Acacia Trees?"), *Le Monde* ("Le chocolat engendre-t-il des tueurs en série?"), *Gawker* ("What Does Extramarital Sex Have to Do with Acacia Trees? Everything."), *Arstechnica* ("Louder vowels won't get you laid, and other tales of spurious correlation"), *New Scientist* ("Reddit's megapixel masterpiece illustrates how culture evolves"), *Der Spiegel* ("Kollaborative Kunst: Wenn eine Million Menschen gemeinsam ein Bild malen"), *Phys.org* ("One million artists can't be wrong about cultural evolution"), and *ORF* ("Eine Million Kulturentwickler").