

# James Winters

Assistant Professor | Cognitive Scientist

## contact

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## email

james.winters@um6p.ma

## website

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

## blog

[www.replicatedtypo.com](http://www.replicatedtypo.com)

## twitter

@replicatedtypo

## interests

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

## academic appointments

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

## education

2012-2017	<b>Ph.D.</b> Linguistics and English Language	University of Edinburgh, Edinburgh
2010-2011	<b>M.A.</b> Language and Communication	Cardiff University, Cardiff
2008-2009	<b>M.Sc</b> The Evolution of Language and Cognition	University of Edinburgh, Edinburgh
2004-2007	<b>B.A.</b> Journalism	University of Glamorgan, Trefforest

## publications

### in press or preprint

**Winters, J.** (2020). Is the cultural evolution of technology cumulative or combinatorial? *SocArXiv*. <https://doi.org/10.31235/osf.io/aypnx>.

Kelly, P., **Winters, J.**, Miton, H., & Morin, O. (in press). 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>.

### 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/thesis-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>

### submitted or under review

Morin, O., Müller, T.F., Morisseau, T., **Winters, J.** (submitted). Contextual salience shapes the emergence and stability of semantic conventions.

Pavlek, B., **Winters, J.**, Morin, O. (submitted). Standards and quantification of coin iconography: possibilities and challenges.

Müller, T.F., **Winters, J.**, Morisseau, T., Noveck, I., & Morin, O. (submitted). Color terms: Natural language semantic structure and artificial language structure formation in a large-scale online smartphone application.

## conference abstracts and proceedings

**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 (EVLANG11)*.

**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 (EVLANG 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

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

## technical skills

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

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

## grants received

2012-2015	<b>AHRC Grant</b>	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.	

## 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 *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").