

Katherine Twomey
Academic (Teaching and Research) Lecturer
Division of Psychology Communication and Human Neuroscience (L5)



Overview

I use computational and empirical techniques to explore how babies and toddlers learn their first words and sentences, and how this is affected by what they see and feel in the world around them. I'm also interested in how children's real-world, curiosity-driven exploration of the learning environment affects early language acquisition. More information and a full publication list can be found at www.katietwomey.com.

Qualifications

Doctor of Philosophy, Understanding early word learning: An investigation of fast and slow mapping, University of Sussex
Award Date: 16 Jun 2013

Employment

Lecturer in Lang. & Communicative Dvlpmt

Academic (Teaching and Research) Lecturer
Division of Psychology Communication and Human Neuroscience (L5)
The University of Manchester
18 Sept 2017 → present

Research outputs

Caregivers as Experimenters: Reducing Unfamiliarity Helps Shy Children Learn Words

Hilton, M., Twomey, K. & Westermann, G., 30 Aug 2024, (Accepted/In press) In: *Infancy*.

Bigger Versus Smaller: Children's Understanding of Size Comparison Words Becomes More Precise With Age

Ferry, A., Corcoran, M., Williams, E., Curtis, S., Gale, C. & Twomey, K., 19 Aug 2024, (Accepted/In press) In: *Child Development*.

What difficulties do children learning English in addition to another language experience with English Oral Language? A systematic review.

Lester, N., Twomey, K. & Theakston, A., 30 Jul 2024, In: *Language Learning Journal*.

"I'm not mad, bad, and dangerous ... simply wired differently": Exploring factors contributing to good quality of life with autistic women

Paricos, A., Sturrock, A., Twomey, K. & Leadbitter, K., 1 Apr 2024, In: *Research in Autism Spectrum Disorders*. 102338.

Initial evaluation of the TALES (technology and literacy engagement after stroke) programme targeting functional literacy and social engagement in people with aphasia after stroke

Cetinkaya, B., Twomey, K. & Conroy, P., 4 Mar 2024, In: *Aphasiology*.

Face time: Effects of shyness and attention to faces on early word learning

Hilton, M., Twomey, K. & Westermann, G., 31 Dec 2023, In: *Language Development Research*. 3, 1

Telerehabilitation of aphasia: A systematic review of the literature

Cetinkaya, B., Twomey, K. & Conroy, P., 8 Nov 2023, In: *Aphasiology*.

The role of the natural history museum in promoting word learning for young children

Lester, N., Theakston, A. & Twomey, K. E., 1 Mar 2023, In: *Infant and Child Development*. 32, 2, e2400.

The role of the natural history museum in promoting language word learning for young children

Lester, N., Theakston, A. & Twomey, K., 2023.

The role of metacognitive abilities and curiosity in learning

Chen, X., Twomey, K. E. & Westermann, G., 21 Nov 2022, (Submitted)

Curiosity enhances incidental object encoding in 8-month-old infants

Chen, X., Twomey, K. & Westermann, G., 1 Nov 2022, In: *Journal of Experimental Child Psychology*. 223, p. 1-13 13 p., 105508.

Children's referent selection and word learning: Insights from a developmental robotic system

Twomey, K. E., Morse, A. F., Cangelosi, A. & Horst, J. S., 5 Jul 2022, In: *Interaction Studies*.

'I'm not bad, mad, and dangerous...simply wired differently' – a positive psychology exploration of quality of life of autistic women without intellectual disability

Paricos, A., Sturrock, A., Twomey, K. & Leadbitter, K., 8 Jun 2022, (Accepted/In press).

The impact of perceived emotions on toddlers' word learning

Ma, L., Twomey, K. & Westermann, G., 30 May 2022, In: *Child Development*.

The relationship between curiosity-driven motor exploration and language development

Durrant, S., Kampengele, M., Turnbull, H. & Twomey, K., 15 May 2022, (Accepted/In press).

Children's scale errors and object processing: early evidence for cross-cultural differences

Ishibashi, M., Twomey, K., Westermann, G. & Uehara, I., 18 Aug 2021, In: *Infant Behavior and Development*. 65, 101631.

Infants learn to follow gaze in stages: Evidence confirming a robotic prediction

Silverstein, P., Feng, J., Westermann, G., Parise, E. & Twomey, K., 2021, In: *Open Mind*.

Similarity, analogy and development in radical exemplar theory: A commentary on Ambridge (2020)

Lieven, E. V. M., Ferry, A., Theakston, A. & Twomey, K., 1 Oct 2020, In: *First Language*. 40, 5-6, p. 600-603 4 p.

Heads, shoulders, knees and toes: What developmental robotics can tell us about language acquisition

Twomey, K. & Cangelosi, A., 1 Sept 2020, *Current Perspectives on Child Language Acquisition : How children use their environment to learn*. Rowland, C., Theakston, A., Ambridge, B. & Twomey, K. (eds.). Amsterdam: John Benjamins Publishing Company, p. 39-64 26 p. (Trends in Language Acquisition Research; vol. 27).

Effects of semantic plausibility, syntactic complexity and n-gram frequency on children's sentence repetition

Polisenska, K., Chiat, S., Szewczyk, J. & Twomey, K., 14 Jul 2020, In: *Journal of Child Language*. p. 1-25

When Object Color is a Red Herring: Extraneous Perceptual Information Hinders Word Learning via Referent Selection

Horst, J., Twomey, K., Nurse, R. & Cangelosi, A., Jun 2020, In: *IEEE Transactions on Cognitive and Developmental Systems*.

Quantifying sources of variability in infancy research using the infant-directed speech preference

The ManyBabies Consortium, Frank, M. C., Alcock, K. J., Arias-Trejo, N., Aschersleben, G., Baldwin, D., Barbu, S., Bergelson, E., Bergmann, C., Black, A. K., Blything, R., Böhlend, M. P., Bolitho, P., Borovsky, A., Brady, S. M., Braun, B., Brown, A., Byers-Heinlein, K., Campbell, L. E. & Cashon, C. & 131 others, Choi, M., Christodoulou, J., Cirelli, L. K., Conte, S., Cordes, S., Cox, C., Cristia, A., Cusack, R., Davies, C., de Klerk, M., Delle Luche, C., de Ruyter, L., Dinakar, D., Dixon, K. C., Durier, V., Durrant, S., Fennell, C., Ferguson, B., Ferry, A., Fikkert, P., Flanagan, T., Floccia, C., Foley, M., Fritzsche, T., Frost, R. L. A., Gampe, A., Gervain, J., Gonzalez-Gomez, N., Gupta, A., Hahn, L. E., Hamlin, J. K., Hannon, E. E., Havron, N., Hay, J., Hernik, M., Höhle, B., Houston, D. M., Howard, L. H., Ishikawa, M., Shoji, I., Jackson, I.,

Jakobsen, K. V., Jartó, M., Johnson, S., Junge, C., Karadag, D., Kartushina, N., Kellier, D. J., Keren-Portnoy, T., Klassen, K., Kline, M., Ko, E.-S., Kominsky, J. F., Kosie, J. E., Kragness, H. E., Kragness, H. E., Krieger, A. A. R., Krieger, F., Lany, J., Lazo, R. J., Lee, M., Leservoiesier, C., Levelt, C., Lew-Williams, C., Lippold, M., Liszkowski, U., Liu, L., Luke, S. G., Lundwall, R. A., Cassia, V. M., Mani, N., Marino, C., Martin, A., Mastroberardino, M., Mateu, V., Mayor, J., Menn, K., Michel, C., Moriguchi, Y., Morris, B., Nave, K. M., Nazzi, T., Noble, C., Novack, M. A., Olesen, N. M., Orena, A. J., Ota, M., Panneton, R., Esfahani, S. P., Paulus, M., Pletti, C., Polka, L., Potter, C., Rabagliati, H., Ramachandran, S., Rennels, J. L., Reynolds, G. D., Roth, K. C., Rothwell, C., Rubez, D., Ryjova, Y., Saffran, J., Sato, A., Savelkoul, S., Schachner, A., Schafer, G., Schreiner, M. S., Seidl, A., Shukla, M., Simpson, E. A., Singh, L., Skarabela, B., Soley, G., Sundara, M., Theakston, A., Thompson, A., Trainor, L. J., Trehub, S. E., Trøan, A. S., Tsui, A.S.-M., Twomey, K., Von Holzen, K., Wang, Y., Waxman, S., Werker, J. F., Wermelinger, S., Woolard, A., Yurovsky, D., Zahner, K., Zettersten, M. & Soderstrom, M., 16 Mar 2020, In: *Advances in Methods and Practices in Psychological Science* . 3, 1, p. 24-52 29 p.

Current Perspectives on Child Language Acquisition: How children use their environment to learn

Rowland, C. F. (Editor), Theakston, A. (Editor), Ambridge, B. (Editor) & Twomey, K. (Editor), 2020, John Benjamins Publishing Company. 330 p. (Trends in Language Acquisition Research; vol. 27)

New evidence for learning-based accounts of gaze following: Testing a robotic prediction

Silverstein, P., Westermann, G., Parise, E. & Twomey, K., 19 Aug 2019, *2019 Joint IEEE 9th International Conference on Development and Learning and Epigenetic Robotics (ICDL-EpiRob 2019)* . IEEE, (2019 Joint IEEE 9th International Conference on Development and Learning and Epigenetic Robotics (ICDL-EpiRob 2019)).

Taking their eye off the ball: How shyness affects children's attention during word learning

Hilton, M., Twomey, K. E. & Westermann, G., 1 Jul 2019, In: *Journal of Experimental Child Psychology*. 183, p. 134-145 12 p.

Curiosity and Attention

Twomey, K. & Westermann, G., 1 Jun 2019, *International Handbook of Language Acquisition (1st Ed)*. Horst, J. & von Koss Torkildsen, J. (eds.). Routledge

Curiosity and Exploration

Bahzydai, M., Twomey, K. & Westermann, G., 5 Apr 2019, (Accepted/In press) *Encyclopedia of Infant and Early Childhood Development*. 2 ed. Elsevier BV

Building the foundations of language: Mechanisms of curiosity-driven learning

Twomey, K. & Westermann, G., 22 Mar 2019, (Accepted/In press) *International Handbook of Language Acquisition*. Horst, J. & von Koss Torkildsen, J. (eds.). Routledge

Word Learning

Twomey, K. & Hilton, M., 26 Jan 2019, (Accepted/In press) *Encyclopedia of Child and Adolescent Development*. Hupp, S., Jewell, J. D., Shek, D. T. L. & Leung, Y. (eds.). John Wiley & Sons Ltd, Vol. 7. 10 p.

The limits of infants' early word learning

Taxitari, L., Twomey, K., Westermann, G. & Mani, N., 2019, In: *Language Learning and Development*.

Neurocomputational models capture the effect of learned labels on infants' object and category representations

Capelier-Mourguy, A., Twomey, K. & Westermann, G., 2018, In: *IEEE Transactions on Cognitive and Developmental Systems*.

Curiosity-based learning in infants: A neurocomputational approach

Twomey, K. & Westermann, G., 10 Dec 2017, In: *Developmental science*.

Computational models of word learning

Twomey, K. & Westermann, G., 10 Nov 2017, *Early Word Learning*. Westermann, G. & Mani, N. (eds.). London: Routledge, p. 138-154 17 p. (Current issues in developmental psychology).

Learned Labels Shape Pre-speech Infants' Object Representations

Twomey, K. & Westermann, G., 5 Jul 2017, In: *Infancy*. p. 1-13 13 p.

All the right noises: Background variability helps early word learning.

Twomey, K., Ma, L. & Westermann, G., 2017, In: *Cognitive Science*.

Neurocomputational models of cognitive development and processing: 14th Neural Computation and Psychology Workshop Lancaster University, UK, 21 – 23 August 2014

Twomey, K. E. (Editor), Smith, A. C. (Editor), Westermann, G. & Monaghan, P. J. (Editor), Nov 2016, 152 p. (Progress in Neural Processing; vol. 22)

Children's referent selection and word learning: Insights from a developmental robotic system

Twomey, K. & Morse, A., 26 Sept 2016, In: *Interaction Studies*. 17, p. 93-119 0.

A learned label modulates object representations in 10-month-old infants

Twomey, K. E. & Westermann, G., 3 Aug 2016.

Lexical distributional cues, but not situational cues, are readily used to learn abstract locative verb-structure associations

Twomey, K. E., Chang, F. & Ambridge, B., Aug 2016, In: *Cognition*. 153, p. 124-139 16 p.

Book Review: Brian MacWhinney & William OGrady (Eds.), *The handbook of language emergence*

Twomey, K. E., 12 Apr 2016, In: *First Language*.

What's on the inside counts: A grounded account of concept acquisition and development.

Thill, S. & Twomey, K., 23 Mar 2016, In: *Frontiers in Psychology*.

Book review: *The Handbook of Language Emergence*

Twomey, K., 2016, In: *First Language*. 36, 2, p. 157-159

A neural network model of curiosity-driven infant categorization

Twomey, K. E. & Westermann, G., 2 Dec 2015, *5th Joint International Conference on Development and Learning and Epigenetic Robotics, ICDL-EpiRob 2015*. IEEE, p. 1-6 6 p. 7346097

Preemption versus Entrenchment: Towards a construction-general solution to the problem of the retreat from verb argument structure overgeneralization

Ambridge, B., Bidgood, A., Twomey, K., Pine, J. M., Rowland, C. & Freudenthal, D., 2015, In: *PLoS ONE*. 10, 4, p. 1-20 20 p.

Do as I say, not as I do: A lexical distributional account of English locative verb class acquisition

Twomey, K., Chang, F. & Ambridge, B., Sept 2014, In: *Cognitive Psychology*. 73, p. 41-71 31 p.

Competition affects word learning in a developmental robotic system

Twomey, K. E., Morse, A., Cangelosi, A. & Horst, J., 1 Jul 2014, *Neurocomputational Models of Cognitive Development and Processing*. Twomey, K., Smith, A., Westermann, G. & Monaghan, P. (eds.). World Scientific Publishing Co. Pte. Ltd, p. 131-144 14 p.

An embodied model of young children's categorization and word learning

Twomey, K., Horst, J. & Morse, A., 2014, *Theoretical and Computational Models of Word Learning: Trends in Psychology and Artificial Intelligence*. IGI Press, p. 172-196

That's more like it: Multiple exemplars facilitate word learning

Twomey, K., Ranson, S. & Horst, J., 2014, In: *Infant and Child Development*. 23, 2, p. 105-122

Visual variability affects early verb learning

Twomey, K., Lush, L., Pearce, R. & Horst, J., 2014, In: *British Journal of Developmental Psychology*. 32, p. 359-366 8 p.

A distributional account of children's acquisition of the locative construction: corpus and computational evidence

Twomey, K. E. & Chang, F., 2013, *Child Language Seminar*.

It's taking shape: shared object features influence novel noun generalizations

Horst, J. S. & Twomey, K. E., 2013, In: *Infant and Child Development*. 22, 1, p. 24-43 20 p.

Twinkle twinkle little star: exemplar variability affects early verb learning

Twomey, K. E., Lush, L., Pearce, R. & Horst, J., 2013, *BPS Cognitive and Developmental Psychology Conference*.

An investigation of fast and slow mapping

Twomey, K. E., 2012, 304 p.

All things considered: Dynamic field theory captures effect of categories on children's word learning

Twomey, K. E. & Horst, J. S., 1 Dec 2011, *AISB 2011: Computational Models of Cognitive Development*. p. 3-7 5 p.

Activities**Modelling approaches to understanding infant development (symposium)**

Twomey, K. (Speaker)

8 Jul 2020

Lancashire & South Cumbria NHS Foundation Trust Speech and Language Therapy Professional Forum

Twomey, K. (Participant)

27 Nov 2019

ESRC Festival of Social Science 2019

Twomey, K. (Participant)

6 Nov 2019

Nuffield Research Placement Scheme celebration event

Twomey, K. (Chair)

5 Nov 2019

Autistica Autism and Artificial Intelligence Summit

Twomey, K. (Participant)

13 Oct 2019 → 14 Oct 2019

LuCiD research internship supervision 2019

Twomey, K. (Other)

15 Jul 2019 → 24 Aug 2019

Robotics@Manchester Workshop

Twomey, K. (Participant)

6 Sept 2018

Nuffield Research Placements

Twomey, K. (Other)

1 Jul 2018 → 31 Aug 2018

LuCiD research internship supervision

Twomey, K. (Other)

1 Jun 2018 → 15 Jul 2018

Prizes

Curiosity-based learning: An empirical view

Twomey, K. (Recipient), 2015

Future Research Leaders

Twomey, K. (Recipient), 2016

Social responsibility contributor of the year

Twomey, K. (Recipient), 31 Aug 2022

Press/Media

Babies: Their Wonderful World

Twomey, K.

10/12/18

1 Media contribution

Talking to your baby – is there a 'right' way?

Durrant, S. & Twomey, K.

1/01/20

1 Media contribution

Why are Humans Curious?

Twomey, K.

16/07/20

1 Media contribution

Awards

Projects

Autism@Manchester

Bond, C. (Researcher), Garg, S. (Researcher), Gowen, E. (Researcher), Green, J. (Researcher), Humphrey, N. (Researcher), Lamb, J. (Researcher), Leadbitter, K. (Researcher), Miyan, J. (Researcher), Parmar, K. (Researcher), Sturrock, A. (Researcher), Wan, M. (Researcher), Leonard, S. (Researcher), Walter, F. (Researcher), Twomey, K. (Researcher), Greco, C. (Researcher), Poliakoff, E. (Researcher), Birtwell, K. (Researcher), Brown, L. (Researcher), Rowland, C. (Researcher), Gorman, L. (PI) & Gillibrand, S. (PI)

1/01/14 → ...

RAI: Centre for Robotics and Artificial Intelligence

Cangelosi, A. (PI), Lennox, B. (PI), Weightman, A. (Col), Dennis, L. (Col), Dixon, C. (Col), Fisher, M. (Col), Herrmann, G. (Col), Dickson, A. (Col), Lanzon, A. (Col), Stancu, A. (Col), Saiani, A. (Col), Freitas, A. (Col), Nini, A. (Col), Voronkov, A. (Col), Brass, A. (Col), Vijayaraghavan, A. (Col), Parslew, B. (Col), Crowther, W. (Col), Grieve, B. (Col), Adorno, B. (Col), Jay, C. (Col), Wang, C. C. L. (Col), Todd, C. (Col), Soutis, C. (Col), Arsene, C. (Col), Dresner, D. (Col), Barrett, E. (Col), Gowen, E. (Col), Arvin, F. (Col), Podd, F. (Col), Brown, G. (Col), Reger, G. (Col), Cooper, G. (Col), Mairs, H. (Col), Yin, H. (Col), Kinloch, I. (Col), Eleftheriou, I. (Col), Li, J. (Col), Carrasco Gomez, J. (Col), Ainsworth, J. (Col), Sinha, J. (Col), Ozanyan, K. (Col), Smith, K. (Col), Twomey, K. (Col), Margetts, L. (Col), Ren, L. (Col), Zhang, L. (Col), Cordeiro, L. (Col), Rattray, M. (PI), Bissett, M. (Col), Elliot, M. (Col), Alvarez, M. (Col), Luján, M. (Col), Nabawy BSc, MSc, PhD, MRaES, SMAIAA, FHEA, M. (Col), Peek, N. (Col), Marjanovic, O. (Col), Dorn, O. (Col), Dudek, P. (Col), Green, P. (Col), Connolly, P. (Col), Da Silva Bartolo, P. J. (Col), Gardner, P. (Col), Martin, P. (Col), Potluri, V. (Col), Curtis, R. (Col), Schmidt, R. (Col), Banach, R. (Col), Batista-Navarro, R. T. (Col), Kaski, S. (Col), Midson, S. (Col), Watson, S. (Col),

Holm, S. (Col), Furber, S. (Col), Schlegel, V. (Col), Mirihanage, W. (Col), Mansell, W. (Col), Pan, W. (Col), Sampson, W. (Col), Sellers, W. (Col), Yang, W. (Col), Cai, P. (Col), Sun, Y. (Col), Alharthi, A. (Researcher), Macario Rojas, A. (Researcher), Serhan, B. (Researcher), Yu, C. (Researcher), Abara, D. (Researcher), Lopez Pulgarin, E. (Researcher), Faruq, F. (Researcher), Tavella, F. (Researcher), Semeraro, F. (Researcher), Liu, G. (Researcher), Fang, G. (Researcher), Niu, H. (Researcher), Taylor, H. (PI), Zhu, H. (PGR student), Collenette, J. (Researcher), Amano, K. (Researcher), Lo, K. C. J. (PGR student), Raggioli, L. (Researcher), Romeo, M. (Researcher), Ruocco, M. (PGR student), Ghaffari Saadat, M. (Researcher), Walmsley, M. (Researcher), Mubarik, A. (Researcher), Vianzi, S. (Researcher), Su, Y.-H. (PGR student), Mcaleese, H. (PGR student), Stringer, P. (PGR student), Stoican, R. (PGR student), Ye, R. (PGR student), Kurawa, S. S. (PGR student), Zhang, T. (PGR student), Krywonos, W. (PGR student), Xu, Y. (PGR student), Tian, Y. (PGR student), Henderson, A. (Technical team), Morley, D. (Support team), Tallentire, J. (Support team), Smith, J. (Support team), Hawthornthwaite, S. (Support team), Carlson, J. (Support team) & Baniqued, P. D. (Researcher)

Datasets

Curiosity-based learning in infants: a neurocomputational approach, experimental data

Twomey, K. (Creator) & Westermann, G. (Creator), UK Data Service, 30 Apr 2015

DOI: 10.5255/UKDA-SN-853598

Evidence for systematicity in infant and toddler curiosity-driven learning 2017-2018

Twomey, K. (Creator), Malem, B. (Creator), Dunn, K. (Creator) & Westermann, G. (Creator), UK Data Service, 24 May 2019

DOI: 10.5255/UKDA-SN-853607

Evidence for systematicity in infant and toddler curiosity-driven object exploration 2017-2018 (Study 2)

Twomey, K. (Creator), Ke, H. (Creator) & Westermann, G. (Creator), UK Data Service, 24 May 2019

DOI: 10.5255/UKDA-SN-853717

International Centre for Language and Communicative Development: All the right noises: Background variability helps early word learning, 2014-2016.

Twomey, K. (Creator), Ma, L. (Creator) & Westermann, G. (Creator), UK Data Service, 2021

DOI: 10.5255/UKDA-SN-853872

International Centre for Language and Communicative Development: Beyond words: Infants' early category representations are shaped by labels, 2014-2019

Twomey, K. (Creator), UK Data Service, 2021

DOI: 10.5255/UKDA-SN-853873

International Centre for Language and Communicative Development: Learned labels shape pre-speech infants' object representations, 2014-2015

Twomey, K. (Creator) & Westermann, G. (Creator), UK Data Service, 2021

DOI: 10.5255/UKDA-SN-853871

The role of the natural history museum in promoting language word learning for young children

Lester, N. (Creator), Theakston, A. (Creator) & Twomey, K. (Creator), Open Science Framework, 1 Dec 2022

https://osf.io/5yw62/?view_only=5e3e4e261ebe4deabe09032e85997c6