

Anita Williams Woolley

**Tepper School of Business
Carnegie Mellon University
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Academic Positions Held

Carnegie Mellon University Associate Professor of Organizational Behavior and Theory	2015-pres
Assistant Professor of Organizational Behavior and Theory Tepper School of Business Faculty Giving Chair Xerox Junior Faculty Chair	2008 – 2015 2009-2010 2010-2011
Harvard University Postdoctoral Fellow, NSF-funded “Group Brain” Project J. Richard Hackman and Stephen Kosslyn, co-PIs	2003-2008

Education

- Ph.D. Organizational Behavior, Harvard University, 2003
Joint Doctoral Program at Harvard Business School and Department of Psychology
- A.M. Social Psychology, Harvard University, 2001
- A.B. Psychology, Harvard University, 1995
Honors: Summa Cum Laude, Phi Beta Kappa

Research Interests

My research is focused on the organizational, team, and individual factors that influence the effectiveness of knowledge work teams. In my lab- and field-based research, I examine:

- Theory and measurement of collective intelligence in groups
- The effects of playing offense versus defense on team process and team decision making
- The factors that lead teams to be outcome- or process-focused
- The implications of multiple team memberships for individual and team performance

PUBLICATIONS

Peer-reviewed Journals (reverse chronological order)

Glikson, E. & Woolley, A.W. (in press). Human trust in artificial intelligence: Review of empirical research. *Academy of Management Annals*.

Mayo, A.T. & Woolley, A.W. (in press). Variance in group ability to transform resources into performance, and the role of coordinated attention. *Academy of Management Discoveries*.

Aggarwal, I. & Woolley, A.W. (2019). Team creativity, cognition, and cognitive style diversity. *Management Science*, 64, 1586-1599.

Mayo, A.T., Woolley, A.W., & Chow, R.M. (2019). Unpacking participation and influence: Diversity's countervailing effects on expertise use in groups. *Academy of Management Discoveries*.

Aggarwal, I., Woolley, A.W., Chabris, C.F. & Malone, T.W. (2019). The impact of cognitive style diversity on implicit learning in teams. *Frontiers in Psychology*, 10:112. doi: 0.3389/fpsyg.2019.00112

Gupta, P. & Woolley, A.W. (2018). Productivity in an era of multi-teaming: The role of information dashboards and shared cognition in team performance. *Proceedings ACM Human-Computer Interaction*, 2, 62. (CSCW 2018). <https://doi.org/10.1145/3274331>

Chang, J.W., Chow, R.C., & Woolley, A.W. (2017). Effects of inter-group status on the pursuit of intra-group status. *Organizational Behavior and Human Decision Processes*, 139, 1-17.

Chikersal, P., Tomprou, M., Kim, Y. J., Woolley, A., & Dabbish, L. (2017). Deep structures of collaboration: Physiological correlates of collective intelligence and group satisfaction. *Proceedings of the 20th ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW 2017)*.

Nielsen, M. W., Alegria, S., Börjeson, L., Etkowitz, H., Falk-Krzesinski, H. J., Joshi, A., Woolley, A.W., ... Schiebinger, L. (2017). Gender diversity leads to better science. *Proceedings of the National Academy of Sciences*, 114(8), 1740–1742.

Kim, Y. J., Engel, D., Woolley, A., Lin, J., McArthur, N., & Malone, T. (2017). What makes a strong team? Using collective intelligence to predict performance of teams in League of Legends. *Proceedings ACM Human-Computer Interaction*. (CSCW 2017).

Riedl, C. & Woolley, A.W. (2017). Teams vs. Crowds: A field test of the relative contributions of incentives, member ability, and emergent collaboration to crowd-based problem solving performance. *Academy of Management Discoveries*, 3, 382-403.

Mayo, A.T. & Woolley, A.W. (2016). Teamwork in healthcare: Maximizing collective intelligence via inclusive collaboration and open communication. *American Medical Association Journal of Ethics*, 18 (9): 933-940.

Schuldt, J. P., Chabris, C.F., Woolley, A.W. and Hackman, J.R. (2016). Confidence in dyadic decision making: The role of individual differences. *Journal of Behavioral Decision Making* doi:10.1002/bdm.1927.

Engel, D., Woolley, A. W., Aggarwal, I., Chabris, C. F., Takahashi, M., Nemoto, K., Kaiser, C., Kim, Y. J., & Malone, T. W. (2015). *Collective intelligence in computer-mediated collaboration emerges in different contexts and cultures*. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI 2015), Seoul, Korea.

Woolley, A.W., Aggarwal, I., and Malone, T.W. (2015) “Collective Intelligence and Group Performance.” *Current Directions in Psychological Science* 24: 420–24.

Engel, D., Woolley, A. W., Jing, L., Chabris, C. F., & Malone, T. W. (2014). [Reading the mind in the eyes or reading between the lines? Theory of Mind predicts collective intelligence equally well online and face-to-face](#). *PLoS ONE* 9(12).

Aggarwal, I. & Woolley, A.W. (2013) Do you see what I see? The effect of members’ cognitive styles on team processes and errors. *Organizational Behavior and Human Decision Processes*, 122, 92-99.

Woolley, A.W., Bear, J.B., Chang, J.W. & DeCostanza, A.H. (2013). The effects of team strategic orientation on team process and information search. *Organizational Behavior and Human Decision Processes*, 122, 114-126.

Woolley, A.W. (2011). Playing offense vs. defense: The effects of strategic orientation on team process in competitive environments. *Organization Science*, 22, 1384-1398.

Woolley, A.W. (2011). Responses to adversarial situations and the implications for collective intelligence. *Journal of Organizational Behavior*, 32, 978-983.

Woolley, A.W. & Fuchs, E.R.H. (2011). Collective intelligence in the organization of science. *Organization Science* 22, 1359-1367.

Bear, J.B. & Woolley, A.W. (2011). The role of gender in team collaboration and performance. *Interdisciplinary Science Reviews*, 36, 146-153.

O’Leary, M.B., Mortensen, M. & Woolley, A.W. (2011). Multiple team membership: A theoretical model of its effects on productivity and learning for individuals and teams. *Academy of Management Review*, 36, 461-478.

Woolley, A.W., Chabris, C.F., Pentland, A., Hashmi, N. & Malone, T.M. (2010). Evidence for a collective intelligence factor in the performance of human groups. *Science*, 330, 686-688.

Woolley, A. W. (2009). Means versus Ends: Implications of outcome and process focus for team adaptation and performance. *Organization Science*, 20, 500-515.

Woolley, A.W. (2009). Putting first things first: Task focus and team performance. *Journal of Organizational Behavior*, 30, 427-452.

^Woolley, A. W., Gerbasi, M. E., Chabris, C. F., Kosslyn, S. M., & Hackman, J. R. (2008). Bringing in the experts: How team composition and work strategy jointly shape analytic effectiveness. *Small Group Research*, 39, 352-371.

^Finalist for best paper of the year in the journal

Woolley, A. W., Hackman, J. R., Jerde, T. J., Chabris, C. F., Bennett, S. L., & Kosslyn, S. M. (2007). Using brain-based measures to compose teams: How individual capabilities and team collaboration strategies jointly shape performance. *Social Neuroscience*, 2, 96-105.

Woolley, S.L., Benjamin, W.J., & Woolley, A.W. (2004) Construct validity of a self-report measure of teacher beliefs related to constructivist and behaviorist theories. *Educational and Psychological Measurement*, 62, 319-331.

Woolley, A.W. (1998). Effects of intervention content and timing on group task performance. *Journal of Applied Behavioral Science*, 34, 30-46.

Refereed Conference Proceedings

Chang, J.W., Chow, R.M., Woolley, A.W. (2013). High-status but low-performing: Effects of group status on information exchange and group outcome. *Academy of Management Best Paper Proceedings*.

Woolley, A.W., Bear, J.B., Chang, J.W., DeCostanza, A.W. (2011). The effects of team strategic orientation on team strategy and information search in competitive environments. *Academy of Management Best Paper Proceedings*.

Woolley, A.W. (2009) Offensive versus defensive strategic orientation and collective information processing in teams. *Academy of Management Best Paper Proceedings*.

Book Chapters (most recent first)

Malone, T.W. & Woolley, A.W. (2020). Collective intelligence. In R. Sternberg (Ed) *The Cambridge Handbook of Intelligence*. Cambridge, UK: Cambridge University Press.

Woolley, A.W. & Aggarwal, I. (2020). Collective intelligence and group learning. In L. Argote & J.M. Levine (Eds.) *The Oxford Handbook of Group and Organizational Learning*. New York, NY: Oxford University Press.

Woolley, A.W., Aggarwal, I., & Malone, T.W. (2015). Collective intelligence in teams and organizations. In T.W. Malone & M. Bernstein (Eds.) *Collective Intelligence*. Cambridge, MA: MIT Press.

Woolley, A.W., & Hashmi, N. (2013). Cultivating collective intelligence in online groups. In P. Michelucci (Ed.) *Handbook of Human Computation*. New York, NY: Springer Science+Business Media.

Woolley, A.W. (2013). Emerging understanding of group-related characteristics: Collective intelligence. *New Directions in Assessing Performance Potential of Individuals and Groups*, National Research Council, Committee on Measuring Human Capabilities: Performance Potential of Individuals and Collectives, Board on Behavioral, Cognitive, and Sensory Sciences. Division of Behavioral and Social Sciences Education. Washington, DC.

Aggarwal, I., & Woolley, A.W. (2012). Two perspectives on intellectual capital and innovation in teams: Collective intelligence and cognitive diversity. In C. Mukhopadhyay (Ed.), *Driving the economy through innovation and entrepreneurship* (pp. 495-502). Bangalore: Springer.

Roloff, K.S., Woolley, A.W. and Edmondson, A.C. (2011) “The contribution of teams to organizational learning,” in M. Easterby-Smith & M. Lyles, (Eds.) *International handbook of organizational learning and knowledge management, Second Edition*, 249-272. London: Blackwell.

O’Leary, M.B., Mortensen, M. and Woolley, A.W. (2011) “Multi-team membership in relation to multi-team systems,” in S. Zaccaro, M. Marks & L. DeChurch (Eds.), *Multi-team systems: An organization form for dynamic and complex environments*. New York, NY: Psychology Press/ Taylor & Francis Group, LLC.

Woolley, A.W. (2009) Organizations. In J.M. Levine & M.A. Hogg (Eds.), *Encyclopedia of Group Processes and Intergroup Relations*. Thousand Oaks, CA: Sage Publications.

Caruso, H.M. & Woolley, A. W. (2008). Manifesting the value of cognitive diversity in teams: The critical role of emergent interdependence. In M. A. Neale, E. Mannix & K. Phillips (Eds.), *Research on managing groups and teams: Groups and diversity* (Vol. 9). Oxford, UK: Elsevier Science Press.

Mortensen, M., Woolley, A. W., & O’Leary, M. B. (2007) Conditions enabling effective multiple team membership. In K. Crowston, S. Sieber, & E. Wynn (Eds.), *Virtuality and Virtualization* Vol. 236: 215-228. Portland, OR: Springer Publishers.

Edmondson, A. C., & Woolley, A. W. (2003). Understanding outcomes of organizational learning interventions. In M. Easterby-Smith & M. Lyles (Eds.), *International handbook on organizational learning and knowledge management*. London: Blackwell.

Managerial Publications and Published Talks

Riedl, C., Seidel, V.P., Woolley, A.W., Kane, G.C. (2020). Make your crowd smart: A framework for tailoring your crowdsourcing approach to the complexity of your innovation challenge. *Sloan Management Review*.

Woolley, A.W. (2013). "Expertise and collective intelligence: when teams are (and are not) more than the sum of their parts", in Wageman, R. (ed.), *Team Effectiveness: The Marketing & Management Collection*, Henry Stewart Talks Ltd, London (online at <http://hstalks.com/?t=MM1713492-WilliamsWoolley>)

Woolley, A.W. & Malone, T.W. (2011). What makes a team smarter? *Harvard Business Review*, June, 32-33.

O'Leary, M.B., Mortensen, M. & Woolley, A.W. (2010) Multiple team membership: Working together effectively before it all goes downhill. *IESE Insight*, 6, 52-58.

Cases

Polzer, J.T. & Woolley, A.W. (2001). Chapter Enrichment Program Teams at the American Red Cross. Case N9-402-042. Boston: Harvard Business School Press.

Working Papers

Tomprou, M., Kim, Y. J., Chikersal, P., Woolley, A. W., & Dabbish, L. A. (in prep). Visual cues disrupt prosodic synchrony and collective intelligence in distributed collaboration. Preparation for submission to CSCW

Riedl, C., Kim, Y.J., Gupta, P., Malone, T.W., & Woolley, A.W. (under review). Quantifying collective intelligence in human groups. Under review at *Nature*.

Woolley, A. W., & Aggarwal, I. (under review). Collective intelligence, interpersonal relationships, and group learning. Revise and resubmit at *Organization Science*.

Woolley, A. W., Chow, R. M., Mayo, A. T., Chang, J. W., & Riedl, C. (under review). Team synchrony and collective intelligence: The role of hierarchy and group composition.

REFEREED CONFERENCE PRESENTATIONS (in reverse chronological order)

Gupta, P., Kim, Y.J., Glikson, E. & Woolley, A. W. (2019). *Digitally Nudging Team Processes to Enhance Collective Intelligence*.

- ACM Collective Intelligence (CI) Conference, Pittsburgh, PA.
- Academy of Management (AOM), Boston, MA.

Gupta, P. & Woolley, A.W. (2019). *The Bottom-up Emergence of Transactive Attention System (TAS)*.

- Interdisciplinary Network for Group Research (INGRoup) Conference, Lisbon, Portugal.
- Academy of Management (AOM), Boston, MA

Gupta, P. & Carley, K. M. & Woolley, A. W. (2019). *Fractionating the Effects of Transactive Memory and Transactive Attention on Collective Performance*.

- Academy of Management Annual Meeting, Boston, MA
- Conference in Honor of Jim March, Pittsburgh, PA

Gupta, P. & Woolley, A.W. & Carley, K. M. & Argote, L. (2019). Simulation Model of Human Transactive Memory: A Study of Emergence. Paper presented at the 34th Society for Industrial & Organizational Psych. (SIOP) Conference, Washington, DC.

*Haan, K.W., Woolley, A.W., & Mayo, A.T. (2019) Investigating the Dynamic Relationship between Team Faultlines and Performance: A Multilevel and Latent Modeling Approach. Paper presented at the INGRoup Conference, Lisbon, Portugal

*Best Student Paper Award

Mayo, A.T., Diabes, M. & Woolley, A.W. (2019). Coordinated attention, boundary management, and collective intelligence.

- Annual Meeting of the Academy of Management, Boston, MA.
- Collective Intelligence Conference, Pittsburgh, PA

Ostrowski, B., Woolley, A.W., Haan, K.W. (2019) Group Brainstorming: The Effects of Collective Intelligence, Individual Ability, and Task Structure.

- Academy of Management Annual Meeting, Boston, MA
- ACM Collective Intelligence Conference, Pittsburgh PA

Ostrowski, B., Mayo, A.T., & Woolley, A.W. (2019). Team performance in adaptive contexts: Process clarity, specialization, and perspective taking. Paper presented at the Annual Interdisciplinary Network for Group Research Conference, Lisbon, Portugal.

Woolley, A.W., Chow, R. M., Mayo, A. T., Reidl, C., Chang, J. W. (2019, August). Team synchrony and collective intelligence: The role of hierarchy and group composition. Paper presented at the Annual Meeting of the Academy of Management, Boston, MA.

Campbell, E.L., Woolley, A.W. (2018). The effect of gender composition on team performance in crisis situations: A preliminary report on escape room teams. Paper presented at the 2018 INGRoup Conference, Bethesda, MD.

Glikson, E., Harush, R., Kim, Y.J., Woolley, A.W., Erez, M. (2018) *Working like a “real team” interdependence and collective intelligence in multicultural globally dispersed team performance.* Paper presented at the 2018 INGRoup Conference, Bethesda, MD.

Glikson, E., Woolley, A.W., Gupta, P. Kim, Y.J. (2018) *The effect of automatic feedback on effort and collective intelligence in distributed teams.* Paper presented at the 2018 Collective Intelligence conference, Zurich, Switzerland.

Glikson, E., Woolley, A.W. *A human-centered perspective on Human-AI interaction: Introduction of the embodiment continuum framework.* Paper presented at the 2018 Collective Intelligence conference, Zurich, Switzerland.

Gupta, P., Woolley, A.W., Carley, K.M., Argote, L. (2018). *Simulation model of human transactive memory: a study of emergence in teams*. Paper presented at the 2018 INGRoup Conference, Bethesda, MD.

Haan, K.W., Woolley, A.W., Argote, L. (2018). Harnessing the power of synergy: A configuration approach to cultural self-construal and team collective intelligence. Paper presented at the 2018 INGRoup Conference, Bethesda, MD.

Kim, Y.J., Gupta, P., Glikson, E., Woolley, A.W., Malone, T. (2018). *Enhancing collective intelligence of human-machine teams*. Paper presented at the 2018 Collective Intelligence conference, Zurich, Switzerland.

Mayo, A.T., Diabes, M., Woolley, A.W. (2018). *Collective intelligence: the role of boundary activities in outperforming expectations*. Paper presented at the 2018 INGRoup Conference, Bethesda, MD.

Mayo, A.T., Woolley, A.W. (2018). *Dynamic teams and boundary management: A field experiment with medical inpatient teams*. Paper presented at the 2018 INGRoup Conference, Bethesda, MD.

*Ostrowski, B., Woolley, A.W. (2018) Using collective intelligence to examine the relative contributions of structure, group ability, and individual ability to team brainstorming performance. Paper presented at the 2018 INGRoup Conference, Bethesda, MD.

*Best Poster Award

Chikersal, P., Tomprou, M., Kim, Y.J., Woolley, A.W., Dabbish, L. (2017) *Psychological and Behavioral Synchrony in Dyads*. Paper presented at the Annual Meeting of the Academy of Management, Atlanta, GA.

Diabes, M. A., Mayo, A.T., & Woolley, A.W. (2017) *Collective intelligence in financial sales units: A qualitative exploration*. Paper presented at the 2017 INGRoup Conference, St. Louis, MO.

Gupta, P. & Woolley, A.W. Multi-team membership, transactive memory and performance in technology-assisted teams.

- Poster presented at the 2017 Organization Science Winter Conference, Park City, UT.
- Paper presented at the 2017 Annual Meeting of the Academy of Management in Atlanta, GA

Mayo, A.T. & Woolley, A.W. Field evidence for collective intelligence in business unit performance.

- Presented at the 2017 Annual Meeting of the Academy of Management in Atlanta, GA
- Presented at the 2016 INGRoup Conference, Helsinki, Finland.

Woolley, A.W., Chow, R.M., Mayo, A.T., Riedl, C., & Chang, J.W. (2017) *Interpersonal synchrony and collective intelligence*. Paper presented at the 2017 INGRoup Conference, St. Louis, MO.

Aggarwal, I., Murase, T., Zhang, E., Aven., B., & Woolley, A.W. (2016). *What makes ER teams efficient? A multi-level exploration of environmental, team, and member characteristics*. Paper presented at the 2016 INGRoup Conference, Helsinki, Finland.

Engel, D., Kim, Y. J., Woolley, A. W., Lin, J., McArthur, N., & Malone, T. W. (2016). *What makes a strong team? Collective intelligence predicts team performance in League of Legends*. Paper presented at the Annual Meeting of the Academy of Management, Anaheim, CA.

Glikson, E., Harush, R., Kim, Y. J., Woolley, A. W., & Erez, M. (2016). *Psychological safety and collective intelligence in multicultural globally distributed teams*. Paper presented at the 2016 INGRoup Conference, Helsinki, Finland.

Kim, Y. J. & Woolley, A. W. (2016). *The effect of team extraversion on coordination and collective intelligence*. Paper presented at the 2016 INGRoup Conference. Helsinki, Finland.

*Kim, Y. J., & Aggarwal, I. & Woolley, A. W. (2016). *How communication impacts team performance: Exploring collective intelligence and transactive memory system as mechanisms*. Paper presented at the 2016 Annual Convention of the International Communication Association. Fukuoka, Japan.

*Top Paper Award; Organizational Communication Division

Kim, Y. J., Aggarwal, I. & Woolley, A. W. (2016). *How collective intelligence impacts team performance: Exploring transactive memory system as a mechanism*. Paper presented at the 2016 Collective Intelligence Conference, New York.

Mayo, A.T., Woolley, A.W., Chow, R.M., Reidl, C., & Chang, J.W. (2016). *Competition and collective intelligence: Do women always make groups smarter?* Paper presented at the Annual Academy of Management Meeting, Anaheim, CA.

Aggarwal, I., Woolley, A. W., Chabris, C. F., and Malone, T. W. (2015). *Cognitive diversity, collective intelligence, and learning in teams*. Paper presented at the 2015 Collective Intelligence Conference, Santa Clara, CA.

Kim, Y. J., Engel, D., Aggarwal, I., Woolley, A. W., & Malone, T. W. (2015). *Retention of participants in online collective intelligence tests involving a panel design*. Panel presented at the 2015 annual convention of the International Communication Association. San Juan, Puerto Rico.

Kim, Y. J., Engel, D., Woolley, A. W., Lin, J., McArthur, N., & Malone, T. W. (2015). *Work together, play smart: Collective intelligence in League of Legends teams*. Paper presented at the 2015 Collective Intelligence Conference, Santa Clara, CA.

Mayo, A.T., Woolley, A.W., and Chow, R.M. (2015). *Matching contribution to expertise: the effect on group decision making and the role of gender composition*. Annual meeting of the Interdisciplinary Network for Groups Research (INGRoup), Pittsburgh, PA.

Woolley, A. W., Kim, Y. J., & Aggarwal, I. (2015). *Using technologies to reliably measure collective intelligence of teams*. Annual meeting of the Interdisciplinary Network for Groups Research (INGRoup), Pittsburgh, PA.

- Vacharkulksemsuk, T., Phillips, K., Akinola, M., Woolley, A.W. & Toosi, N.R. (2014). *Leveraging the value of diversity in teams: Four useful processes*. Symposium presented at the annual meeting of the Society of Experimental and Social Psychology, Columbus, OH.
- Engel, D., Woolley, A. W., Xing, L. X., Chabris, C. F., & Malone, T. W. (2014). *Social perception and collective intelligence in online and face-to-face teams*. Collective Intelligence 2014: Boston, MA.
- Mayo, A.T., Woolley, A.W., Chang, J.W., Chow, R.M. (2014). *Do women make groups smarter? Understanding the effects of gender and competition on collective intelligence*. Presented at the annual meeting of the Interdisciplinary Network for Groups Research (INGRoup), Raleigh, NC.
- Woolley, A.W., Aven, B.L., Zhang, Y., O'Leary, M.B. & Mortensen, M. (2014). *Multiple team membership, autonomy, and teammate novelty*. Presented at the annual meeting of the Interdisciplinary Network for Groups Research (INGRoup), Raleigh, NC.
- Aggarwal, I., Molinaro, M., Woolley, A.W. (2013). *Cognitive versatility: A new lens for understanding team diversity*. Presented at the annual meeting of the Interdisciplinary Network for Groups Research (INGRoup), Atlanta, GA.
- Chang, J.W., Chow, R.M., Woolley, A.W. (2013). *The effects of group status and outcome interdependence on information exchange and joint outcome in negotiating groups*. Presented at the annual Conference of the International Association for Conflict Management, Tacoma, WA.
- Chang, J.W., Chow, R.M., Woolley, A.W. (2013). *High-status but low-performing: Effects of group status on information exchange and group outcome*. Paper presented at the annual meeting of the Academy of Management, Lake Buena Vista, FL.
- Woolley, A.W., Aven, B.L., Zhang, E., O'Leary, M.B., Mortensen, M. (2013). *Multiple team membership over time: Social networks and how the autonomy to switch teams affects individual and team productivity*. Paper presented at the annual meeting of the Academy of Management, Lake Buena Vista, FL.
- Aggarwal, I. & Woolley, A.W. (2012). *Cognitive style diversity and team creativity*. Paper presented at the annual meeting of the Interdisciplinary Network for Groups Research (INGRoup), Chicago, IL.
- Lakhani, K., Boudreau, K., Gaule, P., Riedl, C., Woolley, A.W. (2012). *Catalyzing collaboration amongst strangers: Field experimental evidence*. Paper presented at INFORMS annual meeting, Phoenix, AZ.
- Aggarwal, I. & Woolley, A.W. (2012). *Two perspectives on intellectual capital and innovation in teams*. Paper presented at the International Conference on Technology Management, Indian Institute of Science, Bangalore, India.

Aggarwal, I., Woolley, A.W., Chabris, C., & Malone, T. (2012). *The effects of cognitive diversity on collective intelligence and team learning*. Paper presented at the 12th Annual Trans-Atlantic Doctoral Conference, London Business School, London, England.

Aggarwal, I., Woolley, A.W., Chabris, C., & Malone, T. (2012). *The effects of cognitive diversity on collective intelligence and team learning*. Symposium presentation at the 13th Meeting of the Society for Personality and Social Psychology, San Diego, CA.

Aggarwal, I., & Woolley, A.W. (2011). *The effects of members' cognitive styles on team processes and performance*. Presented at the annual meeting of the Interdisciplinary Network for Groups Research, Minneapolis, MN.

Aggarwal, I., Woolley, A.W., Chabris, C.F., Hashmi, N. & Malone, T.W. (2011) *The relationship between collective intelligence, cognitive diversity and team learning*. Presented at the annual meeting of the Academy of Management, San Antonio, TX.

Woolley, A.W., Bear, J., Chang, J.W., DeCostanza, A.H. (2011). *The effects of team strategic orientation on team strategy and information search in competitive environments*. Presented at the annual meeting of the Academy of Management, San Antonio, TX.

Woolley, A.W., Lakhani, K. & Boudreau, K. (2011). *From strangers to collaborators: Field experimental evidence underlying team formation for creative problem-solvers*. Presented at the Organizational Science Winter Conference XVII, Steamboat Springs, CO.

Aggarwal, I., Woolley, A.W., Chabris, C.F., Hashmi, N. & Malone, T.W. (2010). From “Is Diversity Good” to “How much diversity is good?” The relationship between cognitive style and collective intelligence. Presented at the annual meeting of the Interdisciplinary Network for Groups Research, Washington, D.C.

Aggarwal, I. & Woolley, A.W. (2010). *Do you see what I see? The effect of members' cognitive styles on team processes and performance*. Presented at the annual meeting of the Academy of Management, Montreal, Quebec, Canada.

Bear, J. & Woolley, A.W. (2010). *Don't talk about it: Active avoidance in organizations*. Presented at the annual meeting of the Academy of Management, Montreal, Quebec, Canada.

O'Leary, M.B., Mortensen, M., & Woolley, A.W. (2010). Multiple team membership: A theoretical model of its effects on productivity and learning for individuals, teams, and organizations. Presented at the annual meeting of the Interdisciplinary Network for Groups Research, Washington, D.C.

Woolley, A.W., Bear, J., Chang, J.W., & Hunter, A. (2010). *Shifting gears: The effects of strategic orientation on situational perceptions and information search in teams*. Presented at the annual meeting of the Interdisciplinary Network for Groups Research, Washington, D.C.

Woolley, A.W. (2009) *A process model of strategic orientation in competitive environments*. Presented at the annual meeting of the Academy of Management.

Woolley, A.W. & Aggarwal, I. (2009) *Which side are you on? Offense vs. defense and team process*. Presented at the annual meeting of the Interdisciplinary Network for Groups Research, Colorado Springs, CO.

Woolley, A.W., Malone, T., Chabris, C.F. (2009) *Measuring collective intelligence*. Presented at the annual meeting of the Interdisciplinary Network for Groups Research, Colorado Springs, CO.

INVITED TALKS

Seminars at other academic institutions

Wharton, University of Pennsylvania (November 2019)
Northwestern University (May 2019)
Stanford University, Graduate School of Business (April 2019)
Trinity University (March 2019)
University of Miami (February 2019)
Harvard University, Graduate School of Education (November, 2018)
University of Kansas (October 2018)
University of North Carolina Chapel Hill (November 2018)
University of Pittsburgh (February 2018)
University of California at Irvine (January 2018)
Santa Fe Institute (October, 2017)
Princeton University (May, 2017)
Cornell University (November 2016)
Yale University (October, 2016)
University of California at San Diego (October, 2016)
University of Chicago, Computational Social Science Workshop (April 2016)
Johns Hopkins University, Carey Business School (March 2016)
University of Pittsburgh, Dept. of Psychology (January 2016)
Columbia University (March 2015)
Stanford University, Center for Work, Technology and Organization (March, 2015)
New York University (May, 2014)
Tilburg University, The Netherlands (April, 2014)
Northwestern University (May, 2013)
Washington University (April, 2013)
Harvard University (December, 2013)
University of Michigan (September, 2012)
Massachusetts Institute of Technology (November, 2011)
Harvard University Graduate School of Education (March 2011)
London Business School (May, 2010)
Wharton School of Business, University of Pennsylvania (November, 2009)
University of Pittsburgh (October, 2008)
Boston University (January, 2008)
Duke University (January, 2008)

Invited Keynotes at Academic Conferences

World Economic Forum (July 2019)
Northwestern Dispute Resolution Research Center (June 2019)
Women in Data Science (April 2019)
Harvard Graduate School of Education Learning Innovations Laboratory (November 2018)
EuroScience Open Forum (July 2018)
Science of Team Science (April, 2012; May 2018)
Stanford Group Processes and Intergroup Relations (April 2018)
HEC Montreal Avant-Garde Research on Teams (October 2017)
INSEAD New Directions in Leadership Research Conference (June 2017)
Wharton People Analytics Conference (March 2017)
Stanford University, Gender Diversity Conference (February 2016)

Seminars at non-academic institutions

RAND (March 2020)
Highmark Health Solutions (Sept 2019)
Allegheny League of Municipalities (April 2019)
International Coach Federation (March 2019)
Pittsburgh Gender Equity Symposium (November, 2018)
Amazon.com (October 2018)
Google Cloud Leaders Event (December 2017)
Principal (December 2017, April 2018)
AT&T (November 2017)
CFA Institute (September 2016, October 2017)
SAPPI (April 2017)
Google re:Work Conference (April 2016)
Children's Hospital of Pittsburgh (May 2014, 2015, 2016)
2020 Women on Boards Event (November 2015)
Towers Watson (October 2015; March 2016)
World Bank (July 2014)
Google Pittsburgh (April 2014)
NSF Gender Summit (November 2013)
National Research Council (April 2013)
Vermont Oxford Network (October 2012)
Collective Intelligence (April 2012)
Catalyst Corporate Board Governance Symposium (September 2011)
U.S. Intelligence Science Board (April 2010)
U.S. Veteran's Administration Hospital, Pittsburgh, PA (June 2009)

FELLOWSHIPS AND AWARDS

2017 Best Paper of the Year Finalist, *Academy of Management Discoveries*
2011 Best Paper Award, Managerial and Organizational Cognition Division, Academy of Management
2010 Xerox Junior Faculty Chair, Tepper School of Business, Carnegie Mellon University

2010 Roman Weil Prize for the best unpublished paper on problem-solving, Carnegie Mellon University
2009 Faculty Giving Chair, Tepper School of Business, Carnegie Mellon University
2008 Finalist, Best paper of the year, *Small Group Research*
2007 Bok Center Certificate of Distinction in Teaching, Harvard University
2006 Best Research Proposal, Academy of Management Managerial and Organizational Cognition Division “Cognition in the Rough” Workshop

COMPETITIVE GRANTS RECEIVED

- “The Implications of Playing Offense versus Defense for Team Information Processing and Performance”: This project was an investigation of the effects of offensive and defensive strategic orientation on team information processing and decision making. This grant is funding both laboratory and field research of these effects in both civilian and military populations.
 - Source: Army Research Institute, 2008-2010
- “Investigating collective intelligence”: This project built pilot data collected previously to explore how the construct of collective intelligence generalizes to groups of different sizes as well as online groups. The intended final product is a short test battery that can be used to measure collective intelligence and predict performance of teams on a wide range of tasks.
 - Source: Army Research Office, 2009-2012
 - Co-Principal Investigators: Thomas Malone (MIT); Christopher Chabris (Union College)
- “Measuring and modeling collective intelligence”: This project built on work demonstrating the existence of a “collective intelligence” in groups which is not significantly predicted by the intelligence of individual group members. In this project, we propose to test how the use of computer-based aids can enhance critical coordination processes and possibly increase collective intelligence. Data collected in the lab will also support a computer modeling effort to explore how other changes in group structure (e.g. size, incentives, resources) would further alter collective intelligence.
 - Source: National Science Foundation, Human Computer Collaboration Program, 2010-2012
 - Co-Principal Investigators: Thomas Malone (MIT), Christopher Chabris (Union College).
- "Improving collective intelligence: Investigating the effects of online groups, group size, and gender composition": Building on previous work by the investigators, the project will first develop an online test for collective intelligence. Then it will compare the results of online and face-to-face groups taking this new test with previous results for groups taking an offline version of the test. Next the project will use this test to systematically measure the collective intelligence of online groups that range in size from 2 to 20 people. This will lay the foundation for exploring whether larger online groups can take advantage of the increased resources that more people bring without suffering as much from the process losses that usually accompany increased group size in face-to-face groups. Finally, the project will systematically measure the collective intelligence of groups with varying proportions of women. In doing so, we will test

one particularly promising explanation for a gender effect on group performance: that groups with more women are less interpersonally competitive which leads to higher collective intelligence.

- Source: National Science Foundation, Virtual Organizations as Sociotechnical Systems (VOSS) Program, 2013-2016
 - Co-Principal Investigators: Rosalind Chow (CMU), Thomas Malone (MIT), Christopher Chabris (Union College).
- "Cultivating Collective Intelligence in Teams at PNC": Team performance is increasingly important to the viability of financial and professional service firms. This project will make use of HR data to examine performance of teams at PNC for factors predicting collective intelligence—or performance capability emerging from the coordination and collaboration of team members, varying from expectations given the competitive environment and capabilities of team members. We will examine archival data sources to identify the degree to which unexplained variance exists in team performance, and factors that may account for it such as team member characteristics and team communication and collaboration practices. In a third phase of the project, to be informed by analyses carried out in Phases I and II, we propose to collect additional information via interviews, observations, or surveys to further understand factors accounting for variance in collective intelligence at PNC and identify potential levers for management intervention.
 - Source: PNC Center for Financial Services Innovation, Tepper School of Business, June 2014-December, 2017
- “Tasks and Transitions: An investigation of Transactive Memory Systems in Teams Performing Multi-Task Activities”: This project will explore the effects of task type and sequencing on the formation of transactive memory systems (TMS) in groups, as well as the connection between TMS and collective intelligence
 - Source: Army Research Office, 2016-2020
 - Co-Principal Investigators: Linda Argote (CMU), Kyle Lewis (UC Santa Barbara) and Andrea Hollingshead (Univ Southern California)
- “Cultivating Collective Intelligence in Human-Computer Systems:” In this project we will broaden our exploration of the individual characteristics that most readily lead to collective intelligence in teams, as well as the technological tools that will most readily enhance it.
 - Source: DARPA, 2017-2019
 - Co-Principal Investigators: Michael Bernstein (Stanford), Melissa Valentine (Stanford) Christopher Riedl (Northeastern) and Thomas Malone (MIT)

PROFESSIONAL SERVICE

Senior Editor, *Organization Science*, 2018-pres

Conferences

Conference Chair, ACM Collective Intelligence, 2019

Program Chair, Organization Science Winter Conference, 2018

Program Committee, Collective Intelligence 2014, 2015, 2016

Updated March 2020

Local Arrangements Chair, 2015 Interdisciplinary Network of Groups Research (INGRoup)

Editorial Board

Academy of Management Discoveries (2015-2017)
Organization Science (2009-2010, 2014-pres)
Small Group Research (2008-2017)
Human Computation (2014-pres)

Ad-Hoc Reviewer

Academy of Management Journal
Academy of Management Perspectives
Administrative Science Quarterly
Army Research Office
Journal of Applied Social Psychology
Journal of Organizational Behavior
NASA
National Science Foundation
Nature
Organizational Behavior and Human Decision Processes
Proceedings of the National Academies of Science (PNAS)
Science (AAAS)

Panel Member

National Academies of Science, National Laboratories Review Panel (2017, 2019)
National Academies of Science, Social Identity Panel (2018-2019)
National Science Foundation
NASA Social Science Research

PROFESSIONAL EXPERIENCE

MITRE, Inc. Bedford, MA

Consultant, November, 2004-June 2008. Work with a government sponsor to observe analytic simulations and design and teach a course on analytic teams, leadership, and methods for practicing intelligence analysts and team leaders. Developed experiential exercises based on real threat scenarios and delivered relevant lecture material.

Research International Cambridge, MA

Senior Research Analyst, March, 1997 through July, 1998. Designed and managed market research studies focusing on customer satisfaction and loyalty, new product development, and advertisement testing. Analyzed quantitative and qualitative data, produced reports and presentations for clients. Conducted executive interviews and moderated focus groups.

DIA•logos, Inc. Cambridge, MA

Project Manager, August, 1995 through March, 1997. Managed corporate consulting projects, organized and marketed educational seminars, designed marketing and learning materials, and managed operations for a start-up consulting firm specializing in interpersonal communication.