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Collaboration

Scientific Teamwork

Highest impact research comes from scientists at different universities, study says

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SCIENTISTS IN SEARCH of a collaborator might want to take a closer look at faculty from other universities rather than search the ranks of their own department. According to a new study, research teams made up of scientists from different universities are on the rise across all areas of science and engineering (*Science*, DOI: 10.1126/science.1158357). Furthermore, these multiuniversity teams produce the highest impact papers, provided their authors include researchers from top-tier schools.


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Scientists' collaborators are becoming more likely to be a long-distance phone call away than a walk down the hallway.

Brian Uzzi, Benjamin F. Jones, and Stefan Wuchty of Northwestern University's Kellogg School of Management examined more than 3.4 million science and engineering papers published between 1975 and 2005. In the 1970s, very few publications came from collaborators at different universities, but by 2005, such collaborations accounted for about one-third of published papers. At the same time, single-author publications have steadily declined, and collaborations between researchers at the same university have decreased slightly.

The Northwestern team also found that on the basis of the number of citations, multiuniversity teams produced the highest impact papers. "Teams between schools did better than teams within schools, and teams within schools did better than solo authors," Uzzi says. "So, a Harvard professor is better off working with a Princeton or a Stanford professor than he is working with another Harvard professor."

Uzzi tells C&EN that several factors probably drive the trend toward multi-institutional collaborations,

including the increasingly specialized nature of science, a rise in the number of faculty who relocate, and greater acceptance of joint authorship in science. Surprisingly, Uzzi says, the advent of the Internet hasn't had much impact in the growth of multiuniversity teamwork. "The trend toward collaboration before and after the Internet is basically the same, which means that the Internet couldn't have affected what's going on," he notes.

"This type of bird's-eye view of scholarly publication trends provides valuable insights into the research enterprise and how it is becoming more collaborative and less localized," comments Arthur B. Ellis, vice chancellor for research at the University of California, San Diego. "The social networks that drive these developments represent an important form of investment and need to be better understood."

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