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The Twisting Path to Collaboration

Eric D. Roy and his colleagues provide, in their article that starts on page 745, important data substantiating often-heard individual opinions about the difficulties facing career scientists who would like to pursue interdisciplinary research. Not only is such a course intrinsically hard—because of the mental effort required to learn how to use new concepts correctly—but many of the natural and social scientists who participated in a survey pointed to substantial institutional barriers placed in the way, apparently willfully, by guardians of pure disciplinary research. Investigators with the temerity to engage seriously with those in other disciplines must, it seems, be prepared to pay a serious price.

The difficulties start as soon as interdisciplinary collaboration starts: Most of the respondents in Roy and his colleagues' study acknowledged tensions and problems communicating with prospective colleagues in different disciplines. There is often a distinct lack of departmental support for such ventures, and it is undeniably true that research with a sociological component, in particular, faces methodological difficulties likely to bewilder outsiders not schooled in social science: Human beings are uniquely tricky research subjects. The paucity of previous data about this topic speaks volumes, and Roy and his colleagues acknowledge the limitations of their survey.

But anyone looking to be a successful scientist would have to worry most about the likely impact of interdisciplinary collaboration on his or her assessed productivity—judged, naturally, by the number of published articles in high-impact-factor journals. Given the pressure to produce—to satisfy tenure and promotion committees—and the understandable desire for stable employment at a decent salary, many researchers with interesting ideas must have secretly decided that a creative interdisciplinary project wasn't worth it.

It is galling that such barriers persist at a time when interdisciplinary research on coupled social and ecological systems is becoming more important: Humankind's dominance and incomplete understanding of global ecosystems are not news. Moreover, the barriers may also include some that Roy and his coauthors do not discuss. The notion of studying coupled social and ecological systems is unsettling to many, because it seems to threaten the venerable concept of free will. That pervasive idea, enshrined in Christian theology since Augustine and reinforced by Descartes, rejects the notion that humans' behavior can be understood in naturalistic terms. Defensiveness about humans' capacity to act freely possibly helps explain why sociological research funded by the National Science Foundation is perennially faced with special scrutiny in Congress.

Courageous natural scientists know, however, that humans are part of nature's dominion and will strive to understand their most perplexing research subjects in its terms. And so back to those university administrators who guard pure disciplinary excellence: Their apparently willful placement of barriers to interdisciplinary collaboration can be studied. It might even be possible to understand it naturalistically and to devise strategies to counter it. Psychologists can probably come up with some hypotheses. For example, senior figures in any field tend to worry about preserving their legacy. Perhaps keeping the younger generation on the straight and narrow satisfies that urge. It might be a good subject for a study.

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