

Training for tomorrow's brain sciences

John W Griffin

Imagine an exotic continent inhabited by a primitive but curious people who are fascinated by the brain. The inhabitants study behavior and share the belief that behavior derives from the brain. Over time, however, a rift valley forms on their continent, so that the inhabitants, initially one people, divide into those on one side of the valley who focus on behavior and its abnormalities, and those on the other side who study those changes in function that they can link to specific brain injuries and diseases. The latter examine simple aspects of behavior such as reflexes, and adopt as their tools the microscope, the X-ray, and the ability to sample the nervous system electrically. The former group works with inhabitants in whom these tools fail to explain behaviors, and instead hones the ability to elicit a detailed personal history, to explore the family dynamics, and to understand the individual's life situation. They develop a complex and potent pharmacology.

As the continents drift apart, rumors about the status of their brethren continue to reach each group, but their cultures and rituals evolve in isolation, and the youth on both of the new continents grow up to believe that they are distinct from their brethren and sufficient in themselves. And then comes the realization that new geological forces are driving the continents rapidly back together, and that land bridges are sure to form. Both sets of inhabitants see the need to teach their young about the world to come.

The continents of 'Neurology' and 'Psychiatry' in this fable are indeed coming back together,

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driven by the power of basic brain sciences and by new tools such as anatomical and functional imaging, protein and gene arrays and other biomarkers, and genetics. A shared brain science will inevitably underlie both specialties. The separation of academic departments will decrease and shared training components can confidently be foreseen. This predicted coming together need not entail the loss of the distinctive 'family histories' and the rich cultural inheritances of neurology and psychiatry. Rather, these trappings will within a few decades represent 'nostalgia without memory'. Tomorrow's brain scientists and practitioners will see the divisions of the past as quaint and perhaps endearing, but irrelevant to their work.

Those of us practicing now bear the legacy of our training. Neurology training for a portion of the past few decades could be completed with almost no psychiatry exposure. Neurology and psychiatry departments have been academically separate, and most have ingrained in their trainees quite different intellectual 'reflexes' and approaches. The irony of this separation is compounded by the fact that a high proportion of neurologists' patients have important and often treatable 'psychiatric' disease.

Happily, as in our fable, the 'plate tectonics' bringing neurology and psychiatry back together are unmistakable, inexorable and inevitable, and the inhabitants of both of our 'continents' are beginning to prepare for this new world. This is the implicit theme of the *Training Matters* article by Fred Schon and coauthors in this issue. There is much to do, and it begins with training.