

## **Cognitive Neuroscience as a Fourth Window on Language Evolution**

William Shiyuan Wang  
The Hong Kong Polytechnic University

In 1988, Cavalli-Sforza, L. L., et al famously brought together three fields: genetics, archaeology and linguistics, to study human evolution. This was stimulus for Wang's paper in 1998, *Three windows on the Past*, to study language evolution. There is now a fourth window that has become increasingly important for language evolution: cognitive neuroscience, especially toward understanding the evolution of language across the lifespan. While much research has been done on language acquisition during the beginning part of the lifespan, at least since mid-20th century, relatively little has been done on language loss during the sunset years. Yet, in view of the dramatic population increase of elders worldwide over the past century, it is imperative that we investigate language loss to help society meet this urgent demographic challenge. Such investigations will deepen our basic knowledge of language ontogeny as part of the evolutionary process; at the same time, they potentially provide scientific bases for diagnosis, intervention, and therapy to prolong health span to go with the extended lifespan.