and Roberts 1959; Bogen and Bogen 1976; Rogalsky and Hickok 2011). But people with familial left-handedness comprise roughly 40 percent of the population, so we cannot consign their unique behavioral and neurological structures to an odd minority.

A profound implication for language of all these considerations is the possibility that the existence of language is not causally dependent on any particular unique neurological organization. Rather, syntax especially is a computational type that recruits different neurological structures, originally evolved over ages for other modalities. On this view, the possibility for syntax emerges as a function of factors as yet undetermined: one possibility is the cognitive availability of propositional relations and categories, combined with an explosive growth in the number of lexical items that can externalize the internally represented concepts; such factors may interact with other principles of organization to result in the overt language structures (see, e.g., Nowak et al. 2002 for arguments of this sort). In this scheme, the syntactic architecture is represented neurologically via co-option and integration of different brain regions that are already adapted in other modalities for the type of computation that hierarchically structured language requires: they are felicitously connected to other areas that are also adapted for other types of language computations. Accordingly, there can be significant lability of how language will be represented in an individual's brain, if there is significant variability in how the computationally relevant areas function or are interconnected.

This approach will lead to a rich paradigm for the study of the relation between language and genetic factors. We can now use the familial handedness pedigree to predict the likelihood that a newborn will be left-handed: this gives us an important tool in tracking the simultaneous emergence of language in infancy along with the emergence of specific brain organization for language. That may clarify the extent to which language is shaped by universals of neurological maturation, and the extent to which its structure is independent of any particular neurological organization. The implication of that is consistent with the view that language as a biological system may be dispersed in the nervous system rather than dependent on specific locations (Chomsky 2000).

22.9 Conclusion

The more we study language with new tools of investigation, the more mysterious it becomes. I have suggested that the child's problem is vastly more difficult than "merely" figuring out how to combine words and morphemes:

the problem is how to isolate them in the first place from input that has already encoded, elided, and eliminated them. This heightens the salience of the idea that important properties of language come to us "for free," that is, as a function of language properties as "natural forms" (Hauser et al. 2006). Recently, considerable interest has surfaced in these phenomena, exploring the extent to which language universals emerge as the result of natural laws applying to shape and connect the pieces that the child can recognize. This interesting line of thinking is further indirectly supported by our current work showing normal individual differences in the neurological organization for language.

old and new

Will language as an "organ," discussed in the initial quotation in this paper, turn out to be more like the immune system or skin than the liver?