In normal language production, systematic variations in number agreement point to several basic mechanisms of agreement implementation. Two of these mechanisms involve (a) notional valuation, the categorization of referents with respect to numerosity, and (b) lexical specification, the grammatical categorization of morphemes with respect to number. The roles played by notional and lexical factors have been explored in experiments that manipulate the properties of agreement controllers for verb and pronoun targets. The results of an array of experiments imply that verb and pronoun number are differently sensitive to the notional number variations underlying canonical agreement controllers (subject noun phrases) but are similarly insensitive to the notional number variations of spurious controllers. Notably, verbs and pronouns appear to be equally attracted to the grammatical number of spurious controllers. Experiments on collective agreement in American and British English and on distributive agreement in English and Spanish converge on the same conclusions. To account for these patterns, a psycholinguistic theory dubbed Marking and Morphing proposes separate mechanisms for control and index agreement that differ in how agreement features are represented and how they are transmitted during sentence formulation. The goal is to explain how number agreement works during language production to create a bridge from number meaning to number morphology.