Singular ‘They,’ Set Theory and Some English Pronouns
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Abstract
The use of some third person pronouns corresponds with the mathematical rule for set unions. This leads to speculations about semantics and the place of mathematics among linguistic universals. Singular ‘they’ is the focus here, with a long history before its adoption by genderfluid people in modern society.

Part 1
Descriptive linguists recognize a nonstandard use of a pronoun called the singular they, referring to uses of they, them, their, and theirs. An example is the sentence, ‘Somebody gave their donation anonymously.’ A prescriptive rule would have the sentence as, ‘Somebody gave his donation anonymously.’ for what is sometimes called the generic he. As for singular they, Ann Bodine (1975) traced its use through every recorded century of the English language, and showed how it filled a logical gap in the language, for a singular sex-indefinite pronoun.

Let us further pursue this logic, and state those principles of use: why do we say they when we mean either a he or a she? In our minds, we have two possibilities, of opposite sex. Only one of those possibilities will occur in reality, but that is irrelevant. The purpose is to communicate thoughts that consider both possibilities, so we use a plural pronoun. This is analogous to the mathematical formula for set union: $a \cup b = a \cup b$. Singular they indicates a union of two sets to compose a new set in which a member taken out of this new set could be from either of the two sets that combined.

It is as if we had two different semantic categories. The potential category indicates the basic complete picture of all elements. In mathematics that is the portrait of the sets and their union. The actual category is the result of performing some operation on the sets. In mathematics that would be taking out one element, but in English grammar that becomes the use of the singular they. In the potential category, singular they is actually plural. The potential category is operated upon to become the actual category, and the proof that something has happened is shown by a plural pronoun becoming singular. This happens as long as the actual
situation provides the context and not the hypothetical situation, in which case the pronoun would again have a plural meaning.

Pragmatics are involved in the use of singular they also. If a speaker had time to emphasize that either sex was meant, then ‘he or she’ may be spoken or written instead of they. However, if fast talking were going on, and the speaker didn’t want to call attention to such details, singular they may be spoken without awareness, just as a natural feature of the grammar.

As for syntax, singular they can show up as any kind of noun phrase function: subject, object, or modifier. Singular they encompasses four words. These words often show up with other indefinite pronouns, such as some-, any-, no-, or every- ending in –one or –body. A further example besides the one used at the start of this paper is the sentence, ‘If anybody shows up, give it to them.’

G.L. Brook (1964, 128) remarks upon the Old English adoption of the pronoun they from Scandinavia as a rare example of pronoun borrowing between languages. Jespersen (1938, 74) mentions other indefinite singular pronouns used in the history of the English language, including a contraction of them to ‘em, which is still in use today. The utility of they for indefinite singular usage may have contributed to its permanent establishment in the English language.

Perhaps other terms can cross over into other languages to fulfill set theoretic needs, or a language has a built-in flexibility to allow for such combinations among potential and actual categories. It would certainly be amazing if set theory principles from mathematics were not universal linguistic concepts. That might imply that any non-western language could create a different kind of set theory, and a totally foreign mathematics, to shatter our illusions of scientific truth. What we had thought was an unending universe of mathematics would turn out to be only one of many unending universes.

Part 2

The preceding paper from 1981, originally titled only ‘Set Theory and Some English Pronouns,’ was worked out after a much longer class paper on the use of singular ‘they,’ done for a communication course at Arizona State University in Tempe. That course paper was titled ‘Linguistic Neutralism: Everybody as They,’ and surveyed history and social use, briefly
mentioning set theory implications. This paper on ‘they’ shows a first clue of sets and math processes turning up where they are not supposed to be, outside of mathematical topics.

Forty years later, I can critique this paper as still valid even if the historical progression in usage is unclear. ‘They’ was first used in English for uncertain singular or plural persons, then centuries-worth of prescriptive grammarians and school teachers have tried to limit it to plural only. Regardless of the origin of singular ‘they,’ its modern use in violation of taught grammar shows a kind of set function where ‘male or female’ is thought of as plural, thus one selects a single choice from plural possibilities, so the taught label from plural comes to mind to use. Descriptive grammar is then vindicated by set theory, no matter which came first in history, single or plural ‘they,’ or both together.

Such natural flexibility befits its adoption by genderfluid people in modern society. Whether it is overused for new gender contexts is another question, as the naturally ambiguous gender usage will remain. Attempts to restrict ‘they’ to genderfluidity only would be a new form of prescriptive grammar, unnatural and unnecessary. I do not really worry or think it will occur. We will all continue to use singular ‘they.’

References

