In search of Gender Neutrality: Is Singular They a cognitively efficient substitute for generic he or she?

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Abstract—With increasing frequency, writers and speakers are ignoring grammatical pronouns and using the plural pronoun they to refer to singular antecedents. This change may, in part, be motivated by efforts to make language more gender inclusive. In the current study, two reading-time experiments demonstrated that singular they is a cognitively efficient substitute for generic he or she, particularly when the antecedent is nonreferential. In such instances, clauses containing they were read as much more quickly than clauses containing a gendered pronoun that was against the gender stereotype of the antecedent. However, with referential antecedents, for which the gender was presumably known, clauses containing singular they were not read as quickly as clauses containing a gendered pronoun that matched the antecedent's gender stereotype.

In speech we often solve the problem of the gender he by using a plural pronoun—as in Everyone brought their books to class. But that construction violates the expectations of many readers, so it should be avoided in writing (Fower and Aros, 1985, p. 585).

In spite of prescriptions like this one, using the plural pronoun they to refer to singular antecedents has become ubiquitous, even in writing (Boedijn, 1975; MacKay, 1980; Meyer, 1980; Valler, 1980). Even since generic he for he or she was less favorably rated by those familiar with and biased toward prescriptive and persuasive writers have been looking for a reasonable alternative (Hallyard, 1973; Boedijn, 1975). More and more often, singular they is the pronoun of choice. As grammaticalized as this shift may be, the justification for it is quite clear: The generic he that grammarians prescribe is typically perceived as referring to a male, not as being all inclusive (Iversen, 1988; Kidd, 1971; MacKay & Foulcault, 1978; Marriott, 1976a; Monahan, Robinson, & Elias, 1978; Silvera, 1980). To connect this inquiry, many writers and editors have adopted the practice of using the he or she in place of generic he, even though this construction is awkward when used repeatedly. Other alternatives include using she, which works only in print (MacKay, 1980), or one way or another for generic he with the generic she, a form of linguistic affirmative action.

The alternative examined in the current study, using they as a singular pronoun, has been considered by a number of researchers (Boedijn, 1975; MacKay, 1980; Martinez, 1972a, 1972b; Valler, 1972). For some situations, singular they has even received grammarians' endorsement. Since 1978, grammarians have been struggling with the fact that singular they seems more natural than generic he in certain situations, and must now begrudgingly allow writes to use they as a pronoun for two limited classes of singular antecedents. Indefinite pronouns like anybody or someone and proper nouns like the shop or Starbucks (Zuber & Reed, 1991) can be either singular or plural. Of course, they is used in this way is in some sense plural. Indefinite pronouns refer to any person from a group of unspecified persons, and proper nouns refer to groups of people who form a functional unit. However, using they to refer to an individual of known gender or unknown gender is still considered problematic. As Sturk and White's (1970) Elements of Style assume, "The form usually raised about he would be more impressive if there were a handy substitute for the word. Unfortunately there isn't, or at least no one has come up with one yet." (p. 61). However, according to the experiments reported here, a handy substitute for generic he has already been found: namely, singular they. Aided by sociology's increasing resistance to biased language, this genderless singular pronoun has become firmly embedded in the American lexicon (Meyers, 1988). Indeed, it is unclear whether many of the people who now choose to use singular they realize that it is "anomalous, marginalized."

How does using them as a singular pronoun affect comprehension? The only way to know for sure is through empirical research. In the experiments reported here, the pronoun they was used in various contexts was measured through the readiness of one form of cognitive processing; readers were asked how quickly they read sentences in which the gender of the pronoun and the gender implied by the antecedent did not match. By this same logic, if singular they is confusing and incurs additional cognitive processing, readers would be slowed when reading a clause that uses they to refer to a singular antecedent. Thus, our experiments compared how quickly they were read in sentences containing antecedents that were stereotypically masculine (e.g., most of the drivers), stereotypically feminine (e.g., most of the nurses), gender neutral (e.g., runners), or indefinite pronouns (e.g., anyone).

In both experiments, readers read three-clause sentences that contained a human antecedent in the first clause, and a pronoun referring to that antecedent in the second clause. Results proceeded through the sentences once clause at a time, treating a marked "Continuing" clause only if it was ready to advance. In this way, we obtained a reading time for each clause. As in Kreiss and Underwood's (1984) experiments, we expected reading times for the clause containing the antecedent to be slower than the pronoun's gender did not match the implied gender of the antecedent. The question of interest was how quickly clauses containing they would be read in comparison to clauses containing either he or she. We reasoned that if they were considered an inappropriate or surprising antiphrase to use with a singular antecedent, comprehenders would be significantly slower reading the clauses containing they than the clauses containing he or she. Therefore, if comprehenders were not significantly slowed when encountering the pronoun they with a singular antecedent, the argument that singular they violates the expectations of most readers would not be empirically supported. Such a result would demonstrate that singular they has become an acceptable substitute for generic he in the minds of our readers.

EXPERIMENT 1

In Experiment 1, participants read 72 three-clause sentences in a self-paced reading task and indicated their agreement or disagreement with the opinion expressed in each sentence. The sentences in Experiment 1 contained nonreferential antecedents, in the form of common nouns modified by indefinite determiners, as in Examples 1 through 3, or indefinite pronouns, as in Example 4.

1. A track director should never drive when sleepy. Even if he/she is driving may be too risky to drive (i.e., too risky to drive, because many accidents are caused by drivers who fall asleep at the wheel).

2. A nurse should not be a member of a medical committee if he/she does not have enough medical knowledge to be able to make sure that committee makes accurate treatment decisions.

3. A winner must eat lots of pasta the night before a race, even if he/she should eat pasta the night before the race because carbohydrates provide fuel for endurance events, while proteins do not.

4. Anyone who frowns should be paid $50, even if he/she cannot cause a1,000,000,000 blast.

After each sentence, readers saw a “True or False?” prompt and a prompt to respond (e.g., with a yes or no response).

The first independent variable was the type of antecedent read in the first clause. The antecedents were stereotypically masculine nouns, stereotypically feminine nouns, neutral nouns, or indefinite nouns. The second independent variable was the pronoun that appeared in the second clause (he, she, or they). The dependent variable was the reading time for the clause containing the pronoun. In view of Kreiss and Underwood's (1984) results, we anticipated that reading times for sentences that had gender-stereotyped antecedents (masculine or feminine) would be slowed when the pronoun mismatched the gender stereotype of its antecedent and fastest when the pronoun matched the gender stereotype of its antecedent. In short, we predicted that they would serve as a cognitively efficient compromise. For example, in cases in which the singular they is used to refer to a masculine antecedent, it should not be female (e.g., more), using singular they in cases that refer to antecedents might actually slightly increase the gender neutrality of he.

For sentences that had neutral or indefinite antecedents, we predicted that reading times for clauses with they would be no slower than— and perhaps somewhat faster than—reading times for clauses with he or she. Due reasoning for this prediction was as follows: First, because of the increased occurrence of singular they in colloquial English, sentences that use they to refer to an indefinite or gender-neutral singular antecedent are no longer unexpected or surprising. Second, with neutral and indefinite antecedents, clauses containing they might be read even faster than clauses containing he or she because the pronoun they adds no new information, whereas the pronouns he and she seem to specify the gender of an antecedent whose gender was previously known. Any additional information provided by a singular antecedent gives processing time (Feortsch & Gernsback, 1994; Garman, 1981, 1984; Garrod & Sanford, 1977). Hence, if the reader has not made a presumption about the gender of the antecedent, or if the reader’s presumption does not match the gender that is then specified by the pronoun, the reader will be slower processing a clause that uses a gender-specific pronoun.

Method

Participants

The participants were 87 undergraduates in an introductory psychology course at the University of Wisconsin-Madison. All participants were native English speakers.

Materials

The experimental stimuli were 72 three-clause sentences. The first clause always began with a masculine, feminine, or neutral common noun modified by an indefinite determiner, like an unspecified indefinite pronoun. View was taken to be nothing in this first clause other than the intended referent could be referred to using the pronouns he, she, or they. The second clause began with the words “even if,” followed by the pronoun he, she, or they.

After each sentence, readers saw a “True or False?” prompt and a prompt to respond (e.g., with a yes or no response).

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Singular They

The verb in the second clause was remarked for number so that its form was identical regardless of the pronoun used. The third clause, beginning with “because,” provided a justification for the opinion expressed in the first two clauses and was included as a buffer so that reading time for the crucial second clause would not be contaminated by a reader’s wrap-up processing at the end of each sentence.

The 72 experimental sentences were presented in the same order to all participants. This order was random with the exception that sentences of the same antecedent type (masculine, feminine, or neutral, indeterminate, or undecidable) did not appear more than twice consecutively, and sentences using the same pronoun (he, she, or they) did not appear more than three times consecutively. Three material sets were created so that each sentence appeared with a different pronoun in each material set. The experiment was conducted as a within-subjects design, with each antecedent type appearing with each pronoun a total of six times per material set.

Procedure

Participants were tested in separate cubicles containing computer screens with three-button response pads. At the beginning of a session, participants read instructions that appeared on their screens. Participants were instructed that they would read a series of three-clause sentences presented one clause at a time, and that they were to advance through each sentence by pressing the “Continue” button. After reading the last clause of each sentence and pressing the “Continue” button, the words “True or False?” would appear on the screen. Participants were told to indicate their agreement with the opinion expressed in the sentence by pressing either a button labeled “True” or a button labeled “False.” Participants were given three example sentences with each of which to practice this procedure. After practicing, participants signed informed consent forms, and the experiment began. The participants proceeded through both the experimental and control conditions.

Each clause of each sentence appeared flush left in the center of the computer screen. A clause remained on the screen until the participant pressed the “Continue” button or the correct button. A 200-msec blank period intervened between consecutive clauses. After participants read the last clause of a sentence and pressed the “Continue” button, “True or False?” prompt appeared on the screen and remained until the participant responded or 2000 ms elapsed. A 1.5-s blank period intervened between sentences.

Results and Conclusions

To control for variability in the number and length of words between conditions, reading times for the critical second clauses were divided by the number of characters in each clause. The mean per-character reading times for the three pronoun conditions for each of the four types of antecedent are displayed in Figure 1.

Within subjects analyses of variance (ANOVA’s) with pronoun and material set as factors were performed for each of the four types of antecedent. For both feminine and masculine antecedents, clauses containing opposite-gender pronouns were read most slowly. However, clauses containing same-gender pronouns and singular they were read with equal facility. More specifically, for feminine antecedents, she clauses (M = 59.5, SE = 3.05) were read significantly more slowly than other he clauses (M = 54.8, SE = 1.17) or they clauses (M = 53.3, SE = 1.72). F(2, 34) = 5.14, p = .017, F(2, 34) = 5.32, p = .049, minF(2, 34) = 2.16, p = .103. In contrast, for masculine antecedents, he clauses and they clauses were read with equal facility, F < 1. For feminine antecedents, she clauses (M = 59.7, SE = 2.96) were read significantly more slowly than either she clauses (M = 52.9, SE = 2.04) or they clauses (M = 55.2, SE = 2.04), F(2, 34) = 4.67, p = .034, minF(2, 34) = 3.41, p < .05; she clauses and they clauses were read with equal facility, F < 1. Apparently, singular they is readily substituted for the same-gender pronoun in sentences in which the antecedent has a strong gender bias. When the sentence’s antecedent was neutral, he clauses (M = 59.6, SE = 1.75), she clauses (M = 55.7, SE = 1.73), and they clauses (M = 55.5, SE = 1.80) were all read with equal facility, F < 1. Finally, when the sentence’s referent was an indeterminate pronoun, singular they was the pronoun of choice. They clauses (M = 53.3, SE = 1.90) were read faster than either she clauses (M = 55.3, SE = 1.90) or he clauses (M = 59.2, SE = 2.23), F(2, 168) = 4.41, p = .010, F(2, 168) = 4.37, p = .049, minF(2, 168) = 2.23, p = .103; planned comparisons show that only the difference between they and he is significant, p < .002. It was anticipated that singular they would be the most readily accepted pronoun with indeterminate pronoun antecedents like anyone because, even grammatical heaves, have endorsed this usage. Interestingly, with indecide pronoun antecedents, she clauses had a marginally significant advantage over he clauses, p = .058, suggesting that members of our liberal-minded student body may have been reacting to the perceived chauvinism of using the he clauses in sentences in which the referent supplies no gender information.

EXPERIMENT 2

Experiment 2 demonstrated that singular they can be a cognitively efficient substitution for a masculine or feminine gender when the non-feminine antecedent is either an indefinite pronoun or a common noun with an indefinite determiner. Experiment 2 investigated whether singular results would be found with feminine antecedents. In Experiment 2, we removed the indeterminate pronoun sentences and modified the remaining masculine, feminine, and neutral antecedents to make them referential, giving the reader the impression that each sentence was about a specific person whose gender was presumably known. To accomplish this, the antecedents were modified by the definite determiner that, as in Example 6 by five-person possessives, as in Example 8, by indicators that the antecedent was personally known to the reader, as in Example 7.

5. That truck driver shouldn’t drive when sleepy, even if it’s his job, may be trying to make a delivery on time, because even a sailor is usually driven when off the wheel.

The first sentence was also modified to express a belief, even though he/she had no way of knowing for sure, as in Example 6.

6. I’m sure we can adjust my medication, even though he/she had no way of knowing for sure, because many patients must take lower doses to cope with side effects, even if they had to wait a few hours before the next dose could be given.

After reading each sentence, participants responded to a yes/no question, such as “Is it false?” We assume that speakers and writers are less likely to use singular they in situations in which the antecedent’s gender is known than in situations in which the antecedent is non-gender specific. The question of interest was whether readers are sensitive to this difference.

Method

Participants

The participants were 108 undergraduates in an introductory psychology course at the University of Wisconsin-Madison. None had participated in Experiment 1. All participants were native English speakers.

Materials

The experimental stimuli were 54 three-clause sentences expressing opinions about the behavior of specified persons in particular situations. The sentences were based on those used in Experiment 1 except that each antecedent was made more specific (i.e., referential) by modifying it as illustrated in Example 5 that each antecedent was made more specific (i.e., referential) by modifying it as illustrated in Example 5 that each antecedent was made more specific (i.e., referential) by modifying it as illustrated in Example 5 that each antecedent was made more specific (i.e., referential) by modifying it as illustrated in Example 5. 30 subjects were instructed that the resulting antecedents were overwhelmingly comprehended as referring to “some particular person” and were rarely if ever perceived as plural. After the third clause of each sentence, participants read a yes/no question pertaining to the sentence. About one third of the questions asked whether the participant agreed with the opinion or behavior expressed in the sentence, about one third asked if anything similar had ever happened to the participant, and about one third asked if the participant agreed with a proposed course of action.

Procedure

The procedure was the same as in Experiment 1 except that participants responded to a yes/no question instead of the “True or False?” prompt after each sentence.

Results and Conclusions

As in Experiment 1, the dependent variable was the per-character reading time for the second clause. The mean per-character reading times for the three pronoun conditions for each of the three types of antecedent are displayed in Figure 2.

Within-subjects ANOVAs with pronoun and material set as factors were performed for each of the three types of antecedent. For masculine antecedents, same-gender he clauses resulted in the fastest reading times (M = 51.7, SE = 1.12), and opposite-gender she clauses resulted in the slowest reading times (M = 55.0, SE = 1.39), whereas they clauses had an intermediate reading time (M = 55.0, SE = 1.39), F(2, 34) = 3.84, p = .031, minF(2, 34) = 2.96, p < .05. As in Experiment 1, planned comparisons showed the reading times for the he clauses to be significantly shorter than the reading times for the they clauses, p < .05. However, in contrast to Experiment 1, the reading times for the she clauses, though marginally faster than those for the she clauses, p > .05, were also significantly slower than those for the he clauses, p < .05. The feminine antecedents showed a similar pattern: Same-gender she clauses resulted in the fastest reading times (M = 50.7, SE = 1.16), and opposite-gender he clauses in the slowest reading times (M = 55.4, SE = 1.00), whereas the they clauses had an intermediate reading time (M = 52.5, SE = 1.41).
A norming study was performed using our experimental materials to shed further light on the status of singular they in the minds of our undergraduate readers. When the readers were asked to provide a pronoun for each experimental sentence, spontaneous use of singular they was common. For the nonreferential antecedents used in Experiment 1, 79% of the readers used they to refer to an inanimate pronoun at least once, and 57% used singular to refer to a singular common noun at least once (most frequently, the nouns were gender neutral). In contrast, for the referential antecedents used in Experiment 2, only 20% of the readers used they to refer to a singular common noun at least once. Together, the results of these two experiments demonstrate that the increased use of singular they is not problematic for the majority of readers. We propose that in those few cases in which its use is considered surprising, the delays seen in comprehension are due not to the pronoun's grammaticality but to uncertainty over the intended referent, but to the ambiguous nature of using an nonreferential pronoun for an antecedent whose gender is presumably known.

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REFERENCES

5. A norming experiment (AN 4 A9) showed that gender-matched pronouns were judged to match the gender stereotype of their antecedents better than singular they is an experiment 2 were 90% of the readers used they to refer to a singular common noun at least once (most frequently, the nouns were gender neutral). In contrast, for the referential antecedents used in Experiment 2, only 20% of the readers used they to refer to a singular common noun at least once. Together, the results of these two experiments demonstrate that the increased use of singular they is not problematic for the majority of readers. We propose that in those few cases in which its use is considered surprising, the delays seen in comprehension are due not to the pronoun's grammaticality but to uncertainty over the intended referent, but to the ambiguous nature of using a nonreferential pronoun for an antecedent whose gender is presumably known.

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