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## **Elephants Who Marry Mice are Very Unusual<sup>2</sup>: The Use of the Relative Pronoun Who with Nonhuman Animals**

*Our task must be to free ourselves . . . by widening our circle of compassion to embrace all living creatures and the whole of nature and its beauty—Albert Einstein*

### ABSTRACT

This paper explores the use of the relative pronoun (who) with nonhuman animals. The paper looks at what dictionaries, an encyclopedia, grammars, publication manuals, newspapers, and news agencies say and do relative to this issue. In addition to investigating the views and practices of these authoritative publications, the study also searched a 100-million-word collection (corpus) of spoken and written English. The study found that while some reference works reject or ignore the use of (who) with nonhuman animals, other works discuss the possibility, and (who) does occur in the corpus with nonhuman animals. Explanations for such usage include psychological closeness with particular nonhuman animals and/or features shared with humans. The paper suggests that the use of (who) with nonhuman animals might play a role in promoting human attitudes and behaviors beneficial to fellow animals. However, it cautions that the correlation between language use, on the one hand, and attitudes and behaviors, on the other hand, is not a perfect one.

In the early 1960s, when Goodall (1990) started her research with chimpanzees in Africa, scientists in her

field gave numbers, not names, to the chimpanzees they were studying. When Goodall submitted her first scientific paper for publication, it was returned to her by the editor to be amended. In every place where she had written (he) or (she) to refer to chimpanzees, the words had been replaced with (it). Similarly, every (who) had been replaced with (which). In an effort to rescue the chimpanzees from “thing-ness” and restore them to “being-ness,” Goodall stubbornly changed the words back. In the end, she won a small battle in what was to be an ongoing struggle to tear down, one by one, some of the bricks in the wall of superiority that humans had built to separate themselves from nonhuman animals.

This article seeks to investigate whether the use of the relative pronoun (who)<sup>3</sup> with nonhuman animals has made any progress over the last 40 years. On the one hand, by examining how the issue is treated in a number of dictionaries, one encyclopedia, grammars, publication manuals, and newspaper style guides, we will check whether the language specialists accept such usage. On the other hand, we will analyze a large amount of spoken and written language to determine the extent to which this usage occurs in authentic, everyday language. In addition, we will pinpoint some of the features likely to trigger it.

## **The Use of (Who) with Nonhuman Animals in Reference Works**

This section looks at what dictionaries, one encyclopedia, grammars, publication manuals, and newspapers and news agencies have said on the issue of using (who) with nonhuman animals.

### *Dictionaries and an Encyclopedia*

An investigation of nine dictionaries and one encyclopedia<sup>4</sup> found that five of these sources discuss the limited use of (who) with nonhuman animals as a possibility. Table 1 summarizes the data. The works that accept the use of (who) regularly cite personality as a triggering factor.

**Table 1: Information in Dictionaries and One Encyclopedia on the Use of the Relative Pronoun (Who) with Nonhuman Animals**

| Dictionary                                                 | Possible? | Comments and/or examples                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>American Heritage Dictionary</i> (2000)                 | Yes       | "or one to whom personality is attributed"                                                                                                                                                                                                                                                                                                        |
| <i>Cambridge Advanced Learners Dictionary</i> (2004)       | No        | "It is used for people, not things"                                                                                                                                                                                                                                                                                                               |
| <i>Encarta</i> (2005)                                      | No        | "used to introduce a relative clause giving information about a person or people"                                                                                                                                                                                                                                                                 |
| <i>Funk &amp; Wagnalls</i> (1984)                          | No        | "In modern usage, <i>who</i> as a relative is applied only to persons, <i>which</i> only to animals or to inanimate objects"                                                                                                                                                                                                                      |
| <i>Infoplease Dictionary</i> (2005)                        | Yes       | "sometimes an animal or personified thing"                                                                                                                                                                                                                                                                                                        |
| <i>Merriam-Webster</i> (2005)                              | Yes       | "used especially in reference to persons . . . or to animals"<br>E.g. <i>dogs who</i> . . . fawn all over tramps (Nigel Balchin)                                                                                                                                                                                                                  |
| <i>Newbury House Dictionary of American English</i> (2003) | No        | "used to give more information about a person or persons"                                                                                                                                                                                                                                                                                         |
| <i>Oxford English Dictionary</i> (1989)                    | Yes       | "Used in reference to an animal or animals: usually with implication of personality."<br>E.g. <i>Against the Capitol I met a lion who</i> glared at me, and went surly by (Shakespeare, 1601, <i>Julius Caesar</i> , Act 1, Scene 3) <i>Two honest dogs . . . who perform in Punch's shows</i> (Dickens, 1860, <i>The Uncommercial Traveler</i> ) |
| <i>Wikipedia</i> (2005)                                    | Yes       | "some animals perceived as sentient"                                                                                                                                                                                                                                                                                                              |
| <i>Wordsmyth English Dictionary-Thesaurus</i> (2002)       | No        | "in reference to a specified person or persons"                                                                                                                                                                                                                                                                                                   |

Data on whether the use of (who) with nonhuman animals is mentioned as possible in grammars are displayed in Table 2. Of the 13 works reviewed,<sup>5</sup> 5 state that (who) is possible with nonhuman animals, with another (Eastwood, 1994) implying that it might be possible.<sup>6</sup> Some of the triggering factors mentioned in these works are closeness/sympathy (cf. companion animals), knowledge of the name and/or sex of the nonhuman animal, and whether the reference is to a “lower” or “higher” nonhuman animal.

**Table 2: Information in Grammars on the Use of the Relative Pronoun (Who) with Nonhuman Animals**

| Grammar                                                                              | Possible? | Comments and/or examples                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Huddleston and Pullum (2002)<br><i>The Cambridge Grammar of the English Language</i> | Yes       | “Personal <i>who</i> is usually human, but can also be non-human animate . . .” (pp. 428-9)<br><br>“Nouns denoting animals can thus take <i>which</i> or <i>who</i> , just as <i>that</i> can take <i>it</i> or else <i>he</i> or <i>she</i> . And if an animal is referred to by means of a proper noun then <i>which</i> is excluded . . .” (p. 498)                                                                                                                                                      |
| Sinclair (1990)<br><i>Collins Cobuild English Grammar</i>                            | No        | “ <i>Who</i> and <i>whom</i> always refer to people.” (p. 39)<br><br>“ <i>Which</i> always refers to things.”<br>E.g. <i>two horses which he owned</i> . (p. 40)                                                                                                                                                                                                                                                                                                                                            |
| Quirk et al. (1985)<br><i>A Comprehensive Grammar of the English Language</i>        | Yes       | “Male/female gender distinctions in animal nouns are maintained by people with a special concern (for example with pets), e.g.: <i>cock</i> and <i>rooster</i> <AmE> for the male (with <i>which-it</i> or <i>who-he</i> coreference) and <i>hen</i> for the female (with <i>which-it</i> or <i>who-she</i> coreference).” (p. 317)<br><br>“ . . . lower animals may also be viewed as higher animals. Thus we may speak of ‘ <b>goldfish who</b> swim around’, ‘ <b>bees who</b> are busy’, etc.” (p. 317) |

Table 2 (cont.)

| Grammar                                                                                                   | Possible?     | Comments and/or examples                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                           |               | <p>“Pet animals can be regarded as ‘personal’ (at least by their owners . . .)”</p> <p><b>Rover</b>, <i>who</i> was barking, frightened the children. (p. 1245)</p> <p>“Other nonhuman creatures besides pets may take <i>who</i> even in sentences where this involves an apparent clash with the neuter pronoun <i>it</i>; thus, from a recent work of nonfiction:</p> <p>the <b>chameleon</b> <i>who</i> changes <i>its</i> colours</p> <p>This is less likely, however, when the relative pronoun is object in its clause, as we see from the following examples on two successive pages of a work on zoology:</p> <p>the black <b>rhinoceroses</b> <i>who</i> live in the park</p> <p>the white <b>rhinoceros</b> <i>which</i> we saw in the wilds outside the park.” (p. 1246, note [a])</p> |
| Chalker (1990)<br><i>English Grammar: Word by Word</i>                                                    | Not discussed |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Celce-Murcia, & Larsen-Freeman (1999)<br><i>The Grammar Book</i> (2nd ed.) (1999)                         | No            | States that <i>who</i> is “+ human” and <i>which</i> is “-human.” (p. 582)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Parrott (2000)<br><i>Grammar for English Language Teachers</i>                                            | No            | “If the subject of the relative clause is a person, we can use <i>who</i> but not <i>which</i> . . . . If the subject of the relative clause is a thing we use <i>which</i> but not <i>who</i> .” (p. 354)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Biber, Johansson, Leech, Conrad, & Finegan (1999)<br><i>Longman Grammar of Spoken and Written English</i> | (No)          | “The relative pronoun <i>who</i> is distinctive in that it is used almost exclusively with an animate (human) head. . . . At the other extreme, the relative pronoun <i>which</i> rarely occurs with an animate head.” (pp. 612-3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

Table 2 (cont.)

| Grammar                                                                          | Possible?                | Comments and/or examples                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dixon (1991)<br><i>A New Approach to English Grammar, on Semantic Principles</i> | Yes for “higher animals” | “The relative pronoun is <i>which</i> if the coreferential NP [noun phrase] was a non-human in subject or object function or following a preposition, <i>who</i> if a human (or, for some speakers, a higher animal) in subject function.” (p. 27)                                                                                                              |
| Greenbaum (1996)<br><i>The Oxford English Grammar</i>                            | Yes                      | “Pet-owners and those who have close dealings with the animals may use <i>he</i> and <i>she</i> as appropriate and perhaps <i>who</i> , whereas others will use <i>it</i> and <i>which</i> for all animals.” (p. 108)                                                                                                                                           |
| Eastwood (1994)<br><i>Oxford Guide to English Grammar</i>                        | (Yes)                    | States that <i>who</i> is for people and <i>which</i> is for things, but says the distinction is the same as between <i>he/she</i> and <i>it</i> , and in the discussion of that point, states that <i>he</i> or <i>she</i> can be used with “animals” if we know the sex, and if interest or sympathy is felt. (pp. 236, 360)                                  |
| Van Ek and Robat (1984)<br><i>The Student’s Grammar of English</i>               | Yes                      | “The general rule for the use of anaphoric relatives is that <i>who</i> is used with personal antecedents, <i>which</i> with non-personal antecedents.” (p. 166)<br><br>“Some minor exceptions to the general rule for the use of relative <i>who</i> ( <i>whom</i> ) and <i>which</i> are the following:<br><i>who</i> is often used for pet animals” (p. 167) |
| Wardhaugh (1995)<br><i>Understanding English Grammar: A Linguistic Approach</i>  | No                       | “The relative pronouns are either the personal <i>who</i> or one of its forms or the impersonal <i>which</i> .” (p. 14)                                                                                                                                                                                                                                         |
| <i>The University of Victoria’s Hypertext Writer’s Guide</i> 1995                | No                       | “use <i>who</i> to refer to people. . . . Use <i>which</i> for things.”                                                                                                                                                                                                                                                                                         |

Publication manuals are guides developed for people doing a specific type of writing, such as academic writing, or writing in a specific field, such as biology. Nine manuals were reviewed, as shown in Table 3. Of these nine publication manuals, four do not say anything about the referents of (who), four say that (who) is used only with humans, and only one discusses the possible use of (who) with nonhuman animals (provided they have a name).

**Table 3: Information in Publication Manuals on the Use of the Relative Pronoun (Who) with Nonhuman Animals**

| Publication Manual                                                                          | Possible?     | Comments and/or examples                                                                                                                                           |
|---------------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Himstreet, & Baty (1990)<br><i>Business Communications: Principles and Methods</i>          | No            | “Use <i>who</i> or <i>whom</i> to refer to persons; <i>which</i> to refer to things or animals; and <i>that</i> to refer to things, animals, or persons.” (p. 678) |
| The University of Chicago Press (2003)<br><i>The Chicago Manual of Style (15th ed.)</i>     | No            | “... <i>who</i> refers only to a person . . . . .<br><i>Which</i> refers to an animal or a thing.”<br>(p. 163)                                                     |
| Alred, Brusaw, & Olin (2002)<br><i>Handbook of Technical Writing</i>                        | No            | “ <i>That</i> and <i>which</i> refer to animals and things; <i>who</i> refers to people.” (p. 630)                                                                 |
| Microsoft Corporation (1998)<br><i>Microsoft Manual of Style for Technical Publications</i> | Not discussed |                                                                                                                                                                    |
| Gibaldi (2003)<br><i>MLA Handbook for Writers of Research Papers</i>                        | Not discussed |                                                                                                                                                                    |
| American Psychological Society (2001)                                                       | No            | Use <i>who</i> for human beings; use <i>that</i> or <i>which</i> for animals and for things.                                                                       |

Table 3 (cont.)

| Publication Manual                                                                                                           | Possible?     | Comments and/or examples                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Publication Manual of the American Psychological Association</i>                                                          |               | <p>The <b>rats that</b> completed the task successfully were rewarded.</p> <p>*The <b>rats who</b> completed the task successfully were rewarded.</p> <p>(p. 48)</p> <p>A workbook (Gelfand &amp; Walker, 1990) accompanying an earlier edition of the manual contains this example (pp. 50-51):</p> <p>The <b>monkeys that</b> showed right-paw dominance were trained to select with their left paws.</p> <p>*The <b>monkeys who</b> showed right-paw dominance were trained to select with their left paws.</p> |
| Felder, Bender, Davenport, & Kostyu (1997)<br><i>Reporting for the Media</i>                                                 | Yes           | <p>That and which introduce clauses that refer to ideas, inanimate objects or animals without names. Who and whom begin clauses that refer to people and animals with names. (p. 70)</p>                                                                                                                                                                                                                                                                                                                           |
| Rubens (2001)<br><i>Science and Technical Writing: A Manual of Style</i>                                                     | Not discussed |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Council of Biology Editors (1994)<br><i>Scientific Style and Format: The CBE Manual for Authors, Editors, and Publishers</i> | Not discussed |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

\* In this table, the asterisk indicates that the sentence is judged ungrammatical.

Large circulation, English-language newspapers, and prominent news agencies were contacted by e-mail and telephone to request information on their practices in regard to the use of (who) with nonhuman animals. A response rate of approximately 80% was obtained. In three cases (the Associated Press, the New York Times, and the Guardian), correspondence was not necessary: The newspaper or news agency’s publicly available style guide was consulted.

Data from those newspapers and news agencies that replied or whose style guide was consulted are presented in Table 4. Data were obtained from 13 newspapers and news agencies: One says nothing about the referents of (who); three say that (who) is used only with humans; and nine state that limited use of (who) with nonhuman animals is possible if the animal’s sex has been established or if the animal has a name.

**Table 4: The Practices of Newspapers and News Services Regarding the Use of the Relative Pronoun (Who) with Nonhuman Animals**

| Newspaper or News Agency                                                                          | Possible?     | Comments and/or examples                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| French, Powell, & Angione (1984, pp. 19-20)<br><i>Associated Press Stylebook and Libel Manual</i> | Yes           | “Do not apply a personal pronoun to an animal unless its sex has been established or the animal has a name: <i>The cat, which was scared, ran to its basket. Susie the cat, who was scared, ran to her basket.</i> ” |
| Public Editor, personal communication, December 9, 2004<br><i>Chicago Tribune</i>                 | Yes           | For animals with names                                                                                                                                                                                               |
| J. Thornton, personal communication, December 9, 2004<br><i>Dallas Morning News</i>               | Yes           | If the animal has a name or its sex has been established                                                                                                                                                             |
| Marsh (2004, March)<br><i>The Guardian Stylebook</i>                                              | Not discussed |                                                                                                                                                                                                                      |

Table 4 (cont.)

| Newspaper or News Agency                                                        | Possible? | Comments and/or examples                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Jordan, personal communication, December 9, 2004<br><i>Houston Chronicle</i>    | No        | “Would not refer to animals as ‘who’ and would probably not use ‘which’ or ‘that’ unless essential. Usually that can be left out entirely”                                                                                                                                                                                              |
| M. King, personal communication, December 16, 2004<br><i>The Independent</i>    | Yes       | “Our style expert would advise that an animal with a name—e.g. a race horse, somebody’s dog or Dolly the sheep—would be <i>who</i> . Animals without individual names—such as the squirrels in this example [ <i>Squirrels are believed to be the animals _____ have been eating the corn</i> ]—would be <i>that</i> or <i>which</i> .” |
| K. Zelas, personal communication, December 14, 2004<br><i>Los Angeles Times</i> | Yes       | “If its sex is known or if it has been personalized with a name.”                                                                                                                                                                                                                                                                       |
| J. Jordan (1976, p. 13)<br><i>New York Times</i>                                | Yes       | “Do not use a personal pronoun in referring to an animal unless its sex has been established or it has been personalized with a name: <i>The dog, which was lost, howled. Rover, who was lost, howled.</i> ”                                                                                                                            |
| R. Joyce, personal communication, December 20, 2004<br><i>Reuters</i>           | No        |                                                                                                                                                                                                                                                                                                                                         |

Table 4 (cont.)

| Newspaper or News Agency                                                                   | Possible? | Comments and/or examples                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A. P. Duffy, personal communication,<br>December 16, 2004<br><i>Straits Times</i>          | Yes       | “Which, that, who, whom—Use <i>which</i> and <i>that</i> to refer to inanimate objects and to animals without a name: <i>The dog that ran across the road caused the accident.</i> Use <i>who</i> and <i>whom</i> to refer to people, and to animals with names: <i>John Tan is the man who helped me most. Cleo is a cat who likes chicken pieces.</i> ” |
| R. Dixon, personal communication,<br>December 20, 2004<br><i>The Times</i> (London)        | No        | “We do not elevate animals to the level of humans with the use of ‘who’. Always ‘which’”                                                                                                                                                                                                                                                                  |
| P. Martin, Sr., personal communication,<br>December 16, 2004<br><i>Wall Street Journal</i> | Yes       | “Apply a personal pronoun to an animal only if its sex has been established or it has a name: <i>The dog was frightened; it barked. Spot was frightened; he barked. The cat, which was frightened, ran away. Lady the cat, who was frightened, ran away. The bull lowers his head.</i> ”                                                                  |
| B. Walsh, personal communication,<br>October 18, 2004<br><i>The Washington Post</i>        | Yes       | “Non-pet animals without names are ‘it’ and ‘which.’ Pets and other animals with names can be ‘he,’ ‘she’ and ‘who.’”                                                                                                                                                                                                                                     |

The Use of (Who) with Nonhuman Animals in Corpus Data

To summarize the data in the previous section from the reference works, newspapers, and news agencies consulted, the use of the relative pronoun (who) with nonhuman animals is accepted by slightly less than half of these works (20 of 45)—the highest proportion being found in newspaper style guides (9 of 13).<sup>7</sup> Variance provides grounds for further investigation. Therefore, we continued our study using data from a corpus: “a body of written text or transcribed speech which can serve as a basis for linguistic analysis and

description" (Kennedy, 1998, p. 1). By giving access to large amounts of authentic language, corpora offer a means of empirically testing whether the information found in dictionaries, an encyclopedia, grammars, publication manuals, and newspaper style guides matches actual language use.

In this section, we present the results of the corpus-based study of the use of the relative pronoun (who) with nonhuman animals. We briefly discuss the data from a quantitative point of view, showing how frequent this phenomenon is. However, our main focus is qualitative, as we examine the elements in the sentence that can explain the choice of this pronoun and those that seem to contradict the human-like status associated with (who).

Before starting, we underline that ideally, the results of such a study should be combined with an investigation of other relative pronouns used with nonhuman animals ([which], [that], and the zero relative pronoun) as well as (who) with human antecedents. Only then could we establish that the features brought to light here are unique to the use of (who) with nonhuman animals. We will, however, leave this analysis for future research.<sup>8</sup>

### *Methodology*

The British National Corpus World Edition (BNC, 2000) has been used in this article. It is a 100-million-word collection of spoken and written material (Leech, 1993). It represents contemporary British English (the material was collected between 1991 and 1995 in different areas of the United Kingdom<sup>9</sup> and is a relatively well-balanced corpus that illustrates a wide range of genres, subject fields, and registers). The data for the present study were extracted from the corpus by means of BNCweb (2002), a web-based client program specifically designed at the University of Zurich to search and query the BNC (Lehmann, Schneider, & Hoffmann, 2000).

The first step of the analysis consisted in drawing up a list of nonhuman animals. Using various Internet sources as a base,<sup>10</sup> we came up with a list of 914 nonhuman animals, including the following: (a) general and common nouns (e.g. bird, cat, dog, horse); (b) nouns for males, females, and offspring (e.g. calf, mare, stag); (c) some specialized nouns (e.g. drosophila, ostracod, whydah); and (d) the main breeds of cats, dogs, and horses (e.g. angora, collie, shire).

In a second step, we automatically looked for all the occurrences of one of these nouns (in the singular or plural) followed (within a span of one to three words) by the forms (who) or (whom). A number of examples will be quoted throughout this paper, with the code between angle brackets representing the reference of the sentence in the BNC (2000), and the parentheses enclosing the nonhuman animal, the relative pronoun (who) or (whom), and any words that might occur in-between. Examples (1) to (3) are some relevant sentences extracted from the corpus.

1. Our ancestors were (apes who) left the forests, because there were too many apes and not enough food. <B7J 1286>
2. But you see, Kraal, there is always hope, and there are (eagles here who) may yet learn what I have seen. <FP3 929>
3. In times of crisis and extreme demand it is easy to overlook the willing (horses some of whom) may not know their own limitations. <HPF 897>

Manual post-editing was necessary to discard irrelevant sentences, namely those in which (who) was not a relative pronoun dependent on the nonhuman animal—(4, 5); the antecedent was a homonym not referring to the nonhuman animal—(compare 6 with 7); or the noun of the nonhuman animal was used metaphorically to refer to a human being—(8).

4. And the big (bear said who)'s been sleeping in my bed. <KB6 800>
5. I advise owners of small (dogs who) have to leave their pets in kennels to find one that specializes in little dogs. <ACM 480>
6. Others become (queens who) fly out to seek pastures new and rival heads yet unsevered. <ARR 1424>
7. This is the (queen who) was greeted, on a visit to a Scottish university, by the sight of a student emptying down his throat, at top speed, the contents of a bottle of alcohol. <A05 1564>
8. And most single people and er most young people in particular . . . are at the mercy of er basically the well, well loosely what one could describe as the bad landlords, the (sharks, who) will er exploit their situation. <KRT 4635>

All remaining sentences were included in a database, where each one was encoded according to a number of stylistic, semantic, and syntactic para-

meters such as (a) the medium and genre of the text in which the sentence occurred; (b) the grammatical function of the nonhuman animal and the relative pronoun; or (c) the verb and type of verb in the relative clause. This database served as a basis for the quantitative and qualitative analysis.

*Frequency*

In the entire 100 million words of the corpus, we retrieved 738 sentences in which a nonhuman animal was used with the relative pronoun (who), a relative frequency of 0.76 per 100,000 words. Although not a frequent phenomenon, this type of structure—contrary to what some reference works suggest—is possible.

Table 5 shows that familiar nonhuman animals mainly are used with (who): dogs, horses, cats, birds, rabbits, sheep, fishes, cows, or pigs.<sup>11</sup> (These, however, are likely to be the most frequent with any other relative pronoun as well.) The list in Table 5 contains four nouns clearly marked for gender (mare, filly, bitch, and colt). This might be taken as evidence for the claim made by some reference works (French et al., 1984) that knowledge of the sex of the nonhuman animal is important in the choice of the pronoun.

**Table 5: Twenty Most Frequent Nonhuman Animals Used with (Who) in the BNC**

| noun frequency |          |     | noun frequency |         |    |
|----------------|----------|-----|----------------|---------|----|
| 1              | dog      | 114 | 11             | filly   | 10 |
| 2              | horse    | 70  | 12             | pony    | 10 |
| 3              | animal   | 44  | 13             | sheep   | 10 |
| 4              | cat      | 35  | 14             | bitch   | 8  |
| 5              | bird     | 22  | 15             | colt    | 8  |
| 6              | rabbit   | 21  | 16             | fish    | 8  |
| 7              | mare     | 19  | 17             | hound   | 8  |
| 8              | eagle    | 18  | 18             | terrier | 8  |
| 9              | stallion | 14  | 19             | cow     | 7  |
| 10             | dolphin  | 10  | 20             | pig     | 7  |

The corpus analysis also reveals that the relative pronoun (who) with a non-human animal is more frequent in writing than in speech (relative frequency of 0.82 vs. 0.25 per 100,000 words), thus, according to Tottie (1997), mirroring the stylistic preference of the relative pronoun (who) in general on the rarity of (who) in the spoken data of the BNC (2000).

Finally, it turns out that the texts with the highest number of instances of (who) with a nonhuman animal tend to be devoted specifically to one type of nonhuman animal, *Rottweilers: An Owner's Companion*, *Understanding Horses*, *Today's Horse*, *Dogs Today* or *Owl Light*. Although this certainly is linked to the high frequency of nouns of nonhuman animals in such texts, possibly it might reflect specialists' desire to favor the use of (who) when referring to the nonhuman animal in their specialty. As to magazines (*Today's Horse* and *Dogs Today*), it also might be the result of editorial policies aiming at consistency in the use of relative pronouns with nonhuman animals.

### *Who as Evidence of Human-like Status*

Given that the relative pronoun (who) typically is used to refer to human beings, we can expect it to give nonhuman animals some sort of human-like status. Context shows that indeed this is the case in a number of sentences. Closeness explains why (who) often is used with companion animals, as pointed out by some reference works (Quirk et al., 1985, p. 1245). This is the case not only with common pets such as dogs and cats (9 and 10), but also with more unusual pets such as rats (11) or pigs (12). By sharing the family's life, pets become real members of the family (10)—“the latest member of the Clinton family” and so are considered human or at least human-like.

9. He had several pets: a grey cat Maria, Shep the (sheepdog who) went everywhere with him over the fields. . . . <A6N 1740>
10. The latest member of the Clinton family to hit the headlines is Socks, the family (cat, who) will be seen in America next month on the front of Cats Magazine. <CBC 2628>
11. I refer instead to my pet (rat, who) I have decided to pass on to a new owner due to our having a cat. <J1J 208>
12. You see some unusual pets in people's living rooms—but it's not often you see a pig. . . . Celest isn't the only unusual animal to have

frequented the family's living room . . . in the past they've also enjoyed the company of a goat. But for now the family favorite remains the (pig, who(s) always welcome inside, providing she remembers her manners. <K1D 1239>

Another important criterion justifying the use of (who) is sympathy for the nonhuman animal mentioned in Eastwood (1994), as illustrated by (13) and (14). Nonhuman animals who have a particular function and are helpful to humans seem to elicit the same sort of sympathy (15). In addition, interest, also mentioned in Eastwood, may be a triggering factor, as when a nonhuman animal is the main protagonist of a news article (16). (Notice the use of the possessive adjective (his) in (16).

13. When Fabia left school she seemed to just naturally fill the niche that was tailor-made for her in feeding and exercising the dogs and giving an extra helping of love and attention to the (animals who) needed it. <JYF 26>
14. I was especially fond of my maternal grandparents' dog, Luath, an exquisitely patient (collie with whom) I would sit for hours, pretending or half-pretending that we could read one another's thoughts. <CEE 106>
15. Nebbins was Mr Cooper's only (horse who) worked very hard, pulled the plough and the hay cart, and all the other jobs that a horse had to do on a farm. <KCA 1831>
16. LUCKY, the blind (mongrel who) was found wandering the streets of Darlington lost and alone, has been reunited with (his) owner. <K52 1021>

In more than 60% of the sentences extracted from the corpus, nonhuman animals followed by (who) are assigned human-like characteristics or "personality," as some dictionaries put it: *American Heritage* (2000) or *Oxford English* (1989). Sometimes, this just is a name (note importance of this factor in newspaper style guides in particular) as in (17). In other cases, however, the trigger may be traits normally thought of as belonging to humans only (18) and (19). This phenomenon is taken one step farther in the case of stories in which nonhuman animals are characters on an equal footing with human characters. Horwood (1984) is a case in point because the nonhuman animals in

this story are the real heroes: talking, thinking, and behaving like human beings. Another example is (20).

17. Now he planned to do the same with the female (cub who) had been given the most unleopard-like name of Harriet. <CK2 478>
18. I am on friendly terms with a (dog who) is intoxicated with the pleasure of traveling in motor cars. <B7N 2002>
19. They were (sheep who) had decided that this was no time to waste energy panicking when it could be used for galloping away as fast as possible. <HTH 3443>
20. The (penguin who) had said the word *warm* shook her head sadly, and tho' the young penguin pestered her for days and days she heard no more about it. <HGF 3007>

Another type of context in which (who) is used to refer to a nonhuman animal is that of a comparison drawn between a human and the nonhuman animal. Either the human or the nonhuman animal can serve as the reference point—compare (21) and (22). In (21), the human is the reference point; in (22), the nonhuman is the reference point. In both cases, however, analysis of the ideology of the sentence rests partly on a value judgment related to the behavior or characteristics described. In (21), the human is demeaned by the comparison with the cat. (In this issue, Goatly presents a fuller discussion of the use of nonhuman-human comparisons.)

21. He looked like the (cat who)'d stolen the cream. <FPX 2668>
22. I am in the graveyard where nothing lives but the slow-worm, motionless on the short grass by the path, and the little (birds who) search among the yews like Elizabeth in the wardrobe. <G0X 1854>

In a similar vein, although this is a rare phenomenon in the BNC (2000) data, (who) also can be chosen when a nonhuman animal is coordinated with a human and when both are antecedents of the relative pronoun (23). Although this might look like a logical choice, it should be underlined that the pronoun (that) could have been used instead, making it possible to “neutralize” the difference in humanity between the human and the nonhuman animal.

23. He set off to catch up with his children and (dog who) were racing ahead. <A15 483>

Finally, a small majority of the instances of (who) in our data are followed by a singular noun (58%), as in (24). This has the effect of underlining the individual character of the nonhuman animal.

24. I am reminded of the (ant who) asked the centipede in what order he put his feet to the ground. <ARS 109>

### *Counterevidence to the Human-like Status*

Although closeness has been mentioned as one of the factors triggering the use of (who) with a nonhuman animal, we should not conclude that the use of such a pronoun necessarily entails a positive attitude toward the nonhuman animal. Sometimes, the context explicitly reveals a negative—even hostile—attitude, as in (25). Although in such cases emotional engagement could be invoked to explain the use of the pronoun (Gupta, this issue), this clearly is not the case in others. Thus, a number of instances come from the domain of applied sciences, where they describe experiments involving nonhuman animals (26). The tone here is detached: No compassion whatsoever is expressed for the nonhuman animal. The use of (who) in such contexts could be explained by the author's having "close dealings with the animals" (Greenbaum, 1996, p. 108). We also could hypothesize that the choice of (who) is a—possibly unconscious—attempt on the part of scientists to emphasize the humane aspect of their work with nonhuman animals and conceal the—sometimes painful—treatments they administer to them.

25. Their only foe had been the usual plague of (flies who) had to be slaughtered on a regular basis. <AR8 1241>
26. (Animals who) underwent proximal enterectomy alone demonstrated acinar cell degranulation typical of the response of raised CCK levels, but these changes were not seen after treatment with antagonist. <HU2 3724>

Negative cues not always are as obvious as in (25). Sometimes, the "clash" (Quirk et al., 1985, p. 1246) between different pronouns questions the speaker's attitude toward nonhuman animals: Consider (27). The author of the sentence uses the relative pronoun (who), thus assigning a human-like status to the horse—as also underlined by the word (courage)—but goes on to refer to the horse as *itself*, suddenly presenting the nonhuman animal as an object.

Similarly, in (28) the word (fish) is used once with (which) and once with (who). (Stibbe (2003) discusses the variation in the same document between [s/he] and [it] to refer to pigs.)

27. I don't know what really happened for I had my eyes closed, lashing out with my sword, whilst my (horse, who) had more courage than brains, took care of itself. <H90 1388>
28. There is one fish alive today, which manages to do both these things [move around out of water and obtain oxygen from the air]—the mudskipper. It is not closely related to those (fish who) pioneered the land, so any comparisons with them have to be made with caution, but even so it can give us a hint about how that momentous move was accomplished. <EFR 1809>

Indications that the speaker actually does not grant the nonhuman animal the status suggested by (who) can be even more subtle, being encoded in the syntactic structure. The grammatical function of the nonhuman animal in the sentence is very telling in this respect. It occupies the subject position—the position of the main actor in the sentence—in only 142 cases (19%), among which 21 are in the passive, the nonhuman animal having a patient rather than agentive role. Compare (29), where the nonhuman animal is the subject of an active clause (*will probably outlive next door's parrot*), with (30), where the clause is in the passive (*was laid at the four-figure price*):

29. The springer (spaniels, who) gulp down what the children leave, will probably outlive next door's parrot. <A5U 688>
30. The (mare, who) finished ninth in the Sprouston Claiming Hurdle, was laid at the four-figure price by two Tattersalls bookmakers before being returned at 500-1. <AJ3 73>

Most of the time, the nonhuman animal has a secondary function in the sentence, typically as the object of a prepositional phrase (48%) [*wrestling with an alligator*]:

31. The girl who earned her nickname by wrestling with an (alligator who) made the mistake of choosing her for his dinner, has added yet another incredible feat to her repertoire! <G3P 919>

We noted above that most of the nonhuman animals followed by (who) are individuated thanks to the use of the singular. However, that this individuality

is far from being complete appears from the proportions of definite/indefinite nouns referring to nonhuman animals and defining/non-defining relative clauses.<sup>12</sup> In half the cases, nonhuman animals take the form of an indefinite noun—compare (32) with (33). Defining relative clauses predominate, with a percentage of 75% (34). Put differently, usually the relative clause defines the nonhuman animal who is not quite individuated.

- 32. A (horse or pony who) will pop over a ditch without fuss is a great asset. <BPB 756>
- 33. The glass makes this little, obscure (fly, who) had the cheek to interrupt my wonderful essay, seem suddenly rather less little, and rather less obscure than I'd thought previously. <EFF 1905>
- 34. But serious or lighthearted Central News always brought you the offbeat, like the (catfish who) loved to be fed by hand. <K1B 817>

As a last example of a parameter that subtly points to a “not-so-human-like” status of the nonhuman animal despite the use of (who), let us consider the nature of the verb in the relative clause. Distinguishing between processes of doing, sensing, and being/having, we notice that processes of being/having, not processes of doing, are the most common (51% vs. 38%). In other words, while sentences such as (35), which merely describe the state of the nonhuman animal, are very common, sentences such as (36), in which the nonhuman animal is an agent doing something (*has killed*), comparatively are rarer.

- 35. I had to tell you about the risk, but I've done this operation on (bitches who) were older than Sandy, and they were all successful. <JYE 3629>
- 36. There is some evidence that a (tigress who) has killed humans abandons the habit once her family is self-supporting. <CK2 131>

All these lexical and grammatical elements show that the use of (who) with nonhuman animals by no means implies that we adopt a positive attitude toward them and see them as humans' equals. The rest of the context should be taken into account to have a global view of the speaker's/writer's state of mind.

## Conclusion

This paper has demonstrated that although some reference works reject or simply ignore the phenomenon, the relative pronoun (*who*) does occur with nonhuman animals, a usage that usually can be explained by such factors as closeness with the nonhuman animal and/or features shared with humans. It also has been shown that in some cases, although the use of (*who*) instead of (*which*) may give the impression of nonhuman animals being put on a more equal footing with humans, in practice they may still have an inferior status in terms of the organizations of the sentence.

Language is said to affect, and be affected by, humans' views of the world (Fairclough, 1992; Whorf, 1956). Perhaps using (*who*) with nonhuman animals might, in small measure, promote a greater level of concern for them, thus extending humans' "circle of compassion" (Einstein, cited in Eves, 1977; Schweitzer, 1949) to include nonhuman animals as well. Changes in language, however, are not enough, because—as we have seen—the use of (*who*) with nonhuman animals does not necessarily reflect a positive attitude toward them. Only when humans' attitudes and behaviors toward nonhuman animals have changed will we have succeeded in the effort started by Goodall—and others—more than 40 years ago.

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## Notes

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<sup>2</sup> The quotation in the title illustrates the kind of linguistic phenomenon that will be investigated in this paper. It comes from an online English grammar (Hughes, 2005) where, quite surprisingly, it is used to exemplify, not the use of (*who*) with nonhuman animals but simply the concept of defining relative clauses.

Convenience sample of the manuals available at the Central Library of the National University of Singapore, combined with the second author's intuition as to which are well-known works in the field.

<sup>3</sup> Throughout the article, we use the word (*who*) as a cover term. It refers both to (*who*) and to (*whom*).

- <sup>4</sup> Convenience sample of either online dictionaries/encyclopedia found at the website [www.onelook.com](http://www.onelook.com) or large hardcopy dictionaries/encyclopedia found in the library of the SEAMEO (Southeast Asia Ministers of Education Organization) Regional Language Centre, in Singapore, combined with the second author's intuition as to which are well-known works in the field.
- <sup>5</sup> Convenience sample of grammars available at the library of the SEAMEO (Southeast Asia Ministers of Education Organization) Regional Language Centre, in Singapore, combined with the second author's intuition as to which are well-known works in the field.
- <sup>6</sup> Along the same lines, the grammar check—a tool meant for the public—in the word processing software used to write this article, Microsoft Word (XP version), marks use of (who) after a nonhuman animal, such as “the cat who,” as incorrect.
- <sup>7</sup> As most of the data on newspaper and news agency come from personal correspondence conducted in 2004, this data category is, generally, the most recent in the study. That the category of newspapers and news agencies has the highest percentage of allowing for the use of *who* with nonhuman animals might suggest that English is indeed changing in regard to this matter.
- <sup>8</sup> Such an analysis might produce surprising results. Thus, it transpires from Tagliamonte, Smith, and Lawrence's (2005) analysis of relative pronouns in three spoken vernacular varieties of English in Britain that in two of these varieties, the proportion of the relative pronoun (who) as compared to the other pronouns actually is larger with nonhuman animals than with humans.
- <sup>9</sup> It might be argued that a corpus created more than ten years ago does not reflect language as it is used today, particularly when it comes to a “sensitive” topic such as the use of (who) with nonhuman animals (one impetus for language change related to this phenomenon, the animal rights movement, has seen a boom in the past 10 years). However, it should be kept in mind that designing a large and representative corpus such as the BNC is a slow and complex process, especially when it has to be annotated in some way (in the BNC, for instance, each word is followed by a “tag” indicating its part of speech). The idea of the American National Corpus, the American counterpart of the BNC, was first proposed in 1998, but this corpus is still in the making. Up to now, only the first 10 million words have been released as a beta version.
- <sup>10</sup> [http://dir.yahoo.com/Science/Biology/Zoology/Animals\\_\\_Insects\\_\\_and\\_Pets/Complete\\_List\\_of\\_Animals\\_by\\_Name/Complete\\_Listing/](http://dir.yahoo.com/Science/Biology/Zoology/Animals__Insects__and_Pets/Complete_List_of_Animals_by_Name/Complete_Listing/), <http://www.mcwdn.org/Animals/AnimalsIndex.html>, <http://www.greenapple.com/~jorp/amzanim/aninfct.htm>, <http://www.geocities.com/RainForest/4076/indexlist.html>, <http://www.enchantedlearning.com/subjects/animals/Animalbabies.shtml>,

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- <sup>11</sup> For dogs and horses, who are the top two nonhuman animals in terms of use of (who), a number of related terms also appear in the list: *bitch*, *hound*, and *terrier* for dogs and *mare*, *stallion*, *filly*, *pony*, and *colt* for horses, which can be explained partly by the frequency of these words in descriptions of dog or horse races. As for eagles and dolphins, who perhaps are not so common nonhuman animals in the lives of humans, it should be noted that the instances are not equally distributed over the corpus but mostly occur in one and the same text. For *dolphin*, 7 out of the 10 occurrences of the word come from Donoghue (1990), whereas for *eagle*, all but two of the instances occur in Horwood (1984), a tale about a golden eagle who is captured and brought to the London Zoo. The high frequency of these two words, therefore, does not reflect a general tendency but an idiosyncrasy of one isolated text.
- <sup>12</sup> Defining relative clauses are clauses that give essential information to define or identify the antecedent, while non-defining relative clauses give extra information, not necessary to identify the antecedent. Compare (i) and This distinction also is referred to as restrictive vs. non-restrictive relative clauses (Quirk, Greenbaum, Leech, & Svartvik, 1985, pp. 365, 366).  
(1) Under the Testing of Poultry Order 1989, egg producers must test (birds who) are 18 weeks or older once every two months. <A50 46>  
(2) She gazed with wide eyes at the nearest (cows, who) stared back with large, liquid eyes at her—and didn't move an inch! <B0B 1113>

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