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Title: Furries From A to Z (Anthropomorphism to Zoomorphism)

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Abstract: This study explored the furry identity. Furries are humans interested in anthropomorphic art and cartoons. Some furries have zoomorphic tendencies. Furries often identify with and/or assume characteristics of a special/totem species of nonhuman animal. This research surveyed furries ($N = 217$) and non-furry individuals ($N = 29$) attending a furry convention, and a comparison group of college students ($N = 68$). Furries commonly indicated dragons and various canine and feline species as their alternate species identity; none reported a nonhuman primate identity. Dichotomous responses ("yes" or "no") to two key furry identity questions ("do you consider yourself to be less than 100% human?" and "if you could become 0% human, would you?") produced a two-by-two furry typology. These two independent dimensions are self-perception (undistorted versus distorted) and species identity (attained versus unattained). One-quarter of the furry sample answered "yes" to both questions, placing them in the *Distorted Unattained* quadrant. This type of furry has certain characteristics paralleling

gender identity disorder. Further research is needed to explore this parallel, the furry typology, and the proposed construct of *Species Identity Disorder*.

Key Words: furry; furries; anthropomorphism; zoomorphism; identity; species identity disorder

The subject of anthropomorphism, "the attribution of human characteristics to nonhuman entities," (American Psychological Association, 2007, p. 59) has recently generated a fair amount of attention and debate (see Mitchell, Thompson, & Miles, 1997; Serpell, 2003; Horowitz & Bekoff, 2007; Epley, Waytz, & Cacioppo, in press). A recent *PsycINFO* search for anthropomorphism found 186 publications, 69 of which were published from 1991 through 1999 and 46 of which were published after 1999. In contrast, the concept of zoomorphism, "the attribution of animal traits to human beings, deities, or inanimate objects," (American Psychological Association, 2007, p. 1011) rarely appears in the psychological literature. A *PsycINFO* search for zoomorphism found only four publications, each of which was published in a different decade.

Human anthropocentrism might explain this emphasis on anthropomorphism and lack of interest in zoomorphism. However, an alternative explanation for the lack of research on zoomorphism is the scientific community may be unaware that a group of people exist worldwide with a keen interest in not only anthropomorphism but also zoomorphism. These people, known as furries, often identify with and may wish to assume characteristics of nonhuman animals.

Although there is no standard definition of furry, most furries would likely agree with the following: a furry is a person who identifies with the Furry Fandom culture. Furry Fandom is the collective name given to individuals who have a distinct interest in anthropomorphic animals such as cartoon characters. Many, but not all, furries strongly identify with or view themselves as one (or more) species of animal other than human. Common furry identities (*fursonas*) are dragon, feline (cat, lion, tiger), and canine (wolf, fox, domestic dog) species. Some furries create mixed species, such as a *folf* (fox and wolf) or *cabbit* (cat and rabbit). Furries rarely, if ever, identify with a nonhuman primate species. Many furries congregate in cyberspace, enjoy artwork depicting anthropomorphized animals, and attend Furry Fandom conventions.

While attending Furry Fandom conventions, some furries dress head-to-toe in animal-like costumes, referred to as *fursuits*. Fursuits, similar to what athletic team mascots wear, are constructed of fabric, not fur or animal skins. While in a fursuit, a furry walks upright. Some furries superimpose human clothing on the fursuit; for example, a snow leopard diva may wear a red cocktail dress and a big yellow dog may wear blue jeans. Most furries do not own a full fursuit because they are costly. Many furries wear a partial fursuit consisting of ears and a tail, which can be purchased for $25. See *Wikifur* (n.d.) for information about the Furry Fandom written by and for furries.

The scientific community has had little academic exposure to furries (Gerbasi et al., 2007; Gerbasi, Harris, & Jorgensen, 2007). However, in the popular media, furries have been portrayed in a decidedly unflattering way. Well-known media portrayals include an episode of the television program CSI (2003) and a *Vanity Fair* piece (Gurley, 2001).

Caudron (2006) included furries in her book and she was kinder than Gurley. A recent episode of the HBO (2007) program *Entourage* contained a sexual story line about furries.

The furry stereotype promoted by Gurley indicated that furries were predominantly male, liked cartoons as children, enjoyed science fiction, were homosexual, wore glasses and had beards (male furries only), were employed as scientists or in computer-related fields, and their most common totem animals were wolves and foxes. Gurley also suggested that some furries either felt like or wished they were a species of animal other than human. In addition, media portrayals have implied, if not explicitly stated, that furries tend to be people with psychological problems. To an objective scientist, these purported furry characteristics are no more than speculation, sensationalism, and/or overgeneralization based on media interpretations of a very limited number of interviews and/or observations. Furries have objected to most, if not all of these portrayals. In an attempt to prevent additional distortion and sensationalism of the Furry Fandom, furries have generally refused to participate in research conducted by non-furries.

Due to furries' reluctance to participate in research and the scientific community's lack of awareness of furries, we found no studies of furries in the peer-reviewed literature in 2006 when this study began. The purpose of this study was to address this empirical void by creating a survey which would assess elements of the media-generated furry stereotype, including the mental health characteristics ascribed to furries. Quite simply, the goal of this research was to begin to describe what is meant when an individual says “I am a furry”.

Specific Goals of Current Study

The goals of the study were to test the furry stereotype and determine if furries:

- are more likely to be males than females,
- liked cartoons as children (more than non-furry individuals),
- enjoy science fiction (more than non-furry individuals),
- are likely to be homosexual,
- wear glasses and have beards (male furries only),
- wear fursuits,
- are employed as scientists or in computer-related fields,
- are most likely to have wolves or foxes as their special/totem animals,
- consider themselves to be not completely human,
- would be not at all human if possible,
- are perceived as having behaviors commonly seen in personality disorders,
- report connections to their identity species which parallel aspects of gender identity disorder.

The final two goals result from aspects of the stereotype which indicate furries have mental health problems. Since it is not clear which psychopathologies (if any) furries might have, we hypothesized that if the stereotype had a basis in fact, it might represent one or two different areas of mental health problems. The two areas we considered were personality disorders and gender identity disorder (GID). Finally, since this research was

clearly a bottom-up process, we were open to looking for patterns or variables which might lay the foundation for future studies of the Furry Fandom.

METHODS and PROCEDURE

Furry participants (*FP*) and non-furry participants (*NFP*) were recruited at the world's largest annual furry convention (Guinness World Records Limited, 2007). Conference attendance was counted at about 2,500 individuals, most of whom were furries. The convention chairman, well-trusted and respected by the furry community, approved the study. His approval was the key element which made this study possible. He granted permission for the research team to attend the convention, made important suggestions about the survey, and provided a designated space in which to collect surveys. He also warned that he did not actually expect anyone at the convention to complete a survey because of the history of media portrayals discussed above. In actuality, the chairman's support validated the study and encouraged furries to participate.

The research team was assigned a table in the Dealers' Room of the convention hall. In the Dealers' Room, vendors sell a variety of products and artists display and sell their art. It is a highly-favored area for convention attendees to visit. A sign on the research table invited individuals 18 years old and older to participate in the survey.

Participant Groups

Furry participants and non-furry participants: Attendees in the vicinity of the research table were invited to complete the survey ($N = 408$). They were first given an informed consent letter which stated they could end their participation at any time and that their

data would be anonymous and confidential. Those who agreed to participate were given the informed consent letter to keep. Of the original 408, 134 refused and four who completed the survey indicated they were minors. Their data are not included. Most who refused were males; however, costumes at times interfered with the researcher knowing for certain a person's sex. Individuals (n = 24) who omitted or confused key variables of their sex or furry status are not included in the results. The furry (187 males and 30 females) and non-furry (21 males and 8 females) convention attendees comprised a sample of 246 participants. Furry participants (*FP)* are those who indicated on the survey they were a furry. Non-furry participants (*NFP)* are convention attendees whose survey responses indicated they were not a furry. *NFP* might be friends or relatives of furries or vendors at the convention.

Control participants: Spring 2006 students in all three of Gerbasi's intermediate level psychology classes were offered a small amount of extra credit to complete the control survey. Participation in the study was not the only way in which students could earn extra credit. Students were provided with an informed consent letter and sections were debriefed after all sections had a chance to participate. In all, 40 female and 28 male students served as control participants (*CP*). Data from three students were not used: two were aware of the purpose of the study and one was age 17. They all received extra credit. One male student declined to participate.

The Survey Instruments

We developed two survey instruments[5]. The Convention Survey was for convention attendees and the second, which paralleled the first but did not include furry identity

questions, was for the control participants. Questions on the Convention Survey[6] asked about demographics (such as age, occupation, sex, sexual orientation, student status) and addressed elements of the furry stereotype, including childhood cartoon-viewing, enjoyment of science fiction, and the wearing of glasses and beards (for males only). Furry identity questions included:

- Do you consider yourself a furry (whatever "furry" means to you)?
- Do you consider yourself to be less than 100% human?
- What species of animal other than human do you consider yourself to be?
- If you could become **0%** human, would you?
- At what age did you realize you were a furry?
- At what age did you become connected to the furry culture?
- Do any of your family members know that you are a furry?
- Do you own a fur-suit?
- Do you wear a fur-suit?

FP were also asked to indicate how many (if any) of six possible connections to their species they felt. Each respondent scored 1 for each of these six connection items that they checked. They then received a total score between 0 and 6, indicating the total number of connections they checked. The six connections explored the following furry attributes: was born with connection to other species, share characteristics with other species, was a nonhuman in a previous life and has been reincarnated as a human, has a mystical connection to species, has a feeling of discomfort or inappropriateness concerning their human body, and is a nonhuman species trapped in a human body. The

last two connections are paraphrased from criteria for GID (American Psychiatric Association, *DSM-IV-TR*, 2000).

All convention participants (*FP* and *NFP*) were also asked to select from a 45-item Personality Checklist all which they perceived as characteristic of the "furry personality and/or furry behavior." Checklist items were drawn from five sources: Comer's (2004) 19 personality disorder traits, all ten items from the TIPI (Gosling, Rentfrow, & Swann, 2003; Gosling, n.d.), a brief Big-Five measure in which we reversed the keyed negative items, and all of the positively-keyed items from the three Openness to Experience subscales (IPIP, n.d., Goldberg, 1999) which included Creativity (six items), Unconventionality (five items), and Aesthetic Appreciation (five items). The IPIP subscales and the TIPI served two purposes: their presence masked the disorder traits and the IPIP subscales permitted assessment of the notion that furries are as a group interested in art. These 45 personality items were presented side-by-side in two columns which were labeled A and B. When looking down each column, two items from the same source never appeared consecutively.

Due to anticipated furry suspiciousness about research and the convention chairman's belief that furries would not want to take the survey, the Personality Checklist was ***not*** self-report. We expected that participants might refuse to complete a self-report checklist which included personality disorder traits. Thus, participants were asked to describe the typical furry in the Personality Checklist section of the survey. Participating convention attendees were therefore instructed as follows: "Thinking about furries you know, please read the phrases listed below in **Columns A and B**. Place a check in the box in front of as

many phrases listed in **Column A and Column B** that you see as characteristic of the furry personality and/or behavior." The control group survey asked demographic questions and included the same Personality Checklist and instructions, except that "college student" was substituted for "furry."

RESULTS

When values of *N* are less than the total expected number of participants, it is due to missing data, unless otherwise noted.

Participant Age and Demographic Information

The age of all participants was entered into a two-way *ANOVA*. There was a main effect for sex, $F(1, 301) = 9.044$, $p = .003$; males were older than females. The main effect for group was not quite significant; *NFP* tended to be older than *CP* and *FP*, $F(2, 301) = 2.955$, $p = .054$. The interaction between group and sex was not significant. See Table 1 for participants' mean ages reported by sex and group.

Table 1 about here

The mean age at which furries said they first realized they were a furry was 17.28 (*SD* = 6.74) and the mean age at which they first became connected to the furry culture was 19.48 (*SD* = 6.98). When asked if someone in their family knew they were furry, 29% of the 214 furry respondents indicated that no one in their family knew.

Furry Stereotypes and Results

Table 2 provides a summary of the furry stereotypes and the results. Each individual stereotype is addressed in detail below.

Males are more likely to be furries than females.

The observed percentage of males in the furry sample was 86%, compared to an expected percentage of 49% (U.S. Census, 2006). A binomial test, based on the *Z* approximation, reveals significantly ($p < .001$) more males than females in the furry sample compared to the United States population. These results are consistent with this stereotype.

Table 2 about here

Furries liked cartoons a great deal as children.

Participants were asked how much they liked cartoons as children: not at all, somewhat, or a great deal. *FP* were more likely than *CP* to recall liking cartoons a great deal, $\chi^2(4, N = 299) = 21.920$, $p < .001$. The *CP* had higher than expected frequency in the "liked cartoons somewhat" category. The hours per week participants recalled watching cartoons as children were entered into a one-way *ANOVA.* There was a significant main effect for group membership, $F(2, 296) = 5.823$, $p < .005$. Furries recalled watching cartoons significantly more hours per week ($M = 13.09$, $SD = 9.93$) in childhood than did *CP* ($M = 9.04$, $SD = 6.82$), $p = .05$. The *NFP* ($M = 9.95$, $SD = 6.65$) did not significantly differ from either *FP* or *CP*. These results are consistent with this stereotype.

Furries like science fiction.

Participants were asked to indicate if they did or did not enjoy science fiction. *FP* (and *NFP*) were more likely to report that they enjoyed science fiction than *CP,* $\chi^2(2, N = 308) = 60.584$, $p < .001$). These results are consistent with this stereotype.

Common furry species are wolf and fox.

One-hundred seventy *FP* named one or more species of real and/or imaginary nonhuman animals in response to the question "what species of animal other than human do you consider yourself to be?" In these following results, a small number of participants are counted twice if their named species represented more than one category. Commonly named species were: fox or fox combinations (20.6%), wolf or wolf combinations (17.6%), dragon or dragon combinations (10%), or tiger or tiger combinations (6%). Collapsing across related species, the two most popular categories were varieties of canines (e.g. foxes, wolves, dogs) named by 85 of the respondents and felines (lions, tigers, domestic cats) named by 45 individuals. These two groups account for over three-quarters of those who named one or more nonhuman identity species. Other species such as otter, orca, praying mantis, mouse, horse, raccoon, skunk, rooster, and hyena were named less frequently. No furries named a nonhuman primate species as their identity. These results are somewhat consistent with this stereotype.

Furries wear fursuits.

When asked if they owned a fursuit, 26.4 % of the 216 *FP* who responded said "yes". When asked if they wore a fursuit, 30% of the 217 *FP* who responded said "yes". These results are not consistent with this stereotype.

Male furries wear both beards and glasses.

Both beards and glasses were worn by 19.4% of *FP*, 38.1% of *NFP*, and 10.7 % of *CP*. There was a tendency for *NFP* males to be more likely and *CP* males to be less likely to wear beards and glasses, $\chi^2(2, N = 229) = 5.821$, $p = .054$. These results are not consistent with this stereotype.

Furries are employed in computer or science fields.

Occupation was reported by 188 of the *FP*. Approximately 75% appeared to be neither computer nor science related. These results are not consistent with this stereotype.

Furries are homosexual.

Participants were asked the open-ended question, "what is your sexual orientation?" The following sexual orientation analyses are based on the 210 male and 64 female participants who could be categorized as heterosexual, homosexual, or bisexual based on their responses. It should be noted that 12 individuals chose not to answer this question. Four males, two *FP* and two *NFP*, indicated they were asexual. Another 24 participants, 19 of whom were furries, provided answers that could not be categorized as either heterosexual, homosexual, or bisexual (e.g. "pansexual," "omnisexual," "bicurious," "normal," "any/all," and "white"). Since the furry stereotype presumes furries are males, a chi-square goodness of fit (expected frequency of heterosexual, bisexual, and homosexual equal) for the furry males was computed. This was not significant. In this sample, *FP* males were equally likely to be homosexual, bisexual, or heterosexual. These results are not consistent with this stereotype.

Additional analyses of the sexual orientation of the participants were conducted. A comparison of the distribution of the sexual orientations for the *FP*, *NFP,* and *CP* males

is significant, $\chi^2(4, N = 210) = 48.454$, $p < .001$. Furry males are more likely to be bisexual or homosexual than are *CP* and *NFP* males. *CP* and *NFP* males are more likely to be heterosexual. While it is inaccurate to say that most furries, in particular furry males, are homosexual, they are less likely to be heterosexual compared to other males in the study. See Table 3 for males' and females' sexual orientation by groups.

Table 3 about here

A comparison of the distribution of sexual orientations for male and female furries is significant, $\chi^2(2, N = 192) = 13.670$, $p = .001$. No female furries reported being homosexual; 58.3% were heterosexual, and 41.7 % were bisexual. Of the male furries, 31.5% were homosexual, 28% heterosexual, and 40.5% bisexual. A comparison of the distribution of the sexual orientations for the *FP*, *NFP*, and *CP* females is also significant, $\chi^2(2, N = 64) = 11.059$, $p < .005$. Female furries are more likely to be bisexual than are *CP* and *NFP* females, who are more likely to be heterosexual.

Collapsing across *CP*, *NFP*, and *FP* and comparing only male and female sexual orientations in the sample, females are much more likely to be heterosexual and much less likely to be homosexual than males, $\chi^2(2, N = 274) = 36.161$, $p < .001$. These additional results are somewhat consistent with the stereotype but only for male furries, not female furries.

Personality Checklist Results

Separate binomial analyses of each of the three groups of participants were conducted on all of the Personality Checklist items to determine if use of each item suggested a consensus or appeared random. An expected frequency of endorsement of .50 was used to evaluate the possibility that the endorsement of the items was random and/or lacked consensus. In the *FP* group, 10 of the 45 distributions of endorsement versus non-endorsement of the items were not statistically significant (2-tailed test, $a \leq .05$). For the other two groups, the number of trait distributions which did not differ from chance was considerably higher; 23 items for the *NFP* and 25 traits for the *CP* were not significantly different from chance. However, across all three groups, the number of traits which were significantly different from chance suggests that the perception of the furry target for the *FP* and *NFP* and the perception of the college student target for the *CP* activated some fairly consistent schemas about those targets relative to the items on the Personality Checklist.

To establish the similarity of the *FP* and *NFP* perceptions of the furry target, chi-squares with one degree of freedom comparing *FP* and *NFP* endorsement versus non-endorsement of each of the checklist items were computed. *FP* and *NFP* endorsement of items differed significantly ($p \leq .05$) on only two of the 45 traits on the Personality Checklist (dependable, $\chi^2(1, N = 234) = 4.356$, $p = .037$ and sympathetic, $\chi^2(1, N = 234) = 4.353$, $p = .037$). Three additional traits (worry free, agreeable, and sensitive) had p values between .053 and .066. When conducting 45 analyses using a significance level of .05, it is expected that at least two (45 x .05) would be significant by chance alone. Therefore, responses from the *FP* and *NFP* groups were combined. Chi-squares with one

degree of freedom comparing combined *FP* and *NFP* endorsement of each personality checklist item for the furry target with *CP* endorsement of those items for the college student target were then computed.

Personality Disorder Items

Most (15 of 19) of the personality disorder traits were significantly more often ascribed to the college student than to the furry. Only one personality disorder trait ("has odd or unusual thoughts about daily situations") was selected significantly more frequently to describe the furry than the college student. See Table 4 for item distributions and significance levels.

Table 4 about here

IPIP Items

Three of the five IPIP Aesthetic Appreciation traits ("believes in the importance of art, sees beauty in things that others might not notice, and enjoys feeling close to the earth,") were significantly more likely to be ascribed to the furry than to the college student. See Table 5 for item distributions and significance levels.

Table 5 about here

Four of the five IPIP Unconventionality traits ("swims against the current, does things others find strange, is considered to be kind of eccentric, and knows ideas sometimes

surprise people,") were significantly more likely to be ascribed to the furry than to the college student. One of the six IPIP Creativity traits ("has vivid imagination") was significantly more often ascribed to the furry than to the college student. Only one item from the three IPIP categories was significantly more likely to be ascribed to the college student than to the furry, which was the Unconventionality item ("rebels against authority.") See Tables 6 and 7 for item distributions and significance levels.

Tables 6 & 7 about here

TIPI Big-Five Items

Significant differences were found on 6 of the 10 TIPI items. Both conscientiousness items and emotional stability items and one of the two extraversion items were significantly more likely to be ascribed to the college student than to the furry. One of the two Openness items ("is unconventional, creative") was significantly more likely to be ascribed to the furry than to the college student. No other TIPI items were significant. See Table 8 for item distributions and significance levels.

Table 8 about here

Furry Identity, Connections to Nonhuman Species, and Furry Typology

Two Key Furry Identity Questions

The survey posed a series of key furry identity questions. These questions originated in our reading of the Gurley (2001) article. We had no expectation about how participants

would react to these questions. The first key identity question was, "Do you consider yourself to be less than 100% human?" Three *FP* omitted this question. Of the 214 *FP* who answered, 99 (46.3%) said "yes", and 115 (53.7%) said "no". Those who answered "yes" to this question were asked to indicate what percent nonhuman they considered themselves to be. Most (85 of the 99) who answered "yes" completed this question. The mean percentage not human was 44.35 (*SD* = 27.156, range 1% to 100%). The second key identity question was, "If you could become 0% human, would you?". Of the 206 *FP* who answered, 84 (40.8%) said "yes", and 122 (59.2%) said "no".

Connections to nonhuman species

Furries were asked to indicate the ways in which they were connected to their nonhuman species by checking as many of the six listed connections that applied to them. All but eight *FP* completed this section, with no more than one connection item missing.
Two of the three connections which were checked least frequently were the two GID-based items which specified "a persistent feeling of discomfort" about their human body (23.9%) and the feeling the person was the "non-human species trapped in a human body" (29.2%). The third connection with a relatively low rate of endorsement was the reincarnation item (27.8%).

In contrast, the most frequently selected item described, "sharing characteristics in common with" the nonhuman species. This was checked by 80.9% of the respondents. Nearly half of the participants endorsed the remaining items which indicated being born with the connection (43.1%) and having a mystical connection to the species (47.6%).

For all *FP* (*N* = 209) who completed either all six or all but one of the connection items, a total connection score was tabulated, indicating the total number of connections checked. The range on this total connection score was 0 to 6, with a mean of 2.51 and standard deviation of 1.754. The Pearson correlation between the percent not human and the total connection score is .325 (*N* = 83, $p < .005$, two-tailed). When furries who answered "no" to the question "do you consider yourself to be less than 100% human?" (and therefore left the "percent not human" question blank) are assigned a zero percent not human score, the correlation between the percent not human and the total connection score is .609 (*N* = 191, $p < .001$, two-tailed) [7].

Furry Typology

Furries state there are different types of furries. Using the above distributions of responses to the two key identity questions and the variability in the endorsement of the connection items, it is possible to identify and describe different types of furries. Furry participants' answers to the two key furry identity questions were used to construct a furry typology. The two independent dimensions were labeled self-perception and species identity.

On the self-perception dimension, a furry is labeled *distorted* or *undistorted.* The furry does (*distorted*) or does not (*undistorted*) consider the “self to be less than 100% human.” We chose the terms distorted and undistorted based on a comparison between how the individual feels and what they appear to be (human). The identity is either undistorted (they ***do not*** say they consider themselves less than 100% human) or distorted (they consider themselves to be ***less than*** 100% human) but they are objectively human.

On the species identity dimension, a furry is labeled either *attained* or *unattained*. Is the furry the species he or she wants to be? If the furry says they ***would be*** 0% human if possible, that is *unattained* because they are a human and have not reached their goal. If the furry ***did not*** want to be 0% human, that is *attained* because to the objective observer, they have attained this goal because they are a human.

This classification system results in four types of furries. Most furries (*N*=203) answered both of these key identity questions and can be classified by this typology. The largest group in our sample was the *undistorted attained* type (*N* = 77). This is the individual who says they ***are not less*** than 100% human and ***do not*** wish to become 0% human. To the objective observer, they have attained this goal. They are human and do not wish to be completely other than human. This type was 38% of the furries who answered both key identity questions.

The second largest group was the *distorted unattained* type (*N* = 51). This furry considers the self to be ***less than* 100%** human and ***would become* 0%** human if possible. This type was 25% of the furries who answered both of the key identity questions. The remaining two groups are the *distorted attained* and the *undistorted unattained*. The distorted attained type (*N* = 44) considers the self to be ***less than* 100%** human but ***does not wish*** to be 0% human; this was 22 % of the sample who answered both key identity questions. Finally, the undistorted unattained type (*N* = 31) ***does not*** consider the self less than 100% human but ***would*** become 0% human if possible. This was the least common type, only 15 % of those who answered both key identity questions.

If this classification system has validity, the numbers and types of connections that furries report should vary by type of furry. Of the 203 classifiable furries, 196 completed either all (n = 184) or all but one item (n = 12) in the connections section of the survey. Table 9 shows that the frequency at which furries endorse each of the connections varies by the type of furry and is statistically significant. For five of the six connections, the lowest frequency of endorsement is the undistorted attained group, followed by the undistorted unattained, then distorted attained, and the highest frequency was the distorted unattained group. The only deviation from this pattern was for the "sharing characteristics in common" connection, in which the frequency of endorsement by the distorted attained group (95.3%) is slightly higher than the distorted unattained group (92.2%).

Table 9 about here

To further explore the relationship between the total connection score and this two dimensional furry typology, total connections scores were entered into a two-way *ANOVA*. Main effects for both the self-perception and species identity dimensions were statistically significant. Distorted furries (who consider the self less than 100% human), $F(1, 192) = 107.43$, $p < .001$ and unattained furries (who wish to be 0% human) have higher total connection scores, $F(1,192) = 9.745$, $p = .002$). The interaction between self-perception and species identity was not significant. For mean total connection scores, standard errors, and confidence intervals for these four furry types see Table 10. These results clearly indicate distinctive connection patterns for each furry type.

Table 10 about here

There is also a significant difference in distribution of sexual orientation by type of furry for the 181 *FP* with neither variable missing, $\chi^2(6, N = 181) = 16.573$, $p = .011$. Homosexuals were over-represented in distorted unattained type and heterosexuals were over-represented in undistorted attained type. There is also a tendency for female furries to be under-represented in the distorted unattained group and male furries to be over-represented in that group, $\chi^2(3, N = 203) = 7.685$, $p = .053$. This may represent a confounding of sexual orientation, sex of furry, and furry type. The small number of female *FP* limits a more comprehensive analysis.

GID Connections

One of the goals of the study was to investigate possible parallels between GID and being a furry. Toward that end, two connection statements were patterned after aspects of GID. Given the emerging furry typology, it makes sense to look at these two connections and the four furry types. Of the 201 *FP* answering the connection item regarding a "persistent feeling of discomfort or inappropriateness concerning your human body," 48 (23.9%) indicated this was an aspect of their connection to their nonhuman species. Of these 48 furries, 45 completed both key identity questions and could be placed in the furry typology; 36 of the 45 (80%) were one of the distorted types (14 distorted attained and 22 distorted unattained). Within the distorted attained and distorted unattained types, the percent of *FP* endorsing this connection was 32.6% and 45.8%, respectively. The

endorsement of this item by those in the two undistorted types was significantly less likely, $\chi^2(3, N = 188) = 27.435$, $p < .001$.

The same pattern emerged from the analysis of the second GID connection. Of the 209 *FP* answering the connection item "you are your non-human species trapped in a human body," 61 (29.2%) indicated this was an aspect of their connection to their nonhuman species. Of these 61 furries, 57 completed both key identity questions and could be placed in the furry typology; 47 of the 57 (82%) were one of the distorted types (16 distorted attained and 31 distorted unattained). Within the distorted attained and distorted unattained types, the percent of *FP's* endorsing this connection was 37.2% and 60.8%, respectively. The endorsement of this item by those in the two undistorted groups was significantly less likely, $\chi^2(3, N = 196) = 45.581$, $p < .001$.

For the *FP* who completed both of these connection items, answers to these two connections were associated, $\chi^2(1, N = 201) = 24.146$, $p < .001$. Participants endorsed neither ($n = 123$) or endorsed both ($n = 27$) at greater than the expected frequency. The number of individuals who endorsed only one of the items was less than the expected frequency.

Additional analyses in which the types of furries were compared on how likely they were to check neither, one, or both of the GID connections; reveal that participants in both distorted groups are more likely to check one or both of the GID connections, while undistorted types were likely to check neither GID item, $\chi^2(6, N = 188) = 53.121$, $p < .001$). No participants from the undistorted attained group and only one from the undistorted unattained group checked both GID items. See Table 11 for details.

Table 11 about here

DISCUSSION

A major concern with this study is the extent to which this furry sample is representative of the furry population. Can we generalize from these results to the larger Furry Fandom? Participants were convenience sample volunteers attending the world's largest annual furry convention. There are no other published studies to which these results can be compared. Additional studies, with other samples drawn from other sources, are needed to answer this question. At this time we can say that our furries' sexual orientation results are similar to those from an unpublished online survey conducted by students at the University of California, Davis in which 609 furries participated (Rossmassler & Wen, 2007). Additional furry research is in progress at U.C. Davis (K. Gonsalkorale, personal e-mail communication, July 10, 2007).

A second issue is the impact of possible demand characteristics on the participants. While some furries may have been motivated to demonstrate or exaggerate their uniqueness (B. Harris, personal communication, March 22, 2007), it seems more likely that a furry response bias would be a social desirability bias. If anything, most should want to appear "normal" to refute previous media ridicule. Answering the key furry identity and GID connection items in the affirmative, as many did, is contrary to a social desirability bias. In addition, many furries reported non-heterosexual sexual orientations. These results

demonstrate their willingness to answer in a non-socially desirable way and suggest there is validity to their responses.

Despite possible shortcomings, this study has begun to describe what it means when a person says, "I am a furry". Results revealed that furries are a complex, distinctive, and diverse group of people, who are exceptional in several ways: their interests and behaviors uniquely combine anthropomorphism and zoomorphism, many more males than females are furry, and furries' sexual orientations differ considerably from societal norms. Personality Checklist results indicate the furry is perceived as an unconventional individual with aesthetic interests, but is not viewed as having personality disorder traits. In fact, the characteristic furry was significantly less likely to be perceived by the *FP* and *NFP* as having personality disorder traits than was the perception by the *CP* of the characteristic college student. It is possible that social desirability bias influenced the *FP* descriptions of the furry. However, if the typical furry is really perceived as having personality problems *and* social desirability bias influenced the *FP* responses, the *NFP* should have been more likely to endorse the disorder terms than the *FP*. That was not found.

Coinciding with what furries commonly say, our study revealed that being furry does mean different things to different furries. The proposed furry typology is an attempt to differentiate types of furries. For the largest group of furries, the undistorted attained type, being furry may simply be a route to socializing with others who share common interests such as anthropomorphic art and costumes. For distorted unattained furries, the similarities between their connections to their species and aspects of GID are striking. For

these furries, considering the self as less than 100% human *and* wanting to be 0% human is often accompanied by discomfort with their human body and feeling that they are another species trapped in a human body. These connections parallel criteria for the diagnosis of GID and the results provide face validity for the proposed furry typology. Preliminary analyses from our follow-up study replicate both the proposed furry typology and the patterns of connections different furry types report to their special/totem species (Gerbasi, 2007).

The parallels between the distorted furry dimension and GID criteria are remarkable. Distorted furry types may possibly represent a condition which we have tentatively dubbed *Species Identity Disorder*. Clearly the existence of our hypothesized construct of species identity disorder and the extent to which the distorted furry types resemble GID remain to be seen. Much additional work is needed to replicate and validate both the furry typology and the proposed construct of species identity disorder.

Notes

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[5] Surveys are available upon request from the first author.

[6] This report analyzes only responses to the survey questions herein described. The survey contains questions which are not discussed in this report.

[7] Two *FP* answered "No" to the "less than 100% human" question and then provided a percent not human. They are not included in these two correlation coefficients.

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Table 1
Age of Participants by Group and Sex

Sex	Group	*M*	*SD*	*N*
Female	*CP*	21.9	5.37	39
	FP	23.2	3.93	28
	NFP	22.0	4.76	7
	Total	22.4	4.79	74
Male	*CP*	22.7	6.26	27
	FP	26.5	9.43	185
	NFP	31.6	10.45	21
	Total	26.5	9.41	233
Total	*CP*	22.2	5.71	66
	FP	26.1	8.97	213
	NFP	29.2	10.19	28
	Total	25.5	8.70	307

Table 2
Furry Stereotypes Compared with Results

Furry Stereotype	Outcome
Males are more likely to be furries than females.	Consistent
Furries recall liking cartoons more as children than others.	Consistent
Furries like science fiction more than others.	Consistent
Common furry species are wolf and fox.	Somewhat consistent
Male furries wear both beards and glasses more than other males.	Inconsistent
Furries are employed in computer or science fields.	Somewhat consistent
Furries wear fursuits.	Somewhat consistent
A preponderance of male furries are homosexual.	Inconsistent
Furries consider themselves less than 100% human.	Somewhat consistent
Furries would be 0% human if possible.	Somewhat consistent
Furries are perceived as having behaviors common to personality disorders.	Inconsistent
Furries have specific kinds of connections to their species which parallel aspects of gender identity disorder.	Somewhat consistent

Table 3
Sexual Orientation of Participants by Sex and Group Classifiable as Heterosexual, Bisexual, or Homosexual

Sex	Group	Heterosexual number and (percent)	Bisexual number and (percent)	Homosexual number and (percent)
Male	*FP*	47 (28)	68 (40.5)	53 (31.5)
	NFP	13 (76.5)	3 (17.6)	1 (5.9)
	CP	23 (92)	0 (0)	2 (8)
Female	*FP*	14 (58.3)	10 (41.7)	0 (0)
	NFP	6 (85.7)	1 (14.3)	0 (0)
	CP	31 (93.9)	2 (6.1)	0 (0)

Table 4
Personality Disorder Items Comparing Convention Participants' (FP and NFP Combined) Perceptions of Furry Target with Control Participants' Perceptions of College Student Target

Item location on Personality Checklist	Item content	% Convention participants who used trait to describe "furry"	% Control Participants who used trait to describe "college student"	χ^2 1 degree of freedom, $N = 302$, unless otherwise noted	
1A	Has relationship problems	43.6	79.4	27.074***	
3A	Has problems paying attention	28.6	75.0	47.584***	
6A	Is anxious/tense	32.5	63.2	20.874***	
8A	Is egotistical/world revolves around them	23.1	50.0	18.496***	
10A	Is depressed/helpless	30.0	48.5	7.992**	($n = 301$)
12A	Is impulsive/reckless	28.2	48.5	9.877**	
16A	Is sensitive	66.1	60.3	.776	($n = 301$)
19A	Is deceitful	11.1	30.9	15.673***	
21A	Is suspicious/distrustful	18.4	30.9	4.934*	
23A	Blames others	26.3	63.2	31.686***	($n = 300$)
2B	Is self-critical	53.8	72.1	7.172**	
5B	Is aloof/isolated	31.3	30.9	.005	($n = 301$)
7B	Has odd or unusual thoughts about daily situations	58.1	41.2	6.095 *	
9B	Is controlling/manipulative	9.4	36.8	30.021***	
11B	Has hallucinations &/or delusions	14.1	11.8	.245	
14B	Is self-absorbed	19.7	51.5	27.167***	
17B	Is emotionally unstable	33.3	48.5	5.234*	
20B	Is hostile	8.1	26.5	16.504***	
22B	Is jealous	17.9	47.1	24.135***	

* $p < .05$. ** $p < .01$. *** $p < .001$. Critical value $\chi^2(1 \text{ df}) = 10.827$, $p = .001$ (Rosnow & Rosenthal, 2002).

Table 5

Aesthetic Appreciation Items Comparing Convention Participants' (FP and NFP Combined) Perceptions of Furry Target with Control Participants' Perceptions of College Student Target

Item location on Personality Checklist	Item content	% Convention participants who used trait to describe "furry"	% Control participants who used trait to describe "college student"	χ^2 1 degree of freedom, $N = 302$
2A	Believes in the importance of art	75.6	35.3	38.533***
20A	Sees beauty in things that others might not notice	67.9	44.1	12.778***
1B	Gets deeply immersed in music	54.7	54.4	.002
15B	Has read the great literary classics	27.8	27.9	.001
19B	Enjoys feeling "close to the earth"	41.5	23.5	7.228**

** $p < .01$. *** $p < .001$. Critical value $\chi^2(1\ df) = 10.827$, $p = .001$ (Rosnow & Rosenthal, 2002).

Table 6

Unconventionality Items Comparing Convention Participants' (Furry and Non-furry Combined) Perceptions of Furry Target with Control Participants' Perceptions of College Student Target

Item location on Personality Checklist	Item content	% Convention participants who used trait to describe "furry"	% Control participants who used trait to describe "college student"	χ^2 1 degree of freedom, $N = 302$
4A	Rebels against authority	35.0	48.5	4.064*
7A	Swims against the current.	56.4	29.4	15.363***
13A	Knows their ideas sometimes surprise people	65.0	50.0	4.983*
3B	Does things that others find strange	82.9	51.5	28.406***
12B	Is considered to be kind of eccentric	65.0	35.3	19.067***

* $p < .05$. *** $p < .001$. Critical value χ^2 (1 df) = 10.827, $p = .001$ (Rosnow & Rosenthal, 2002).

Table 7
Creativity Items Comparing Convention Participants' (Furry and Non-furry Combined) Perceptions of Furry Target with Control Participants' Perceptions of College Student Target

Item location on Personality Checklist	Item content	% Convention participants who used trait to describe "furry"	% Control participants who used trait to describe "college student"	χ^2 1 degree of freedom, $N = 302$, unless otherwise noted
11A	Has a vivid imagination.	83.3	52.9	27.064 ***
15A	Comes up with something new	47.9	50.0	.096
18A	Has excellent ideas	50.2	51.5	.033 ($n = 301$)
8B	Loves to think up new ways of doing things	54.3	51.5	.166
10B	Is full of ideas	64.1	69.1	.584
18B	Carries the conversation to a higher level	32.9	36.8	.351

*** $p < .001$. Critical value of $\chi^2(1 \text{ df}) = 10.827$, $p = .001$ (Rosnow & Rosenthal, 2002).

Table 8
TIPI Items Comparing Convention Participants' (FP and NFP Combined) Perceptions of Furry Target with Control Participants' Perceptions of College Student Target

Item location on Personality Checklist	Item content - Big Five Extraversion (E) Conscientiousness (C) Openness to Experiences (O) Emotional Stability (ES) Agreeableness (A)	% Convention participants who used trait to describe "furry"	% Control participants who used trait to describe "college student"	χ^2 1 degree of freedom, $N = 302$, unless otherwise noted
5A	Is extraverted, enthusiastic (E)	48.3	55.9	1.215
16B	Is unreserved, talkative (E)	38.9	64.7	14.207***
14A	Is dependable, self-disciplined (C)	29.1	58.8	20.318***
22A	Is organized, careful (C)	23.2	51.5	20.235*** ($n = 301$)
9A	Is open to new experiences, complex (O)	69.2	67.6	.062
21B	Is unconventional, creative (O)	62.0	42.6	8.052**
17A	Is calm, emotionally stable (ES)	24.5	47.1	12.905*** ($n = 301$)
13B	Is worry free, not easily upset (ES)	22.6	39.7	7.872**
4B	Is non-judgmental, agreeable (A)	48.3	48.5	.001
6B	Is sympathetic, warm (A)	53.8	55.9	.088

** $p < .01$. *** $p < .001$. Critical values of $\chi^2(1 \text{ df}) = 6.635$, $p = .01$; $\chi^2(1 \text{ df}) = 10.827$, $p = .001$ (Rosnow & Rosenthal, 2002).

Table 9
Agreement with Connections to Nonhuman Species Items and Rates of Agreement by Furry Type

Connections	Number and (%) of furries who checked item, $N = 209$**	Number and (percent) of each type of furry who checked connection				χ^2 (3 df, N =196, unless otherwise noted) $p < .001$
		undistorted attained $N = 72$	undistorted unattained $N = 30$	distorted attained $N = 43$	distorted unattained $N = 51$	
You were born with this connection to your non-human species	90 (43.1)	12 (16.7)	11 (36.7)	26 (60.5)	36 (70.6)	41.953
A feeling that you are your non-human species trapped in a human body	61 (29.2)	5 (6.9)	5 (16.7)	16 (37.2)	31 (60.8)	45.581
A feeling of sharing characteristics in common with your non-human species	169 (80.9)	48 (66.7)	23 (76.7)	41 (95.3)	47 (92.2)	19.952
A feeling that in a previous life you were your non-human species and you have been reincarnated as a human	57 (27.8) $n = 205$	5 (6.9)	3 (10.3) $n = 29$	18 (42.9) $n = 42$	30 (60.0) $n = 50$	49.150 $n = 193$
A feeling that you have a mystical connection to your non-human species	99 (47.6) $n = 208$	17 (23.6)	9 (30.0)	28 (66.7) $n = 42$	37 (72.5)	39.202 $n = 195$
*A persistent feeling of discomfort or inappropriateness concerning your human body	48 (23.9) $n = 201$	4 (5.8) $n = 69$	5 (17.9) $n = 28$	14 (32.6)	22 (45.8) $n = 48$	27.435 $n = 188$

* The check-mark line for this item was unintentionally omitted when the survey was printed. Results may underestimate the frequency of endorsement of this connection.
** Total N exceeds sum of $N's$ for furry types due to missing data.
Critical value $\chi^2(3 \text{ df}) = 16.268$, $p < .001$ (Rosnow & Rosenthal, 2002).

Table 10
Furry Types and Mean Total Connection Scores, Standard Errors, and Confidence Intervals

Considers self less than 100% human	Would become 0% human	*M*	Standard Error	95% Confidence Interval	
				Lower bound	Upper bound
No (undistorted)	No (attained)	1.26	.158	.95	1.58
	Yes (unattained)	1.87	.245	1.38	2.35
Yes (distorted)	No (attained)	3.33	.205	2.92	3.73
	Yes (unattained)	3.98	.188	3.61	4.35

Table 11
*Endorsement of Neither, One, or Both GID Connections by Furry Type**

	Number of each type of furry who checked GID connections			
GID Connections Checked	Undistorted attained *N* = 69	Undistorted unattained *N* = 28	Distorted attained *N* = 43	Distorted unattained *N* = 48
Neither	61	19	21	14
Only one	8	8	14	18
Both	0	1	8	16

* based on *FP* with no missing data