
Literary Anthrozoology: Do Fiction and Literature Have a Place in Anthrozoology?

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ABSTRACT:

Literature has been stimulating minds for centuries, as has science. This essay explores the need for both in the emerging field of anthrozoology. Anthrozoology is unique in its interdisciplinary approach to the sciences. By integrating zoology, anthropology, psychology, biology and others, this emerging field of study is examining interconnectivity in new and exciting ways. Literature and literary fiction play a large part in mental development. Literature is often a child's first introduction to the other animals that share the planet and can act as a bridge to future animal interactions. People who read literary fiction show improved theory-of-mind and empathy scores. Reading and writing literary fiction improves mental processing. Literature can serve as a catharsis, an escape, and a mind-builder. Because of this, literature is a critically important tool in the anthrozoology toolbox.

Keywords: literature, literary fiction, anthrozoology, theory of mind, human-animal studies

“Imagination is more important than knowledge.” Albert Einstein (1931)

Mine began with a Moomin. For readers not of Scandinavian heritage, a Moomin is a lovely creature invented by Finnish novelist Tove Jansson. With a hippo-like appearance and adventurous heart Moomintroll took me on adventures across the seas, to the theatre, and deep into the forest. In the 1970s, my parents took me to the zoo for the first time. There, in gorgeous Technicolor[®], I saw it...my first hippo. Of course, I THOUGHT it was a Moomin, but that point is moot. From that day on, I was hooked. Not just on literature that could come alive in my mind and then actually happen in reality, but on all

animals. I spent years begging, pleading, promising to do anything for my parents if they would just take me to see more animals.

Readers may find themselves wondering where, exactly, this Moomin fits into the field of anthrozoology. Well, as participants in a fairly young discipline, anthrozoologists are in an enviable position. Without hundreds of years of tradition to prevent them, anthrozoologists are free to explore and define just what this field might be. Definitions of anthrozoology are sadly lacking in most dictionaries, and even such publications as the Encyclopedia of Social and Cultural Anthropology are oddly silent on what exactly this field entails. As students learn early on in their preparation of reports for classes in anthrozoology, Microsoft Word doesn't *recognize* the word in its spell-check capacity. Speaking etymologically, anthrozoology is the study of humans and animals throughout their history. Hurn argues that anthrozoology "is the most appropriate label for research which considers human interactions with other animals, but which prioritizes the human angle and to all intents and purposes objectifies the animals involved" (Hurn, 2010, p. 27). After all, current research is being written exclusively by human beings. However, anthrozoology can "act as a bridge between scholars from the natural and social sciences" (Hurn, 2010, p. 27). This bridge helps create a field with nearly endless options for incorporating research from the social sciences, education, zoology and biology. Using writings from many of these very diverse fields, this essay will explain how literature, and especially literary fiction, is a critical part of anthrozoology.

As scientists, we are often tasked with searching for the *truth* of things. Theories are created, tests designed, and hypothesis proven or disproven. So-called 'hard science' gets very messy when you throw humanity into the mix. The brain of every human potentially sees the 'truth' of reality in a different way, thereby making agreement even among scientists a rare thing. In *Walking with Dragons*, Tim Ingold (2011) asks if modern scientists don't

somehow diminish the field of science (and indeed life itself) by limiting themselves to the practice of “rational science;” separating their dreams, art and literature from a search for the true nature of everything. By limiting ourselves to the biochemical basis of our bodies, we destroy the “wonder and astonishment” that is life as a human (Ingold, 2011:np). It is up to the Anthrozoologist to bring art, humanity, animals, culture, fiction and reality together in an attempt to find the truth of nature.

It appears, then, that a Moomin and a hippo might have a place together in this emerging field.

The Literature on Literature:

Anthropologist Margaret Mead once said that human nature is “almost unbelievably malleable” and responds to cultural conditions with amazing flexibility (Mead, 1935: 280). While her research took place nearly a century ago, her statement is still very applicable. As malleable, social beings any input we receive via media, literature, arts or any other mentally stimulating activity will have a lasting impact on our lives.

It is my belief that literature, art, and imagination have everything to do with science. By *literature* I mean everything from pulp fiction and true crime novels to Shakespeare and Harry Potter. I include “the literature,” meaning works of non-fiction and scientific dialogue as well, but to a lesser degree. In fact, I plan to incorporate “the literature” from psychologists, anthropologists, English professors, zoologists, philosophers, social researchers, a physiologist, authors and a Greek slave to prove why “literature” is so important to the study of human/non-human animal interactions.

This essay began with a statement: “Mine began with a Moomin.” For me, my malleable nature caused me to fall in love with books and the animals living within them. Traveling through these books lead me to a love of animals in reality, and on to a career in environmental and veterinary education. In my case, fictional animals helped “real” ones by

leading me to a career caring for and educating others about them. We cannot demean the impact that fictional, representational or historical animals have on our interaction with living ones, or we risk missing the pivotal element that creates the very thing we have chosen to study, the link between humans and non-human animals.

Literature and Anthrozoology:

“One might think of literature as encoding both our cultural and genetic inheritance. Each of these two elements, genes and culture, have had a reciprocal shaping effect, for as primates we are intensely social creatures, and our social environment has exerted over time a powerful adaptive pressure.”
(McEwan, 2005:11)

As McEwan stated in the above quote, we are more than our genes. Our culture has as much to do with who we are as our genetic code. Understanding our own brains is essential before we try to understand another species' brain. There is an entire field dedicated to literary studies, with the mission of nothing less than understanding the human mind. A daunting task, but one that important to our field, as well. An important concept within literary studies is that of “theory-of-mind” or TOM. TOM is the learned or natural acknowledgement that within another's physical *brain* exists an active, thinking *mind*. Without TOM there would be no ability to attribute personhood to another being, and therefore no understanding of each other (and no field of anthrozoology). In *The Literary Animal* Biologist E. O. Wilson describes the human mind as driven “neither by genes nor culture” but by an amalgam of pre-wired behaviour pressured by environmental factors into the intricate web that we call human behaviour (Wilson, 2005: viii-x). This ability to take our biological *brain* and turn it into a *mind* via interaction with our surroundings is what von Uexkull might call our “umwelt” (1934:320). Umwelt involves “all that a subject perceives” and that which occupies our time and space. There is also an internal umwelt that exists inside our minds. “All that we perceive” includes input from the environment as well as from our dreams and fantasies.

For most westernized cultures, literature is a part of both educational and entertainment pursuits. It follows then that literature shapes our Umwelt as much as other environmental factors in our “dwelling world” (von Uexkull, 2010:150). Stories have been shaping humankind’s relationship to non-human animals and vice-versa for thousands of years. Because words shape our relationships with the world, consideration must be taken with regard to the use of these words. In *Are We Smart Enough to Know How Smart Animals Are?* Frans de Waal makes his distaste for the use of ‘non-human animal’ as a descriptive category clear. By naming animals in regard to what they are lacking (humanity), de Waal argues that we both diminish them and reduce them to objects of pity (de Waal, 2016: 27-28). Words have the power to shape our world and the beings in it. David Weiss explains that, “...even in Paradise Adam’s naming of the creatures is connected with his birthright of dominion over them” and “the danger is this: to name is to cage; to preserve is to kill” (Weiss, 1990: 233). How to classify those animals with whom we share a great deal of DNA and our entire world remains a puzzle. Because this is not a puzzle that will likely be solved in the near future, in this essay I will refer to those creatures who share our place in the animal kingdom simply as animals, and ask their forgiveness.

Aesop used animals to teach morals to generations of humans such as: do unto others as you would have them do unto you (The Fox and the Crane), mind your own business (The Seagull and the Kite), vanity will destroy you (The Tortoise and the Eagle) (Aesop’s Fables, 2016: np). These fables created not only a way to understand acceptable behaviours, but inadvertently created a belief that foxes are wily, monkeys are greedy, and ants wise and thrifty. The words Aesop used shaped human perception of these creatures, and when they began to be written down the perceptions spread across the globe. Over a millennium later we are still using these stories in elementary schools, and they are still shaping our view of animals. Of course, many of the stories now attributed to Aesop were likely composed over

many years by many authors. For the purposes of this essay, I have included those traditionally attributed to him (Aesop's fables, 2016: np; University of Massachusetts, 2016: np).

Several hundred years later, oral tradition was slowly giving way to written literature. In *Walking with Dragons*, Tim Ingold reminds us that the early scholars, having no spaces between the letters on a page to allow them to mentally split lines into words, were forced to read aloud (2011: np). This, combined with a lack of punctuation and often incorrect spelling, made it impossible to scan a page silently and gather any meaning from it. The text was essentially unintelligible until read out loud. Readers were forced to take an active role, searching out meaning as they read (Saenger, 1982:371). Reading was a physical activity. The library was a place where words floated in the air above the readers; they were a living thing, and their use was not taken lightly. The words were meaningless until someone "breathed life into" them (Ingold, 2011: np).

Eventually came the twelfth and thirteenth centuries, and along with them came the advent of spaces between words. This made it possible to read silently and therefore; heartbreakingly, "the voices of the pages were effectively silenced" (Saenger, 1982: 384). A few centuries later, Martin Luther struck a massive blow to the life of words when he told people to abandon their dreams and the fantasies of the voices in the pages and "draw a line in the sand" between what words mean and their interpretation. In this way, we lost *understanding* for the sake of *information* (Ingold, 2011:np). Michel Foucault described this loss beautifully:

The profound kinship of language with the world was thus dissolved. The primacy of the written word went into abeyance. And that uniform layer, in which the *seen* and the *read*, the visible and the expressible, were endlessly interwoven, vanished too. Things and words were to be separated from one another (1966:47).

Today we are lucky enough to be able to choose not only what but *how* we read. We can

choose stories that speak to us and allow the words to once again live in our minds. Thousands of years of stories and literature are available to us, and we now understand that literature impacts the way our brains actually function. Theory-of-mind is the understanding that other beings possess a consciousness, emotional state or series of beliefs. A study by Mar, et al. discovered that children who read fictional stories have 26% higher theory-of-mind scores than other children. Additionally, stories in the form of movies had a similar effect on theory-of-mind scores, but television did not. There is something about the time involved in becoming a part of the book and understanding the characters that a television show cannot achieve (Mar, 2010: 73-75). A related study in 2003 found that children who were exposed to stories with characters who change or behave differently than expected significantly raised their theory-of-mind scores. Characters that are “flat” do not have the same effect (Hale & Tager-Flusberg, 2003:8-9). Exposure to characters who behave against our expectations might prepare us for the humans we encounter in our daily lives. If literature increases our theory-of-mind functioning, then it is crucial to our study of human/non-human interactions and anthrozoology as a whole.

Aesop’s fables inspired an entire generation of morality book series such as *The Berenstain Bears* by Stan Berenstain and Janice Grant, *The Sweet Pickles* series by Richard Hefter and Janice Reinach, and the *Arthur* series by Marc Brown. All of these books are aimed at children using animals to teach acceptable behaviour and morals. These books achieve an important goal beyond teaching societal manners. They give children the chance to imagine that non-humans have an internal life of the mind. While bears don’t generally wear clothes, and aardvarks are not prone to attending school, at least these books offer children a chance to imagine that other species also have cognitive abilities and social structures similar to our own.

Acknowledging that others actually think and feel is a critical first step. But literature

goes further and actually allows us to place ourselves inside the mind of another being.

Philosopher Mark Johnson introduced an idea he called “moral imagination” in 1993. He proposes that we need more than just to understand that there are other minds at work out in the world. We must actually inhabit their world in “imagination, feeling, and expression” (1993: 200-201). Johnson goes on to explain that we must experience an empathetic ‘imaginative reality’ in order to truly understand each other. This moral imagination must be a public, shared experience if we are to reach out and care for others (1993: 200-201).

Children’s books are only the beginning. Adult fictional literature is the key to expanding beyond the knowledge that there are other brains out there, and into a true “anthropology beyond the human,” to use Kohn’s term (Kohn, 2013: 7). Maurice Hamington refers to this as “moral imagination” when discussing how we can learn ethics from animals (2008: 182). He suggests that one’s moral imagination gets better with each use.

I picture moral imagination as a muscle—needing to be stretched and used regularly in order to function properly and grow. If left idle, it will wither and shrink. Literature provides the “gym” for this muscle building. Each time we become so engrossed in a novel that we actually gasp when the main character is faced with a pack of wolves snarling and snapping (but then think that perhaps she was in their territory); each time we see ourselves in the dangerous situation of facing the man-eating tiger (who may actually simply be hungry due to a lack of deer in the forest); each time we get a tear in our eye when the elephant finally reaches the waterhole just in time to rescue her baby from the poachers (who perhaps can’t feed their children and are desperate) we take on a new layer of understanding. Flipping back and forth empathetically between character motivations is a great workout. Without developed empathy muscles, we can’t hope to fully understand our fellow animals of all species. It is akin to putting on reading glasses; we may be able to see without them, but the details are sketchy.

One might presume that reading in general exposes people to a wide variety of characters, behaviours and situations that will expand empathy for others. While this may be true, new research by Kidd & Castano seems to indicate that it is not the old-fashioned morality play that allows us to best see the world from another's point of view. In fact, it is the area of writing referred to as literary fiction that had the greatest impact on theory-of-mind scores and the identification of emotions in facial expression. Furthermore; the age, gender, educational level or undergraduate study area of the test subjects did not have any effect on the results (2016: 10-11).

According to Kidd and Castano, literary fiction can be defined as fiction with psychologically complex, well-rounded characters who may behave outside of their normal routine, and beautiful writing. This writing is often critically acclaimed, has political or social commentary, or deals with current issues. The problem with this category is that it is often defined by western culture and studies themselves have focused on western societies. In other words, what creates higher theory-of-mind and empathy scores in the westernized world might have no impact on people in other areas of the globe (2016:11). This type of fiction is different from genre fiction (popular, entertainment or commercial fiction), where more formulaic plot and specific subject matter are key. Genre characters tend to behave in predictable ways, and follow the given formulas of the genre (for example, vampires have sex appeal and are always killable with a wooden stake, witches need a coven to function, and werewolves love a good fight). Genre fiction might be said to entertain the reader, whereas literary fiction causes the reader to interact and consider the motives of characters. Romance novels, science fiction, and crime novels are included in the genre category. This is not to say that all authors fall into one or the other category, or that genre fiction has no effect on the reader. The impact is simply greater with literary fiction (2016:10-11). Additionally, the authors note that in their 2013 study that even reading short literary fiction temporarily

raises the subject's theory-of-mind scores (Kidd & Castano, 2013:377).

Another consideration should be made when thinking about this information. Perhaps people who show improvement on theory-of-mind scores after exposure to literary fiction are the same people who, due to their concern with the thoughts and behaviours of others seek out literary fiction. It would be quite interesting (and complex) to find a subject who has never read fiction and test their theory-of-mind scores before and after administering a healthy dose of literary fiction.

Intercultural Instead of Other:

Like most people in westernized society, I was once a schoolchild. Here in the U. S. we were forced to take part in superficial aspects of culture (such as old favourites “The Mexican Hat Dance” and dreidel making) that students were told would help us get in touch with other cultures. Food fairs featuring “traditional” dishes were meant to give us a glimpse of life in other countries, and we were made to dress like Native Americans or Pilgrims for Thanksgiving. After many years of these schoolwide “cultural celebrations”, I found that I had no more *actual* knowledge of these cultures than when I began primary school.

Frustrated by these same educational traditions, teacher Kathy Short decided there was a better way. She realized that until children understood their own culture, they couldn't comprehend another culture. They needed to examine their own personal and societal history in order to understand why they believed or interacted with the world in a certain way (Short, 2009: 2). They needed to know who they were before they could really know anyone else. In order to build their own cultural and historical identity, Short asked her students to read.

Using literature to show her students that they were, in fact, “cultural beings,” Short examined with the students how they felt, what they believed, and the influences that acted upon them. The students soon realized that their beliefs and actions were based upon their interactions with their families and community. Short then added literature from other

geographic areas outside the students' hometown to help broaden their identity. Finally, she introduced international literature and books about global, social and political issues. Thus, the foundation was completed for what Short terms becoming "intercultural" humans (Short, 2009: 7-8).

The students were changed by this literature. Instead of remaining quiet when asked questions about social issues, students were engaging in conversations about social change. Instead of simply stating that certain issues (such as racism and poverty) are "unfair", the students learned to ask questions and formulate strategies for dealing with them. These students had formed a personal cultural identity, and were now comfortable exploring the identity of others (Short, 2009: 8-9). These students had learned how to be reflexive, intercultural beings. The term "intercultural" can just as easily be applied to include all creatures: primate, wasp, bird or human. Applying a healthy dose of literary fiction may be the key to true "anthropology beyond the human" (Kohn, 2013:7).

"Through literature, the being of language shines once more on the frontiers of Western culture—and at its centre—for it is what has been most foreign to that culture since the sixteenth century" (Foucault, 1966: 49)

Semiotics, Semantics, and Pragmatics: Making the Words Real

In Walking with Dragons, Ingold reminds us of St. Benedict's monk and his unusual encounter with a dragon. St. Benedict was overseeing a monk who was tired of being in the monastery. Told to go out into the world and see if he could find what he was looking for, the monk headed for the gate. When he attempted to leave, a large dragon blocked his path. He was mortified and yelled for his fellow monks to help. When they returned him safely inside, he told them about the dragon. They, of course, hadn't seen it, but assumed he had actually seen *something* because he looked so scared (2011: np). If this happened today, it is likely that the monk would be on a 72-hour mental health hold. However, in the sixth

century all of the monks had been trained to imagine emotions, evil, and the divine as objects such as dragons and angels through their literature. The purpose of this was to allow the monks to acknowledge their feelings, and work through them in a safe way. By giving shape to fear via reading, they were able to cope with their fears in reality (Ingold, 2011: np).

Ingold hypothesized that the appearance of the dragon took place due to a ‘thinness’ between the walls of what is real and what is imagined. The dragon was a personification of the monk’s fear, and his fear was as real a thing as any living animal. None of his cohort doubted his sighting, they simply assumed his fear has taken a physical shape (Ingold, 2011:np).

Stories help us deal with our fear. We know there is no such thing as a vampire, yet everyone can describe what one looks like in detail. Their pale skin, ability to ‘glamour’ us, and inability to face the sunlight is common knowledge. We know werewolves are affected by the moon, tend to run warm, and are fantastic fighters. El Chupacabra runs through farms in the southern area of my state on a regular basis. We “know” these things aren’t real, and yet when we are frightened we immediately think they are right behind us. Fear makes the thin veil that separates our emotions from our reality even thinner.

Phillips Stevens, Jr. explains:

We should understand that it is not with the eyes, but with the brain/mind that we ‘see’; and that people sometimes *really do* ‘see things’, and those things are real, and people *know* that they saw them, and they are telling the truth when they report them (Stevens, Jr., 1990: 125).

These “true” reports often involve a massive hominid that has been spotted in American forests for years. The Sasquatch or “ape-man” of early Native North American oral history found its way into written accounts by European settlers that can be traced back to at least 1850 (Sax, 2013: 27). The Traverse City Herald reported in 1858 that a wild ape-like creature “as big as a bear” had been eating the local cows (Weird US, 2016: np). When large footprints were discovered in construction zones in California, the Humbolt Times picked up

the “ape-man” story. Eventually, the Associated Press got hold of the article and named the creature “Bigfoot” (2016:np). According to Stevens, Bigfoot has to be humanoid in shape and behaviour in order to fulfil its purpose. This purpose is to provide a way for humans to deal with emotions such as lack of trust in others, feelings of isolation, or confusion in a changing world (Stevens, Jr., 1990: 127). The large, ungainly hominid who ventures from the safe forest to the domain of “man” creates a sense of understanding in humans. We have all felt out of place, ugly, and alone. Our feelings become manifest; our manifestations become literature. People eat up stories about bigfoot, and in response hundreds of people report seeing bigfoot each year. (Sax, 2013: 27).

Apparently, we enjoy the confusion and fear that literature induces. Americans and Europeans read horror stories, murder mysteries, and true crime novels by the truckload. Mystery, crime and thriller books topped sales across all adult age groups in the U.S. last year, accounting for up to 66% of sales in some cases (Statistica online, 2016: np). Scaring ourselves via literature has become a universal coping mechanism. Interestingly, these genres did lose out to romance and erotica in worldwide sales, so perhaps humans are working out more than just their fears via reading (2016: np).

Not Just Good to Eat or Think, but Good to Read and Write:

No anthropological paper is complete without some bastardization of this quote from Levi-Strauss, of course. We eat certain animals and think about others, but what happens to us when we write about animals? Here I would like to return to “the literature” instead of *literature*. Reading about non-human animals and learning to put ourselves in their culture in order to understand them is fantastic, as I hope I proved above. But when we as anthrozoologists write about the animals we observe, what happens to us?

An education professor at my undergraduate college liked to say that if you wanted to see if you really *know* something, try teaching it to someone else. Probably her version of what

is commonly attributed to Yogi Bahaan as, “If you want to understand something, teach it.” In order to fully engage with our subjects of all species, we need to write about our experiences. We need to note our interactions and feelings about them, and we need to try to explain these interactions in ways others will understand. This process engages our brain in a slightly different way than reading does.

Erhard et al. completed an MRI study of writers and non-writers in 2014. He found that during the process of creating work (not just copying words) the areas of the brain responsible for holding several bits of information at once was activated during the writing process. The areas of the brain responsible for expertise lit up when experienced writers were brainstorming. The area did nothing in writers with little experience. This is the same part of the brain responsible for any hard-won skill, such as chess mastery or opera singing. The same part of the brain lights up when a master pianist plays, or when an ice skater lands a triple axel. As writers get more experienced at writing, these different areas of the brain go to work more efficiently. This allows the writer to actually “think better” (Erhard, et al., 2014: np).

Educator James Marshall gave students different writing tasks in relation to literary works which they needed to understand. It was only in the difficult extended writing tasks that students began to understand the literature on a deeper level. Whether the writing was more formal or personal in nature, the task of extended writing required the framing of an argument and use of language that created a deeper understanding of the text. Lightweight writing or short answer writing on tests had none of the same effect (Marshall, 1987: 58-60). It is the process of trying to explain to another person the motivations of a character in which the growth and understanding takes place.

Because of this, our task as humans is to keep reading and writing. We, as anthrozoologists, have to employ all the tools at our disposal, and this means picking up a

good book whenever possible. Exposing ourselves to the complex characters of novels, as well as the complex characters in ethnographies or ethographies, will make us better scientists.

Conclusion:

This essay ends with a Moomin.

Using “characters” to understand ourselves is not a new concept. The Greeks used plays as catharsis, Aesop used animals to teach morals, the monk’s dragon lead him back into the monastic life, and a Moomin showed me that animals were people with emotions and personalities. The Moomin taught me to explore beyond my front door and to seek out new experiences with different creatures wherever I could. He also created a life-long reader with a voracious appetite for fiction. With the millions of titles available for people of all ages, expanding our theory-of-mind and brain function is as easy as picking up a best-seller or reading a storybook to a child. Continued reading and writing of both fiction and non-fiction is essential to our study of anthrozoology. Whatever your Moomin may be, if it leads to a desire to study the interactions of all animals and drives you to see the vast interconnectedness of the world, then embrace it.

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