University of Tartu Faculty of Arts and Humanities Institute of Cultural Research

Denise Leah McKeown

FOLKLORE AND THE VERNACULAR OF COMPANION DOG CLONING Master's Project

Supervisor: Maarja Kaaristo, Ph.D

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INTRODUCTION

In February 2018, American celebrity Barbara Streisand revealed she had cloned her dog. The story quickly made its way through both online and offline media sparking many conversations along the way. I was instantly struck by two powerful reactions, I thought cloning was unnatural but I was also thinking, with regret, of a pet I would have cloned if I had been given the chance. Shortly afterwards, someone in a Facebook group I belong to asked why we think pet cloning is so creepy especially when we consider everything else humans do to animals, for instance factory farming and animal experimentations. I was intrigued by this question especially in light of the contradictory ways humans treat animals.

Understanding the importance people place on animals is a relatively new way of researching and explaining the ways people make sense of their lives, construct their social worlds and communicate this reality to others (Grady & Mechling, 2003; Magliocco, 2018a, 2018b). The emotional connections people have with animals is often similar to the connections people have with each other (Heðinsdóttir, Kondrup, Röcklinsberg, & Gjerris, 2018; Klotzko, 2001) and therefore animal-human relationships provide important insights into human beliefs, behaviours and culture. These insights are particularly evident when examining ways in which people talk about companion dog cloning and integrate this technology and the resulting clones into the construction of their social worlds.

Companion dog (*Canis lupus familiaris*) cloning became commercially available in 2008 and since then over one thousand dogs have been cloned for clients around the world. This highly controversial practice is gaining popularity in the media and people, regardless of whether they agree with cloning or not, have a lot to say about the procedure. Folkloristics, as the study of people's stories, is advantageous for studying the social aspects of companion dog cloning because, essentially, choosing to clone a companion dog is a story about the deep emotional bond the person shares with their pet.

Few people are so blunt as to say they want their dog reincarnated through cloning. Rather they use words such as "recreate" (Tech Insider, 2015). This vernacular usage depends, in part, on science's ambiguous perspective regarding what a personality is and whether or not it can be transferred to the clone. The vernacular also depends on the way

the media, like cloning programs, and popular culture, like books and movies, have shaped our imaginations and our expectations in regards to cloning. Cloning clients draw on their special relationships with their dogs to explain why they wanted to clone that dog but are unable to articulate exactly what made that dog so special.

However, people who object to cloning seem to define the "something special" in terms of the personality, the "soul" and/or the memories the clone will have of the owners. They question whether transference from the original dog is possible and they question what exactly might be transferred. People object to cloning for a number of reasons. Again, their expectations are influenced by science, media and pop culture. I look at several controversies surrounding companion dog cloning including the integrity of the cloning companies and claims that clones are somehow not real dogs.

Cloning technology is still new, at least in the public imagination, so there are several areas where people have difficulties expressing themselves. For example, people have difficulty talking about the familial relationship between the clone and the original dog. Sometimes this occurs because loss of the original dog brings up many emotions but also because the terms usually employed in familial relationships do not fit easily within the context of cloning. These difficulties may also indicate that owners need to readjust their frame of reference to include the clone. When a person's frame of reference, or current understanding of the social world, is challenged it may take time for the person to adapt (Figes, 2008; Shuman & Bohmer, 2012). After all, it is not everyday someone says they cloned their dog. Taken together, choosing certain words over others and the inability to easily express certain thoughts provides a basis for understanding people's beliefs and expectations in regards to companion dog cloning.

Using a qualitative approach, my research uses listening methodology (Hyma & Simbulan, 2016; Lukin, 2017) to analyze the vernacular, or everyday language, used by cloning clients and those who share their own opinions about cloning in several videos, in comments left on videos and in online newspaper articles. Critical Discourse Analysis (CDA) and representation form the theoretical basis for understanding that the words we use reflect our own beliefs about cloning and influences what others think about it. Several key themes emerged during analysis highlighting people's beliefs, opinions and ideas about cloning and how a clone might fit into the social world of a cloning client. In order to share

the results of my research I have developed a Massive Open Online Course (MOOC), called Folklore and the vernacular of companion dog cloning: Examining beliefs and ethics in regards to pet cloning.

The aim of my research is to understand the beliefs and expectations that surround companion dog cloning by listening to the words people use to express their opinions and narratives. Several key themes emerged during analysis, which have been incorporated into the MOOC. Subsequently, the goal of the MOOC is to introduce folkloristics to more people and to present the social consequences and ethical concerns of companion dog cloning research in an interesting and educational format aimed at students new to academia. The MOOC will be made available on an online platform called Udemy (Udemy.com). This paper provides the theoretical and methodological support for the scripts written for the MOOC video lectures.

Since very little research has been done in regards to the social consequences of companion dog cloning, the MOOC and this thesis contribute to wider academia by drawing attention to the ways people, either positively or negatively, talk about companion dog cloning. It is important to understand the nuances surrounding pet cloning because as science and technology progresses cloning is likely to become part of mainstream medicine. Although my research does not focus on the future, current beliefs, opinions and ideas about cloning will have consequences for its future acceptance, use and surrounding policies.

I conclude this introduction by explaining the structure of the support paper. Throughout this paper, and my MOOC, I was guided by the idea that words, and the ways we use them, matters. Word usage reflects our own beliefs and influences what other people believe about companion dog cloning. In the first chapter I explain the theoretical framework used in my research and in the MOOC. Although I use several themes the most notable ones to mention here are Critical Discourse Analysis (CDA) and representation and their role in understanding the impact of the words people use. I also explain the pet-human relationship in the context of my research and its importance for understanding companion dog cloning.

In the second chapter, I introduce listening methodology and explain how I collected and analysed data during my research. Since this paper and the MOOC are highly

reflective I also address reflexivity as well as some of the online ethnographic ethics I faced during my research. In the third chapter I present my results and explain how I organized them into the MOOC. All the scripts for the MOOC are included in the appendices (1-7) which also contains the transcripts for the videos (appendices 8-10) I suggested the students watch.

1. THEORETICAL FRAMEWORK: The Power of Words and Emotional Bonds

Thankfully, folkloristics is an interdisciplinary field because researching companion dog cloning crosses borders between folkloristics, philosophy, bioethics, oral history, memory studies, semiotics and several other disciplines. Of course, this means my research crosses the borders of many theories too. At times, this project has proven difficult for me to conceptualize as a folkloristics project. Initially, the two biggest challenges for me were explaining the validity of animal-human interactions for a folkloristic project and the other was understanding how contemporary technology fit into a folkloristic context.

Jay Mechling laid the groundwork for understanding animal-human interactions in a folkloristic context by urging folklorists to push past the idea that folklore belongs solely to humans. In "Banana Cannon" and Other Folk Traditions Between Human and Nonhuman Animals, Mechling cites several names which have since become well-known, such as Alan Dundes and Elliott Oring, and points to the ways their new folkloristic definitions applied to relationships between dogs and people (Mechling, 1989). More recently, in 2018, an entire issue of the Journal of Folklore Research was dedicated to the new animal turn. Social and scientific boundaries established to delineate humans from non-human animals are eroding as humans begin to recognize and accept that non-human animals have language, culture (Magliocco, 2018b) and even folklore (Mechling, 1989). This boundary erosion, which Magliocco calls fluid boundaries, combined with the "ethical reflection it entails, are known as the 'animal turn' in scholarship" (Magliocco, 2018b, 3). Magliocco goes on to say "As the study of informal knowledge and expressive culture, the discipline of folklore is ideally positioned to undertake this new challenge" (Magliocco, 2018b, 3).

Furthermore, several prominent folklorists have tackled the issue of modern technology and folklore. For example, Trevor Blank (2018) and Robert Glenn Howard (2005) and their respective work regarding folklore and the internet. In addition, Leah Lowthorp, a cultural anthropologist and folklorist, has successfully combined her education with her interest in "the social justice implications of human reproductive and genetic technologies, and the ways in which biopolitical narratives are circulated both online and face-to-face" (Center for Genetics and Society, n.d.). Although the technology itself is not folklore the way it is used or talked about by common people can be.

When I presented an abstract for an early draft of this paper a reader wanted to know why I focused on animal-human relationships instead of just focusing on people. For this person, a dog is just a dog. Clearly, I had not done my job explaining the importance of the bond between cloning clients and their dogs and the similarities in sentimentality between pet cloning and human cloning. Since then I have tried to stress the importance of this relationship because if the reader or viewer does not understand that this bond is the driving force behind companion dog cloning they will struggle with the rest of the material.

It took time, but I eventually realized that cloning itself is not folklore but many of the ways people talk about it is folklore. This is particularly true when looking at personal experience narrative from clients. However, as I explain below, trying to organize the different ways people talk about cloning into genres was problematic and I eventually abandoned the idea of genres in favour of a less complex approach.

Furthermore, I found that developing the theoretical framework for my research and for developing the MOOC were not necessarily the same thing. If I had written a thesis instead of a MOOC, I probably would have spent time defining several complex concepts and terminology such as culture, genre and narrative. However, for the MOOC I needed to present material in a way that I thought would be easily understood by students new to academia. Therefore, although I use several theories and methodologies in my research and in the MOOC, I purposely avoid labeling concepts and terms as such. Instead, for example, in module one I explain what folklore is and how I use it in this course. I explain there are several kinds (genres) of folklore and that we can interpret them in different ways. For instance, did the door slam shut because of a gust of wind or is it a spirit trying to get attention? In this way, I hope to introduce some of the nuances of folklore without overwhelming and intimidating beginners with so much information at the beginning that they are reluctant to continue with the course.

1.1 Words Matter: Representation and Critical Discourse Analysis

This entire masters project is based on the idea that words matter and how we use them matters. Throughout the MOOC, I examine the vernacular language people use regardless of whether they support cloning or not. To do this I use a particular kind of Critical Discourse Analysis (CDA) first developed by Norman Fairclough. Fairclough (2001) seeks to integrate multi-dimensional and social theory approaches with discourse analysis and maintains that critical analysis is necessary for revealing discourses hidden behind word usage and common assumptions.

Fairclough's CDA was later adapted by Arron Stibbe (2001) and Les Mitchell (2006) for analyzing animal-human relationships and the particular ways in which animals are represented in and by animal product industries and related fields such as law, media and animal rights movements. Stibbe (2001) focuses on the role language plays in animal representation, especially as it applies to ways in which animals are socially constructed and oppressed. Likewise, Mitchell (2006) focuses on the different ways discourses construct a world view saying, "different words may be used to describe the same thing, but the words chosen give an insight into how the writer [or speaker] sees and constructs their world" (Mitchell, 2006, 41) and subsequently how they think about and treat animals. Furthermore, the words we chose to use when talking about any topic, including cloning, represents the topic in very specific ways therefore Stuart Hall's (1997) work on representation is invaluable. As I explain in the MOOC, the ways people represent companion dog cloning reflects their own beliefs about cloning and influences what other people think about cloning.

The vernacular is an important concept used throughout the project in three notable ways. The first way I use the vernacular is in regards to how people talk about cloning and their expectations, the second refers to the ways cloning companies use the vernacular for their own purposes and the third concerns the ways cloning clients have to adjust to a clone in their lives. Cloning companies have appropriated the vernacular for marketing purposes since they first started advertising pet cloning. In the 1990s, Robert Glenn Howard (2005) noticed a new folklore emerging on the internet. He noted that pet owners used a specific vernacular when they created and displayed their pet vanity pages during a time when the

internet was still primarily a commercial concern. Howard (2005) claims that the institutional "gave the vernacular its power to enact meaning" explaining that it is only in comparision with the institutional language on the webpages of banks and businesses that the vernacular of pet vanity pages become apparent (Howard, 2005, 325).

In the 1990s, Lou Hawthorne began *The Missyplicity Project* and its more professional side, *Savings & Clone*. The new cloning project was attempting to raise awareness and money to fund pet cloning research and to recruit scientists to do the work. To appeal to potential clients, investers and scientists, Hawthorne purposefully duplicated the vernacular he saw on pet vanity pages when he developed *The Missyplicity Project* web site (Howard, 2005; Woestendiek, 2010). Although the company has long since closed its doors this repurposing of the vernacular is still apparent on cloning company websites today and I address this in module four in the MOOC.

In module two in the MOOC, I include a short overview of what cloning is it is done. Although my explanaition is informal in comparisson to scientific articles it does provide a somewhat technical and scientific viewpoint so that students can compare it with the vernacular used by everyday people. I include some of the ways the vernacular is influenced by cloning programs, scientific sources and by popular culutre because whether or not the information is correct it influences what people think is possible. I also look at some of the ways cloning clients have to adjust to a clone in their lives by looking at the ways the current vernacular becomes inadequate for talking about new technologies and new realities.

The inability to coherently talk about certain aspects of cloning can happen for several reasons and I examine three of them in module five. The first reason can be related to emotions and de-personification. De-personification is a process by which characteristics of the previously individualized animal are no longer evoked, such as no longer using the dog's name (see Mäekivi & Maran, 2016 for an example of de-personification of zoo animals). In the MOOC I focused on Laura Jacques' story about collecting skin cells from her dead dog. When she talks about this process she stops calling her dog "Dylan" and starts using the pronoun "him" (BuzzFeedBlue). The second and third difficulties people have when talking about cloning are related to their attempts at fitting cloning into a framework that does not include the reality of cloning or clones.

Orlando Figes' (2008) and Lynn Abrams' (2010) respective works in oral history and memory studies talks about the ways we try to use our existing frameworks of knowledge to fill in the gaps for partial or non-existent frameworks. For example, many people have an idea of what cloning is and that knowledge is influenced by several sources. For instance, knowledge comes from pop culture in the form of movies in the *Jurassic Park* franchise, cloning clients talking about their experiences on cloning programs, and scientific stories reported in newspapers or online journals. Furthermore, when cloning clients' expectations are stretched too far it takes time for the person to adjust. This is something I draw attention to in module five.

Throughout the project I kept Michael Frisch's (2016) work in mind as he explains about the way a story becomes progressively condensed as it goes from the original source and is filtered through various other sources. For example, cloning clients are the original sources of their stories. However, the stories are filtered through the questions asked in the interviews and through the edits made by video producers. I filter the story even more as I chose what to tell my audience and if a student shares information from the MOOC they will filter and condense the story even more. Frisch (2016) cautions researchers to remember that through this filtering process some information is privileged while other information is neglected.

On the theme of choosing what information to share, Amy Shuman's (2005) work reminds readers that those who share other people's stories are in a position of entitlement and privilege because they decide what is important enough to share. Furthermore, what they decide to share is not always in the best interest of the person who originally shared the story. This, besides wanting to present as many viewpoints as possible, is part of the reason I chose to quote as extensively as I have in the MOOC. I want my audience to know what people are saying so they do not have to take my word for what others say.

1.2 Theories about Animal-Human Relationships

Although I talk about pet related theories in the MOOC I mention them here again because I want to stress the significance of these relationships and to point out some of the nuances amongst pet owners. In the MOOC, I explained that human relationships with pets are different than with other groups of animals like livestock (Belk, 1996; Blouin, 2013; Klotzko, 2001). In fact, these relationships can be even deeper than I explained in the MOOC. The dogs are not just part of the family, they are often granted personhood and sometimes even perceived as quasi-humans (for examples see Belk, 1996; Blouin, 2013; Cohen, 2002). Pets are also ascribed certain morals, values and human qualities (Ilomäki, 2002).

Some researchers note that humans use empathy to understand and connect with the minds of animals to deduce what the animals are feeling or thinking (Calcagno, 2017). In this way, humans and dogs build a meaningful social life together (Calcagno, 2017) one in which the dog is believed to reciprocate those feelings (Blouin, 2012). Arguably, this hands-on and full-bodied experience with animals is exactly what makes that particular animal unique to their human counterparts (Ware, 2018).

Here I would also like to add that "The imperatives driving people toward pet cloning are much more similar to those for cloning humans. They are deeply personal. In contrast, the cloning of sheep, cattle, and pigs is a quintessentially practical endeavor, devoid of sentimentality" (Klotzko, 2001, 169). I point this out to help explain why I put so much emphasis on the animal-human relationship in the MOOC. The other reason is that very little research has been done in regards to understanding companion dog cloning in a social context. For example, people are trying to understand what a clone is. For those who believe animals have souls they wonder whether or not the clone can have one and where it might come from. People ask questions and draw their own conclusions about the metaphysical existence of the clone which I explore in modules three and four. This uncertainty has social implications, especially for people who clone their dogs because they have to adjust to the existence of a clone in their lives. I address some of these difficulties in module five.

However, there are countless nuances in regards to the ways people feel about their pets. Although Belk (1996) and Blouin (2013) draw many of the same conclusions about differing attitudes and attachments to pets, Belk (1996) generalizes his findings to all pet owners while Blouin (2013) develops three broad, albeit overlapping, orientations calling them dominionistic, protectionist and humanist. Blouin's (2013) approach moves past popular academic approaches dividing people into groups of caring or abusive dog owners thus allowing for particular in-group nuances which help account for whether or not owners would consider cloning their pets.

As a group, the people who chose to clone their companion dogs connects strongly with Blouin's (2013) concept of the humanistic orientation of pet ownership.

The humanistic categorization is characterized primarily by an intense emotional attachment to a particular dog or dogs. This category involves an understanding of animals as unique and extremely valuable persons. People employing the humanistic orientation often think of their dogs as either their children or close friends. Their relationship with the animal is an extremely important part of their lives, often as important, or sometimes more important than their human relationships. Those employing a humanistic orientation maintain that their dog is their best friend, and/or that they are closer to their dog than anyone else in the world, sometimes including spouses or other members of their immediate family (Blouin 2013, 282).

Furthermore, the "humanistic relationship with pets is defined primarily by what the owner wants and needs, that is, what they get out of the relationship, rather than a one-sided assessment of what the dog wants or needs" (Blouin, 2013, 283). Whereas owners in the protectionist orientation are more likely to have pets euthanatized rather than see them suffer, humanists have "the most trouble letting go. Because of their close attachments, occasional emotional dependence, and proclivity to privilege their own needs, this type of pet owner is most likely to try to extend their animal's life through surgeries or by delaying putting their animals to sleep" (Blouin, 2013, 284). These kind of life extending measures makes me think that for some people cloning is a logical next step but more research needs to be done in this area before any conclusions can be made.

Blouin's work resonates with my own as I have observed several similarities between the humanistic group and cloning clients such as the difficulty letting go and the

person wanting to maintain an attachment with that particular dog. I explore these topics in module three. However, as Blouin notes these groups are not static and each group reflects a certain cultural sensibility which could bear further investigation in the context of why people clone their dogs.

1.3 Folk Groups and a Question of Genre

Throughout the MOOC I focus on three broad folk groups bound together by at least one commonality (Dundes, 1980). I consider cloning clients to be the first folk group and although they have probably never communicated with each other (Howard, 2005) they shared an interest in their dogs and share the experience of cloning their dogs. Although not cloning clients themselves, the people who say they would clone their dogs if given the chance also fall loosely into this group.

The second folk group are the people who dislike companion dog cloning. Although their objections are based on any number of reasons, reasons like the cost or believing cloning is against nature, their shared belief is that people should not clone their dogs. The third group are the people who fall outside of these two groups and support cloning clients but either say they would not clone their own dogs or they do not say whether or not they would clone their dogs. I have included quotes from people in different groups throughout the MOOC in an attempt to present a wide variety of perspectives.

It was relatively easy to categorize people into broad groups according to the ways they express themselves in regards to pet cloning. What was much more difficult was trying to understand which genres they used when expressing themselves. Cloning clients use primarily personal experience narratives and for many weeks I was contextualizing my research as a narrative study. However, people who do not clone their dogs are not speaking from experience and when I started looking more closely at the comments I realized they are not usually in the form of narratives. Usually their comments are opinions. Recently this has made me wonder, can people have a shared experience of not wanting to do something? After all, this group shares the opinion that cloning is wrong and their opinions are easily categorized into two broad groups, identified by researchers like

Autumn Fiester (2005), consequential or slippery slope arguments and deontological or against God arguments.

In any case, once I realized the comments were opinions not narratives I needed to change my approach. The fact that people disagree with companion dog cloning and the ways they express their disagreement is just as much a part of the larger cloning story as the opinions of those who want to clone their dogs. Furthermore, the words used in the opinions of people who have not cloned pets, whether they agree or disagree with cloning, are sometimes comparable with the words cloning clients use in their narratives. For example, often when people want to strengthen their arguments against cloning, they compare clones to monsters like Frankenstein. Although Frankenstein was the name of the doctor and not the deformed monster brought to life via lightening, people in the videos and in the comments tend to use the name to mean the monster. Their sentimentality is comparable to the way a cloning client inadvertently compares her expectations to Frankenstein when she admits to thinking the clones were going to be born prematurely and ill-formed (BuzzFeedBlue, 2016). Clearly, pop cultural and official channels of knowledge influence what people believe about cloning and the subsequent clones, it just manifests differently in different people.

However, attempting to fit the comments of people who did not have personal narratives into a folkloristic genre was making my project too complex. What I really wanted to focus on was bringing all of these voices together to present to students so I set aside this genre driven focus and began to actively think of the verbal and written speech as "ways of talking about cloning" instead of using "discourse," "narrative" or any other term that led back to genre. That said, I still use "narrative" in module five but I do not define it except to say that difficult and silent narratives helps shape what we know about cloning.

2. RESEARCH METHODS AND DATA COLLECTION

In this section, I will explain how I collected and analysed the data during my research. I also introduce listening methodology and explain how I employed it in my work. I will end this section with a brief look at some of the questions I encountered regarding online research ethics. However, before moving to these topics it is necessary to say a few words about reflexivity in the context of my work.

Since, as I mentioned earlier, I experienced strong reactions to the idea of pet cloning I found it impossible to set aside my own feelings as I worked. Therefore, the reflexive approach and being mindful of my own emotions became part of the research as well as part of the project development and subsequently part of this paper. "Reflexivity, broadly defined, means a turning back on oneself, a process of self-reference. In the context of social research, reflexivity . . . refers to the ways in which the products of research are affected by the personnel and process of doing research" (Davies, 2003, 4) In short, reflexivity is an "awareness" (Davies, 2003) or "consciousness" (Robben, 2012) of my connection to my work. I was aware, for example, that my somewhat negative feelings towards cloning had the potential to influence what data I collected and how I analysed what was collected. Therefore, I was careful to incorporate material that represents several perspectives and the reflexive approach is woven into the entire body of this work.

It is also important to note that just as I chose which parts of other people's stories I shared, I, as an author, also chose which parts of the reflexivity process I shared (Gay y Blasco & Wardle, 2007). At times, choosing what to share may be directly related to my own level of awareness. At other times, deciding what to share is an attempt at balancing between demonstrating awareness of own position in my work with avoiding the possibilities of self-indulgence and self-absorption. This is an ongoing struggle shared by any number of researchers (see Davies, 2003; Gay y Blasco & Wardle, 2007; Robben, 2012; Smartt Gullion, 2016).

2.1 Listening Methodology, Data Collection and Analysis

While doing my background research I collected and archived 65 online newspaper articles, watched several online pet cloning videos, and read numerous quotes from comment sections from some of those videos. I began to identify several key themes which were confirmed by and expanded on in Autumn Fiester's (2005) work. Fiester (2005) identifies two broad themes in ethical arguments surrounding animal cloning and categorizes them as either 1) "going against God" (deontological) or 2) slippery slope (consequential) arguments. Furthermore, Fiester (2005) presents both sides of each arguments providing a well-rounded paper about the ethics of animal cloning. The data I collected clearly illustrated many of Fiester's (2005) philosophical points and subsequently her article informed my own collection and analysis.

My data collection and analysis were also informed by listening methodology. In the autumn of 2018, I saw an online video of Karina Lukin's (2017) lecture, *The field strikes back. Unwinding the past and contemporary silences in folklore studies*. Lukin (2017) speaks about mistakes and failures in early fieldwork with the Sami people and suggests some ways to overcome them. She says,

In the encounter, failure is not the end but more of a point to reflect on and to continue. This is a subjective point in our research endeavours with which we have to lead and why not then make it a strength? I think this is something Deborah Kapchan has suggested when she has written as listening as learning process and method within which we should listen tactically without claiming ownership of a territory but to attend among the people and to resonate or transform the sound in another environment. If this would work in the fieldwork with the archival materials one should also listen and read tactically in order to get hold of the fragmentary and transient moments in the lives of those individuals, their life histories, their communities of which the Sami community, for one, must have been one possible reference group (Lukin, 2017).

I was mindful of Lukin's interpretation of listening as methodology as I collected my data. I thought of the specific words used by people as a way of understanding their beliefs and expectations in regards to companion dog cloning.

Furthermore,

Listening Methodology is a qualitative, subject-oriented research approach used to analyse the direct experiences of individuals. Listening research involves an inductive, comprehensive and systematic exploration of the

ideas and insights of people living in and affected by a particular situation. It is used to identify key themes, trends, and common issues from a wide range of people, creating an opportunity to elevate voices that are less often heard and facilitating a channel to share opinions on a particular situation or plan for the future (Hyma & Simbulan, 2016).

When I narrowed the parameters for data collection I decided to focus on videos available online and on the comments left on some of those videos. I continued to "listen" to the ways people talked about companion dog cloning and the specific words they used. In order to keep my data manageable in the time I had, I set my collection parameters for videos produced between 2015 and 2018. I chose this timeline because companion dog cloning has been available to clients since 2009. Since that time four companies have offered pet cloning services at different times, two of which were closed prior to 2015. Furthermore, I chose videos in which people spoke for themselves so I used videos that featured cloning clients sharing their own experiences rather than ones that spoke about cloning clients.

The combination of the six videos I used in my analysis and in the MOOC provides personal experience narratives from three families who cloned their dogs and several reasons why they did so, information about cloning scent detection dogs, and some commentary from genetic researchers who are critical of pet cloning. In chronological order, the six videos are:

- 1. The science behind cloning from (Tech Insider, 2015) features Junichi Fukudo and cloning his dog Momoko. The show has a somewhat graphic description of taking eggs from the donor dog and implanting embryos into the surrogate mother.
- How we cloned our dead boxer dog Dylan from (The Guardian, 2015) features a
 British couple, Laura Jacques and Richard Remede, who cloned their beloved
 boxer, Dylan, in 2015.
- 3. I cloned my dead dog (BuzzFeedBlue, 2016) features Laura Jacques and Richard Remede and Laura describes collecting skin samples from Dylan after he died.
- 4. On assignment: The clone zone- part 1 and part 2 (NBC News, 2016b, 2016a) features cloning clients Laura Jacques and Richard Remede. The program also tells the story of a scent detection clone named Specter. Cloning critic and evolutionary biologist, Beth Shapiro speaks out against pet cloning.

- 5. We Spent £70, 000 to clone our dead dog from (This Morning, 2016) is a TV interview with Laura Jacques and Richard Remede and the clones, Shadow and Chance, are on air too.
- 6. Jurassic bark pet owners spending \$135,000 to clone their dogs- part 1 and part 2 (60 Minutes Australia, 2018a, 2018b) features cloning clients Laura Jacques and Richard Remede who cloned their dog Dylan and Tom Rubython who cloned his dog Daisy. Stem-cell researcher and geneticist, cloning critic Robin Lovell-Badge, speaks out against cloning.

I also collected and archived several comments from the comment section of two cloning videos available on YouTube, *The science behind cloning* produced by Tech Insider (2015) and *We spent £70,000 to clone our dead dog* produced by This Morning (2016). I collected comments from each video in a single visit rather than over a period of time. Before searching through the comments, I set the comments to display the newest dates first. I went back about one year looking for comments that talked about "nature," "personality," "soul" and so on. The keywords I used were based on the key themes that had already been identified. I wanted to represent as many perspectives as possible so I looked for comments that were supportive and unsupportive of companion dog cloning.

Using a combination of my own observations and Fiester's (2005) article, I identified seven themes which I incorporated into the MOOC. 1) Of the several reasons someone might want to clone their dog the owners believe there is "something special" about that dog which sets her or him apart from all others. Although owners are unable or maybe reluctant to specify what that "something" is 2) outsiders refer to it as the personality, "soul" or memories of the dog and question whether or not these things can be passed to the clone. There are a lot of debates about 3) the cost of the procedure and speculations about whether or not 4) cloning companies are taking advantage of people. People are deeply concerned that 5) cloning is unnatural and 6) have trouble understanding how clones fit into the social world. It is striking that although there are several themes, which I usually present as controversies, there are still 7) silent narratives. Meaning there are several topics people are reluctant to talk about and their absence forms an incomplete picture of companion dog cloning.

2.2 Research Ethics

Since quotes from online sources are such a big part of this project I need to say a few words about ethics and how I decided to use and cite YouTube comments. The ethics of quoting comments left on YouTube videos is one area I struggled with throughout my research and MOOC development and one with which I am still struggling. Although online researchers may face different challenges in terms of ethics, their concerns for good conduct and good practice still align with and overlap with the ethical concerns of offline researchers.

Several organizations, including the Association of Internet Research (AoIR), have attempted to provide guidelines for quoting comments left on social media (see Markham & Buchanan, 2012; Sugiura, Wiles, & Pope, 2016). However, these attempts are often efforts at extending established and accepted ethics into the realm of online research (Sugiura et al., 2016). Such efforts are often criticised for their inability to adequately address the unique needs of online researchers and their subjects and for their inability to be generalized to all online research (Sugiura et al., 2016). Although criticized for being too open-ended (Sugiura et al., 2016), I found AoIR's guidelines helpful for formulating and articulating my own guiding rational for using YouTube comments in my research and in the MOOC. Rather than provide a set of instructions for researchers to follow, the AoIR presents several guiding questions to help each researcher make decisions regarding their own online research projects (Markham & Buchanan, 2012).

During my research I collected direct quotes because I wanted to know what people said about companion dog cloning. Through their own words, I wanted to understand what kinds of beliefs and expectations people have in regards to cloning. When collecting quotes I considered the public nature of YouTube videos and the comments that accompany them. YouTube, below each public video, invites people to "add a public comment" and although only registered users can post a comment, anyone can read them regardless of whether or not they have a YouTube account.

Several researchers consider comments on social media to be in the public domain. For Lisa Sugiura, Rosemary Wiles and Catherine Pope, "Online spaces such as forums can be viewed as public documents rather than ethnographic interactions, and the automatic

archiving of text in such spaces makes the active presence (and disclosure) of the researcher unnecessary" (Sugiura et al., 2016, 190).

Furthermore, Roy Langer and Suzanne Beckman (2005) conceptualize comments on many social media platforms as comparable to quoting from readers' letters in newspapers because "these are intentionally public postings by the authors—it would be absolutely unusual to seek permission to use direct quotes" (Langer & Beckman, 2005, 197). With all of this in mind I did not feel it was necessary seek permission for quoting YouTube comments.

Additionally, I was concerned that commenters may feel violated if approached by a researcher. Researchers have noted their own negative experiences when announcing their presence and intentions in public spaces (Langer & Beckman, 2005; Sugiura et al., 2016). It seems that remaining unobtrusive disrupted the online community much less than when researchers announced themselves (Langer & Beckman, 2005; Sugiura et al., 2016). Considering my collection period went as far back as one year and was limited to a single visit for each video I was less concerned about the possibility of interrupting the natural flow of comments, and potentially skewing the data, (Sugiura et al., 2016) than I was with making commenters feel as if their online activities were under a microscope (Langer & Beckman, 2005; Sugiura et al., 2016). My concern was that commenters would feel as if they were being watched and this would, in turn, effect their future online interactions.

I used the quoted comments in the MOOC because I wanted students to see for themselves what people say about cloning. However, I took the content of the comments into account when I chose them for the MOOC. Although the comments reflect varying degrees of support or dislike for cloning I do not think any of the comments are inflammatory or overly sensational. This is important because although I assume the use of quotes in the MOOC will not cause harm to the commenters I do not know that for certain. That said, the people who demonstrate support for cloning are in the minority and as such I think they would be more vulnerable to potential harm than people who express distaste for cloning. With all of this in mind and in an effort to protect their identities, I did not use names or usernames in the citations. Even though it is possible for someone to find the identity of individual commenters I have found from experience that it is difficult to do so even if the comment is unique and I know which video it was posted on.

When I wrote the scripts and made the slides for the MOOC videos I chose quotes from the people in the cloning videos and from my collection of comments specifically to illustrate what I was talking about. I ruled out comments with swearing although, if this had been an academic paper I would not have ruled them out but the audience for the MOOC are not necessarily from an academic background. Keeping in mind that I would be reading them out loud, I either disregarded long comments or only used part of the comment. Unfortunately, on April 17, 2019 when I went back to check something on *We spent £70,000 to clone our dead dog* (This Morning, 2016) I encountered this message "comments are disabled for this video." I decided to leave the quotes I had already used for the MOOC because the people who post the videos can shut off commenting at any time demonstrating how quickly online data availability can change.

3. RESEARCH FINDINGS AND THE MOOC

Since my MOOC is, in large part, the presentation of my findings I will expand on the themes in context of the MOOC and how it is organized. I start by presenting the outline of the MOOC and indicate where my findings are presented. Then I will provide more details about the tasks and testing I utilized. I will end the section with brief descriptions explaining what a MOOC is and the Udemy (Udemy.com) platform it will be presented on. Please see appendices one through seven for complete scripts for all of the video lectures and the final test.

Course Introduction

- Task 1

Module 1 Understanding Folklore and the Vernacular- This module provides terms and concepts and sets the stage for how ordinary people talk about cloning differently than scientists.

- Video 1 Understanding Folklore
- Video 2 Official and Unofficial Ways of Knowing
- Video 3 Representation
- Quiz

Module 2 What is Cloning?- This module provides more terms and concepts but also some of the context for what we are investigating. Understanding what cloning is helps people understand how the man-made part of this process upsets many people. It also provides a more technical description of cloning so students can compare it with vernacular language.

- Video 1 Understanding Somatic Cell Nuclear Transfer
- Video 2 How to Clone a Dog
- Quiz

Module 3 Cloning Companion Dogs and What's at Stake-This module also provides context because not everyone is familiar with the idea of a pet and this highly emotional bond. The module also provides reasons for why I chose companion dogs specifically. And it highlights the emotional bond people have with their dog. At this point I start transitioning to my research findings and explain them in the MOOC as controversies of companion dog cloning. Videos three and four in this module feature the first two themes I identified during analysis; reasons someone might want to clone their dog and the different ways people explain the "something special" that makes this dog unique. People refer to it as the personality, "soul" or memories of the dog and question whether or not these things can be passed to the clone.

- Video 1 Animal Groups
- Video 2 Pets and Companion Dogs
- Task 2
- Video 3 Why Someone Might Clone their Dog (fear of loss/letting go, only want that one dog, the dog: is something "special", went through hard time with the owner like a divorce)
- Video 4 What is at Stake? ("soul", personality, memories)
- Quiz

Module 4 Common Controversies- This module continues to present my research findings. The first video examines the ways people talk about the cost of the procedure and the ways cloning clients are chastised for their decisions to clone their dogs. People also debate whether or not cloning companies take advantage of people. Ultimately, cloning clients think the financial cost of cloning is money well spent. Questions of what may be considered natural sparks a deeper debate into the metaphysical realm and people question whether or not clones can even be considered real dogs.

- Video 1 The Cost
- Video 3 Taking Advantage?
- Video 2 Goes Against Nature
- Task 3 I ask the students to watch one of the videos
- Quiz

Module 5 Difficult and Silent Narratives- This module presents the last of my finding. Cloning clients find it difficult to accept clones into their social worlds. They have to come to terms with their emotions and learn how to talk about the relationship between the original dog and the clone. In this module it is evident that people have to expand their existing frame of reference in order to adjust to the clone they are responsible for creating. In addition to difficult narratives, discussion revolving around companion dog cloning includes a large number of silent narratives. Sometimes the silent narrative is partially silent. For instance, cloning companies do not explain where the donor dogs and surrogate mothers come from or what happens to them after their services are no longer needed. However, people do express concern for them in the comments. Other silent narratives are almost completely silent, such as the lack of discussion about the embryos and puppies that die during this process. In this module I also point out some of the consequences of silent narratives.

- Video 1 Difficulties Talking About Cloning
- Video 2 Silent Narratives
- Video 3 Wrap Up
- Ouiz

Module 6 The Final Test

This MOOC is intended for a wide audience providing information for people new to humanities and/or folkloristics as well as for more academically experienced people. There are three short tasks to help students understand the material and to give them a preview of some of the material we cover. I wanted to avoid drawing conclusions in the course so it made sense to have the students do the tasks so they could draw their own conclusions. The first task is between the introduction and the first module. I ask students to write down some things they think of when they hear the word folklore. I chose this task for two reasons. One is that Udemy suggests creating some kind of task or quiz by the second or third video so students feel a sense of accomplishment early on and they are more

likely to continue with the course. The second is that when we talk about folklore in the next video it will help them expand their idea of folklore.

The second task is in the middle of module three. I ask students to watch either *Jurassic bark* parts one and two (60 Minutes Australia, 2018b, 2018a) or *The clone zone* parts one and two (NBC News, 2016a, 2016b). I asked students to look for different kinds of cloning which reiterates what we talked about in the last two videos. I also ask them to pay attention to the ways owners talk about their dogs and the cloning process. I wanted students to be aware of these things before we talked about them in the rest of the module otherwise it seems like I am being judgement or overly critical when I present the personal views of cloning clients. The transcripts for the videos I suggested my students watch during this task are available in appendices eight and nine.

The last task is at the end of module four. I ask students to watch *I cloned my dead dog* (BuzzFeedBlue, 2016) because many of the difficult narratives I talk about can be found in this video. It also adds to the overall number of cloning programs students watch so when we talk about silent narratives they can see how parts of the story are missing. The transcript for this video is available in appendix ten. Each of the quizzes consists of one true/false question and two multiple choice questions. The last module is the final test and follows the same format as the quizzes with five true/false questions and ten multiple choice questions. This course is self-administered so marking the quizzes and tests will be done via the Udemy program.

MOOCs are easily found online and provide a variety of courses in several different topics such as computer programming or philosophy. The courses are usually at a university level and they are provided for free. MOOCs can be found on several online platforms including Coursera (Coursera.org) and FutureLearn (FutureLearn.com). The platform my MOOC will be on is called Udemy and it offers both free and paid courses. Users must register on Udemy before they can register for courses and will receive completion credits upon completing the courses. Udemy asks instructors to fill out several sections to help students decide whether or not they want to take the course. This is what it looks like for my MOOC:

What you'll learn

- Critical thinking skills
- Some basic folklore terms and concepts
- Contemporary beliefs and attitudes about companion dog cloning

Are there any course requirements or prerequisites?

- The only thing you need to bring is an interest in learning
- Although it is not mandatory I suggest you keep a learning journal so you can record any thoughts, ideas and questions you have as you proceed through the course

Who this course is for:

- Anyone interested in folklore studies, companion dog cloning, philosophy and/or bioethics
- Suitable for beginners and more advanced learners

CONCLUSIONS

The aim of my project was to present several ethical arguments and social aspects of companion dog cloning in an interesting and educational Massive Open Online Course (MOOC). I also wanted my MOOC to be accessible for people at any level of education and to introduce folkloristics to more people. My MOOC is called *Folklore and the vernacular of companion dog cloning: Examining beliefs and ethics in regards to pet cloning*. Throughout this project I was mindful of my position of entitlement and privilege as a researcher and author and the power this entails when sharing other people's stories. By presenting several conflicting perspectives surrounding pet cloning I tried to guide students through the material, encouraging them to think about the issues and reach their own conclusions.

My research was governed by the idea that words and the ways we use them matters. To avoid overwhelming students new to academia I did not draw attention to all of my research theories in the MOOC. However, in this paper I have explained the importance of several theories, some of which come together to form the foundation for the entire project and others which were specific to certain areas of the MOOC. Critical Discourse Analysis, and the adaptions made to it to fit discourses about animals, as well as the concept of representation helped explain how word choices reveal the speaker's beliefs and influences other people's beliefs. This is true whether the person is speaking about companion dog cloning or any other topic.

The vernacular is another important concept used throughout the MOOC. In the MOOC, the vernacular is noticeable in the general way people talk about cloning using their everyday or common language which is most easily identified when it is compared to the institutional language of science. Interestingly cloning companies have duplicated the vernacular pet owners use to talk about their dogs in order to appeal to certain people. However, the vernacular becomes inadequate for expressing oneself when what people want to talk about does not fit into their current frame of reference. This leads to the fourth theory, frameworks. People struggle when they try to talk about having cloned their dogs and how to refer to the resulting clone(s). The owners have to expand their frame of

reference so they can adjust to their new reality and put words to thought. This process takes time.

Using a qualitative approach to data collection and analysis my main aim was to 'listen' to what people were saying either in the videos or in the comments left in video comment sections. Regardless of whether people agree or disagree with cloning their opinions are as much a part of the cloning story as the personal experiences of the cloning clients. Furthermore, including several voices exposes students to several perspectives and encourages them to use their own critical thinking skills. Several key themes emerged during analysis which I then presented in the MOOC.

Helping students understand the bond between owners and their dogs was integral for understanding why someone might clone their dog. Cloning clients are either unable or unwilling to define what makes their dog so special. However, outsiders label the specialness as the personality, the "soul" and/or the memories that may possibly be passed from the original dog to the clone. Many of the key themes form the basis of ethical arguments and although cloning clients willingly pay for cloning, many people object on the basis of the cost and claim cloning companies are taking advantage of people. However, whether people support or object to cloning there are several themes that hinge on trying to understand how clones fit into the social world. Perhaps the most disturbing theme is that of silent narratives and the several topics that people are unwilling to talk about. Understanding how silent narratives shape the overall story of companion dog cloning is only one of several further research possibilities.

Since very little research has been done in regards to the social consequences of companion dog cloning, the MOOC and this thesis contribute to wider academia by drawing attention to the ways people, either positively or negatively, talk about companion dog cloning. As science and technology progresses cloning is likely to become part of mainstream medicine. Therefore, it is beneficial to research and understand what the current beliefs, opinion and ideas about cloning are because they have consequences for cloning's future acceptance, use and surrounding policies.

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RÉSUMÉ- Estonian

Kodukoera kloonimise folkloor ja argikeel

Kodukoera (Canis lupus familiaris) kloonimine sai eraklientidele võimalikuks 2008. aastal ning sellest alates on kogu maailmas kloonitud üle tuhande koera. Antud praktikat kajastatakse üha enam ka meedias ning inimestel selle protseduuri kohta mitmesuguseid arvamusi. Kuna folkloristika kui distsipliin keskendub esmajoones inimeste lugude uurimisele, aitab see uurida koerte kloonimise sotsiaalseid aspekte: lemmiku kloonimine on oma põhiolemuselt lugu inimese ja looma vahelisest sügavast, jagatud sidemest. Käesolevas töös analüüsisin ma kvalitatiivset kuulamismeetodit kasutades nii kloonimisklientide kui ka antud teema suhtes arvamust avaldavate inimeste kõne- ja argikeelisi väljendusviise *online* meedias kättesaadavates videointervjuudes ja nende netikommentaarides. Töö teoreetilise baasi moodustavad kriitiline diskursuse analüüs (CDA) ja representatsioon, mis aitavad mõista, et sõnad, mida me kasutame, peegeldavad meie kloonimisega seotud uskumusi ja hinnanguid ning mõjutavad ühtaegu ka teiste inimeste arvamusi. Analüüsist ilmnesid mitmesugused võtmeteemad, mis tõstsid esile inimeste uskumusi, arvamusi ja ideid niihästi seoses kloonimisega kui ka seoses sellega, mil moel sobitub kloon kloonimiskliendi sotsiaalsesse maailma. Oma koeri kloonida lasknud lemmikloomaomanike jaoks on kõnealune praktika sellele kulunud aega ja raha väärt; teisalt aga tõusevad analüüsitud allikates olulisemate teemadena esile protseduuri maksumus, arvamus, et kloonimisette võtted kasutavad inimesi ära ning idee, et kloonimise puhul on tegemist millegi loomuvastase või ebaloomulikuga. Oma uurimistöö tulemuste jagamiseks ja levitamiseks töötasin ma välja ingliskeelse vaba juurdepääsuga e-kursuse (ehk MOOC'i) pealkirjaga The folkloristics and vernacular of companion dog cloning: Examining beliefs and ethics in regards to companion dog cloning ("Kodukoera kloonimise folkloor ja argikeel: lemmikloomade kloonimisega seotud uskumuste ja eetika analüüs"), mis saab kättesaadavaks Udemy.com platvormil. Kuna lemmikloomade kloonimise sotsiaalseid mõjusid on väga vähe uuritud, on nii MOOC'i kui ka käesoleva magistritöö akadeemiliseks panuseks juhtida tähelepanu sellele, millistel – nii positiivsetel kui ka negatiivsetel – viisidel inimesed koerte kloonimisest kõnelevad. Lemmiklooma

kloonimisega seonduvate nüansside mõistmine on oluline, kuna teaduse ja tehnoloogia arenedes võib kloonimisest peagi saada osa tavameditsiinist ning antud teema kohta käivatel hetkeuskumustel, arvamustel ja ideedel võivad olla otsesed tagajärjed kloonimispraktika hilisemale võimalikule aktsepteerimisele ja poliitikale.

APPENDIX 1: Course Introduction Script

Were you shocked and maybe a little intrigued when you heard about pet cloning? I certainly was.

I felt two incredibly strong emotions at the same time. I thought cloning was very weird, unnatural even.

But I was also thinking of a pet I would have cloned if I'd had the chance.

Right away I wanted to know more about cloning and why I felt such strong and conflicting emotions about it. I learned that many people have similar reactions to the ones I had. And that what I thought was possible with cloning was not always true. I also learned that there is a dark side to cloning which is rarely talked about.

But one of the most intriguing things about cloning is that even though most people have negative views about it, there are still plenty of people who decide to do it. And the number is growing as more people from around the world chose to clone their pets.

Hello, my name is Denise McKeown. Welcome to Folklore and the vernacular of companion dog cloning: Examining beliefs and ethics in regards to pet cloning.

I am a folklorist, which is a fancy way to say I study folklore, and this course is based on what I have learned about cloning and people's beliefs about it.

Folklore, at is very core, is the lore of the folk OR the stories of the people. When people talk about and represent companion dog cloning I see connections to the way we create and share folklore to understand the world and our place in it.

By focusing on what people say, we can start to understand the kinds of expectations and beliefs people have in regards to pet cloning, specifically companion dog cloning.

In this course we focus on vernacular language- which is the everyday language- people use to talk about cloning. However, the vernacular language is only visible when we compare it with the official way the scientific community talks about cloning. So for this reason we also look at what science says about companion dog cloning and what science says is possible.

People in the general public have their own way of understanding cloning. People do rely on some official channels of knowledge like the media and science but they are also influenced by other sources such as mainstream or pop culture like books and movies.

Examining the different ways people talk about cloning provides insights into their personal beliefs and expectations regarding the process. But it also offers insights into how they feel about several other topics including how money should be spent or what should be considered natural and so much more. When we understand what people believe about

cloning we start to see how people create their own social worlds and understand their places in it.

Before moving on with the course let's take a moment to go over the schedule.

This course is made up of 6 modules. Each module, except for the last one, consists of two to four video lectures of varying lengths and a short quiz.

The last module consists only of the final test which is made up of true and false questions and multiple choice questions using the same format as the quizzes.

There are also three short tasks in this course designed to help you relate to the topics at hand. One task is at the end of this video, one is in the middle of module three and the third task is at the end of module four.

In Module 1 we talk about what folklore is in more depth. And how it is different from official ways of knowing like scientific knowledge. We also look at how folklore is different from other channels of unofficial knowledge. This helps us understand how people think of and talk about cloning.

We also spend time talking about representation and how the use of specific words provides insights into how people feel about cloning or any other topic. And at how different words can change what we think of the topic.

In **module 2** we talk about the somatic cell nuclear transfer cloning process, the process used to clone companion dogs. We continue this exploration with a very short overview on how to clone a companion dog. This helps us understand some the scientific views about the process.

BUT it also gives us some insights into some of the technical processes the dog owners become familiar with when they decide to clone their dogs.

In **module** 3 we start by examining different groups of animals and how we think of them and treat them differently. And how the bonds people share with their pets makes the pet group so different from other groups. This helps us understand why we focus on companion dog cloning rather than all animals or on pets as a group. By concentrating on the particular words people use to express themselves, we also explore some of the reasons someone might want to clone their companion dog and what people believe is at stake when a dog is cloned.

In Modules 4 we look at some more of the common controversies surrounding companion dog cloning. Whether or not people agree or disagree with cloning they have something to say about it. We start with the ways people talk about the cost of the procedure and how the cost refers to more than just money.

Next we look at the different ways people express their distrust in the cloning companies with allegations that the companies take advantage of grieving pet owners.

Moving on we explore some of the ways people talk about cloning as going against nature and what natural might mean.

Cloning is such a new technology that many people find it difficult to believe but they also find it hard to talk about. In **Module 5** we look at some of the difficulties cloning clients have in talking about different aspects of cloning.

We also talk about silent narratives. These are the parts of the story that no one talks about. And how they impact what we know about cloning.

Lastly, we wrap up the course with highlights from the previous modules.

And like I mentioned earlier, **module 6** is the final test. It consists of multiple choice questions and true or false questions.

At the end of many videos there's a "recommended sources" list for people who want to know more about certain topics. You do not have to read the articles or watch the videos but they will help you understand some of the main points in the course.

A reference list is located at the end of each video and it can also be found in written form under the "resources for this lecture".

It may be beneficial for you to take notes during the course. I suggest that you keep a learning journal nearby so you can write down answers to the questions I ask. It's also a good idea to write down the questions and thoughts you have while going through this course. Also, remember that you can stop, rewind, or watch videos as many times as you like.

The next video starts with a more in-depth look at folklore.

Short Task

But before you move to the next video please take five minutes to complete the first task: Write down a couple things you think of when you hear the word folklore.

References

McNeill, L. S. (2013). Folklore rules: A fun, quick, and useful introduction to the field of academic folklore studies. Logan, Utah: Utah State University Press.

References-Images

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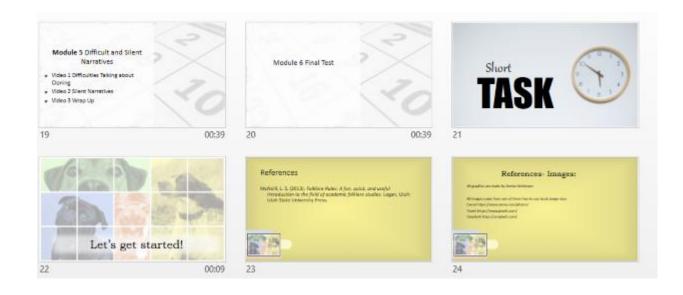
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* I have included the slides that accompanies the scripts for the introduction video. However, even in this compressed size it would be too unwieldly to add the slides for all the videos. Therefore, I have only included a few slides throughout the rest of the scripts in the hopes that it helps readers imagine how slides and scripts come together to construct the videos.







APPENDIX 2: Scripts for Module 1 Understanding Folklore and the Vernacular

Module 1 Video 1 Understanding Folklore

Most people have an idea of what folklore is.

They think of things like fairy tales and legends. Cooking or making things like quilts or baskets. Or maybe they think of traditions like how we celebrate on birthdays or certain holidays. They might also think of folklore as believing in the supernatural.

None of these are wrong but there is so much more to folklore.

All these different kinds of folklore helps us understand the world around us, how we fit in to it and how we adjust our thinking to include new information.

For example we can think about stories like fairy tales. Although we usually think of them as children's bedtime stories, in the past they were tales of caution shared amongst people of all ages.

The story itself as well as *how* it is told and *who* it is told to helps us understand what people think is important to share with others.

Let's consider the fairy tale, *Little Red Riding Hood* (LRRH). This is a story about a little girl who is sent to grandmother's house in the woods. She is not supposed to talk to strangers or go off the path. She does both. And the grandmother and LRRH are eaten by the wolf. The underlying lesson of the story is that there are consequences when the rules are broken.

Looking closely at the story, one thing it can help us understand is that people were wary of strangers and they thought it was important to make sure other people knew this as well.

We can also think about the ways cooking and quilt making or birthday celebrations helps us understand our world.

For example, if we think about quilts we can think about who makes the quilts and why. Are the quilts for newborn babies or maybe part of a burial custom when a person dies?

Birthday celebrations often involve a gathering of people and maybe some cake. But in some places the cake is provided for the person having the birthday and in other places it is the birthday person who provides the cake. In either case the point is to honor the birthday person.

For the last example we can think about a door slamming shut in a seemingly empty room. I might think I left a window open and gust of wind forced the door closed. Or I might believe that the spirit of an ancestor is attempting to communicate with me.

If I believe the first explanation I probably think of the world as a rational place and everything can be explained with scientific facts or proof. If I believe that spirits are responsible I might think that the world is full of unexplained mysteries.

If I believe in spirits I probably do not believe the world *only* consists of rational or scientific facts.

In the next video we will look at the ways folklore and official ways of knowing are different and how they influence what we know about the world.

Recommended Sources

If you'd like to learn more about folklore a fun book to read is *Folklore Rules: a Fun*, *Quick, and Useful Introduction to the Field of Academic Folklore Studies by Lynne McNeill*. See the references for more information.

References-Articles and Books

- Dundes, A. (1980). Who are the folk? In *Interpreting folklore*. Bloomington: Indiana University Press.
- McNeill, Lynne S. (2013). Folklore rules: A fun, quick, and useful introduction to the field of academic folklore studies. Logan: Utah State University Press.
- Valk, Ülo (2016). The quest for meaning in folklore and belief narrative studies. In Zothanchhingi Khiangte (Ed.), *Orality: The quest for meanings*. India: Partridge Publishing, 22-37.

References-Videos and Websites

- McNeill, L. (2015). Folklore doesn't meme what you think it memes [Video file]. Retrieved March 14, 2019 from https://youtu.be/PBDJ2UJpKt4
- Vaz da Silva, Francisco (2016). *In the woods: Little Riding Hood* [Video file]. UTTV. Retrieved March 14, 2019 from https://www.uttv.ee/naita?id=24097&keel=eng

References-Images

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Module 1 Video 2 Official and Unofficial Ways of Knowing

In the last video we looked at folklore as a way of understanding the world. In this video we are going to talk about folklore and how it is different from the official ways of knowing such as scientific knowledge. We will also look at the ways pop culture influences what we know about the world. This will help us understand how people use vernacular language to talk about what they know.

Last time we talked about the different ways we can explain how a door slams shut in an empty room. Was it a gust of wind from an open window? Or a spirit from beyond?

These explanations represents two knowledge systems. Or two ways of knowing the world. An *official* way of knowing and an *unofficial* way.

Official knowledge, also called institutional or formal knowledge, is usually how we think something *should* work because of things like laws or science or historical facts.

Or because we have been told something is true by someone like an environmental scientist quoted in a news story or a lawyer on TV. This kind of knowledge is based on things like facts, proof and evidence.

There are different ways to get things like evidence.

We can think of how science and medicine relies on experiments and tests to know more about illness, nuclear energy, how plants grow and other things like this. We can also think about the evidence a judge hears in court when an eye witness explains what she or he saw.

As you can imagine this kind of knowledge is all around us. We've already mentioned science and law as official channels of knowledge. We can also see it in newspapers, schools, government and so many other institutional forms of learning and sharing knowledge.

In the second knowledge system, the **unofficial** ways of knowing, we can see there is room for explanations outside of scientific proof. This system does not depend on provable or empirical facts the way that the official system does. So information does not need to be proven by facts in order for it to be considered true or real. Instead this system relies on people's values, beliefs, feelings, intuitions and so on. And often we learn it by watching other people.

Here's a couple examples. There are no laws about lining up for ice cream. But we all seem to know how to do it. Most of us have not been to medical school. But we could probably figure out how to use a stethoscope on a teddy bear.

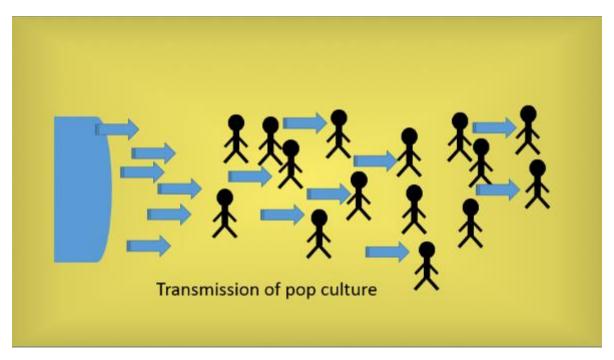
At this point it probably seems that everything that is not official knowledge must be folklore. But it's not

There are several different kinds of unofficial knowledge. One example is **pop culture**. This refers to many things like knowing what kinds of clothes are the right ones to wear to

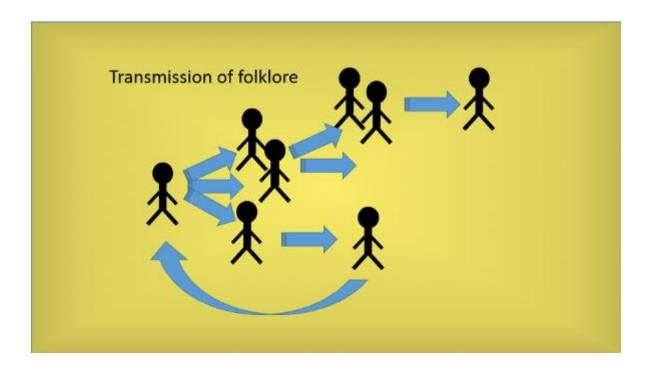
school or to work or for hanging out with your friends. It's also part of the reason we know how to line up for ice cream.

But let's look at how pop culture and folklore spreads throughout a population or group of people. We are going to look at **transmission-** which is how the information moves through a population and **variations-** which are the changes that happen when information moves. We'll start with **transmission**.

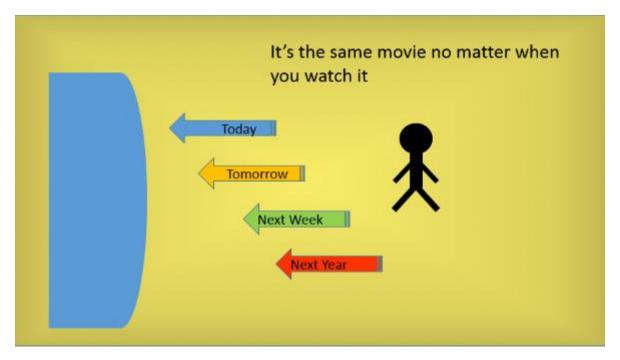
When we think of pop culture we can think of things like movies, books and art. These are mass produced for large audiences. Usually for thousands and thousands, if not millions, of people at a time. This means most of us will watch the same movies and read the same books.



But folklore, like fairytales and quilts, is shared between much smaller groups and individuals. For example, if I share a good joke with my friend then my friend might share the joke with a couple of her friends. And so on. The joke might even make its way back to me. Eventually the joke might reach thousands or millions of people but it takes time. Of course with the internet doesn't take as much time as it used to.



Another important difference between pop culture and folklore are the **variations** or changes that happens when the information is spread. If we think of a single movie or a single book we realize that no matter how many times we watch that movie or read that book it remains the same.



But if we go back to *Little Red Riding Hood* we can think about the ways stories change every time they are told. In many of the versions LRRH and her grandmother are both eaten

by the wolf. Sometimes only one is eaten. In some variations they are saved and in some they are not. In some stories the wolf is a tiger. And there are countless other variations. Some big. Some small.

Changing whether or not people are rescued could reflect who the story is being told to like if there are small children in the audience. And if there are no wolves in the area it might make better sense to change this character into a tiger.

Now we know that folklore is different from official channels of information like science. And from other kinds of unofficial information, like pop culture. We also know that folklore is shared in small groups or between individuals and it changes over time. And we also know there are different kinds of folklore shared in different ways

One way people share information is through talking. And when we talk amongst ourselves in the course of the day we use everyday language. This means language that is not official like specialized scientific language. And it is not formal like listening to a speech from a world leader.

This everyday language is called **vernacular language**.

When people talk about cloning we can think of the lengthy scientific explanations scientists use to explain what they do. Versus the way ordinary people might use the word 'magical' to explain a process they may not completely understand.

It is probably clear by now that cloning is not folklore. BUT a lot of the ways ordinary people talk about cloning is folklore.

In the next video we will look at representation so we can understand how using certain words to explain something like cloning can change the way we understand it.

References- Articles and Books

Blank, T. (2018). Folklore and the internet: The challenge of an ephemeral landscape. *Humanities*, 7(2). https://doi.org/10.3390/h7020050

McNeill, L. S. (2013). Folklore rules: A fun, quick, and useful introduction to the field of academic folklore studies. Logan, Utah: Utah State University Press.

References-Video

McNeill, L. (2015). Folklore doesn't meme what you think it memes [Video file]. Retrieved March 14, 2019 from https://youtu.be/PBDJ2UJpKt4

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Module 3 Video 3 Representation

In the last video we looked at how folklore is one kind of unofficial knowledge and some of the ways it is different from official channels of knowledge. We also looked at the way we use vernacular language to talk about what we know.

In this video we are going to talk about what representation is and how it impacts what we believe about cloning.

Representation refers to the way we use symbols, such as a word, to stand in for or take the place of an object. For example, we can think about the word 'tree'. The word tree is not the actual tree you can see outside your window. Rather the word 'tree' stands in for, or it represents, the actual tree.

When we hear the word 'tree' we all have something that comes to mind. For example did you think of a simple *illustration* of a tree? Like this? Or this? Or maybe this?

Maybe you thought of a more realistic tree. Like a leafy tree on a sunny summer day. Or one that has lost its leaves and is covered in snow and frost. The tree you thought of might grow across the ground instead of up and down.

All of these kinds of trees shows us how we all think of the same kinds of things differently. We have our own internal representation system for everything we can possibly think of.

Also, the way I represent or talk about a tree can change how someone else thinks about it. For example, if I ask you to think of a holiday tree, what do you think of? The kind that can be decorated and kept in the house over the holidays? Or the kind that you find when you go on holiday in a warm climate?

Another way I can change how someone thinks about a tree is to use either scientific or common words to talk about it. For example, what do you think of when you hear 'deciduous tree'? This merely means a leafy tree.

Ideas and feelings can also be represented by something. You can think about how you might reply to a comment on social media with different emojis. Or use hearts to show we love someone or something. Or maybe a picture of a sun to represent a sunny day. We can also draw thought bubbles to represent a thought.

There are several ways to represent any single object like a tree. So far we have seen illustrations, photographs and words. But there are also videos and sculptures and so many more ways.

But in this course we focus on the words people use. Specifically we will focus on the words people use to represent the cloning process as well as the clones and the dogs who have been cloned.

Just like people have an idea of what a tree is everyone has an idea of what a dog is and many also have an idea what cloning is.

The words people chose to use when they talk about or represent their feelings about cloning not only influences what we think of cloning it also helps us understand how *they* feel about cloning. Regardless of whether people agree with or disagree with cloning they use specific words when they talk about it. For example, a person who agrees with the procedure may see cloning as a miracle of science while people who disagree with it may say it is a mistake. Also, if a person says they disagree with cloning we understand it differently than if they say they think cloning is disgusting.

This is the last video in the first module.

In this module we have learned about the difference between the official ways of knowing used by institutions like science. And unofficial ways of knowing like lining up for ice cream.

We looked at how folklore is one kind of unofficial knowledge and that it different from other unofficial ways of knowing like pop culture because of the way it is moves around groups of people and the way it changes as it goes.

We also learned about the vernacular language people use to talk about cloning. And at how changing the ways cloning is represented can influence what we think about it.

In the **next module**, module two, we will take a quick look at what somatic cell nuclear transfer is and at how to clone a companion dog.

Recommended Sources

If you want to know more about representation check out Stuart Hall's book *Representation: Cultural Representation & Signifying Practices*. You can find the details in the reference list.

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- Fairclough, N. (2001). Critical Discourse Analysis as a method in social scientific research. In R. Wodak & M. Meyer (Eds.), *Methods of Critical Discourse Analysis* (pp. 121–138). London, England: Sage Publications Ltd. https://doi.org/10.4135/9780857028020.n6
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- Howard, R. G. (2005). Toward a theory of the World Wide Web vernacular: The case for pet cloning. *Journal of Folklore Research*, 42(3), 323–360.

Mitchell, L. (2006). Animals and the discourse of farming in Southern Africa. *Society and Animals*, 14(1), 39–59.

Nelkin, D., & Lindee, M. S. (2001). Cloning in the popular imagination. In A. J.
Klotzko (Ed.), *The cloning sourcebook* (pp. 83–93). Oxford: Oxford University
Press. Stibbe, A. (2001). Language Power and the Social Construction of. *Society and Animals*, 9(2), 145–161.

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The answers are highlighted but I will remove it before I put it quiz on Udemy.

Module 1 Quiz

- 1. When people use vernacular language they also incorporate official language and are influenced by pop culture
 - A. True
 - B. False
- 2. Representation
 - A. Refers to the way we use symbols to stand in for objects
 - B. Refers to the way words stand in for emotions or beliefs
 - C. Influences what we know
 - D. All of the above
 - E. None of the above
- 3. Folklore
 - A. Refers only to making quilts and telling stories
 - B. Helps us understand the world around us
 - C. Refers to every possible way we communicate
 - D. All of the above
 - E. None of the above

APPENDIX 3: Scripts for Module 2 Understanding Cloning

Module 2 Video 1

Understanding Somatic Cell Nuclear Transfer

Hello. Welcome to the second module of Folklore and the Vernacular of Companion Dog Cloning.

In the last module we spent time talking about what folklore is and how it can be differentiated from other ways of knowing. And at how different ways of representing cloning provides insights into people's beliefs about cloning and influences what we think about it.

In this module we will look at the cloning process to better understand what cloning is. And although this module does not use official and often difficult scientific explanations it does use a scientific approach and will help make vernacular language easier to spot as we progress through the course.

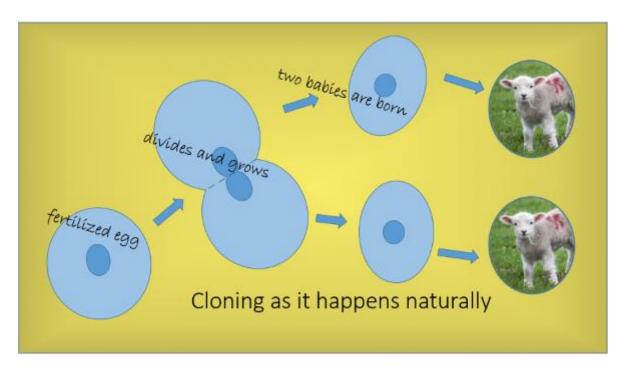
BUT before we get started I want to remind everyone that at the end of many videos there is a "recommended sources" list for people who want to know more about certain topics. You do not have to read the articles or watch the videos but they might be helpful to you.

There is also a complete reference list located at the end of each video and in written form in the "resources for this lecture". Remember you can stop, rewind and re watch videos as much as you like.

Most of us have an idea of what cloning is. We've probably read about it in a newspaper or a book or seen it in a movie. The 1993 hit, *Jurassic Park*, is a great example. It was even based on some of the cutting edge scientific ideas and technology of the time. When the movie was made, scientists really were trying to extract insect DNA from the bugs caught and preserved in amber.

As the first clone created from an adult animal, Dolly the sheep became almost as famous when she was born in 1996. For many people Dolly became the bridge between science fiction and scientific reality.

Cloning can happen naturally. Like in the case of identical twins, whether it is with sheep or people or any other animal. Identical twins happen when a fertilized egg splits and both halves continue to develop.



But the way Dolly was cloned can only happen when scientists make it happen. The cloning process used to produce Dolly is called somatic cell nuclear transfer (SCNT).

Somatic cells are the cells that come from *any* adult animal, including people. Up to this point, cloning had only been done using cells from embryos which are the unborn babies of sheep and other animals. These cells are called embryonic cells.

During the early stages of the embryonic development of any animal, cells have the potential to develop into anything the body needs like skin cells, liver cells, muscle cells - you get the idea. But after a certain stage in development the cells become specialized and will only be that kind of cell- like a skin cell.

During the somatic cell nuclear transplant process the cells that have been collected from the adult animal that is going to be cloned are reprogrammed to act like embryonic cells. Once they go back to acting like embryonic cells they can once again become anything like skin cells, liver cells and so on.

Since their success with Dolly, scientists have cloned several mammal species including rats, rabbits, cattle, goats, horses, cats and dogs.

In the next video we will look briefly at how a companion dog is cloned and at how people talk about the process.

References

Shapiro, B. (2016). *How to clone a mammoth: The science of de-extinction*. Princeton, New Jersey: Princeton University Press.

Van Eenennaam, A. L. (2015). Animal biotechnology: Scientific, regulatory and public acceptance issues associated with cloned and genetically engineered animals. In H. Khatib (Ed.), *Animal genetics* (pp. 289–301). Hoboken, New Jersey: John Wiley & Sons, Incorporated.

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Module 2 Video 2 How to Clone a Companion Dog

In this video we will follow up our discussion about somatic cell nuclear transfer with a brief overview on how to clone a companion dog.

In order to clone their dogs, owners need to have several skin samples taken from their living dog or a dog that has been dead for no more than 5 days and has been kept cool not frozen (to preserve live cells). Usually a veterinarian performs this task but in some cases the owners do this job after their dog has died.

Once collected, the genetic material is sent to one of two companies that currently do this kind of cloning. One company is called ViaGen Biotech and it is located in Texas in the United States. It has been operating for years but they only opened their pet division in 2016. The other company is located in Seoul Korea and is called Sooam Biotech Research Foundation. This company has been cloning companion dogs for clients since 2008. Although their pet division is called 'Not You But You' but most people refer to its official name- Sooam Biotech. And I will too.

When the DNA from the dog who is going to be cloned reaches the laboratory, scientists do a number of procedures to get the cells ready for either cell banking, that is when the cells are frozen in liquid nitrogen for later cloning, OR for immediate use in the cloning process. This involves several days and many different procedures.

Meanwhile, several eggs are collected from donor dogs. The dog is put under general anesthesia and operated on so the uterus can be accessed and the eggs siphoned out. Once the eggs are removed the uterus is put back in place and the operation site is closed.

Next, the nucleus is removed from the eggs. The eggs are now considered to be 'genetically empty' even though the mitochondria remains behind. The mitochondria contains genetic material from the egg donor which will be passed on to the clone.

The genetic material from the dog that is going to be cloned is fused together with the egg from the donor in a machine using a small electrical shock. The fertilized eggs begins to divide and when there are enough cells they are implanted into a surrogate mother.

Once again this involves an operation. The surrogate mother is put under general anesthesia and the embryos are surgically implanted in her uterus. To provide the best chance for a live clone several embryos are implanted into several surrogate mothers at the same time.

After pregnancy is confirmed it takes about two months before the puppies are ready to be delivered. Clones are often delivered through cesarean section rather than conventional birth. The surrogate mothers take care of the babies until they are old enough to be weaned or separated from their mother.

After weaning, the clones must wait at the laboratory until they meet certain age restrictions for traveling. And that depends on the country they're going to.

But genes are tricky things.

Although the clone is a genetic match the ways this match is described can be quite different. For example, is the clone a genetic copy? Or is ViaGen correct to call the clone a twin born at a later date?

Furthermore, the ways genes are expressed can be different for every dog. This means the clone will not necessarily look like the original dog. She or he can be a different size or different color. The clone might even be a different sex than the original dog.

This concludes the technical but simplified overview of cloning a dog.

But the way people talk about this process is much less technical than this overview.

In 2015, British couple, Laura Jacques and Richard Remede cloned their 8-year old boxer, Dylan, after he died. In an interview on the British TV show, This Morning, Laura explains part of the cell banking procedure.

Laura: "So, basically, once your dog's died, or you can do it when your dog's alive and they take some skin cells and over in the laboratory in South Korea they do something magical some kind of electric shock to these cells and it makes them grow in number then they freeze them in liquid nitrogen so if you ever do want to clone later down the line . . ." (Laura Jacques on "We spent £70, 000 to clone our dead dog," This Morning, 2016).

Laura's use of the word 'magical' can be influenced by several factors. For example, Laura may not completely understand the technical parts of cell banking so she summarizes much of what happens at the laboratory with the word 'magical'. Or she may understand much more than is evident here but is aware that her audience may not understand an overly technical description. It is also possible that Laura believes there's a certain magical or supernatural aspect to the scientific reality of cloning.

Another video available on YouTube, *The science behind cloning*, the story of Junichi Fukudo, a Japanese man who cloned his black pug, Momoko. One commenter provides several reasons why they would not clone their pet and at the end describes some of the technical aspects of cloning like this and please note that I have left the spelling and wording the way it was written in the comment:

"it's not even like this is convenient... refrigerating your dead dog and sending it to have pieces of its skin chopped up into small pieces in search of live skin cells... shipping it to south korea... then performing on operation on a perfectly healthy dog to remove her ovaries for eggs and the other removing the ovaries AND uterus to inject embryos which might not even work so then they REPEAT THE PROCESS on more innocent dogs... i understand cloning shows how we're making great strides in technology but this is cruel and morally incorrect" (comment on "The science behind cloning," Tech Insider, 2015).

The commenter clearly disagrees with cloning and seems to be stripping away some of the video's neutral or technical language using words like 'chopped' to describe the skin biopsy. And pointing out that the dogs used in this process are innocent. And that they are healthy so they do not need surgery. The poster ends by pointing out that although cloning shows scientific progress it is also cruel and morally incorrect.

Regardless of their personal views, we can see how both Laura and the commenter combine official and unofficial ways of knowing to explain what they understand.

This is the last video in module two.

Now that we have a better understanding of what cloning is and how it is done we can look at why someone might want to clone their companion dog.

Pets are cloned for different reasons than other animals so we will start **module 3** by looking at different animal groups and how we think of them and treat them differently. When we focus on pets we can see people have strong emotional bonds to their pets and we can begin to understand why people might want to clone their dog and why others disagree with them.

Recommended Sources

For a short video about the cloning process you can check out ViaGen's video on YouTube. It's called *ViaGen Pets: How cloning works*.

You can also find some visual aids at either the Sooam Biotech site or the Not You But You site.

Additional information for all of these sources are in the references.

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Logos come from their respective company websites

Sooam Biotech Research Foundation http://en.sooam.com/

ViaGen Pets https://viagenpets.com/

Not You But You http://www.notyoubutyou.com/

The answers are highlighted but I will remove it before I put it quiz on Udemy.

Module 2 quiz

- 1. Clones always look identical to the original dog
 - A. True
 - B. False
- 2. Somatic cell nuclear transfer
 - A. Can only be done by humans
 - B. Is an artificial cloning method
 - C. Use the cells from an adult animal
 - D. All of the above
 - E. None of the above
- 3. Clones
 - A. Will have genetic material from the original dog and the egg donor
 - B. Will have genetic material from the original dog only
 - C. Are only cloned in the United States
 - D. All of the above
 - E. None of the above

APPENDIX 4: Scripts for Module 3 Cloning Companion Dogs and What's at Stake

Module 3 Video 1 Animal Groups

Hello, this is the third module of Folklore and the vernacular of companion dog cloning.

In the last module we looked briefly at somatic cell nuclear transfer and how to clone a dog and at some of the vernacular language people use to talk about this process.

In this module we are going to look at the ways we group different animals together and how this influences the ways we think of them and treat them. Then we will focus on pets as a group and the different kinds of emotional bonds people have with them. This will help us understand why someone might want to clone their dog and what people believe is at stake when a dog is cloned.

BUT before we get started I would once again like to remind everyone that at the end of many videos there is a "recommended sources" list for people who want to know more about certain topics. You do not have to read the articles or watch the videos but they might be helpful to you.

There is also a complete reference list located at the end of each video and in written form in the "resources for this lecture". Remember you can stop, rewind and re watch videos as much as you like.

If we think about grouping animals into different categories we can think of groups like wildlife, livestock, working animals or pets.

You probably already have an idea how you would group the animals in these pictures.



Deer and elephant as wild animals. Cows and sheep as livestock. Some animals are working animals with very specific jobs. Like polo ponies and police dogs. And other dogs and hamsters we think of as pets.

As you have already seen, animals don't belong only in one group. Another example of an animal that's in different groups are rabbits- some are wild, some are raised as food and some are pets.

And when we think of the different categories we notice that people interact with the animals in those categories in different ways. For example, many people think of wild life as roaming free without human interference. Livestock as providing meat or milk to people. Or working animals as doing jobs for us. And we think of pets as animals that share our lives and often our homes.

Of course not everyone thinks of animal groups these ways but this gives us an idea of how animals *are* grouped together. Cloning scientists think about each of these groups differently too. For example, some focus on cloning endangered species like the jaguar. Or even newly extinct wild animals like the guar, which is a type of wild cattle. Others work on de-extinction programs and are trying to bring back animals like the woolly mammoth.

Other scientists are more concerned with cloning specific animals in the livestock category because they are superior milk producers or superior meat producers. Milk and meat production are physical traits that can be passed to offspring and the traits are more likely to be passed on through cloning than they are through conventional breeding programs.

Horses are one of the animals that belongs to several groups. They are often categorized as livestock but different horses have different roles. Including pets. If we think of them as working animals then we see they are cloned for physical traits like speed and agility.

Some dogs also have jobs. Like scent detection or sniffer dogs who sniff out explosives or drugs. Superior sniffing abilities are another example of physical traits that can be passed to offspring more reliably through cloning than through conventional breeding. And although handlers certainly love their dogs these dogs are cloned because of the work they do. Not because of the emotional bonds they share with people.

Clearly there are too many differences in the ways we think of and treat animal groups for us to try and understand how people feel about all animal cloning. We can see that there might be practical reasons for cloning certain animal groups like wild animals, livestock and working animals. But pet cloning is different. Pet owners chose to clone their pets because of their strong emotional connections.

In the next video we will take a closer look at pets to further explore this bond.

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Module 3 Video 2 Pets and Companion Dogs

In the **last video** we saw some of the ways groups of animals are thought of and treated differently.

In this video we'll look at our emotional bonds to pets and how this makes pets different from other animal groups.

Before continuing with this video I should mention that many people do not like the words 'pets' or 'owners'. They see these words as demeaning to the animal and believe this highlights an unequal relationship in which the animal is considered inferior to humans. Many people believe that animals are much more than property and try to find different words that express the relationships they have with the animals in their lives.

Some people consider their relationships to the animals as being equivalent to that or even better than their relationships with people. They prefer terms that describe human relationships saying the animal in their life is just like their child. And tend to call them baby or furbaby. Other people see the relationship with their animals as being more of a partnership or a friendship. They prefer terms such as friend, best friend and companion.

You have probably noticed that it is very difficult to find a single word that embraces all of these different kinds of relationships. So, when I use the words 'pets' or 'owners' I am using them as a way to represent all these relationships.

Although people have several kinds of relationships with their pets there are some things that are common for all. First and foremost, pets are not eaten like wildlife and livestock. They don't usually make money for their owners like livestock and sniffer dogs. In fact, they can be quite expensive to have. Pets have names and even nick names.

And Pets often have certain rights and privileges within the household. They have their own furniture and share or even take over our furniture. We celebrate birthdays and holidays with our pets. We share adventures with our pets, usually with our dogs. Of course there are many other ways pets are part of our lives but the most important thing is the emotional connection people have with their pets.

And clearly this bond is what makes pets different from other groups of animals. This bond helps explain why we focus on companion dogs rather than on dogs as a group. The other reason we focus on companion dogs is that even though companies clone several animal species they only offer limited pet cloning. Both Sooam Biotech and ViaGen Pet offers cloning for dogs and ViaGen also clones cats and horses. Of these three species there is substantially more material available for dogs than there is for cats and horses.

It is probably impossible to figure out exactly why people clone their dogs but there are several things cloning clients have in common and this is the topic of the **next video**.

But before moving to the next video please complete the module 3 short task. You can also find it in the section called 'Resources for this lecture'.

Module 3 Short Task (goes between M1V2 Pets and companion dogs and M1V3 why someone might want to clone their dog).

Watch either:

- On Assignment: The Clone Zone from NBC News
- Jurassic Bark: Pet owners spending \$135,000 to clone their dogs from 60 Minutes Australia.

The details and video addresses are located at the end of this video in the reference list and in the 'resources for this lecture file.'

Pay particular attention to the different reasons people clone different animals. What kinds of reasoning do people use when they want to clone different animals? When people talk about their pets how do they explain their relationships with their dogs?

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Module 3 Video 3 Why Someone Might Clone their Dog

In the last video we looked at how the emotional bonds people share with animals is strongest with pets than other animal groups.

I also asked you to watch one of two cloning programs to see how animals are divided into groups and how cloning clients talk about their relationships with their dogs.

At this point can you think of any reason someone would consider cloning their dog?

In this video we look at some of the things cloning clients and people who want to clone have in common.

There is no single reason why someone would chose to clone their dog and the reasons they do have, overlap with the ways people generally feel about their pets. But cloning clients and people who would like to clone their dogs DO have some important factors in common with each other.

We'll look at these four:

- The person only wants that one particular dog
- The dog has gone through a rough time with the person
- The person has trouble letting go.
- The dog is 'something special'

For many people it is difficult to understand why the owners do not get a different dog, either buying one of the same breed or adopting one from a shelter.

For example, this comment, left on the video, We spent £70, 000 to clone our dead dog, expresses this inability rather well:

"Instead of spending a fortune on a clone of your dog why don't you drive a little ways away and adopt a dog that needs a family that could be put down if it isn't adopted?" (comment on "We spent £70, 000 to clone our dead dog," This Morning, 2016).

But people who decide to clone their dogs do not want just any dog, they want the dog they are going to lose. The decision to clone is based on the relationship with that specific dog. There may even be more than one dog in the household. And one of those dogs might even be related to the dog they want to clone.

This is important when trying to understand why the owner doesn't adopt or buy another dog. Laura Jacques and Richard Remede cloned their boxer, Dylan, in 2015 and ended up with two clones, Shadow and Chance.

In an interview on the British TV show, *This Morning*, host, Ruth Langsford points out that many people want to know why Laura and Richard cloned their dog instead of adopting one and that they probably could have found another boxer. Laura explains that she and Richard had no intention of getting a new dog when Dylan died.

Laura says, "Yeah. I mean we weren't actually planning on getting another dog and we do have these four extra dogs but it's not like they've taken up four spaces of some rescue dogs" (Laura Jacques on "We spent £70, 000 to clone our dead dog," This Morning, 2016).

When Laura refers to 4 dogs instead of 2 this is because she and Richard also adopted the surrogate mothers, Hope and Saffy.

Many people who want to clone their dog have spent more time with that dog than with anyone else. For example,

Laura explains "He was my total best friend, yeah. I spent more time with Dylan in those eight years than I did with anyone else" (Laura Jacques on "On assignment: The clone Zone," NBC News, 2016).

The dog people want to clone was also an important emotional support especially during particularly difficult times in their lives. Junichi Fukuda, a Japanese man, cloned his black pug Momoko, in 2015.

The internet program, *Tech Insider*, describes Junichi and Momoko as being inseparable for 16 years.

Junichi says: "I divorced my wife when Momoko was six-years old and it was just me and Momoko after that" (Junichi Fukuda on "The science behind cloning," Tech Insider, 2015).

Clearly their bonds are very strong and the owner does not want to lose their dog and will do whatever they can to avoid that loss. Some people even consider having the dog stuffed by a taxidermist.

Dylan's death was something Laura had dreaded during their entire relationship.

She says, "I just didn't know how I was going to cope . . . The worse thing in my world I'd dreaded for 8 years 7 month and twenty three days. It happened and there was no way that I could comprehend that"

(Laura Jacques on "How we cloned our dead boxer dog Dylan," The Guardian, 2015).

The dog people want to clone is somehow special, more special to the person than any other dog they have ever known. And we all know how difficult it is to explain what makes someone, human or pet, so special to us.

British national, Tom Rubython cloned his cocker spaniel Daisy in 2014. In a 2018 Interview on 60 Minutes Australia, Tom tried explaining to host Tara Brown why Daisy was so special to him.

Tom says, "It's hard to describe ... You have to love your dog to have a dog. But there's certain dogs ... special dogs, and they're a bit more intelligent than the average dog and its just something" (Tom Rubython on "Jurassic bark part 1," 60 Minutes Australia, 2018).

Laura and Richard also tried to put into words why Dylan was so special to them.

Richard- "You know [he] didn't have a bad, bad thing in his body. Everyone loved him didn't they?"

Laura- "Yeah everyone that ever met him he was just the softest dog ever, like the kids would climb in his basket and fall asleep with him. And you could just trust him 100%" (Richard Remede and Laura Jacques on "How we cloned our dead boxer dog Dylan," The Guardian, 2015).

We might not be able to pinpoint exactly what makes this one dog so special but what we do know is how important that dog is to the person and that no other dog could possibly take her or his place. This dog is part of the person's social world and their world makes no sense without that dog. We will continue this discussion in the **next video** when we look at what people think is at stake when a dog is cloned.

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Module 3 Video 4 What is at Stake?

In the last video we heard the ways people talk about the dog they decided to clone and how that dog cannot be replaced by another which is why they do not buy or adopt a new dog. They also talk about how special that dog was and their difficulty in letting go.

In this video we will see that other people have their own way of describing what cloning clients find so difficult to describe- that 'something special'.

Cloning critics try to explain that 'something special' when they question whether or not the soul, the personality or the memories are transferred from the original dog to the clone and it is difficult to know what to expect when a dog is cloned.

A couple comments left on the video, *The science behind cloning* featuring Junichi Fukuda and Momoko, capture this uncertainty:

"This is weird. Imagine you are the dog that died and you got cloned it's like a different dog that is same" (comment on "The science behind cloning", Tech Insider, 2015).

Or in another comment:

"The dog is the same it just doesn't have the personality and memories" (comment on "The science behind cloning" Tech Insider, 2015).

So what does it mean for a dog to be the same if she is "the same but different" or she no longer has the memories of the original dog?

Cloning companies try to manage the expectations of potential cloning clients without discouraging them. On their websites they tell clients that genes can help shape temperament and character but stress that the personality of the dog is the product of their environment, not genetics.

The following is a direct quote taken from the Not You But You FAQ page on their website:

The question asks: "Are their personality the same?"

Not You But You says: "Personality is greatly influenced by environmental. However, more and more findings are highlighting the importance of genes in determining personality traits. When looking at human identical twins raised apart, scientists have observed many shocking similarities as reported in the 'Minnesota Twin Studies.' By replicating the genes, we replicate the 'potential, or genetic tendency' for the clone to develop like the original, but cannot replicate the rearing experiences" (From the Not You But You, FAQ page).

ViaGen says something similar on their website in the FAQ section:

'Is a pet born through the cloning process physically and behaviorally identical to the 'original' pet?"

"... The environment does interact with genetics to impact many traits such as personality and behavior" (emphasis original, from the ViaGen Pet FAQ page).

Basically what the companies, and what science, is saying is that that even though the original dog and the clone share the same genes, their life experiences are going to be different.

So, for example, if the original dog had a bad experience at a lake he might not go into the lake. And if the clone has never had this particular experience she might love to swim.

Although some people agree with the scientific explanation about the dog's personality other people question whether or not science is correct about this. When people try to understand what they think happens when a dog is cloned they talk about things like the soul, the personality and the memories of the clone and how they measure up to the original dog.

The following comments were left in the comment section for the video *The science behind* dog cloning and please note that I have left the spelling and wording the way the way it is written in the comments:

One person says, "this is wht i've been asking all the time....does clone have soul?" (comment on "The science behind cloning," Tech Insider, 2015).

Another asks,

"Will the dog have the same soul or a different one?" (comment on "The science behind cloning," Tech Insider, 2015).

Or a variation of the question:

"The real question is: Do they get their own souls?" (comment on "The science behind cloning," Tech Insider, 2015).

Some people already have ideas about what is coming back. One person explains that:

"It's like they have the body of someone you loved but with a different soul. They can't replace the soul. It's the soul u loved not the body" (comment on "The science behind cloning," Tech Insider, 2015).

The following commenter seems to be influenced by official religious doctrines regarding souls and wants to know where the clone's soul will come from:

"Wow this is scary.. they're going to be cloning humans at some point and it just makes me wonder about their souls, I don't care what anyone says, you can not clone a soul! So where is that soul coming from? It can't be from God" (comment on "The science behind cloning," Tech Insider, 2015).

The soul and personality are talked about slightly differently. People often want to know if the clone will have a soul or where the soul will come from. But when people talk about the personality it seems to be taken for granted that the clone will have one. What people wonder about is whether the personality is transferred from the original dog or whether the clone is born with her or his own personality.

For example,

"You can clone a dog for 50,000 or a cat for 25,000 and hell yes I want to clone my baby... It won't be the SAME creature but you can bet it's characteristics DO carry over. It's like you have an identical twin or even the son/ daughter of your beloved pet. Personally i'm going to try it on my dog after college. This company ViaGen will even preserve their DNA for \$1600 til you're ready! My dogs my son and if I could carry on even a part of him then i'm gonna try!" (comment on "The science behind cloning," Tech Insider, 2015).

Other people are influenced by what science has to say on this matter. For example:

"Temperament is a part of personality... and there's a genetic component to temperament. So part of your personality is genetic. And if it's the same owner, environment, etc... there's a way higher chance of the same personality. . . . tadaaa science" (comment on "We spent £70, 000 to clone our dead dog," This Morning, 2016).

Some people want to know what the clone is going to remember. One person asks:

"Can the clones even remember you" (comment on "The science behind cloning," Tech Insider, 2015).

For other people it is obvious the clone will not remember the owner:

"But they won't have the most important thing in a dog...Memories" (comment on "The science behind cloning," Tech Insider, 2015).

People's beliefs about whether or not the clone will remember her owner or have the personality or soul of the original dog are influenced by their vernacular beliefs that pets have souls and an afterlife. Even the idea that dogs have souls uses official religious doctrine regarding souls and an afterlife for humans.

Whether they talk about souls, personalities or memories people are often trying to understand what exactly can be cloned. And their beliefs about what can be cloned influences whether or not they think pet cloning is a good idea.

What do you think? Can souls, personalities or memories be cloned? How does this influence what you think of companion dog cloning?

This is the end of module three.

In this module we covered different animal groups and the ways they are thought of and treated differently. We looked at how pets are different from other groups because of the strong emotional bonds people share with their pets.

We also talked about the different reasons people have for wanting to clone their dogs. And we carried this discussion over to the last video in which people try to understand what exactly comes back when a dog is cloned.

In the next module we look at three more common objections people have to pet cloning: the cost, the possibility that cloning companies are taking advantage of grieving pet owners and that cloning is against nature.

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All graphics are made by Denise McKeown

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The answers are highlighted but I will remove it before I put it quiz on Udemy.

Module 3 quiz

- 1. People who clone their pets have a difficult time explaining why that dog is so special to them
 - A. True
 - B. False
- 2. People who clone their companion dogs
 - A. Have a single reason for doing so
 - B. Know for a fact that the personality of the original dog will be transferred to the clone
 - C. Only want to clone this particular dog even if there are other dogs in the household
 - D. All of the above
 - E. None of the above
- 3. Companion dogs
 - A. Are more likely to be cloned than cats or other pets
 - B. And scent detection dogs are cloned for the same reasons
 - C. Are only cloned in the United States
 - D. All of the above
 - E. None of the above

APPENDIX 5: Scripts for Module 4 Common Controversies

Module 4 Video 1 The Cost

In the last module we talked about different animal groups and how people are more emotionally connected to pets than to other animal groups. We also looked at why some people might want to clone their dogs and what makes one particular dog more special than all the others.

In this module we look at some more conversations and controversies surrounding companion dog cloning. We will look at what people say about the cost of cloning and how some believe it would be better to spend the money on other things like helping shelter dogs. Then we will look at how cloning companies are seen either as helpful or as taking advantage of grieving pet owners depending on how the speaker views cloning. We will also spend some time examining people's beliefs that cloning goes against nature.

BUT once again I would like to remind everyone that at the end of many videos there is a "recommended sources" list if you want more information about certain topics. You do not have to read the articles or watch the videos but they might be helpful to you.

There is also a complete reference list located at the end of each video and in written form in the "resources for this lecture". Remember you can stop, rewind and re watch videos as much as you like.

Regardless of which currency you use, cloning is expensive. Currently ViaGen charges \$50,000 US for pet dog cloning And Sooam charges \$100,00 US. But neither price includes expenses like

- transport of the DNA from the original dog to the laboratory
- travel and accommodations to go see the clones
- Travel and quarantine when the clones come home
- And more

The media often focuses on the cost of cloning implying it is a frivolous way to spend money.

For example, on the *Jurassic bark*, program host, Tara Brown, says "Ouch. That's a lot of money" when talking with cloning client Tom Rubython who cloned his dog Daisy in 2014 ("Jurassic bark part 1," 60 Minutes Australia, 2018).

On the Clone Zone, Harry Smith uses the term "sticker price" a term more often associated with luxury items like sports cars and jets ("On assignment: The clone zone," NBC News, 2016).

But not everybody who wants to clone their dogs find it easy to come up with the money. Before Dylan became ill, Laura saw a story about companion dog cloning on TV. She says:

"I remember thinking I would love to do that with Dylan but you could never warrant spending that much money. I mean where would you get all that money from. Well then the day after he died you [Richard] actually said to me 'what about this cloning thing? Can't we look into it?' 'like are you kidding that's 65,000 pounds' which is a hundred thousand dollars" (Laura Jacques on "On assignment: The clone zone," NBC News, 2016).

Laura and Richard decided to look into cloning. Originally they wanted to bank Dylan's cells and decide later if they wanted to clone him or not. Unfortunately the cells would not have survived the process and had to be used right away or not at all. In order to pay for the procedure Laura and Richard decided to leave the house they were building, unfinished.

Similarly, on *Jurassic bark* Tom Rubython explained that he'd sold some of his classic cars so he could afford to pay for Daisy's cloning (Tom Rubython on "Jurassic bark part 1," 60 Minutes Australia, 2018).

In the comment section for the video, *The science behind dog cloning* (Tech Insider, 2015) which features Junichi Fukuda and Momoko's story, several people explain that they would clone their pet if they could afford to do so. Before we look at the examples I would like to remind everyone that the spelling and the wording in the quotes is the same as it is in the comments.

So, one person says:

"If I was a millionaire I would, but I'm even struggling to save up for a laptop" (comment on The science behind dog cloning, Tech Insider, 2015).

A commenter on We spent £70, 000 to clone our dead dog explains that

"my dog Daisey is died we wanted to clone her soooooooo bad but we did not have enough money" (comment on "We spent £70, 000 to clone our dead dog," This Morning, 2016).

It is important to understand that the cost only determines who will clone their dog not who wants to clone their dog.

Of course for many people it does not matter how much cloning costs it will always be a waste of money. Another commenter from the video *The science behind dog cloning* says:

"nooooo this is SUCH a waste, you're going to spend \$100,000 and completely brush over the 3.9 million dogs living in kill shelters in the US ALONE. 2.3 million of which are EUTHANIZED to make a

physically identical clone of your deceased dog which may not even have the same personality or charm of your dead dog?? it's not even like this is convenient..." (comment on "The science behind dog cloning," Tech Insider, 2015).

This comment goes on to talk about the cloning procedure which we saw in module 2. But what is interesting in this part of the comment is that the poster feels it is a waste of money and draws on the plight of unwanted animals to justify their argument.

But we saw in the last module that people who clone their dogs only want the dog they are going to lose. People who clone are not interested in adopting shelter dogs.

Some people do defend cloning:

"I think this is perfectly fine . . . Even though it won't be the same dog again, I think the owner understood this, the value of a dog carrying the desired genes is worth its own value. More than just a dog with same breed/color, genes have its own merit, which makes it boils down to a matter of preferences . . . And about the cost-benefit, I think it's just a matter of choice for the owner, whether to clone it or to buy another one" (comment on "The science behind dog cloning," Tech Insider, 2015).

This commenter draws on some of the official language of finances when talking about 'cost-benefit,' in effect equating "desired genes" with a monetary value.

Clearly people spend their money on what they think is important. And for some people what is important is to clone their dogs and whether or not they actually do it comes down to whether or not they can afford it.

In the next video we will take a closer look into beliefs regarding whether or not cloning companies are taking advantage of grieving pet owners

Recommended Sources

To see how media hosts and different people talk about the cost of cloning watch *Jurassic Bark* and *The Clone Zone*. See the reference list for more details.

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Module 4 Video 2 Taking Advantage?

In the last video we saw that the cost of cloning only determines who can clone not who wants to clone

In this video we are going to talk about people's beliefs in regards to whether or not cloning companies are taking advantage of people.

Cloning companies are accused of taking advantage of grieving pet owners in several different ways. We will look at two; accusations of fraud and of predatory marketing.

Fraud

Even though companies provide genetic testing to prove the authenticity of the clone, some people believe companies are being dishonest about the cloning process itself. For example, in the comments left on the video *We spent £70, 000 to clone our dead dog* which features a TV interview with Laura and Richard, one person says:

"I bet they just buy a brand new dog and scam them" (comment on "We spent £70, 000 to clone our dead dog," This Morning, 2016).

In the same comment section someone else says:

"If anything they probably breed Dylan and another boxer with the same markings . . . they also probably robbed you 86,000 dollars" (comment on "We spent £70, 000 to clone our dead dog," This Morning, 2016).

Beverly Rubython also believes her husband, Tom, was robbed when he had their cocker spaniel, Daisy, cloned. On *Jurassic bark*, host Tara Brown asks Beverly what she told Tom when she found out he'd cloned Daisy.

Beverly said, I told him: "He'd been robbed and they didn't have to wear a mask or hold a gun to his head" (Beverly Rubython on "Jurassic bark part 1," 60 Minutes Australia, 2018).

Predatory Marketing

Cloning companies are also accused of predatory marketing. Beth Shapiro is an evolutionary molecular biologist with an interest in de-extinction research (Shapiro, 2015).

And she is a critic of pet cloning. "On assignment: The clone zone" Beth talks with host Harry Smith about some of her concerns:

Harry: "While Dr. Shapiro does not object to some cloning for science she is opposed to cloning pets."

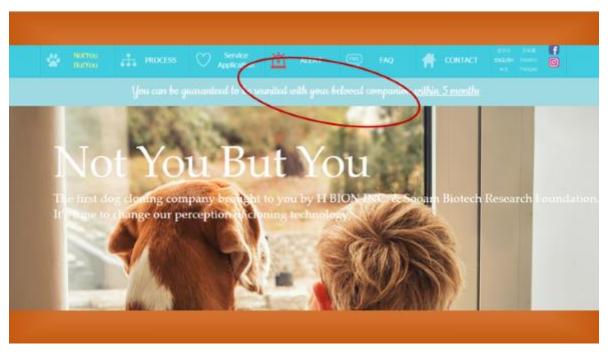
Beth: "I think it's predatory. Convincing someone that if they give you a hundred thousand dollars you can give *them* an identical copy of a beloved pet. It's not fair."

Harry: "I've got the genetic replica. Looks like Fido. Right? Barks like Fido."

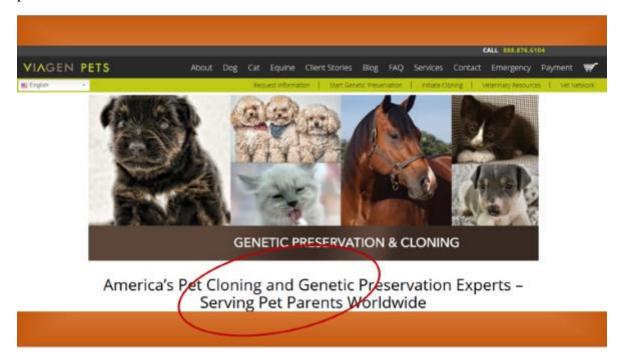
Beth: "There will be many behaviours. There will be physical traits. There will be other aspects of this dog that will be identical to the dog that once lived but it's *not* the same dog. Identical twins are clones of each other but they are different people" (Harry Smith and Beth Shapiro on "On assignment: The clone zone," NBC News, 2016).

When looking at the vernacular language cloning companies use on their websites it is easy to see why people feel the companies use predatory marketing.

For example, if we look at the taglines companies use the vernacular becomes apparent. On the Not You But You site the tagline says: "You can be guaranteed to be reunited with your beloved companion within 5 months." The wording- "reunited with your beloved companion" seems somewhat misleading.



And the tagline on ViaGen pets says: "America's Pet cloning and genetic preservation experts- serving pet parents worldwide." The term "pet parents" is how some pet owners think of themselves because it reflects a certain kind of relationship they have with their pet.



It would seem the company uses their understanding of the relationship to appeal to these kinds of pet owners.

If we take a closer look at the each of the companies' websites we can see how this vernacular language continues throughout their sites.

"Dog cloning through ViaGen Pets presents an opportunity for dog owners to open a new window for extending their relationships with their beloved pets. Dogs provide a unique form of companionship, loyalty and love. It is difficult for many dog owners to imagine life without their dog. Indeed, many dogs become a member of the family. At ViaGen Pets, many of us are loving dog owners ourselves and we understand intimately the nature of these relationships." (ViaGen Pets, n.d.).

Looking at different parts of this single paragraph we can see different ways the company is trying to appeal to customers. They use phrases that make it seem as if cloning can extend

an existing relationship. They highlight the importance of dogs in people's lives while sympathizing with the owner's inability to let go.

The company plays on the idea that the people who clone their pets think of them of family. The company also tries to build a connection with pet owners by saying they have pets too so they understand how strong these bonds are.

Not You But You uses vernacular language in a similar way. In this quote I have kept the layout the same way it appears on the webpage:

"With respect to the companions who have spent their precious time with us,

who have consoled our weary hearts and made the happy memories,

How would it feel like to start again with your companion?

It is now possible to make your dreams come true with biotechnology.

Currently, about 900 cloned companions are now with their families or serving the community.

As the perception of cloning animals is renewed, the quality of life we enjoy is also increasing.

Let us be of aid to you and your family" (Not You But You, n.d.).

This paragraph starts by pointing out all the things the dog did for the owner, gave their time, made the owner feel better and were part of the reason owners were happy. Then owners are asked "How would it feel like to start again with your companion?" Once again making it seem like an extension of an existing relationship. The company goes on to say they have the biotechnology to make your dreams come true.

The paragraph goes on to talk about how many clones are already with their families. And having a clone will make the owner's life better.

When cloning companies say things like owners are "guaranteed to be reunited with your beloved companion" in the Not You But You tagline or "extending their relationships with their beloved pets" in the ViaGen paragraph- they are using phrases that can be interpreted quite differently depending on what you think it means to have your dog back again.

In module three we talked about the ways people try to understand what exactly makes that dog so special. Owners often have difficulties expressing the 'something special' but many others use words like soul, personality or memory in an attempt to understand what is so unique about a particular dog.

If someone believes a genetic copy of the physical body is enough to qualify the clone as being the same dog or that the genetics passed to the clone will help ensure that the clone will have a very similar personality to the original dog than the marketing of cloning clients probably seems fine.

But for those who believe souls, personalities and memories are what makes a dog unique and that they are not transferable from the original dog to the clone than cloning companies are obviously making unrealistic promises.

It is important to remember that people are not puppets. They make their own choices. We saw in the last video that Laura had already learned about and thought about cloning Dylan before he'd died but dismissed it as too expensive. After Dylan died, Richard reminded Laura about cloning and they decided to go through with it. On *The clone zone*, Harry brings up concerns about cloning companies taking advantage and asks Laura and Richard if they felt exploited in any way.

Laura, "Noo not in any way whatsoever. I see it, probably, as a way to deal with my grief and just to make me feel like there is still a part of him somewhere in this world. To feel like I have not fully lost him" (Laura Jacques on "On assignment: The clone zone," NBC News, 2016).

The very act of cloning a certain dog implies there is something about that dog worth copying. Junichi Fukuda says,

"To me, spending a hundred thousand dollars for a dog that has a similar color as Momoko, smells like Momoko, and feels like Momoko when I touch her, I never thought it would be too much to pay one hundred thousand dollars for such a dog whose attributes are the same as Momoko" (Junichi Fukuda on "The science behind dog cloning," Tech Insider 2015).

Worthiness is decided by the owner, not the cloning company.

Although the language companies use on their websites is questionable it seems that whether or not a person believes cloning companies are taking advantage of people is linked to how they think about the clones. For example, is the clone seen as a genetic copy of the original dog? Or like more like a twin or cousin of the original dog? Or that the clone is somehow the original dog.

How do you feel about the wording that cloning companies use on their websites?

In the next video we will look at the ways people talk about cloning and clones as going against nature.

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Module 4 Video 3 Goes Against Nature

In the last video we talked about beliefs concerning whether or not cloning companies take advantage of people.

In this video we look at several ways people express their feelings about cloning as going against nature or against God.

If we think back to module three and the ways we think of and treat animal groups differently we can think about wildlife and the ways we imagine them. For example, we think of wild animals as roaming free and doing what they like without human interference. This idea is correct to a certain extent but humans do influence the lives of wild animals through direct contact like habitat destruction, hunting or supplying food during natural disasters. We also influence wild animals through indirect contact like climate change. But people tend to hold onto the idea of wild animals as wild and free.

We have a similar way of thinking about nature and what is natural. People often express this belief by referring to the clones as artificial or unnatural. For example, let's look at four comments left on the video *The science behind dog cloning*, featuring Momoko and Junichi:

"I would rather cherish his memory, after his death, this is against nature" (comment on "The science behind dog cloning," Tech Insider, 2015).

"Those puppies are really cute, but it wouldn't be the same as owning a real dog" (comment on "The science behind dog cloning," Tech Insider, 2015).

"How about instead of artificially creating a dog you can adopt a dog from a kill shelter that looks exactly the same or extremely close to your old dog and save a life" (comment on "The science behind dog cloning," Tech Insider, 2015).

"Eh im still sticking with natural dogs" (comment on "The science behind dog cloning," Tech Insider, 2015).

We tend to explain things like animals, plants, and so on as coming into existence through scientific processes like evolution or through a creator of some kind. Regardless of how people think life came to be, the important thing here is that even though we *could* argue

that humans were created or evolved with the intelligence and creativity to clone animals, many people tend to believe that if it is something that can be considered as coming from nature or from God than it cannot be man-made.

Somatic cell nuclear transfer obviously crosses this boundary. In the comment section of *We spent £70, 000 to clone our dead dog*, the TV interview with Laura and Richard, one commenter says:

"No, I would never do that. It's unnatural. It doesn't come from GOD so it don't have a soul. Go google it.. cloned animals act very strange compared to natural animals" (comment on "We spent £70, 000 to clone our dead dog," Tech Insider, 2015).

This comment draws on both the official religious doctrine that God is the creator and that something man made is unnatural.

Other people draw on scientific language to talk about clones as unnatural. For example, in a comment left on *The science behind dog cloning* says:

"This is wrong. I dont think u should mess around with genetics like this" (comment on "The science behind dog cloning," Tech Insider, 2015).

Another way people express their belief that clones cross the boundary between natural and unnatural is to think of clones as somehow not quite right. For example, Laura did not know what to expect. She says,

Laura: "I think I was expecting them to come out looking younger and not as formed for some reason" (Laura Jacques on "I cloned my dead dog," BuzzFeed Multiplayer, 2016).

Others go so far as to compare clones to monster. One popular comparison is with Frankenstein. For example,

On *This Morning*, Eamonn Holmes says to Laura: "Can I ask you, "Are you happy with the result?" because there will be a lot of people saying 'Frankenstein creatures' and whatever" (Eamonn Holmes on "We spent £70, 000 to clone our dead dog," This Morning, 2016).

On a similar note,

Harry Smith, on *The clone zone*, is speaking to David Kim, one of Sooam's technicians,

"I think people have an idea that bizarre cloned animals are coming out of those dogs and they have two heads and three legs. This is some Frankenstein factory."

David replies "You know, cloning itself has been sort of warped because of science fiction movies and all that. But cloning itself it's relatively very basic" (Harry Smith and David Kim on "On assignment: The clone zone," NBC News, 2016).

Even though the clones are living entities people are still unsure how to think of them. Clones are often compared to monsters and their creation is seen as going against nature or against God.

This is the last video in module four

In this module we covered discussions surrounding the cost of cloning and whether or not cloning companies take advantage of people. We also looked at the ways people talk about cloning and clones as unnatural.

In the next module we will examine some of the difficult narratives, these are the parts of the story that are hard for people to talk about because there are no words to express themselves.

And we will look at silent narratives which are the parts of the story that are rarely talked about or missing altogether and how this influences what we know or what we think we know about companion dog cloning.

The last video of that module is the wrap up for the course.

Short Task

Before moving to the next module please take some time to watch the video *I cloned my dead dog* it is available on YouTube and you can find more reference details in the References section at the end of this video. This video focuses on Laura and Richard's experience, on the trouble the laboratory had when they tried to preserve Dylan's DNA and on the birth of the clones.

Pay attention to the words Laura and Richard use when they describe the cloning process and when they talk about the clones. Your reading journal is a good place to write down your observations.

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The answers are highlighted but I will remove it before I put it quiz on Udemy.

Module 4 quiz

- 1. Only wealthy people want to clone their companion dogs
 - A. True
 - B. False
- 2. Everyone thinks cloning companion dogs goes against nature because
 - A. The clones don't have souls
 - B. The clones are monsters
 - C. The clones have memories of their owners
 - D. All of the above
 - E. None of the above
- 3. When people talk about cloning companies taking advantage of people
 - A. They are wrong
 - B. They are concerned the scientific language on the company websites is wrong
 - C. They are sometimes concerned about the possibility of fraud and predatory marketing
 - D. All of the above
 - E. None of the above

APPENDIX 6: Scripts for Module 5 Difficult and Silent Narratives

Module 5 Video 1 Difficulties Talking about Cloning

In the last module we talked about different ways people talk about the cost of cloning and whether or not cloning companies take advantage of people. We also looked at several ways people express their belief that clones are unnatural.

In this module we are going to look at some the narratives or parts of the cloning story that people find difficult to talk about and some of the things no one wants to talk about. We'll end this module with a wrap up of the course.

Once again I would like to remind everyone that at the end of many videos there are "recommended sources" in case you want more information about some topics. You do not have to check them out but they might be helpful to you.

There is also a complete reference list located at the end of each video and in written form in the "resources for this lecture". Remember you can stop, rewind and re watch videos as much as you like.

There are many times when we find it difficult to talk about something. Like when we try to talk about something emotional but it is too hard. Or the difficulty we having finding words for a situation or experience that is so outside of our everyday lives that we don't know how to talk about it, we just don't have the right words. And sometimes we need time to adjust to whatever it is that makes us uncomfortable. There are several other ways but these are the ones we are going to focus on in this video.

Emotional

When Laura Jacques and Richard Remede decided to clone Dylan, they had to take skin samples from his body using a biopsy punch.

And when Laura attempts to talk about it in the video, *I cloned my dead dog* (BuzzFeed, 2016) she changes the way she talks about Dylan. Laura usually refers to Dylan by name but while talking about this procedure she refers to Dylan as he and him. And she describes sterilizing him very much like she talks about having to sterilize the kitchen.

Using pronouns like he and him to describe Dylan may have been a way for Laura to create an emotional distance between Dylan and the distasteful task of having to collect skin from his dead body. In the video *How we cloned our dead boxer*, *Dylan* Laura talks about taking the skin samples and says:

"It was really hard but I just had to totally block out what I was doing and think 'right it's a job I need to do." (Laura on "How we cloned our dead boxer, Dylan," The Guardian, 2015).

There are other ways we change the words we use when we talk about difficult things. We also do it when we aren't sure about something. For example,

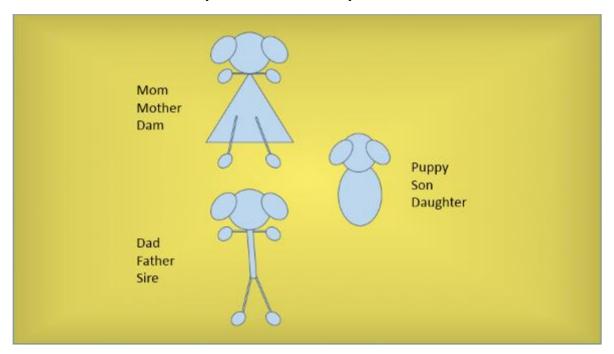
In the video We spent £70, 000 to clone our dead dog (This Morning, 2016) Laura calls the cloning process "magical" and in I cloned my dead dog (BuzzFeedBlue, 2016) when she finds out about the pregnancies she said it was a "miracle".

These word can indicate several things like Laura doesnt understand the process so the words "magical" or "miracle" become an easy way to describe it. OR she understands the process but is unsure how well her audience will understand it. OR Laura does believe in magic, miracles and other things that are "meant to be" in *I cloned my dead dog* (BuzzFeedBlue, 2016). It may even be a way to avoid talking about controversial subjects. It's probably a bit of all these things.

No Words

In all of the videos we looked at in this course Laura and Richard do not call the clones, clones. They call the clones, puppies. In biology we know that when dogs or people or other animals have offpring the offspring will get half the DNA from the male and half from the female.

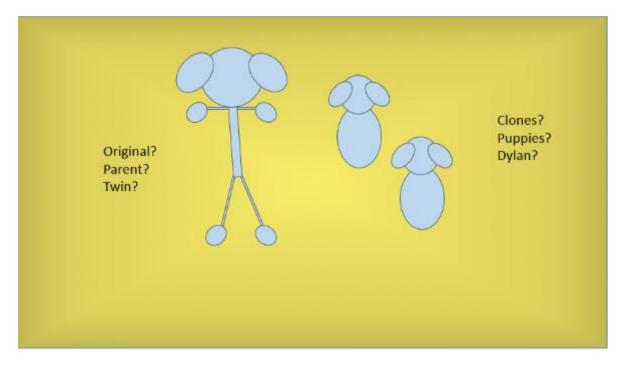
We also know that we don't usually refer to male, female and offspring when we talk about a family. We use words like mother, father and baby. And it doesn't matter if there are two moms or two dads or one parent or any other arrangement when we hear these words we have an idea about where everyone fits into the family.



But when we talk about cloning the words we usually use to talk about family and how different family members fit into the family, no longer work.

We either have no words for what we're talking about and if there are words we don't know them. So we try to make the old words fit into a new situation even if they don't really belong.

I started thinking of Dylan as the original dog because the other words I was hearing didnt seem to fit.



For example, is Dylan the parent of the clone? But the way I understand what a parent is doesn't fit. Or maybe the clones are Dylan's identical twins born at a later date? This is how ViaGen wants people to think of clones.

Are the clones Dylan's puppies? Which, in our usual understanding of the word, would mean Dylan was bred to a female who then carried and gave birth to Shadow and Chance.

Are they, in fact, somehow Dylan? The genetic material is the same. But even if Shadow and Chance look and act exactly like Dylan, which they don't, are they both Dylan?

So, our language limits our understanding of what cloning is and, in fact, what the clones are. And it presents a challenge to the ways we think of family relationships.

Most of us don't have to think about this too much and as the pet cloning industry continues to grow a vernacular language for understanding such relationships will grow with it.

Adjustment

But this kind of vernacular language is still developing so Laura and Richard had to figure things out by themselves. When Laura was asked directly in *The clone zone* interview:

Harry: "when you see the dogs, when you see the puppies do you think clones or do you think puppies?"

Laura replies "Puppies I think. It's too hard to comprehend that I took these samples from my dog after he died and these two puppies have come from that. It's so unbelievable and incredible" (Laura Jacques on "On assignment: The clone zone," NBC News, 2016).

In a different interview from 2016 Richard says

"You know they're just like Dylan's puppies you know we don't think they're Dylan. They're just like his puppies" (Richard Remede on "We spent £70, 000 to clone our dead dog," This Morning, 2016).

According to Tara Brown on the 2018 episode of 60 minutes Australia, the Laura and Richard were calling the clones, clones. Although the viewers never actually here them say it. This could indicate several things. One reason is that Shadow and Chance are no longer puppies, they are all grown up now. Another could be that Laura and Richard have adjusted to the fact that they have clones in thier lives.

Clearly there are several reasons why things are difficult to talk about and it can be challenging to figure out how to deal with it.

But some things are never talked about by some people. These are the silent narratives and it effects what we think we know about anything. This the topic of **the next video**.

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References-Images

All graphics are made by Denise McKeown

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Module 5 Video 2 Silent Narratives

In the last video we looked at some of the difficulties people have when they talk about cloning and the ways they deal with those difficulties.

In this video we look at some of the silent narrative, that is, the parts of the story that are rarely, if ever talked about.

So, how do we even find the silent narratives if no one talks about them? The quickest and easiest way to find a silent narrative is to think about the questions you have and what kinds of information is missing when you watch the videos.

There are many answers to this but, as always, we only have time to look at a couple.

Cloning companies, media and cloning clients touch on or completely skip things like what happens to the surrogate mothers and egg donors.

But people who comment on videos featuring companion dog cloning do talk about it. For example,

"Please stop and think about the surrogate mothers, they are deprived of living a normal life to be always giving birth. This is horrible. There are so many dogs in shelters waiting to be adopted!! Just stop this" (comment on I cloned my dead dog, BuzzFeed, 2016).

Other commenters want to know what happens when clones don't look like the original dog or they are not wanted by the cloning client for some reason. For example,

"But what do they do with the puppies that don't look like the dog you want... it's not like they can just sell them. Do they kill them?" (comment on I cloned my dead dog, BuzzFeed, 2016).

On *Jurassic bark*, host Tara Brown, addresses a situation where a client has more clones than they wanted. She is holding one of the clones and says,

"But when you put all your love, hope and dollars into cloning your beloved original dog, sometimes you get more than you bargained for. In this case four times. This little fella has three identical brothers and now his owner has to make the hard decision of what to do with these carbon copies" (Tara Brown on "Jurassic bark part 1," 60 Minutes Australia, 2018).

We never learn what happened to the clones so we are always left to wonder.

Laura and Richard were originally expecting one clone but they got a phone call informing them that there was another pregnancy. They were excited but worried there might even be more. In a TV interview Laura says:

Laura: "We was happy but he was getting really worried I was gonna ring in and say oh its three, four and five. And like that we were thinking which family members can give the others to or friends that we can" (Laura Jacques on Jurassic Bark, 60 Minutes Australia, 2018).

The narrative that remains the most silent is that of all the clones that do not survive this process. There is only about a 40% success rate which mean over half of all the implanted embryos die.

Tara Brown, host of *Jurassic bark* says "To maximize the chance of a live birth multiple embryos, sometimes up to 30, are implanted in multiple surrogates" (Tara Brown on "Jurassic bark part 1," 60 Minutes Australia, 2018).

There are several reasons the clones die but their deaths are masked when the companies and the media shifts the focus from death rates to "success rates" or "efficacy rates".

Even after watching the videos in this course you probably still have unanswered questions. The truth is I cannot provide all the answers. No one can.

But if the same questions are left unanswered after watching several videos or reading several articles it's a good idea to ask "why?"

For example why does the cloning company remain silent about the high death rate or the fate of the donor dogs and surrogate mothers?

Not all cloning clients avoid talking about the donors and the surrogates. For example, Laura and Richard adopted the surrogates, Hope and Saffy.

But Laura also knew about some of what these dogs through when she had Dylan cloned. On *The clone zone* when Laura and Harry Smith have this exchange:

Harry- "There's a lot of medical procedures that have to take place in order for you to get your successful clone."

Laura- "Yeah, yeah"

Harry- "Is that all worth it?"

Laura- "I mean that's the part I do feel worst about. Knowing that these dogs (unintelligible) unnecessary operation because I am such a dog lover" (the clone zone).

On Jurassic Bark, Tara Brown and cloning client, Tom Rubython, have this conversation:

Tara- "Would you do it again?"

Tom- *audible sigh* "Possibly yes. Yes, I probably would, it's not the right thing to do if you weigh everything up but nonetheless it's not a really bad thing to do. I didn't go out and murder anybody. I just have my dogs cloned. So, there it is" (Jurassic Bark, 2018).

Although some videos try to address some of these hard questions many don't.

And when the hard questions are avoided there are several consequences one of which is that cloning looks like a viable and possibly harmless option especially if the potential client doesn't care about the cost and are not aware of what happens to dogs during the cloning process.

Can you think of some more consequences when parts of the companion dog cloning story is left silent?

This is the end of module five and the end of the course, except for the wrap up video of course.

In this module we covered several difficult narratives and several silent ones in order to get an idea about how people deal with difficult topics or maybe avoid them.

The next, and last, video is the course wrap-up

Recommended Sources

For an interesting look at some more ethics surrounding companion dog cloning watch Cloning your dead dog- How to & should you by Anneka Svenska. It is available on YouTube and the you can find more details in the reference section at the end of this video.

References- Books and Articles

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Module 5 Video 3

Course Wrap-Up

Clearly companion dog cloning is a complex and highly controversial topic. Although we covered a lot in this course there are many issue we did not cover but there are several more videos available online if you want to keep looking. Not to mention countless newspapers, journals, magazines and even some books, both online and off, that feature stories about cloning.

But let's get on with the course wrap up.

As we have seen, for the cloning clients, choosing to clone their dogs is part of an ongoing love story. The owner does not want to lose the one dog that has meant so much to them. And people who do not clone don't have personal experience of the process they do have opinions about it. And sometimes those opinions express what the owner cannot, especially when people try to understand what it is that makes a particular dog so special. They talk about the soul, personality and memories and question whether or not these elements will transfer from the original dog to the clone.

Many people talk about the cost of cloning and debate whether or not cloning is worth the money. Others talk about whether or not cloning companies are taking advantage of people. There are also several discussions questioning whether or not cloning goes against nature.

But not everything about cloning can be put into words so easily are even put into words at all. There are many parts of the cloning story that cloning clients have trouble talking about for a number of reasons. Like being unable to overcome emotion or find that their current understanding of certain words no longer fits their experience. In other cases the owners need time to adjust to the fact that they really don't understand what the clone is.

There a many downsides to cloning and although it seems to be easy to talk about money in debates about the cost of cloning very few people talk about the cost to the egg donors who do not chose to be donors or surrogate mothers both of which undergo invasive procedures and whose life outside of the cloning company is not revealed. Or the cost of lives as countless embryos die or the fate of unwanted clones is concealed.

When such important parts of the story are left out it leaves a gap in our understanding of companion dog cloning which may lead to the conclusion that cloning is harmless.

The vernacular language people use to express themselves helps us understand what they believe is possible in the cloning process. Their beliefs are influenced by many things including the media, pop culture and science. And whether they agree with cloning or not the opinions shared in the comments influences what other people think about companion dog cloning.

Well done getting this far in the course. There is just one more thing left to do. The final test. The test consists of 15 questions, 5 true/false and 10 multiple choice. It is the same format used in the quizzes.

Before taking the test take some time to read your notes and remember you can go back to the course videos as many times as you like.

Thank you for taking my course and I wish you luck on your future endeavours.

The answers are highlighted but I will remove it before I put it quiz on Udemy.

Module 5 quiz

- 4. It is impossible to find silent narratives because no one talks about them
 - A. True
 - B. False
- 5. People occasionally have difficulty talking about certain aspects of cloning
 - A. Even though it is so easy to talk about
 - B. So they avoid the difficult topics by changing the words they use. For example, saying puppies instead of clones.
 - C. So they don't clone their dogs
 - D. All of the above
 - E. None of the above
- 6. Silent narratives
 - A. Are the parts of the story that is rarely or never talked about
 - B. Can have consequences
 - C. Often concerns the fate of unwanted clones and the death rate of embryos
 - D. All of the above
 - E. None of the above

APPENDIX 7: Module 6 Final Exam

Final Test

Total of 15 Questions

5 true/false

10 multiple choice

(The code at the end of the question refers to the video the question comes from). The highlights are the answers. I will take both these things off before I put it on Udemy).

- 1. Somatic nuclear cell transfer is an artificial cloning process that can only be done with the help of science and humans M2V1
 - A. True
 - B. False
- 2. Sometimes people who clone their dogs have to get the skin samples themselves M2V2
 - A. True
 - B. False
- 3. People who clone their pets only do it to show off to their friends M3V3
 - A. True
 - B. False
- 4. Everybody has their own internal representation system M1V3
 - A. True
 - B. False
- 5. Everyone who does not clone their dog thinks cloning is a scam M4V2
 - A. True
 - B. False

6. Pets M3V1

- A. Are cloned for the same reasons livestock and sniffer dogs are cloned
- B. Are cloned for different reasons than livestock and sniffer dogs are cloned
- C. Are cloned only in Korea
- D. All of the above
- E. None of the above

7. Folklore M1V1

- A. Has many forms and variations
- B. Can help us understand our place in the world
- C. Can help us understand what people think is important to share with others
- D. All of the above
- E. None of the above

8. Dolly was (M2V1)

- A. Cloned in 2017
- B. The first dog to be cloned
- C. A sheep who was the first animal to be cloned using somatic cell nuclear transfer
- D. All of the above
- E. None of the above

9. Official forms of knowledge (M1V2)

- A. Is the kind of information shared in newspapers, schools, government and many other institutional forms of learning and sharing knowledge
- B. Is how we know to line up for ice cream
- C. Is the way people communicate with each other in their ordinary and daily lives
- D. All of the above
- E. None of the above

10. People who clone their dogs (M4V1)

- A. Never worry about money so they can afford to do whatever they want
- B. Have been lied to by the media
- C. Sometimes make sacrifices, like selling their possessions, so they can afford the procedure
- D. All of the above
- E. None of the above

- 11. Examples of silent narratives in cloning includes (M5V2)
 - A. Not talking about unwanted clones
 - B. Using words like "success rates" instead of talking about how many clones die in the cloning process
 - C. Not talking about what happens to the egg donors and surrogate mothers
 - D. All of the above
 - E. None of the above
- 12. Pets and people (M3V2)
 - A. Usually don't spend time together
 - B. Can form very strong bonds
 - C. Rarely form bonds
 - D. All of the above
 - E. None of the above
- 13. Scientists (M3V4)
 - A. Are positive the personality of the original dog is transferred to the clone
 - B. Are positive the soul and memories of the original dog are transferred to the clone
 - C. Are positive the clone is exactly the same dog as the original
 - D. All of the above
 - E. None of the above
- 14. Sometimes it is difficult for cloning clients to talk about the clones (M5V1)
 - A. Because they know everything about somatic cell nuclear transfer
 - B. Because they need to adjust to the fact that new dogs are clones
 - C. Because they know absolutely nothing about somatic cell nuclear transfer
 - D. All of the above
 - E. None of the above
- 15. The companion dog clones we talked about in this course (M4V3)
 - A. are created by an artificial process called somatic cell nuclear transfer
 - B. are loved by their owners
 - C. are a high controversial topic
 - D. All of the above
 - E. None of the above

- APPENDIX 8: Transcript- *On assignment: The clone zone* (NBC News part 1 and 2, 2016, 12:11 min long)
- Studio Host- Jurassic Park. That was Hollywood's version of cloning. But clones are more than science fiction. They are real and there is one place where you can buy a pet clone of your very own. Harry Smith traveled to Asia.
- Harry Smith- We are in South Korea a country proud of its technology based economy. But we didn't come to Seoul to look at the latest electronic gadgetry. No, we're here to see puppies. If you have a dog in your home that you love more than some family members you can get it cloned here. An exact genetic duplicate. And if you think that's impressive you ought to hear what they wanna clone next.
- Harry Smith- meet Laura Jacques and Richard Remede. They traveled 5000 miles from their home in the north of England to Korea to see two little boxer pups. These pups are clones of Laura's dog Dylan. This is the only place in the world where you can get your pet dog cloned.
- Harry- do they look like Dylan?
- Laura- yeah I got Dylan when he was a few weeks older, they look just like him.
- Harry- Richard's in construction. Laura helps with the business and walks dogs. Richard says Laura is Dog mad. Dog mad in a good way.
- Harry- when you see the dogs, when you see the puppies do you think clones or do you think puppies?
- Laura- puppies I think. It's too hard to comprehend that I took these samples from my dog after he died and these two puppies have come from that. It's so unbelievable and incredible.
- Harry- Laura's eight year old dog, Dylan, died quite suddenly leaving her an emotional wreck.
- Harry- would it be too much to say he was your best friend?
- Laura- he was my total best friend, yeah. I spent more time with Dylan in those eight years than I did with anyone else.
- Harry- in her grief she remember seeing a story on television about dog cloning. (showing onscreen a clip from "The 60,000 Puppy: cloning man's best friend).
- Laura- and I remember thinking I would love to do that with Dylan but you could never warrant spending that much money. I mean where would you get all that money from. Well then the day after he died you actually said to me 'what about this cloning thing? Can't we look into it?' 'like are you kidding that's 65,000 pounds' which is a hundred thousand dollars.
- Harry- you heard that right the sticker price is 100,000 dollars. Laura was there when her puppies were born.
- Laura- they're absolutely beautiful.

Harry- so far the lab has cloned 780 dogs for customers around the world. Including these two Jack Russel terriers for billionaire Barry Diller and his wife Diane von Fürstenburg.

David Kim- Over here is a Pomeranian for a client in France. A Yorkshire terrier for a client in the United States.

Harry- clones?

David- Yes they are all clones

Harry- ok

David- Here we have Tibetan mastiff clones for clients in China.

Harry- six of them all together?

David- Yes

Harry- all clones?

David- Yes, they're all clones.

Harry-just want to make sure

David- Here finally we have another clone for a client in India.

Harry- Right. Here we go. looks like a happy dog.

David- Yeah yeah.

Harry- a happy clone

Harry- the man behind all this *dog* cloning is Dr. Hwang Woo-Suk a scientific superstar in South Korea. In 2005 Hwang cloned the first dog a feat Time magazine hailed as the invention of the year. Just the year before Hwang created a worldwide sensation when he claimed to have cloned a human embryo. A dramatic scientific first.

Harry- do you trust this guy?

Beth Shapiro- I can't trust him, no.

Harry- Dr. Beth Shapiro is an evolutionary biologist and a MacArthur genius grant awardee.

Harry- Dr. Hwang claimed to have cloned a human embryo.

Beth- Right, he did.

Harry- and the whole world said 'oh my gosh look what happened'

Beth- right.

Harry- then what happened to the science?

- Beth- well it turned out that he hadn't actually cloned a human embryo. And he'd done some things that were not favourably looked upon by the scientific and global community.
- Harry- investigators found that Hwang's data on human cloning had been fabricated and female lab workers were pressured into donating their eggs. He lost his job and lost face. Hwang vowed he would spend the rest of his life repenting.
- Beth- anyone who has lied very publicly and been found guilty of that, I think it's going to be very hard for the scientific community to get behind it.
- Harry- But Dr. Hwang has come roaring back building the Sooam Biotech Research Foundation into an international cloning mega business. And while we were welcomed at his lab, Dr. Hwang turned down our request for an interview, offering instead a proxy, researcher David Kim.
- Harry- I think people have an idea- bizarre cloned animals are coming out of those dogs and they have two heads and three legs. This is some Frankenstein factory.
- David- you know, cloning itself has been sort of warped because of science fiction movies and all that. But (unintelligible) itself it's relatively very basic.
- Harry- we watched Dr. Hwang perform the procedures necessary to clone a dog. Hwang removes eggs from a donor dog's ovaries then all he needs is a DNA sample from a living or recently decease animal.

Harry- so he needs that

David- yes

Harry- cloning a dog or a horse or, in these pictures, a pig the DNA is lit up with dye then sucked out of the egg. Then the DNA from the animal you want to clone replaces it. Shoot in a little electricity and presto soon you have an embryo forming. Not exactly biology 101. For Laura and Richard it worked twice.

Laura- We literally could not believe it. Could we?

Richard- (unintelligible) Laura screaming 'it's two'. I'm thinking ohhh... (covers face with hand like oh no gesture).

Laura- oh no, do we have to pay?

Richard- do we have to pay?

- Harry- the Sooam lab offered the second pup as a gift. But there is a different kind of cost producing a healthy clone. Numerous surgical procedures on otherwise healthy dogs, from the egg donors to the surrogates who carry the clone pups to term.
- Harry- There's a lot of medical procedures that have to take place in order for you to get your successful clone.

Laura- yeah yeah

Harry- is that all worth it?

Laura- I mean that's the part I do feel worst about. Knowing that these dogs (unintelligible) unnecessary operation because I am such a dog lover.

Harry- Laura who has spent a lot of time at Sooam lab is convinced the dogs here are treated humanely.

Beth- here's the donor

Harry- while Dr. Shapiro does not object to some cloning for science she is opposed to cloning pets.

Beth- I think it's predatory. Convincing someone that if they give you a hundred thousand dollars you can give *them* an identical copy of a beloved pet. It's not fair.

Harry- I've got the genetic replica. Looks like Fido. Right? Barks like Fido.

Beth- there will be many behaviours. There will be physical traits. There will be other aspects of this dog that will be identical to the dog that once lived but it's *not* the same dog. Identical twins are clones of each other but they are different people.

Harry- some people see this program as playing on emotions of people like you who are grieving so desperately for the animal they lost.

Laura- yeah

Harry- do you feel exploited at all in this process.

Laura- noo not in any way whatsoever. I see it, probably, as a way to deal with my grief and just to make me feel like there is still a part of him somewhere in this world. To feel like I have not fully lost him.

Harry- but Dr. Hwang is doing a lot more than cloning warm fuzzy puppies. Half a world away in rural western Pennsylvania another of Dr. Hwang's clones is learning a bit more than how to sit, fetch and roll over. He's being taught how to identify different types of explosives.

John Brannon- That's black powder. Specter, here is going to be an explosives dog.

Harry- Specter is the clone of an animal of rare courage and exceptional ability. A once in a lifetime US special forces dog.

Harry- can you tell me the dog's name or where the dog's working right now?

John- Yeah the dog's name Branco and the dog's assigned to a unit that I can't tell you who he's with.

Harry- classified?

John- classified, yes.

Harry- John Brannon has thirty years' experience working with police and military dogs. A former cop he now runs Shallow Creek Kennels. Training dogs and their handlers for law enforcement.

Harry- somebody calls you up one day and says 'you wanna work with a clone?' what was your response?

John- I kind of laughed at first. I didn't think it would work. I didn't think there'd be any difference between a normal puppy compared to a clone puppy. And we were proven wrong.

Harry- Specter is the third clone of that US Special Forces dog. The first two are already working for the ATF SWAT team.

Harry (dressed in attack training gear) - just for the record, john, this is a good idea, right?

Harry- at five months old Specter's bite is already much worse than his bark.

Harry (with Specter latched to his sleeve) - those are some serious jaws.

Harry- so the genes are the same. The dog looks the same. Is there something else that *you're* sensing about this clone?

John- they seem to have previous life experience, they seem to be more mature and more focused than a puppy should be.

Harry- does it freak you out a little bit?

John- yes absolutely. It's like a science experiment. Yes.

Harry- and if cloning pets and combat dogs isn't impressive enough you'll wanna see what Dr Hwang wants to clone next.

PART TWO

Harry- One more thing before we leave South Korea. Dr Hwang Woo-Suk, the master of dog cloning is expanding his enterprises. He's involved in a multi-million dollar deal to clone cattle to feed hungry China. And his lab is also working to modify pigs for human organ transplants. And if you've seen Jurassic Park, get this. Hwang has been to the Arctic to recover remains of extinct species like the Woolly Mammoth which last walked the earth more than 3000 years ago.

Harry to Beth- He apparently says he plans to clone one using, presumably, the same process that he would use to clone a dog. Is that possible?

Beth- It is not possible.

Harry- Why not?

- Beth- in order to clone something using this process one needs, not only a well preserved cell but a cell that is actually still alive. And in anything that is dead, like a mammoth has been dead. The most recent population of mammoths lived in Wrangel Island about 3000 years ago that is way too much time to have passed for any cell to still be alive.
- Harry- Shapiro has done her own research in the Arctic hunting for mammoth remains. She is an expert in ancient DNA, and the author of, ironically enough, How to clone a mammoth.
- Harry to Beth- Why do you think Dr Hwang is trying to clone a Woolly Mammoth?
- Beth- His career is checkered with things that he's is doing to create attention. It would be an amazing feat, an impossible feat and he would be famous.
- Harry- Fact is, a number of labs are trying to bring back extinct species using different techniques. Hwang's group says it is hopeful it will unearth viable DNA to clone a mammoth. And surely someone somewhere is trying to clone a human.
- Harry- if I get really good at cloning dogs might I get good at or better at trying to clone a human embryo?
- Beth- humans are a species that are for better or for worse, probably I would say for better, seem to be very hard to figure out how to do this for. That's not say that it's impossible.
- Harry- while the world waits for that or for Dr. Hwang's cloned mammoth Laura and Richard have to wait for their dogs to clear quarantine before they can bring them home.
- Laura- I'm so excited to get them home.
- Harry- a hundred thousand dollars, does it feel like that's money well spent?
- Richard- At the end of the day it's only money. You know, we've got the dogs its money well spent.
- Harry- Laura is also adopting the two surrogates who gave birth to the cloned pups. She's dog mad, remember?

APPENDIX 9: Transcript- Jurassic bark: Pet owners spending \$135,000 to clone their dogs

(60 Minutes Australia part 1 and 2, 2018, 17.31 min. long)

- Tara Brown- from what will they think of next files, hope for humans mourning the loss of long lost pets. Well pet dogs to be precise. With just a single cell a laboratory in South Korea is now creating replicas of devoted pooches. It's not quite Jurassic Park. More like Jurassic Bark. But even so the cloning of animals is an incredible glimpse into an exciting or creepy world. There's always a but though and in this case. Would you hand over 135,000 dollars so you'd never have to say goodbye to your pet?
- Tara voice over- Mable and Myrtle are a couple of very costly cocker spaniels for their owner British author Tom Rubython. Their creation was complicated, some might say crazy. When Daisy, Tom's beloved canine companion, died in 2014 instead of letting go Tom decide to have cloned.
- Tara- "Tom how would you describe the connection you had with Daisy?"
- Tom- "Uh it's hard to describe its coming back you know. I've noticed with real dog lovers some people love their dogs. You have to love your dog to have a dog. But there's certain dogs you have, that they have to be special dogs and there's a bit more intelligent than the average dog and its just something."
- Tara- And so, Tom turned to a lab in Korea that cloned Daisy's DNA and cloned Mabel and Myrtle.
- Tara- how much did it cost you?
- Tom- well when it started off it was going to be about sixty six thousand pounds. But the currency had Brexit and the currency went crazy so it ended up being about 75.
- Tara- ouch. That's a lot of money.
- Tom- that's a lot of money.
- So after your dog passes away you can go through the traditional burial or you can go through cremation ro you can go through, see a taxidermist, and get your dog stuffed. The other new alternative that we provide is cloning.
- Tara- Daisy was cloned deep in the industrial heartland of Seoul at a purpose-built laboratory called Sooam Biotech where replica dogs are being churned out by the kennel load.
- Tara- "jay, this room is really a scientific success story isn't it when you look at what you've got here.
- Jay- well it's a successful story of science become commercialized for sure.

Tara- JWW, as he likes to be called, is one of Sooam's scientists and sometimes eccentric spokesman for the world's biggest and most successful dog cloning operation.

JWW- these one are headed to China, Hong Kong.

Tara- Who are your clients? Who owns them?

JWW- Some of them are these mega rich people but also some of them are just normal people who sometimes even go through liquidation of their asset to actually afford the cloning services.

Tara- is that right?

JWW- yes

Tara- so they would sell up their house to clone a dog?

JWW- yes. But usually they have more than one houses. (laughs with Tara).

Tom- I mean its very tight. I had to sell my cars and make quite a lot of sacrafices to do it. We do crazy things, with our money, don't we? Which are inexplicable.

Tara- tom's wife, Beverly, loves animals just as much as he does, But he knew she thought the idea of cloning was somewhat nuts which is why he decided to keep her in the dark about his plans for their departed Daisy.

Tom- I didn't tell Beverly I was doing this, you see, because I knew she would think I was crazy so I thought 'no, best not to tell her.'

Tara- but explaining why he wanted their dead pet refrigerated instead of buried was a little tricky even for an author.

Tom- so I made up some story about insurance because they were insured. I got some ice and I got a tea chest, a big old-fashioned tea chest and I put daisy in the ice. You've got to put keep them cool.

Tara- if his secret was hard to keep it was even harder taking the necessary from flesh samples from his dead dog.

Beverly- I remember going into the office once and just looking at all this medical equipment on this desk but I though...I kept saying you're up to something and he said 'oh, I don't know what you're talking about'.

Tara- how did you react when you found out?

Beverly- I said he'd been robbed and they didn't have to wear a mask or hold a gun to his head. (everyone chuckling)

Tara- he'd been robbed and they didn't have to hold a gun to his head. (still chuckling)

Tara- this is where Sooam's commercial cloning production line begins. Creating a cloned embryo under the microscope. An egg harvested from the surrogate dog has its nucleus removed.

JWW- in fact we've created a blank egg.

Tara- yes, like just a vessel?

JWW - yes

Tara- ok

Tara- in it's place is inserted the DNA from the dog to be cloned, usually taken from a skin or muscle cell. It's extraordinary, and from this little puppies grow?

JWW - yep

Tara- in sooams busy operating theatre downstairs a surrogate mother is about to be implanted with the cloned embryos just created in the lab.

JWW- what you see on the monitor are 10 embryos

Tara- yep

JWW- now he's going to bring in the catheter and draw up the embryos into the catheter

Tara- mm-hmm

Tara- the next step is what many critics of cloning find repugnant. To maximize the chance of a live birth multiple embryos, sometimes up to 30, are implanted in multiple surrogates.

Tara- how many of these are done a day here?

JWW- usually maybe up to 3 or 4

Tara- it's a lot of effort and a lot of science to deliver the dream to a grieving owner. A single genetic replica of a much-loved pet

Robin – I don't know whether told how many dogs don't make it to birth. I don't know whether they are told 'well you know it takes so many surrogate mother dogs to carry so many pups before you get your 1, 2 at the end. I would hope that if they really are dog lovers if they really got all that information and they thought about it they would then decide 'no, I'm not going to do this."

Tara- world leading stem cell biologist and geneticist Robin Lovell-Badge says cloning is not only cruel but ultimately pointless. While clones are genetic replicas their markings are often different than the original, as are their temperaments.

Robin - So it's a waste of money. You're not going to reproduce the dog that you lost that was your favourite pet. It just is not going to happen. There be much better off

going to the local dog pound. Choosing a poor little dog that's been maybe not been looked after terribly well. Giving it a happy home.

Tom- I don't know the right answer is.

Tara- really?

Tom- No, I don't. I don't defend what, what I did because you're actually right, I could have gone to the dog pound and got a stray. And that would have been the right thing to do probably. But as human beings we don't always do the right thing, do we? If we're honest.

Tara- But sitting here today do you feel like you did the wrong thing? Do you think that you did something ethically wrong.

Tom- no. no, not at all. No. no. no. I did what technology allows doesn't it?

Tara- back in Korea this surreal genetic production line grinds on. And another clone puppy comes to life. Depending on your viewpoint this little newborn is either a scientific marvel or a mistake.

Tara- how many dogs have you cloned?

JWW- this I need a fact check.

Tara- ah. Sooam it seems is a stickler for numbers.

JWW- I have to give you that number because somebody gets very upset if I don't give you that number. *On the phone- speak Korean (not the entire phone call). Off the phone- one thousand one hundred seventeen

Tara- wow. Represents quite a lot of cash.

JWW- people spend a lot of money, yes.

Tara- well, this is what it is all about. A puppy that costs a cool one hundred and thirty five thousand dollars to make. Perhaps priceless in the cuteness stakes. But when you put all your love, hope and dollars into cloning your beloved original dog, sometimes you get more than you bargained for. In this case four times. This little fella has three identical brothers and now his owner has to make the hard decision of what to do with these carbon copies.

Richard Remedes- I don't think I've got 70 grand and the next day we've got another phone call and we've got two and I think oh my god.

Tara- two puppies? One hundred and forty thousand pounds.

Laura Jacques- we was happy but he was getting really worried I was gonna ring in and say oh its three, four and five. And like that we were thinking which family members can give the others to or friends that we can.

segue to part 2

Tara- coming up: From dogs to dinosaurs

Tara- so which creature would you like to bring back?

Olaf Olsson - One that's biggest and most popular of course would be the mammoth.

Tara- and maybe even humans.

Movie clip- your clones. What?

Tara- just because we can do it should we do it? That's next on 60 minutes.

PART TWO

Tara- When Richard Remde's partner, Laura Jacques, lost her cherished dog, Dylan, to a sudden illness no price was too high to ease her pain.

Richard- when he died I would have done anything just to just make Laura feel a little bit better.

Laura- it was just me grieving and wanting somehow to hold onto him because I was not ready to let go.

Tara- so, like over a thousand dog owners around the world Laura and Richard looked towards Korea. Within hours of Dylan's death they were frantically trying to keep him refrigerated to preserve his cells for cloning. (in other sources Laura did not think about cloning until after Dylan had been dead for a couple days)

Richard- then we ended up going to a funeral parlour.

Laura- yeah we did actually

Richard- and we put the dog, they let us put the dog in there to keep him cool.

Tara- goodness, I mean you say you didn't tell people because you're worried they might think your crazy.

Richard- yeah

Tara- at any stage did you think you're crazy?

Richard- yeah (unintelligible) what am I doing here?

Tara- six months later cells taken from Dylan's leg were transformed into not one but two clones, Shadow and Chance. Now playing by the house that went unfinished to pay for their creation.

Laura- my Dylan was just the kindest, lovingest dog and they are too. I think, I don't know whether I love them so much because they've got those lovely traits or because they are Dylan's traits but obviously are extra, extra special.

Tara- and I think they know it.

Laura- yeah.

Tara- you do talk about them as clones "the clones". Do you sometimes go "this is a bit science fiction?"

Richard- yeah

Laura- They are so similar to each other

Richard- (unintelligible) they eat together, the poop together, they'll do everything together and its just like having two Dylan's just, just there. And just think it's a bit freaky sometimes.

Tara- the Sooam lab in Korea is controversial in the scientific community drawing fire because it's founder is Dr. Hwang Woo-suk cast out of academic circles a decade ago for fraudulently claiming to have pioneered work on human cloning.

Newsclip- the ??? National University professor was indicted on charges of fabricating the results of his human stem cell research.

Tara- professionally unforgivable according to world leading geneticist Robin Lovell-Badge.

Tara- Do you have any concerns that Dr. Hwang's clinic is, is doing this sort of work.

Robin- I am always concerned that he's behind this because he made up data and if you're a scientist who makes up data you're not a scientist.

Tara- As it turned out all Dr. Hwang could really do was clone dogs a specialty that is now being turned to research. These cloned beagles have been genetically modified with human diabetes.

JWW- So these dogs we engineered them so that we give them diabetes, actually human form of diabetes and the reason why we give them is so that we can study the disease outside of the human body.

Tara- Sooam spokesman, JWW, tells us the beagles also carry fluorescent DNA taken from jellyfish to mark the progress of the disease. Like a genetic highlighter pen for the diabetes.

Tara- sounds pretty creepy actually.

JWW- Is it creepy?

Tara- yeah

JWW- Well evolution is pretty much the same thing

Tara- really??

Tara- no wonder he's got such sad eyes.

Tara- these sad eyed beagles may one day save humanity but they also raise the spectre of what unregulated cloning could create in the lab. A spectre that has long been Hollywood fodder.

Tara- So which creature would you like to bring back?

Olaf Olsson - Well one that's maybe the biggest and most popular of course would be the mammoth.

Olsson- So this is where we have a lot of self incubators and . ..

Tara- Olaf Olsson is Sooam's extinct species expert, special interest the woolly Mammoth.

Inside this incubator is DNA material taken from frozen Siberian Mammoths

Tara- So you're warming them up

Olaf- Warming them up hoping there is something alive, it can be grown

Tara- that's the idea

Olaf- yeah

Tara- that's the dream

Olaf- the dream, not an unachievable dream either.

Tara- so, a living, walking mammoth

Olaf- That's the goal.

Tara- if mammoths are about recreating the past what of the future? is Sooam where the first human clone might be created?

Tara- It raises the question, just because we can do it should we do it?

Robin- there is no good reason for doing it, so why would you? It would just be pure vanity. I mean, just think of all the issues it would involve. I mean that's the trauma of the whole thing. It's not worth it. Absolutely not worth it. So, you'd have a really good reason for doing it and no one has given me one so no. Silly.

Tara- Is any part of the ambition to do cloning?

JWW- this is where we have very strong standing is that we will absolutely not be involved in human cloning whatsoever.

Tara- Do you have any moral beliefs around it?

JWW- Oh that's way too personal.

Tara- Meanwhile Mable and Myrtle are living a dog's life, blissfully unaware of the cloning debate swirling around them. And of the ever so slight domestic dispute their creation caused in the sleepy Rubython household.

Tara- And how's the trust issue going between you now.

Beverly- you had to ask. Ask me another question.

Tom- I'm not saying it's a sensible thing to have done. It's, it's impetuous, totally mad.

Tara- would you do it again?

Tom- *audible sigh* possibly yes. Yes, I probably would, it's not the right thing to do if you weigh everything up but nonetheless it's not a really bad thing to do. I didn't go out and murder anybody. I just have my dogs cloned. So, there it is.

Tara- closing remarks and end of show.

APPENDIX 10: Transcript- *I cloned my dead dog* (BuzzFeedBlue, 2016, 2.54 min long)

- Laura Jacques: We lost our dog Dylan who was a Boxer on the 30th of June 2015. Before I even managed to get my head around the fact that he had a terminal illness, he passed away. So, I was in complete shock, I was completely traumatized. After Dylan had died I knew straight away that we wanted to bring his body back with us because we wanted to bury him. The vet said we could have him out for a few days then we would need to think about freezing him. So we had him out on his bed for a couple of days. During that time, I was thinking, 'shall I get him stuffed, what shall I do?" I was just in complete shock and that was when I remembered of someone else in the UK had their dog cloned while the dog was alive. So I called Sooam Biotech, told them the situation and just said, "is there anything you can do?"
- On screen text: For Sooam Biotech to clone Dylan, it would cost £60K-roughly over \$86,000 [US]. But they provided Laura and Richard with a cheaper option to freeze the cells until they made a decision.
- Laura: And they said, 'but we can do what we do to the cells. Make them grow in number then freeze them until you're ready to do the clone or they can just stay there if you don't decide to go ahead with it."
- Text: Laura and Richard decided to freeze the DNA samples until they were ready to clone
- Dylan. Sooam sent Laura and Richard instruction on how to collect the DNA sample from Dylan.
- Laura: We were meant to refrigerate Dylan and take the cells and get the cells to them in South Korea within five days.
- Richard Remde: We had to go to our local, to a Boots Store to get all the vials and instruments we needed to get the cells.
- Laura: We had to like sterilize all our kitchen, then lay him out, sterilize all the area, shave his fur and basically follow the instructions using the biopsy tilt [sic] to take some skin samples.
- Text: Since the DNA sample arrived at Sooam Biotech after the preferred timeline there were some issues with the cells growing.
- Laura: Then we got an email saying that the situation of the cells is somewhat complicated. They seem to have attached but they are not growing. We need to leave it a few more weeks and then weeks and weeks just seemed to be going by and then we got this one saying, "oh they've started to grow." Because Dylan was like such a special case and it was a scientific breakthrough. Never been done before and I guess we just kinda felt like it was meant to be.

Text: Laura and Richard decided to clone Dylan. 31 days after receiving Dylan's DNA samples, Sooam Biotech confirmed two pregnancies.

Laura: We were like, "how is this even possible?" Like it's a proper miracle. So we went to South Korea for the births. It was surreal, wasn't it?

Richard: Yea, emotional.

Laura: Richard came in the room and said, "oh my god, they look just like Dylan," and I was just in shock at this point. How am I even, I was just staring at this puppy but not really thinking anything. It was only when you said that, I thought God its got all the markings in the same place, and its like a few minutes old. And already you could tell it looks like Dylan. I think I was expecting them to come out looking younger and not as formed for some reason. Being part of this scientific breakthrough is like you know, once in a lifetime.

Text: Would you clone your pet?

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