

Title: **Bike sharing from a Quantum Storytelling Perspective**

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Abstract

I am a bike-sharing activist at New Mexico State University (NMSU). I am using quantum storytelling and ethnographic methods to study the bike-sharing implementation process at the university. Quantum storytelling is also by its nature an intervention into the process it observes. It is part of encouraging the university governing entities to support and fund a bike-share program. Quantum Storytelling is not just words, texts, or human dramatic action. Rather, Quantum Storytelling is the pattern of assemblages of material actants (i.e. bikes, paths, and so), non-human beings (other animals, plants, etc.), and humans doing a Quantum version of Storytelling in the inseparability of *spacetime mattering* (Boje, 2014; Boje & Henderson, 2014). Quantum storytelling is formally defined as “the interplay of quantum understandings with storytelling processes” including their counter-narratives (Boje, 2014: 100). Quantum storytelling also helps make explicit what Heidegger (1962) calls fore-having, fore-structuring, fore-conception, fore-telling, and fore-caring (as developed Boje, Svane, & Gergerich, *in review*). The reason why quantum storytelling is so helpful is it involves *antenarrative* preview of the way to operationalize bike sharing through visual media including pictures documents five year plan maps of campus bikes themselves riders. Finally, in my presentation I will show embodied practices that stem from quantum storytelling. I will do this by doing a Barthean S/Z and Bojean antenarrative analysis of the bike-share implementation process.

Keywords: quantum storytelling, antenarrative, bike sharing

INTRODUCTION

How does quantum storytelling help us to understand how people in organizations relate to material infrastructure, such as a bike-share installation? Quantum storytelling is defined by Boje (2014) the intra-activity of humans (& non-human life) with material things that form a pattern of entanglements in the inseparability of *spacetime mattering*. A bike-share program is cyborg relation of human and machine, and it’s a way of Being-in-the-world, in the spacetime mattering of Nature. It is not just that the human body is in nature, it is the body is energy, bicycling is energetic, and the machine itself is not only moving parts, at a quantum level, a bicycle is human-made machine whose collective motion and momentum follows the laws of quantum mechanics. For example, a bicycle is made of phonons, an elastic assemblage of atoms and subatomic condensed mattering that are also waves. “Due to the connections between

atoms, the displacement of one or more atoms from their equilibrium positions give rise to a set of vibration waves propagating through the lattice” (Dictionary.com, Chandler 2010).

Beyond the quantum vibratory mattering, the bike-sharing requires bike racks, kiosks to check out and in the bikes, people doing maintenance, rules of the road, and lots of bike paths on campus, as well as safe paths between the city and the campus. The human-bike-infrastructure is a living quantum mechanical system.

There are obvious advantages. Biking is healthy, in-touch with Nature. Bike sharing at NMSU would allow student, faculty and staff an opportunity to change their sociomaterial practices: use bicycles on campus for easier maneuverability. The bike-share will promote sustainability, decrease congestion, offers possibility for revenue and improves the health of the users.

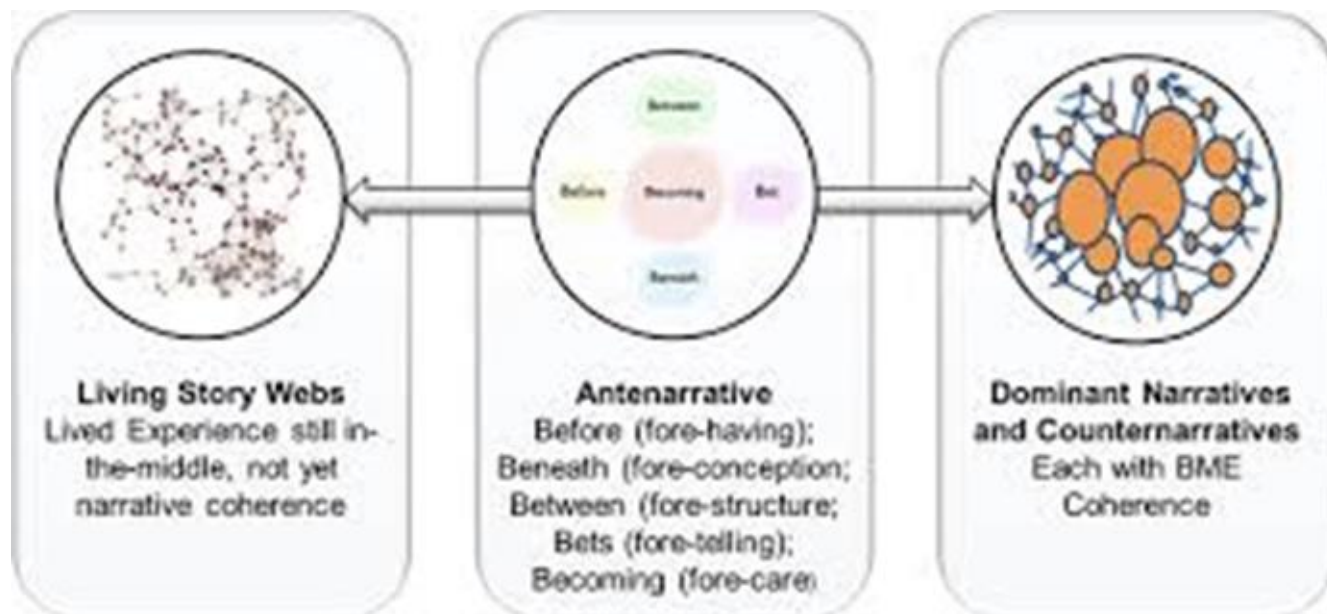
The purpose of my research is to do an ethnographic field study of how a large university in the southwest does a kind of storytelling that is quantum, since it is an assemblage of humans, machines, infrastructures, in which as William James (1907: 98) puts it “things tell a story.” I am here to tell you that bikes tell a story, bike-paths, and bike-sharing tell a story. It is not just a story mouthed or penned by humans. Rather, the bikes, themselves are telling us something. In quantum storytelling, it is the background, not the foreground that matters. In traditional narrative, the central character follows a plot line with helpers, and a bike in that scene would just be a prop. But in quantum storytelling, it’s the bikes, the paths, the whole infrastructure of bike-sharing, and the entire process of implementing a human-machine system that is telling.

“Bikes Tell Stories was one of the most inspiring films of our festival. Watching how bikes can change someone's life in such a positive way was certainly encouraging” according to Şafak Başnak, Director Mountain Films Festival, Turkey (<http://bikestellstories.com/>). Bikes, in this instance are ‘agential’ and its not just that humans tell about them, it’s a way in which riding them, working on them, and implementing bike-sharing is itself life-changing. A university bike-sharing has many stories unfolding, in the background, while in the fore-ground university administrators, professors, students, and staff are unaware of what all is involved in bringing about a major change to its infrastructure.

There are three contributions are to the theory of storytelling. First, quantum storytelling, is new in theory, but has few actual studies. This study makes a contribution to theory by showing, as stated above, how quantum storytelling is a background activity to other narratives, such as the university motto, “All about discovery.” Second, I will develop an antenarrative understanding of bike sharing and cycling in general. Third is how Barthes (1974) hermeneutics is related in the process of quantum storytelling. Specifically I will analyze how Barthes codes (SYM, HER, SEM, REF, ACT) can open up our understanding of the antenarrative process

The structure of the paper is as follows. First, I will introduce readers to antenarrative and Barthes hermeneutic codes. Second, I will summarize the methods used in the ethnographic field study. Third, I will present findings for the antenarrative and hermeneutic coding. Finally, I will provide a discussion of the implications of the analyses, and how they constitute a contribution to theory, as well as to practices.

ANTENARRATIVE IN QUANTUM STORYTELLING



In the above figure (Boje & Svane, in review; Boje, Henderson, Strevel, & Svane, in press; Svane & Boje 2014; Svane & Boje, 2015; Boje, Svane, & Gergerich, in press), there are five aspects of antenarrative:

- *"Meaning is the 'upon-which' of a projection in terms of which something becomes intelligible as something; it gets its structure from a fore-having, a fore-sight, and a fore-conception" ... "the existential state of Being of the 'there'.... of disclosedness..." (#151).*

Before (fore-having)

Beneath (fore-conception)

Between (fore-structure)

Bets on the future arriving (fore-telling)

Becoming (fore-care)

HERMENEUTICS IN QUANTUM STORYTELLING

Barthes S/Z five codes "The grouping of codes, as they enter into the work, into the movement of the reading, constitute a braid (text, fabric, braid: the same thing); each thread, each code, is a voice; these braided—or braiding—voices form the writing" (Barthes S/Z p 160).

1. Proairetic code (the voice of empirics): The code of actions. Any action initiated must be completed. The cumulative actions constitute the plot events of the text.
2. Hermeneutic code (the voice of truth): The code of enigmas or puzzles
3. Connotative code (the voice of the person): The accumulation of connotations. Semes, sequential thoughts, traits and actions constitute character.
4. Cultural or referential code (the voice of science or knowledge): Though all codes are cultural we reserve this designation for the storehouse of knowledge we use in interpreting everyday experience
5. Symbolic code (voice of symbol) Binary oppositions or themes, The inscription into the text of the antithesis central to the organization of the cultural code.

1. The hermeneutic code (HER) is questions and answers
2. The Proairetic code (ACT) sequence (process)
3. The semantic code (SEM) characters
4. The symbolic code (SYM) symbols anti thesis
5. The cultural code (REF) bodies of knowledge

METHODS

I adopted ethnographic approach to understand bike share implementation. Studying people who are involved in the process of getting a bike share approved and funded. I worked with the assistant director of Environmental health and a spreadsheet expert, I also spoke with people from Associated Student of New Mexico State University (ASNMSU), Sustainability Committee, Sustainability office, Activities Committee, City Planners, Various Bike- Share Companies, NMSU Bike Friendly University Task Force (BFU Task Force), Southern New

Mexico Bike Educators, Las Cruces Codes Enforcement, NMSU Environmental Health and Safety (EH&S), and Aggie Express. I coordinated bike events at NMSU and Walmart. .

The study setting and sample field work started at NMSU 4 years ago in a communication class as a project that required us to do something that made a difference. I worked with the Bicycle Friendly University task force and NMSU EH&S. I coordinated projects, I had students help from the management class, I asked around and found out who the key players were for cycling in the community. Who would be good to have on my side for gaining more support for a bike share program as well as cycling in general? I found the Sustainability Committee to be a great resource for me because some key people attended this meeting. I met Dr. Boje at this meeting and he inspired me to go beyond the class project and make it a reality. I realized I needed to educate myself on everything to do with bike sharing, bicycles, activities, and why people are so passionate about cycling. I reached out to the people I had met and asked for help. They were more than happy to help me they love cycling and want to see more people riding. I started attending and speaking to any and every one I met. I emailed bike share companies asking what we would need to start up a bike share at NMSU. A representative from B-cycles was amazingly kind and came out to NMSU to a sustainability meeting and toured the campus to let us know what it would cost and what we would need to do to start a bike share. This was the beginning of my journey down this path of becoming a bike-share activist. I started a Facebook page to open the communication between the cycling community so we could make changes on campus and improve people's riding experience. I made a ghost bike and have it on display at the community of hope , I started a petition for more fix it station on campus , I did tabling's to inform people about bike share, benefits of riding , and asking how they would feel about having a bike share. I helped create a map showing all the routes on campus as well as bike friendly roads. I planned an event to promote safe and health family activities (bike riding as a family), this helped me to learn so much more and how everything is interconnected. I have this great passion for helping people. Seeing a need for the Aggies community and knowing I had the ability to fill that need was amazing in itself. For the Aggie Family Bike Event/ and Safety Ride I had help from the student in a management class at NMSU. They helped me get donations for the event, get the word out, and run the event on the day of the event. This group also helped me write a report analyzed the information that was obtained about bike share. The Sustainability chair and the BFU chairs did a phone conference with me with a bike share company, this is when I learned how aggressive people can be. The next semester the new grouped help me take that information to a whole new level. I was able to communicate with different bike share companies and see what it would require for the university to have a bikes share and the cost and things we should look at in the future for this plan to be successful.. The next semester I was able to get more students from the management class who helped me run the data and create a detailed plan including everything that is needed when starting a bike share at a university. This plan is a comprehensive plan I am able to present to all the stake holder that answers all of the questions they may have. Then more I worked with people the more educate I became and the more people came to me with questions on this process..

Data collection was done at different stages. The data was collected at different stages throughout my time at NMSU. I then used Antenarrative and Barthes S-Z to analyze the data. The data was collected on many different levels. It started as a simple class project and my passion for this to become a reality increased. THIS project required us to start by figuring out why New Mexico State University would benefit from having a bike share program. We did our research looking at comparable schools and bike share companies. Good locations for bike stations, How it would benefit the campus, the health of the people using it, and the carbon footprint at NMSU. Then meet with the Activity Recreation committee and the Sustainability committee. Then started a world wide meeting information finding and project. After the semester ending the two working with me went on their way and I started researching more.

FINDINGS, ANTENARRATIVE

Before (fore-having) – The bike-share is not yet. The potentiality-for-Being, e.g. of organizations to be a whole system in fore-having (the BEFORE) is an ontologic problematic. We are creating a process to bring it about. "How about its fore-having? When and how has our existential analysis received any assurance that by starting with everydayness, it has force the *whole* of Dasein into view as a whole?" (Heidegger, 1962: section #233, Boje, D. 2015). The whole is also not yet. We have some bike paths, some parking racks, and lots of discussion about the need for having bike-sharing, safer bike paths, a campus culture of bike-health. A potentiality, not yet something that is in *spacetime mattering*, as a whole, but is nevertheless in the background, becoming hopefully a foreground. "Not only has the hermeneutical Situation hitherto given us an assurance of 'having' the whole entity: one may even question where 'having' the whole entity is attainable at all, and whether a primordial ontological Interpretation of Dasein will not founder on the kind of Being which belongs to the very entity we have taken as our theme" (Heidegger, 1962: section #233, Boje, D. 2015).



This is a picture of me with my many trifolds showing all the knowledge I have on bike share and bicycles in general. It shows the many different stages but for this paper's purpose it is showing the fore-having in the antenarrative. I am standing here with all of the information for a bike share program, the map of the campus that is allowing people to state where they want a bike share, The presentation that shows many concepts that relate to Barthes S-Z HERMENEUTICS, it shows the bike event picture I created to help educate people on bike safety and the fun they can have as a family riding. This picture really represents the before (fore-having) it shows me with all my knowledge wanting to get people to understand what bike-share is and the importance of it. It shows how many people think of Bike share at NMSU or in Las Cruces and think of me. Some planners from the city would receive calls and refer them to me. IT shows something that is not yet there but what is attainable in the future. It shows me so to speak as the Mother of Bike – Share at NMSU. All things dealing with bike share and understanding from classes, bicycles, meetings, and bringing bike sharing to NMSU in a workable safe manner.

Beneath (fore-conception)

"Anything understood which is held in our fore-having and towards which we set our sights 'foresightedly', becomes conceptualizable through the interpretation... it is grounded in something the grasp in advance---in a fore-conception" (Heidegger, 1962: section #150, Boje, D. 2015). A bike share before at NMSU was just a novice thought that most people would here and it was foreign or something to toy with. It was in the before stage. Now bike share has taken on a whole new thought in people's thought process. In the Fore-conception stage people are think about a bike share and thinking how it would be beneficial for the university, they are grasping the idea if it.



This picture to me represents the Beneath (fore-conception). This stage is when Barthes S-Z HERMENEUTICS really starts to take place. The significations, the fore-concepts conceives as an entity, in this case systems, or parts of whole system, not yet, becoming, moving to its potentiality-for-Being can be a "Self-projection upon the 'for-the-sake-of-oneself'" so this is why a Hermeneutic Situation includes conscience and care "grounded in the future" (Heidegger, 1962: section #327, Boje, D. 2015) It show me with three of my colleagues showing the audience what we did, the processes we worked through to bring bike-share interest to higher peaks at NMSU. We tell our story on how it not only changed our lives but others, what we had to do to get more interest and what still needed to be done. I reference the things I had to do and shared my knowledge about the whole bike-share process. When talking with a bike lover there are certain terms they use a language of its own. Many people will get lost in this lingo if they have no idea what it is. This gave me the opportunity to educate people on the lingo of a cyclist and a bike share system. To talk about what a kiosk is, what a bike fix-it station was. How they bike-share can help improve the health of the riders along with the carbon foot print left at

NMSU. It shows others how important something like this can be, what changes will come and the work behind the scenes. It opened the eyes of the audience and had them asking us questions about it. When one thinks of a bike share now they see the process we went through and the importance of it and that it would be a great benefit for not only the student at NMSU but also the faculty, staff, parking issues, sustainability, NMSU campus as a whole. This is the stage where people really started to see the Bike share as a valid program.

Between (fore-structure)

Fore-structure from "the ground up" is "amplification of understanding" the "basic conditions which make interpretation possible" the between of fore-structure is connected to "our fore-having, fore-sight, and fore-conception" and "working out these fore-structures in terms of the things themselves" and their "Being-in-the-world" (Heidegger, 1962: section #153, Boje, D. 2015). During this process I have to get the understanding across that in order for NMSU to have a bike share we needed to improve our campus. In Fore-structure step it is important for one to see all the needs to make a bike share a reality. This includes what is plans need to be made before a bike share can become a reality. It includes what we need to install on campus from more bike parking to more bike p[aths, funding to pay for the program, approval from all the different groups from ASNMSU, faculty senate, Provost, and the board of regents. It covers all structures needed before a bike share can be implemented.

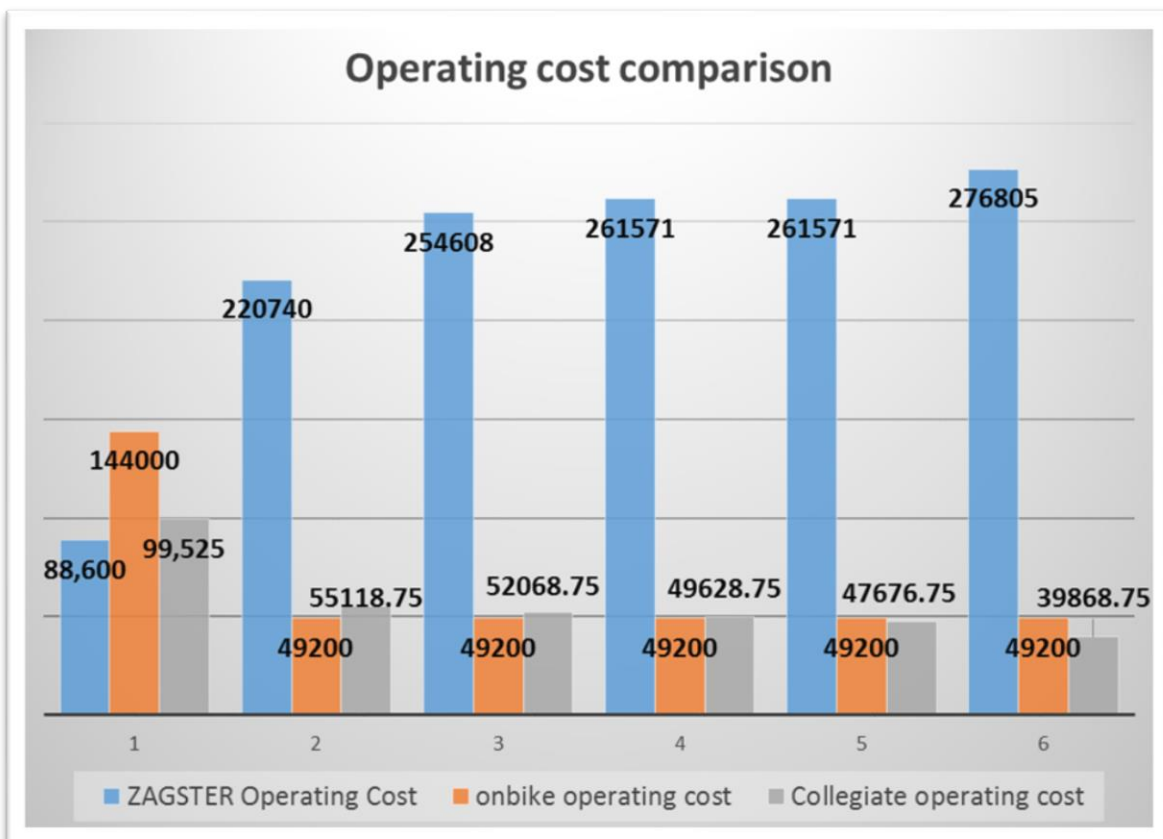


These two pictures to me best represent fore-structuring. This shows how at NMSU we needed more bike parking so this was implemented. This was actually done because of me. I used the Facebook page and showed the need for more bike parking in this area of campus because the other racks were overly packed. This show a small thing that was accomplish because of all the work I have done on campus to raise awareness of the presence of bicycles on campus along with the need for improved facilities for them. Not only bike parking, but how the parking is installed, the quality of that parking and the paths we have available for riders. The

comprehensive plan created by the students puts all of these needs into perspective. It show what we need to do who we need to talk with, how it would benefit the campus to have a bike share.

Bets on the future arriving (fore-telling)

"In every case interpretation is grounded in something we see in advance---in a fore-sight. The fore-sight 'takes the first cut' out of what has been taken into our fore-having, and it does so with a view to the definite in which this can be interpreted.. Anything understood which is held in our fore-having and towards which we set our sights 'foresightedly', becomes conceptualizable through the interpretation... it is grounded in something the grasp in advance---in a fore-conception" (Heidegger, 1962: section #150, Boje, D. 2015). In fore-telling process is when people have something to look at and bet on in the future. For bike share this to me would be the data collected , the predictions, the cost of the programs, what it means health wise for everything on campus humans, the animals, plants, environment on campus, Most people want to see hard numbers and at this stage I was able to give them the answers they were looking for. From the cost of the bike share program to the effects it could have on everything and everyone involved.



This picture to me represents the Bets on the future arriving (fore-telling). It shows the data that was collected for different bike share companies and gives a better look at what the cost would

be over a five years . The work put into this collection not only included the price but the services. In the comprehensive plan talks about how it can effect health. Most people do not know that riding a bike is better for your joints because it is a “non-weight bearing activity”. (Machin DR, Tanaka H , 2012) When one is given knowledge it helps them to better see what the future holds. This picture represents what the future of bike share at NMSU could become.

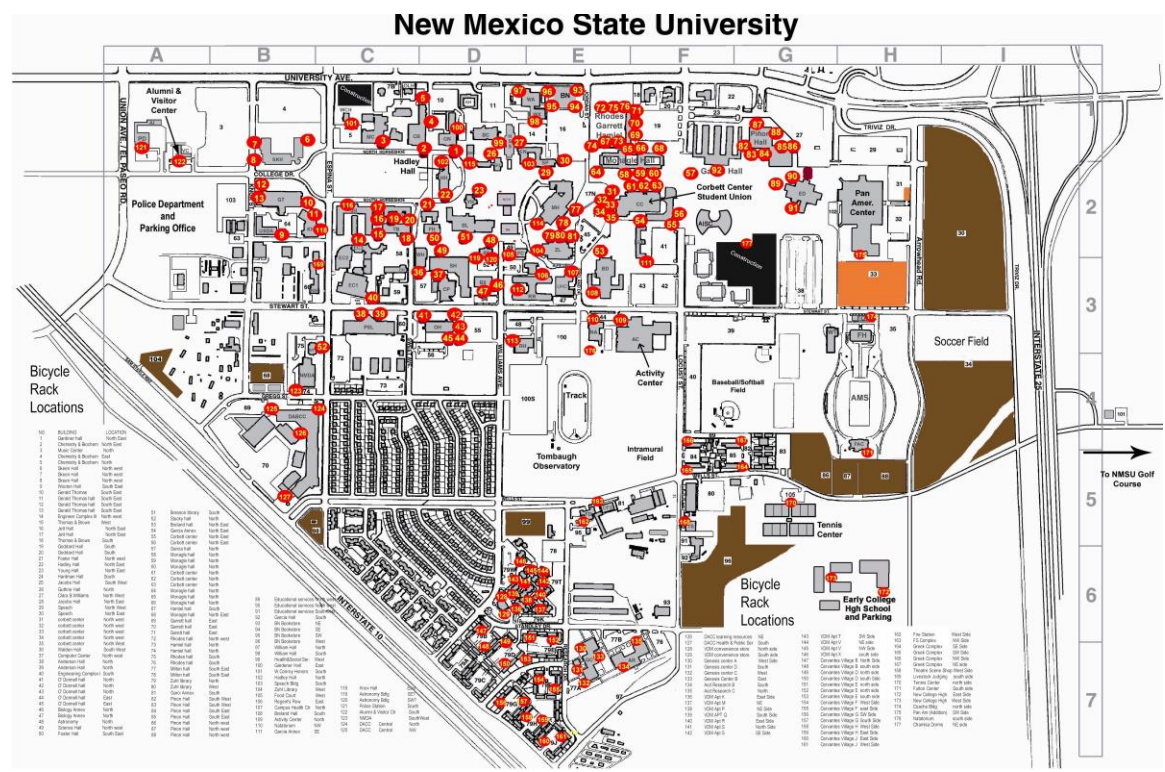
Becoming (fore-care) In the curiosity attunement, Heidegger (#172) says, “Care becomes concern with the possibilities of seeing the ‘world’ merely as it looks while one tarries and takes a rest.” (Heidegger, 1962: section #172, Boje, D. 2015) For-care relating bike share is all care that needs to happen to bring about a bike share and to maintain it the repairs to the stations and the bicycles, the insurance needed in case someone gets hurt that helps cover the possible law suites, the paths being maintained so the use is continued , the relocation of the bikes from full stations to empty ones etc..... Fore-caring is also what happens when you see something like the picture below.



This picture shows fore-caring it shows many things but we will use fore-caring and *spacetime mattering* it show being in the moment. This is a picture that was taken at one of my events. It shows how the Codes officer is connecting to the bike as well as the child. She is

showing care in helping the child learn to ride safely as well as the child showing the desire to ride. He is concentrating so hard on riding the bike. Knowing more information about this little boy such as he is four years old. Both of his parents ride every day and take him and his brother along. He has grown up loving bikes and now is learning how to ride one himself. This is a step in the process of bring bike share to NMSU. This event was created to promote cycling as a family activity that can be done safely and improve the health of the whole family while having fun. It was also to encourage people to ride more and be willing to use a bike share program if it were made available to them.

This map shows what is available for student right now



FINDING: BARTHES HERMENEUTICS

What is bike-share? A noun? A verb? A name? A thing? An activity? Barthes (1974; 17) designates as Hermeneutic (HER) code, all the ways of forming a question and its response. There were a variety of chance events that formulate these questions. For example, I Jamie, by chance met David Shearer, and David Boje, and other people named David, David Perez, and Joni. This initiates the first step in a sequence, a process of bike-share coming into Being-in-the-word (Heidegger, 1962).

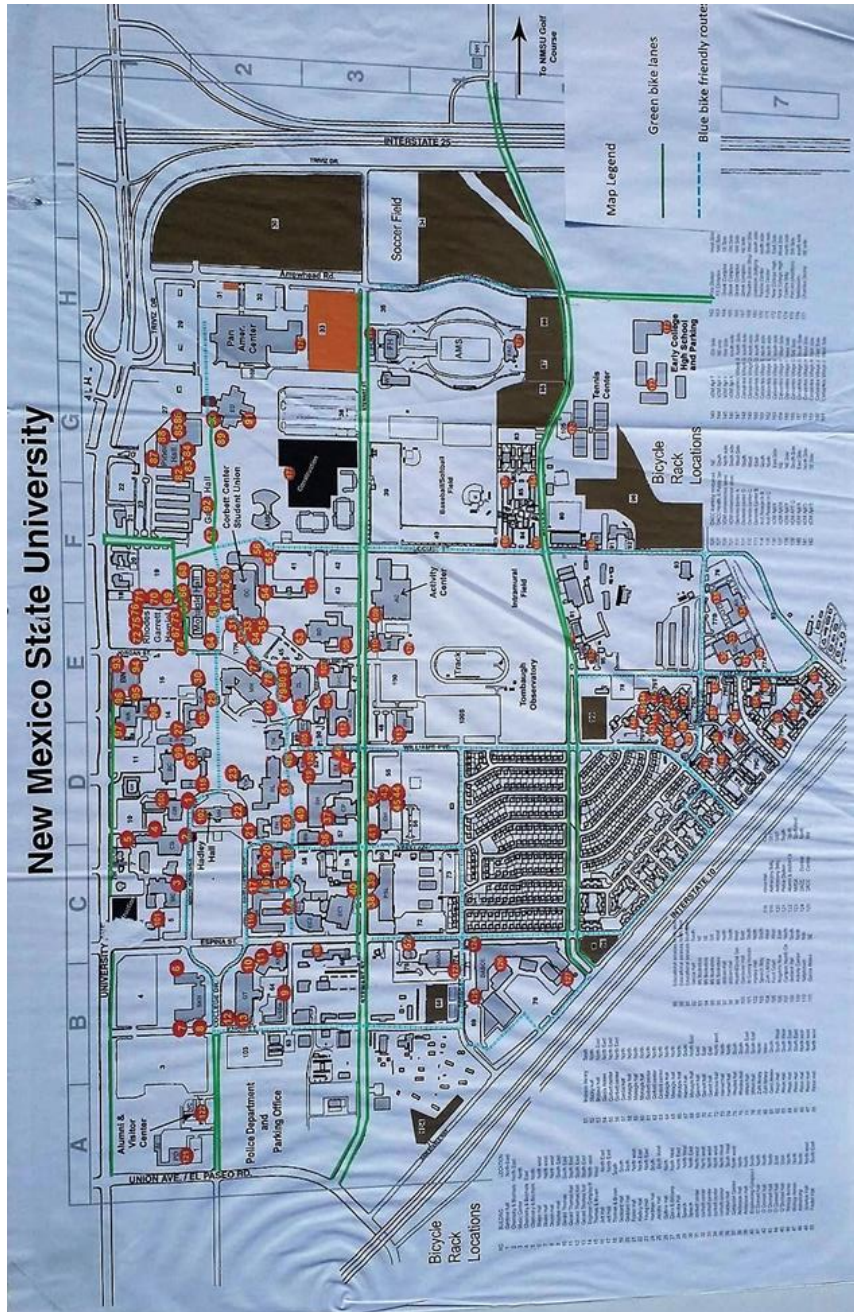
The hermeneutic code (HER) is questions and answers the process unfolding
 What is a bike share ? a bikes share is

a noun because it an idea. Bike-Sharing Someone who see the bike share system will look at it and see bikes connect to a kiosk station and ask what is that? Then someone will respond that it is a Bike share system and explain what it is and how it works a bike –share is something that bring communities together, it helps the environment and offers a convenient mode of transportation. The bike share was first started y A verb by the name alone because bike sharing is an action that is taking place. People are using the bikes in the system. A name with people seeing the system they need a name for it so Bike Share is that name for the system. It is a thing because is it a thing people do for exercise, to sight see, or just to experience. An Activity because Bike sharing is and activity that people participate in.



This is a picture represent the Barthes Hermeneutics Code. I will separate it into separate pieces and explain each piece of this picture according to Barthes S-Z codes. This picture has so many details I decided to use this to explain the codes and the relation to bike share and cycling.

The first section is the map of NMSU. This map shows all of the bike paths as well as the bike friendly routes. It shows where the bike racks are located. It represent the hermeneutics code it not only promote questions but is also a question with answers. I lets people ask: which way I should go? Where will I park my bike? How safe is it? What building is that next to? All of these questions can be asked or answered by simply looking at this map that was created with the idea that people would know what was available to them on campus. This map combines many facets of the campus in one so its users has a clear concept of what is out there for their use.



The NMSU Bicycling section is part of the same code. This picture represents many codes for my purpose it represent idea of what a bike share is. The guy riding on the bike that represents the NMSU cycling community. It alone informs and raising questions that also gives the answers to the questions or leaves some wanting to ask more: What is a bike s share? What options do I have? This is a bike share. These are some options


NMSU BICYCLING

What is a bike share program?

- This program makes bikes conveniently available for use at an unattended station.
- There is a variety of systems available here is an example of two types of systems. Which one would you prefer?
- There is a kiosk system where the user would simply swipe their card or put in a code to unhook the bike. The kiosk will keep track of who has a bike and when it is returned. To return a bike you hook it into the closest station. If someone

does not return the bike they will be charged the full price of the bike.

- The other system is that the bike would have a computer attached that would have a GPS, and be used to access the bike. Users would swipe their card, punch in a code, or use their phone to gain access to the bike. The bike would latch onto current bike racks on campus.



NMSU Bicycling Community

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Bike share has been around since the 1960s according to DeMaio and was started to help lessen our carbon foot print or in other words effects on the environment. (DeMaio, 2009) I make this statement so that people see the beneath, because bike share is far more than just a program but a tells a story in and of itself. The follow section is something found online when searching for reasons to show people what

12 Reasons to Ride Your Bike

- 1) **It's easier to finance a new bicycle than a new car.** Thanks to the recession, auto loans are hard to find these days — even if you have good credit. But for the price of a single car payment, you can buy a well-made bicycle that should outlast most cars. Add a few hundred dollars more for rain gear, lights and accessories, and you have all-weather, anytime transportation.
- 2) **A bicycle has a tiny manufacturing footprint when compared to a car.** All manufactured goods have environmental impact, but bicycles can be produced for a fraction of the materials, energy and shipping costs of a car.
- 3) **Bicycles produce no meaningful pollution when in operation.** Bikes don't have tailpipes belching poisonous fumes into the atmosphere. They also eliminate the oil, fuel and hydraulic fluids dripped by automobiles onto the road surface — which means less toxic runoff into local waterways.
- 4) **Bikes save taxpayers money by reducing road wear.** A 20-pound bicycle is a lot less rough on the pavement than a two-ton sedan. Every bicycle on the road amounts to money saved patching potholes and resurfacing city streets.
- 5) **Bicycles are an effective alternative to a second car.** Perhaps you're not in a position to adopt a bicycle as primary transportation. But bikes make great second vehicles. You can literally save thousands of dollars a year using a bicycle for workday commuting and weekend errands in households which might otherwise be forced to maintain two cars.
- 6) **Using a bike for transportation can help you lose weight and improve your overall health.** The health benefits of regular aerobic exercise are well-known. Depending on your riding style and local road conditions, you could easily burn 600 calories an hour through brisk cycling. Most bike commuters report losing 15 to 20 pounds during their first year in the saddle without changing their eating habits.
- 7) **You can store a dozen bicycles in a single automobile-sized parking place.** Parking lots have enormous environmental and financial impact, particularly in urbanized areas. The more bikes you can get on the road, the fewer parking spaces you need to build.
- 8) **Bicycles don't burn gasoline.** Fuel is cheap compared to last year, and the economic downturn is likely to keep a lid on petroleum demand for a while. But we're not producing any more oil today than we were when it was more than \$100 a barrel. A healthy bike culture will help ease pressure on supply once demand returns.
- 9) **Bicycling may be faster and more efficient than taking a car.** We're not talking about the crazy — and illegal — antics of New York bicycle messengers. But bikes are often faster than cars in urban areas, especially when city designers have set aside proper bike lanes. There's nothing more satisfying as a bicycle commuter than breezing past a long line of gridlocked traffic.
- 10) **Bikes cost much less to maintain and operate than automobiles.** You'll never throw a rod on a bicycle, and dropping a transmission on a bike usually means replacing a bent derailleur hanger or worn-out chain. Bicycles do require service, but you can learn to perform most of it yourself. Even if you have a shop do things for you, costs will be trivial compared to a car.
- 11) **Bicycles provide mobility for those who may not qualify or afford to drive.** Not everyone can get a driver's license (or wants one), and the cost of purchasing, insuring and maintaining a car is out of reach for a lot of people. Almost everyone can afford some sort of bike. Other than walking, bicycles are the most cost-effective transportation on the planet.
- 12) **Studies show that bicycle commuters are healthier, more productive, and require less time off at work.** This is why most enlightened employers are eager to accommodate commuting cyclists. Healthy workers are better workers — and that's good for the bottom line. Bikes are smart business.

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Read more: <http://www.mnn.com/green-tech/transportation/stories/12-reasons-to-start-using-a-bicycle-for-transportation#ixzz3GsuORbqg>

benefits they would gain from the use of bicycles and why their use should be considered more. This represents the HER code; it shows questions with answers and leaves one to ponder and come up with reasons on their own. It gives the reader ideas and thoughts. It signifies what is to come or could be.

The Proairetic code (ACT) sequence (process)

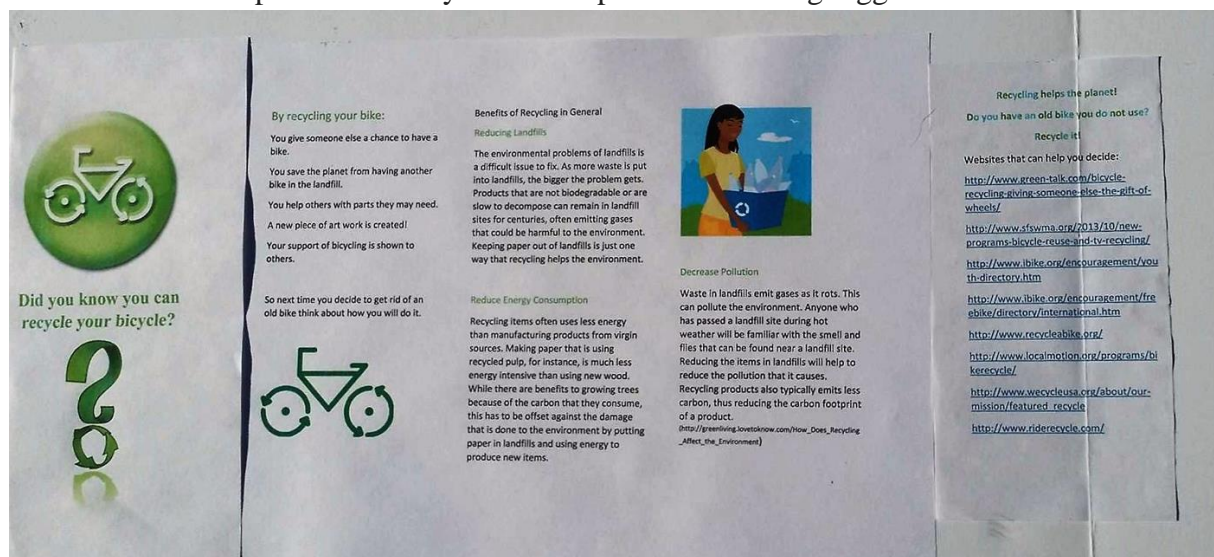
“Such sequences imply a logic in human behavior. In Aristotelian terms, in which *praxis* is linked to *proairesis*, or the ability rationally to determine the result of an action, we shall name this code of actions and behavior *proairetec* (in narrative, however, the discourse, rather than the characters determines the action).” Barthes (1974; 18)

A bike share system is an ACT; this is an example of how it is action. Through this picture you can see how these two men are teaching this boy how to fix his bike. Not just doing it for him; so a sequence unfolds; there is more to the story than just fixing the bike; the boy's attention has been captured and he is wanting to learn. He will then in the future be able to teach others the same skills he picked up at this event. These two men have a great passion for teaching others and sharing the bicycle knowledge that they have. They are part of a sequence that just keeps building and sharing knowledge; they tell a story with the education they give and the people learning from them are able to pass that on along with more knowledge they pick up. It represents the ACT code because of this it is part of the sequences and in a way sets the sequence in motion. These people are deep in thought and deep in the art of being a passionate bicycle advocate and lover.



It is important though to remember that it is not just the people in this picture that tell a story it is the bike as well. This bike by looking at it shows how much use it has received. How with the connection to the young man the older gentlemen that it needs some care because of all the hard use it has received. It connects the boy to the world. To some peace of mind. Riding his bike lets him clear his mind and destress. This bike tells a story just from looking at it. . Granted in this picture you cannot see the lights that he has on it or any of the other work he has put into the bicycle. However if you could have seen this young man this day, talked with him , you would have seen how riding a bike helps him in many ways. He loves to ride and learning how to repair his bike only enhances the ability to ride more.

The follow section of the presentation was telling people how they can recycle their bicycles. So many people will have a bike they do not use anymore and it just sit there collecting dust. People need to be more aware of what is out there and that they can do something with them other than sending the bike to the landfill. This sections is also part of the ACT Code. It sets a sequence that tells people they can do something and gives them the resources to do them. The flyer puts people in a deeper train of thought no just the superficial thought process. Most people do not think that they can do anything to help with sustainability or any process that makes a change and this section helps them see hey I can be a part of something bigger.



The semantic code (SEM) characters the signifier par excellence because of its connotation, in the usual meaning of the term. We shall call this element a signifier (without going into further detail), or a seme (semantically, the seme is the unit of the signifier), Barthes ()

In bike share the symbols are the kiosk, the bikes the user, the campus on which it is used, the acceptance of non-riders and officials. The kiosk represent what is there and when people see them they know they have the system available if the person is a user, if not a non-rider who is aware is able to explain to the new people on the campus what it is. The bike rider is a symbol a character because by people seeing him they are able to the system in use they can see how quickly the rider gets to class, how safely he is riding and the convenience of the system. The campus plays a big role in character because a campus that is open, accepting and well prepared for a bike-share system shows it to others. The campus will have good riding paths for the users, as well as knowledge distributed to all new and incoming students and visitors to campus. They take pride in this system. When drivers respect riders and understand the rules it encourages more use of the system. When non riders show that even though they do not ride but it is cool that others utilizes the system and show respect for them when they see them using it and promote it equally it only enhances the users experience and encourages more people to become users. When the president and provost promote the system as well as taking picture with them using the system will only enhance the views of the bike –share system making them a positive character in this system. New people may start feeling well if they can use it maybe I can as well. Without the support of the higher ups on a campus this system is bound to fail. You have to have the campus as a whole promote the system and encourage use. From the parking personnel, police, students ,faculty, staff, deans of the colleges, head of departments all the way up to the directors of the different programs on campus. When you have this support other of people will be more willing to use the system.



This picture is like saying a thousand things all in one simple picture. It represents the character at NMSU this is Pistol Pete at one of my events promoting family bike use and this to me is a big deal. Having our university mascot on a bike and supporting the activities helps father sets in motion the support and mind set ‘if Pistol Pete can do it so can I’. It goes along with our motto for the university “All About Discovery” This leads one to ask then what the antithesis could be for bike share.

The symbolic code (SYM) symbols antithesis

“On the symbolic level, an immense province appears, the province of the antithesis, of which this forms the first unit, linking at the start its two adversative terms (A/B) so for a bike share there are many antithesis such as: which system should be chosen? One with a kiosk or without? How does it affect the riders and the non-riders what are their opinions of It.? Who will use this system the faculty or the student? Who will pay for this system? Will there be a fee or no fee? Will they be required to wear helmets or not?

Kiosk/ no kiosk

Riders/ non-riders

Faculty / students

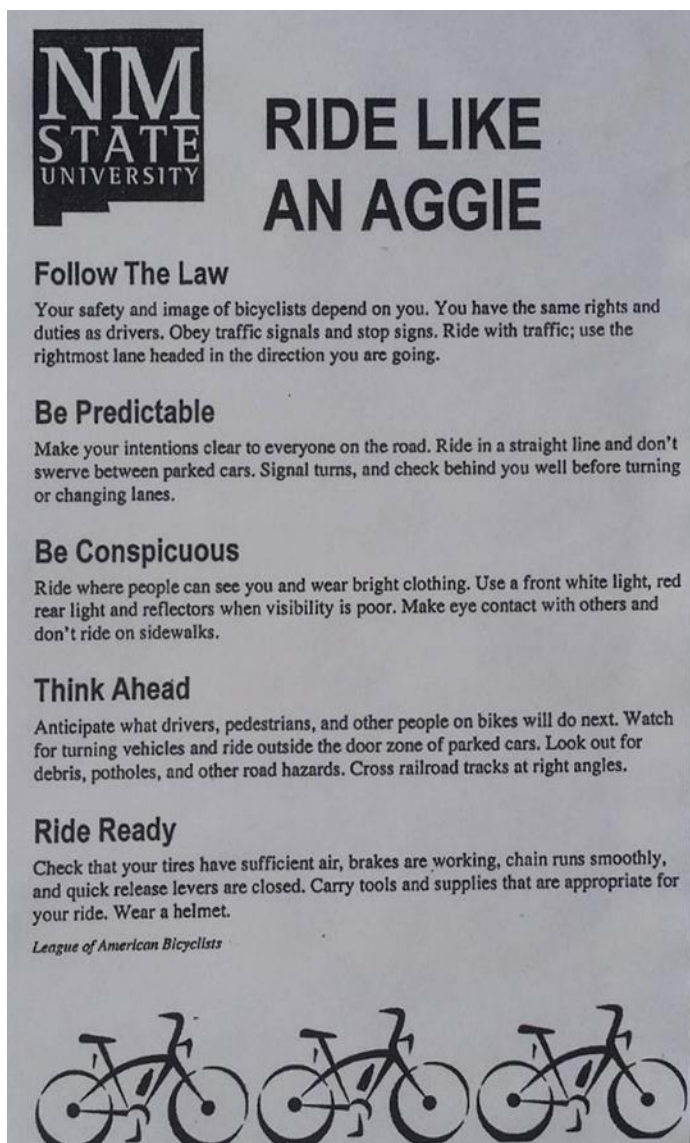
Fees /no fees

Helmet / no helmets



I choose this picture to represent this code because it shows a father about to go on one of my safety rides that is making his children wear a helmet and he himself is not wearing one. This picture represents many things but I think it best suits the antithesis.

The cultural code (REF) bodies of knowledge. this code is one of the numerous codes of knowledge or wisdom to which the text continually refers; we shall call them in a very general way cultural codes (even though, of course, all codes are cultural), or rather, since they afford the discourse a basis in scientific or moral authority, we shall call them reference codes (REF.Gnomic code). Barthes (1974; 18). for a bike share there are many things that represent bodies of knowledge from many articles that have been read to the follow parts from the presentation trifold. “Ride Like An Aggie” is a body of knowledge that was provided by the *League of American Bicyclist*, it is something that I pass out at all of my event. It teaches people 5 simple things to remember when riding their bicycle. It helps give people an idea of what is expected of them and may offer them some information they may not know. This is something that is easy to understand.



NM STATE UNIVERSITY

RIDE LIKE AN AGGIE

Follow The Law
Your safety and image of bicyclists depend on you. You have the same rights and duties as drivers. Obey traffic signals and stop signs. Ride with traffic; use the rightmost lane headed in the direction you are going.


Be Predictable
Make your intentions clear to everyone on the road. Ride in a straight line and don't swerve between parked cars. Signal turns, and check behind you well before turning or changing lanes.

Be Conspicuous
Ride where people can see you and wear bright clothing. Use a front white light, red rear light and reflectors when visibility is poor. Make eye contact with others and don't ride on sidewalks.

Think Ahead
Anticipate what drivers, pedestrians, and other people on bikes will do next. Watch for turning vehicles and ride outside the door zone of parked cars. Look out for debris, potholes, and other road hazards. Cross railroad tracks at right angles.

Ride Ready
Check that your tires have sufficient air, brakes are working, chain runs smoothly, and quick release levers are closed. Carry tools and supplies that are appropriate for your ride. Wear a helmet.

League of American Bicyclists



The next body of knowledge is the information of how bicycling is sustainable. This show a price tag which draws people eyes to it and makes them wonder why is that there? What is this one about? They take a second look and they see the person on the bike and may wonder why. There eyes drift to the gas pump connected to the leaf and they start figuring out that if they read this flyer it will tell them how they can save money riding a bike and be more environmentally friendly. Interest in reading it is peak so once they read it they are given the knowledge of all of these things. And the flyer has served its purpose as a body of knowledge with or without words. It then offers them a resource to find out more. They are given links to the Facebook page and the webpage for the university that was created just for bicycle related topics and as a way to communicate with the community.



This flyer takes a moment to have people think about the here and now. How what they are doing may not benefit our planet or their wallet. It make them look beyond a simple bicycle that kid rides all the time to a serious way to save some money, get exercise, and lesson their carbon

foot print. Which helps them look to the future and the present time and possible reevaluate what they are doing.

These pictures still represent the body of knowledge it shows people what different types of stations are available to them from ones with simple bike racks to ones with kiosks. They were obtain from the internet since we have not gotten to this point yet.



They show the people with questions exactly what we are talking about when we say kiosk or no kiosk or bike – share. It is a body of knowledge that shows what it looks like in different ways. Which leads us to our discussion or conclusion about all of this.

DISCUSSION/ CONCLUSION

Through talking with many different people I learned that most people will support a bike share program. Once people understood the concept of the system they were willing to support it for the most part. I did have this one person who at the beginning supported it she then retired from the university and her support stop. She said she would probably not use the system due to lack of campus presence. With time more and more people will grasp the understanding and importance of having a bike sharing in every city and at every university and college. NMSU does not yet have this system in place but we are working on it. Our sister cities have it takes a lot of work to get all of the key players on board. Through my work I have been able to use quantum storytelling and ethnographic methods to study the bike-sharing implementation process at the university. Using the events I created and presenting to numerous organizations, classes, groups, and different city groups I was able to get more knowledge out in the community and create great alliances. I used the antenarrative: Fore-having, fore-conception, fore-structure, fore-telling and fore-caring to show how the whole process would be beneficial and ties into Barthes S-Z hermeneutics code. The Barthes S-Z hermeneutics code shows how the events improved support for the bike share, bike use and family activities. I was able to show how the community as a whole can help the bike share success as well and the environment. Bike-share is more than just a system, with machines, it is the people, the environment, the rules, attitudes so many things that it is a story in and of itself. It makes people rethink of what a bicycle is and what story it tells. In the future I hop to see not only NMSU having a bike share but the city as well so that we can interconnect with other areas as well.

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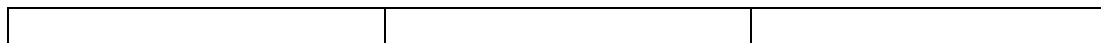
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Sample	Projects	interviews
vendors	Family bike event	
Chair of Bicycle friendly university	Bike event	
City planners	Petitions	
Mpo bpac	Tabling's	
asnmsu	Dispersing information	
Safety Coalition	Educating	
Nmsu classes	Facebook page	
Southern New Mexico Bike Educators	Family	
Las cruces codes		
Donna Anna Place Matters		
Sustainability committee		
Activity Recreation Committee		
Students in Management class		
Student in communication class		
Assistant director of student activities		



Antenarrative

Fore-having: represents me with all the knowledge I had gathered. Me knowing more than most about bike share

Fore-structure: represented by All structure are in place before it can be installed including the approvals from the Provost, facility senate ASNMSU, and funding.

Fore-caring: all –care that needs to happen bringing about the system and after repairs for system, safety, relocation, and connectivity. The codes officers teaching the child how to ride.

Fore-conception: represents the groups, committees, classes, authority figures, I presented to and the Activities I started.

Fore-telling: represents the future, Data, predictions, cost, meaning health wise, parking, environmentally, and positives for the campus as a whole

Barthes S-Z

The hermeneutic code (HER) is questions and answers : the map, the 12 reasons to ride, and NMSU bike-share flyers all represent this code

The semantic code (SEM) characters: kiosks , riders, non-riders, campus support, Pistol Pete, Faculty , staff students head of departments, President , plus many more.

The cultural code (REF) bodies of knowledge: this the maps. University rules, how to be sustainable, bike safety, running the program (pragmatics), Demanding out of someone.

The Proairetic code (ACT) sequence (process): Men teaching boy how to fix bike, teaching how to recycle bikes, teaching others what bike share is these all sets up a sequence of events.

The symbolic code (SYM) symbols antithesis: Kiosk/ no kiosk, Riders/ non-riders, Faculty / students, Fees /no fees, and Helmet / no helmets