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Chaos in the Clinic: Applications of Chaos Theory to a Qualitative Study of a Veterinary Practice

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Keywords

qualitative research

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Chaos in the Clinic: Applications of Chaos Theory to a Qualitative Study of a Veterinary Practice

by
Eleanor Craven Brennan[±]

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Abstract

This paper is the result of a twelve hour participant observation study of a local, private veterinary practice in southeastern Pennsylvania. Field notes and semi-structured interviews, the result of naturally occurring conversation between me and practice members, were taken over a twelve week period, one hour of site visit each week. Using a grounded theory methodology, categories of social interaction among veterinarians, veterinary technicians, clerical staff, owners and animal clients were assembled, discarded and re-assembled. The resulting categories were analyzed using the conceptual framework of chaos theory and the principles of uncertainty.

It appears that the most striking feature of the intra-site analysis centers around the chaotic notion of similarity of patterns or fractals, those patterns that repeat at smaller and smaller scales. In this micro-sociological analysis, these patterns or fractals are presented as behavior patterns within this veterinary practice. The analysis of the similarity of behavior is based on intra-practice comparative data of roles and status and gender.

The triangulation of owner, veterinary worker and animal is a fascinating one; from a chaotic perspective it is a subject ripe with the possibilities of patterned order within disorder.

Introduction

Leighann came in and cradled his limp body to her chest really closely and said, "Come on Buddy, let's go, Sweetie".

A veterinary technician to an anesthetized cat after a declaw,
Field Notes 6, March 12, 1997

Leighann, cooing to the dog, "Helloooo, Sophia, how are you today? You're one of my favorite dogs, aren't you Sophia? You're just the best dog, Sophia."

Joan, the receptionist, "I just love Sophia. She's a good girl, isn't she? Aren't you, Sophia?" in a sing-song, child-like voice.

A veterinary technician and a receptionist to a basset in the treatment room,
Field Notes 10, April 9, 1997

The world of animals as pets or companions to humans is as old as paintings on cave walls, as new as today's veterinary subfield of oncology. However, the use of animals *only* as companions,

with the specific purpose of fulfillment of socio-emotional, rather than physical, needs is relatively new to the human condition. It is a uniquely Western, although globalized now (Ito, 1987), middle-class and upper middle class tradition and the care that is bestowed on animals as pets is reflexive of a class system that allows for luxury (Sanders, 1993). It is representative of Maslow's highest level of fulfillment. In the eyes of a pet owner, there is a reciprocal agreement between owner and pet, that of love and care in return for unconditional acceptance and companionship (Sable, 1995).

On the front cabinets facing the examining room were notes from clients, among them two eulogies of animals that had been long time patients of the clinic. One was a greeting card type handwritten note of thanks for "easing the journey" [emphasis mine] and the other was a very long fax of a scripted eulogy that had perhaps been given at a commemorative service. The fax chronicled the life of a dog from birth to death with wry comments thrown in. An amusing story told of trying to get the dog to wear a sweater.

Field Notes 3, February 14, 1997

The individuation of "animal as pet" (Kidd & Kidd, 1995; Sable, 1995; Schwartz, 1996) and the triangulation between owner, pet and medical caregiver (Kidd, Kidd, & George, 1992) make for a social exchange that is unique to these three entities. It is, in effect, a negotiation between medical caregiver and owner without a shred of autonomy for the patient (Sanders, 1994), although the patient has been individuated and granted a particular status as such. In this triad of pet, owner and caregiver, there is a negation of a three-way feedback loop, even though all three are "self-regulating" entities. It creates a "power of care" unlike that of any other human interaction, save that of infantile pediatric medicine. It is a struggle, not unlike that of human class or status, for a voice to be understood.

This is the basis upon which I will attempt to analyze various categories of owner, pet, veterinary care interaction for those patterns of similarity or fractals that emerged during my observation. The research question I formulated after my data were collected can be put as such:

Given that there are patterns of similarities that emerge upon investigation of any worksite, what about this worksite makes the patterns of similarities I observed unique?

Noting that this is a qualitative study of the patterns of interaction of one veterinary practice, the conclusions I present are intended to be argumentative. This study does not purport to be inferable to other veterinary practices and because the data collected were over such a short span of time, this report is meant to be only a preliminary one.

Background

The Research

In the Spring of 1997, as part of the requirements of a qualitative sociology research methods course at Temple University, College of Arts and Sciences, I needed to pick a research site. There were no boundaries on the type of site, only that the site be one that was unfamiliar to me and one that I thought would be interesting to observe. The expectation was that the participant

observation employed at the research site would be journaled in field notes and that the field notes and unstructured interviews would form the basis of a research paper. The participant observation would continue for the duration of the semester. However, I have attempted to incorporate examples that occurred more than once as evidence of the patterns of this veterinary practice. There is no reason to believe that the twelve site visits and subsequent field notes represent an anomaly in the "business as usual" for this site.

In conjunction with the qualitative research class, I was taking a class in chaos and complexity theory at Temple University, Harrisburg. As part of the requirements of that course, a "publishable" piece incorporating chaos and complexity theories was to be submitted. I chose to combine my interest in qualitative research with the fascinating subject of chaos and ground my piece in the tenets of both.

The veterinary practice I chose granted me unlimited access to both personnel and facilities:

Dr. Brandelt didn't ask who I was, or what I wanted, only how he could help me. I went through the explanation of doctoral student, Temple, research methods class, site selection, observation, field notes, whatever I could think of to sound credible. Dr. Brandelt did ask me what I wanted to observe, what kind of interaction I was interested in. Before I could answer, he said that there was lots and lots (my words, I can't remember exactly what his words were) of interactions I could observe.

Field Notes 1 (First Report), February 1, 1997

I'm backing out of the operating room into the treatment room, almost bumping into the royal blue scrubs technician.

Ellie - "Sorry"

RBS - "No problem. You're not in the way. Stay where you are."

Conversation between researcher and veterinary technician,

Field Notes 4, February 21, 1997

Linda - "...no, no ... anything we can do to help. It's more than okay with us."

Office Manager to researcher,

Field Notes 6, March 12, 1997

The Veterinary Practice

For as long as I have lived and worked in the southeastern Pennsylvania area, Southeastern Veterinary Clinic has been located on busy, commercial Route 7 in the township of West Lincoln, a suburb of the borough of Sherrittown, PA. The veterinary practice is in Lincoln County, the largest growing county in Pennsylvania and is middle to upper income socio-economically. You can see that the practice has grown through the years by the way the building that houses the practice has developed. Originally a residence, it has been added onto in the back and sides by newer looking, more business oriented facades. The original residence has been maintained, however, and it does give the look of the practice a certain homey charm. There is a lighted sign on the expanse of front lawn facing Sherriville Pike with the name of the practice and details that, in addition to the practice, there is a 24 hour emergency service housed in the building.

The Veterinary Staff

The staff of the Southeastern Veterinary Clinic is overwhelmingly female. There are three veterinarians, one of whom is Dr. Bob Brandelt, owner of the practice and the only male. There are three full-time veterinary technicians, all female, and a host of part-time technicians, also all female. There are at least six clerical staff, all female. There are two veterinarians assigned each day the practice is open, 6 days a week. The practice's hours are from 9:00 am to 8:00 PM; however, the clerical staff and the technicians start around 8:30.

There's three full-time technicians and we work 5 days a week, 8 or 8.5 hours a dayusually get in around 8:30 and stay until 6:00.

Technician to researcher,
Field Notes 10, April 9, 1997

Surgery is usually performed on weekday mornings; any one of the three veterinarians perform surgery. All animals brought in for an exam are seen by a veterinarian, sometimes with a technician present, sometimes not. Technicians perform blood and other technical tests, routine inoculations and the drawing of blood, dental surgical procedures, removal of sutures and other complex tasks.

Although I've not yet sorted out yet who does what (if there is indeed such a division of labor) in the clerical realm, the duties of the women who work in the reception area are multi-task and multi-varied. These women meet and greet every owner and pet that comes in the door and invariably know each animal by his or her name.

Linda comes out into the reception area.

Linda - "Buddy?" to a woman at the reception counter

Woman at counter - "Shot today ...stool sample".

Receptionist and owner, identifying Buddy the dog,
Field Notes 5, February 26, 1997

Dianne, "...and what is Bear's last name?"

Receptionist to man waiting for his dog to be examined,
Field Notes 7, March 22, 1997

"Well...here's Mc Muffi!"

Receptionist to me when I brought my dog in for exam,
Field Notes 9, April 4, 1997

In addition to keeping track of incoming and outgoing appointments, the clerical staff (or receptionists; I am using the term interchangeably) "keep the books", file and maintain all patients' charts, answer phones, maintain an appointment schedule for both routine examinations and surgeries and maintain peace and order in the waiting room, which can, at times, be filled with the cacophony of competing species of animals.

Dianne - "It's Saturday" in a tone of voice that said that that should explain it, but then she went on, "It's always busy on Saturdays. We have two vets on and people are here for food and shots

and to pay bills and it's not a work week and it's the only time they can get here and we have shortened hours. Yeah, it's a madhouse in here on Saturdays."

A receptionist to a man with a police dog,
Field Notes 7, March 22, 1997

Principles of Chaos, Uncertainty, and Fractals

What is Chaos? An Overview

Interconnectedness

Variouly known as chaos theory, complexity theory, the theory of complex systems, non-linear dynamical systems theory, quantum non-linear dynamical theory, uncertainty theory, this *system of thinking* [my emphasis] is emerging as a way of understanding human behavior. With its beginnings in the mathematical sciences, some trace the "new science" ([Capra](#), 1996; [Merry](#), 1995) of chaos theory to the systems tenets of Ludwig Von Bertalanffy in the 1940's and 50's. Unlike the Cartesian analytic tradition of cause and effect, of discrete parts that, upon analysis, reveal the structure of the whole, Von Bertalanffy stated that there are processes between parts, that to analyze one part is to analyze the whole. Von Bertalanffy proposed that there are linkages between parts and to understand the workings of the whole it was crucial to understand how the process or linkages worked. Quite simply, it was the analysis of the whole, rather than the analysis of the parts. It is analysis from a macro understanding; in order to understand the interconnectedness of a forest structure, it is necessary to view the trees as part of the overall forest, understanding that a tree by itself does not a forest make; many trees by themselves do not a forest make; it is the interaction or process among the trees that form the complexities of a forest ([Brodnick](#), 1997). So, one aspect of chaos theory is the premise that the whole is more than the sum of its parts and that to understand the whole, it is necessary to understand the *interconnectedness of the parts*, knowing that even this understanding of parts interconnection can be insufficient for the understanding of the workings of the whole.

Sensitivity to Initial Conditions

Meteorologist Edward Lorenz, in attempting to predict weather patterns, discovered that there is a quirkiness to weather pattern results if the initial conditions governing the pattern are altered even slightly. Noting that even the most minute alteration in initial conditions can produce exponentially differing results, he coined the phrase the "Butterfly Effect". Lorenz's butterfly metaphor, that the flap of a butterfly's wings in the Amazon could influence a tornado far removed from the Amazon, is a visual image of the concept of sensitivity to initial conditions. Conversely, the overt disparity of initial conditions can have negligible effects on a complex system. This axiom of chaos theory, *sensitivity to initial conditions*, makes cause and effect prediction in complex systems impossible. In chaos theory, as in qualitative research, it is the evidence of similar patterns or processes within the whole that stimulate analysis.

Self-Organization and Dissipative Structures

The ability of a system *to organize itself* and through that organization to adapt to outside influences and transform itself systemically are two chaotic concepts that I see as intrinsically linked. Both concepts utilize the energy of the system to regulate and adapt. If this concept is theoretically followed, it can be hypothesized that no complex system ever becomes moribund or ceases existence; it simply recycles itself and adapts to new properties while potentializing properties of the "old" system that work for the new. The tenets of self-organization and dissipative structures are similar to the concepts of social constructionism ([Berger & Luckmann, 1967](#)) with social construction's worlds and sub-worlds, nuances and shadings and the inculcation, adaptability, and expansion of those worlds, sub-worlds, nuances and shadings into different human constructs or meanings. One of the usual explanations of *dissipative structures* is the example of water boiling. Water, in and of itself, is a self-regulating system, made up of molecules, atoms, and whatever else makes it water. Left to itself, it remains water, with its own energy and regulation. When outside influences are added, such as heat, the water adapts to the heat, changes structure, becomes steam, and evaporates. However, the water does not cease to exist, it is simply changed and, if given new energies and new influences may become water again or it may become ice, snow or fog, all with the properties of water.

Attractors

In chaos terms, *attractors* can be thought of like magnets. As in magnetic pull, the system as a whole is attracted toward these forces. These forces give the system a certain direction and flow. Indeed, these attractors can be thought of as providing boundaries for the system. If I think of a metal pin being pulled toward a magnet, there are certain boundaries that beyond which the pin would not feel the attraction to the magnet. The magnitude or strength of the magnet determines the magnitude or strength of the boundaries. Note that it is the whole pin that is being attracted to the magnet, not just the pin components. So, while there may be discrepancies of parts from pin to pin, pins as a whole, and the wholes of pins, are attracted to magnets and the stronger the magnet, the stronger the attraction. In the research conclusion, I hypothesize that the overarching mission of care to animals can be thought of as an attractor.

Bifurcation Points and Phase Transitions

Bifurcation, a chaotic term signifying change, is that "fork in the road" of a system where the system is confronted with new challenges and is faced with the decision of which fork to take. It signifies change within the system, either an addition, subtraction or mutation of already assembled parts that with their addition, subtraction or mutation alter the system as a whole (*see [interconnectedness](#)*). Along with bifurcation comes another chaotic term, phase transition, which signifies the point at which the system decides which bifurcation or fork to take. I think of bifurcation as a choice to be decided; I think of phase transition as the process of change resulting from the choice. Note that the word "choice" as I have used it here, does not mean to imply autonomy; in complex systems "choices" are inevitable and decisions made do not imply cognitive functions.

What are Fractals?

Fractals are fascinating chaotic properties of complex systems. They are the ordered patterns found among the disorder of a chaotic system. They are found at smaller and smaller scales throughout the wholeness of the system. They are repetitive and constant in the system. "The shape of the whole is similar to itself at all levels of scale" (Capra, 1996, p.138). They are wholes within the whole, so to speak.

In 1986, the publication of the Mandelbrot set in *Scientific American* signaled the dissemination of fractal geometry to a more diverse public than the mathematics community. The Mandelbrot set is a "complex mathematical object" (Capra, 1996, p.148) looking unlike any mathematical calculation seen heretofore. It is a stunning visual of swirls, paisleys, whirlpools, each repeating the same patterns over and over again. Yet, it is a whole; the Mandelbrot set is a discrete, easily identifiable entity. As its parts become magnified, the repeating patterns became visible and upon further and greater magnification, Mandelbrot sets contained within the larger Mandelbrot set can be identified. These smaller sets are fractals; repetitions of the whole, similar, yet not wholly identical. Another fractal image that might be easier to comprehend is that of a stick drawing of a fern that was illustrated by Capra in the 1996 book *The Web of Life*. By iterating, or making a simple straight line smaller or larger in repeating scales, a complex picture of a fern emerges and at any point in the fern's final shape, the point resembles the whole of the fern.

In emphasizing the fractal-like patterns I discovered within my observation of this veterinary practice, I am looking at only those ordered patterns that I think help to answer the research question posed. I am looking at the "forest" or the veterinary clinic on a macro level for similarities or patterns of the trees while acknowledging on a micro level that each "tree" or entity within the veterinary practice (owner, veterinary staff and pet) has unique and autonomous characteristics that make it impossible to duplicate. In this research, I've identified two fractal patterns that I explore. Each fractal pattern discovered produced the same similarities over and over again, evidenced by selected verbatim quotes, yet each fractal is based on polar opposites. In the one fractal pattern, the homogeneity of gender would be expected to produce similar patterns; in the other, the dissimilarity of the roles and status of the participants would be *expected* to produce dissimilar patterns, yet they do not. The Conclusions section will explore why not.

Analysis

Roles and Statuses

This is a practice where the prima facie division of labor is evident in the structuration of the practice. There are three veterinarians, and their status as "important people" is evident even before one enters the practice.

I noticed that all three vets have their plaque (bronze, iron, some kind of metal) on the wall beside the door. They read in order, Bob Brandelt, VMD, Kimberly Cloutman, VMD, Crista Jacobs, VMD. Is there a hierarchy to the order? I assumed that there must be, if only by seniority. I don't know if Jacobs is the youngest of the three (Cloutman looks young, too) but I do know that she's the one at the clinic with the least time.

Field Notes 6, March 12, 1997

The physical layout of the practice is also one that tends to structure the actors according to the roles they occupy. There are distinct spaces for owners, and the division of status between clerical workers and more highly paid technical workers is immediately evident in the spaces they occupy. The animals occupy separate spaces, as well.

She led me through a *latched gate* [emphasis mine] into the reception-work area where the files are kept, the phones are answered, and the appointment books are kept. I'm assuming that the billing is done here also. This area is clearly in view of the waiting room, rather an extension of the room, but definitively separated from the waiting room. From the reception-work area we went through a *door* [emphasis mine] leading into what I came to know as the treatment area.

Field Notes 1, February 1, 1997

Off to the side of the treatment area was another door leading to the kennel area. There were metal cages and there were animals in the cages, judging from the sound I heard when the door was opened.

Field Notes 1, February 1, 1997

After animals are examined, the chart stays in the back, so the vet can note stuff and after a few minutes, it's pushed through a letter-type opening on the door leading into the treatment room. It's kind of funny. Every so often, without warning, this chart comes popping out of this mail slot, sort of on its own.

Field Notes 7, March 22, 1997

The structuration of this practice leads one to believe that there would be divisions in the patterns of behavior exhibited by their respective roles and statuses. However, I discovered that this *prima facie* data was somewhat misleading.

There is an egalitarianism in this practice that is rare in organizational hierarchies and belies some of the data presented by the physical structure of the clinic. All staff of the practice call each other by her or his first name and all animals are addressed by his or her given name. The owner of the practice, a working veterinarian, is no exception.

Brandelt went on his way after exchanging some dialogue with Sue that I didn't catch. I did catch, however, the fact that she called him "*Bob*".

Sue, a technician speaking to Dr. Brandelt, the owner,

Field Notes 3, February 14, 1997

Dianne - "*Crista, is Kimberly back?*"

Dianne, a receptionist to a veterinarian about a veterinarian,

Field Notes 5, February 26, 1997

Linda - "Um ...*Kimberly's* scheduled to do them, so it'd be in the morning. sometime around ten, I'm guessing."

Receptionist on phone to me about surgery the veterinarian is performing the next day,

Field Notes 4, February 21, 1997

The red scrub lady pops her head in the door.

Red Scrub Lady - "*Bob*"

A technician asking a question of a vet in the operating room,

Field Notes 4, February 21, 1997

Cloutman (coming into the treatment room), "*Barb, is Cookie's* blood work done?"

Veterinarian to technician about dog,
Field Notes 8, March 29, 1997

There is one clear status accorded Dr. Bob Brandelt, that of practice owner. There is a recognition that it is he that controls the purse strings.

Dr. C. - "Bob's new demo machine".

Leighann - "Think he'll keep it?"

Dr. J. - "Fraid so. It must have cost a fortune".

Leighann - "Maybe we can convince him to give it back and give us a raise instead."

Dr. J., still stitching up Nila - "A raise nah, he'll probably keep the machine", no animosity, just a what -can -you -do attitude.

Two veterinarians and a technician,
Field Notes 6, March 12, 1997

Dr. C. - "...Bob doesn't provide maternity leave and we can't live without money, so I'll have to come back to work".

A veterinarian to me,
Field Notes 8, March 29, 1997

However, even given this dichotomy, there is an equality among the staff that bespeaks a familiarity and casualness with each other. That familiarity extends to the pets as well. Pets are considered more than patients, more than the sum of their ailments and treatment. They are elevated to a higher level, they are accorded a higher level of care than that which was evident to me in my observation of a "people doctor's" waiting room, where I was neither greeted when I came in, nor spoken to while I was waiting. Given the treatment I received in the "people doctor's" waiting room, it is not hard to imagine that the scenario below could have never taken place in a "people's operating room":

She patted the dog's belly. "C'mon, Bianca, wake up. To me - "We get them awake before we pull the tubes out." She lifts Bianca's eyelid. "Hey, Sweetie, wake up". To me - "Their eyes start to come up. When they're out, their eyes go down. As they wake up, their eyes go back up." "C'mon Bianca, Cutie, wake up. You're fakin'.... I know you're fakin'", she said lovingly in a child-like, sing-song voice.

"Hey, Lovie, wake up". Now she's rubbing Bianca's belly in a round motion. I don't think that this has anything to do with any sort of medicinal treatment, just a loving motion to tell the dog to wake up.

Field Notes 4, February 21, 1997

Leighann to me - "Have you ever had anesthesia?" I nod. "When you come out of anesthesia you're really, really cold. That's why she's shivering, that's why we give her a warm water bath and wrap her up in a towel."

Field Notes 4, February 21, 1997

This egalitarianism among the veterinary staff was a fascinating one to consider in a chaotic, fractal context. Far from the structured division of labor found in "people doctor's offices" that is noted in the medical literature (e.g., [Boutros & Della Ratta](#), 1994; [Braus](#), 1994; [Halpern](#), 1992; [Langton](#), 1994; [Lurie](#), 1994; [Swaan](#), 1989; [Witz](#), 1990), these veterinary staff behaviors differed

considerably in the "medical" context; yet in this "medical" context, the behaviors formed a pattern of behavior unmistakably fractal-like. The similarities of behaviors exist in this practice regardless of worker status or role; the behaviors consistently appear as pro forma behaviors.

Conversely, owners are treated far differently than the staff and the pets. Back in the treatment room, very rarely, if at all are "owners" or "humans" brought up and when they are, it's always by the impersonal "he" or "she", or by the pet's name. It is not unusual for owners to be disparaged, patronized or demeaned by the conversational tone of voice of the veterinary staff:

Leighann- "*Rosie's* mom."

Technician referring to owner. Rosie is a dog,

Field Notes 9, April 4, 1997

"She sounded like she'd come and get him when she was good and ready."

Vet referring to owner about picking up her dog,

Field Notes, 4, February 21, 1997

Joan - "Well, this *guy* [no name given, receptionist emphasis] is calling from France...."

Receptionist about an owner's dog,

Field Notes 6, March 12, 1997

"Their owner ...actually they've been through lots of owners ... is having them spay and neuter together. The first owner adopted them from us and then discovered that she and the kids and the cats were just too much to handle. Set a *horrible role model*, [emphasis mine] if you ask me. Another lady had her cat in for a routine check and overheard us talking about Nila and Simba and decided to take them. Only thing was, she didn't check with the other one [the other cat]. Just sort of thrust these two on her."

Technician about present and first owners of Nila and Simba, two cats,

Field Notes 6, March 12, 1997

Other notes posted on cabinets were memo-type instructions for lab work, how to properly designate slides and other identificatory necessities (the animal's name always is to appear *first* and *if there is room*, [emphasis mine] the human's name next).

Field Notes 3, February 14, 1997

Owners are further distinguished as lower status entities by the fact that they are discouraged from occupying "privileged spaces".

Elderly lady - "I can't go back there with you", but she makes movements toward the examining room anyway. But she doesn't go.

Owner to her dog,

Field Notes 5, February 26, 1997

Sue comes out of an examination room to get Colby who is having a blood test for heartworm, so that man that is with her says. He talks very lowly and very closely to Sue, like he's asking for permission for something. The dog is very nervous, whimpering and shaking and looks to me as if it's scared to death. If I had to guess, I'd think that the man wanted to go in the back with Sue and be with the dog, but he didn't go. Sue carried Colby back in the examining room.

Field Notes 7, March 22, 1997

The examining room doors are always kept closed so when the vet announces the pet's name, the door is opened from the inside and the vet comes into the reception area.

Interestingly enough, owners behaviorally accept the norms of this clinic and so tacitly accept their lesser status as well, at least as far as the observed data would indicate. These owners' behaviors form a fractal-like pattern of similarity that cut through owner gender as well as owner age and time frame observed. There is nothing in my observations that would indicate that these observed fractal behavioral patterns of owners are considered deviant by any one of the three categories of entities -- owner, animal, veterinary staff; although it is impossible, after all, to gauge what cognitive processes the animal is engaged in.

More will be said about how these fractal behaviors of owners and veterinary staff came to be in the Conclusions section of this paper.

Gender

Clearly, one can point to gender as a cause for the fractal-like behavior patterns of the veterinary staff that cut across age, role, status and time that I observed at this practice. This veterinary practice is overtly female; their gender is obvious. It is my belief that most researchers, in looking at behavior patterns for this research site, would logically choose gender as an underpinning for their observed behavior patterns. However, since I had no comparative data with which to analyze this largely female practice against a equally large male populated practice, the "burden of proof" for using gender as a basis for the exhibitions of fractal behavior patterns fell to the literature. Equally perplexing was how to use the literature, what literature to use. This study is not a psychological one; it was not my desire to "get in these women's heads" from any psychological standpoint. My aim was to see how these people, at this clinic, constructed the reality of their workplace, using a piece of chaos theory, that of similar patterns of behavior or fractals. I had only their "voices" as I had transcribed them for my field notes. So, I turned to sociolinguistic literature, particularly gendered sociolinguistic literature. The categories used for linguistic analysis are accepted ones in this field.

Rapport-Talk and Report-Talk

[Tannen](#) (1990) characterizes talk as public talk and private talk, or report talk and rapport talk. Gender differences in rapport and report talk are traced to developmental issues; girls and, later on, women seek similarity of experience in their talk, they seek linkages to each other. Boys and men strive for independence and their place in the pecking order of society in their use of language ([Tannen](#), 1990) and predictably use a "give me the facts, ma'am, just the facts" approach.

Brandelt, holding a piece of paper, to Sue, "Friday morning appointment so I can juggle surgery".

Sue to Brandelt, "You don't want to speak to him?"

Brandelt, " I do want to talk to him". Said definitively.

Brandelt to somebody else, "... with food. You *did* [vet's emphasis] tell them with food?"

A male vet to a technician,
Field Notes 1, February 1, 1997

By this time, Brandelt and the blue scrub technician had a Siamese looking tabby kitty on the table by the kennels. The technician had a pair of hair clippers and she shaved a small portion of the cat's belly. He wanted to take a "lymph node" and something to do with "bladder", probably some sort of tests, cause he drew blood and put it in a vial with a label on it.

Field Notes 1, February 1, 1997

B - "See this? Uterine horns."

He holds up a part of the mess that's on the dog's belly and I can see what he's talking about. It's a long fleshy sort of straight ligament-y thing leading to a round ball at the end.

B - "The ovary is in that sack at the end. It's different for humans (he doesn't say females) ...the fallopian tubes extend down the side in a human (no females again) but not in an animal. I've already done one side and now I'm doing the other side".

Male Veterinarian to researcher,
Field Notes 4, February 21, 1997

In contrast,

She was chatting amiably and animatedly to the blue-smocked technician. It was clear that they knew each other. She had leggings and a flannel shirt on and brown shoulder length hair. She introduced herself to me as, "I'm Leighann and I live here in the house. I work here, too, but my husband and I rent the house".

She called him George and said, "We're newlyweds, can't you tell?"

I couldn't, but I smiled.

Technician to researcher,
Field Notes 1, February 1, 1997

One of the technicians comes in. Green scrub bottoms and bright blue, not royal blue but a true blue vest-smock with little doggies and kitties on it. Very brightly colored.

Elderly lady, "Oh, that's a cute top". Said woman-to-woman, peer-to-peer.

It is clear to me that this elderly woman knows everyone in the clinic.

Exchange between owner and technician,
Field Notes 5, February 26, 1997

Leighann, "Well, we want to keep 'em breathin', that's for sure, don't we, Crista? It's not good when they don't breathe". This is said tongue-in-cheek with a straight poker face. Leighann tells the story about her mother "a retired nurse" [direct quote] who underwent some sort of surgery and the anesthesiologist had her sign some sort of release.

Leighann, "Well, you've got to know my mother ... she's weird ...she remembers everything. She remembers that number 5 on this list that she has to sign says something like, "it is known to happen that breathing can stop and that the heart will stop beating", so my mother says to the anesthesiologist, "that means I'm dead, right?". The anesthesiologist says, "it doesn't say anywhere on there, dead", but my mother says "if your heart stops beating and I stop breathing, it means I'm dead, right?" The anesthesiologist says, "right, but it doesn't say anything on here about dead."

Technician to researcher and veterinarian,
Field Notes 6, March 12, 1997

This next exchange is one that is quintessentially female. What makes it fascinating is that the actors were participating in a dialogue in a "workplace", during "working hours", in an extremely

specialized area of the workplace (an operating room). The "civilian clothes lady" is an visitor inside the operating room, just like me. We have never met.

Civilian clothes lady, looking around the operating room, "Should we be in here?"

Dr. Cloutman, "It's okay, that's why I asked Crista if she was done ... [with the surgery]. Where she is now ...[in the surgery process] ... she doesn't need a surgical field"

Leighann to me, "Kimberly wants to show her mom the baby"

Now all of us - me, Leighann, Kimberly's mom, (the civilian clothes lady), Kimberly, Joan, the royal blue scrub technician - are in the operating room watching Kimberly fiddle around with the ultrasound.

Me to Kimberly, "How far along is she?"

Kimberly, "She's five months".

Wow, she sure doesn't look it.

Now we're all looking at the screen to see the baby. Evidently Kimberly knows it's going to be a boy, because she wants to show her mom evidence of the baby being a boy. Kimberly's mom turns to me.

Kimberly's mom, "We wanted a girl." But there was no sorrow in her voice. We couldn't see any evidence of boyhood, but we did see arms and legs. Really cool.

I thought that we all looked a little ludicrous in that O.R. crowded around Kimberly and the ultrasound while Dr. Jacobs was finishing up with Nila [Nila's a cat] there in her cap and gown and her needles and thread and stuff. Nobody else thought or expressed that this was unusual behavior.

Field Notes 6, March 12, 1997

"We're all Equals"

Women's talk is inclusive; of its very nature it tends to cross hierarchical bounds. This language inclusion is a gendered, constructed, ritual way of talking. Female actors are cognitively aware of hierarchical and authority boundaries (*see "purse string" dialog*), however, they ritualize ways of talking to equalize and perhaps neutralize these conditions. This female language of inclusion is, "... Habitual phrasings learned over time that become automatic, seemingly self-evidently appropriate ways to say what you mean" ([Tannen](#), 1994, p. 177). The women in this veterinary practice are no strangers to "we are equal talk". It is evident in their conversations with one another, even in conversation with the male authority figure that owns the practice. There is a recognition that he shares a kinship with these women by including him in the world of veterinary care givers.

Sue - "See, she recognizes that we [emphasis mine] are special"

Technician to Dr.Brandelt,
Field Notes 9, April 4, 1997

Leighann - "I think that all people that work with animals are really special because they care so much, but yeah, *we* [emphasis mine] have a really good group here. Yeah, a really good group."

Technician to me,
Field Notes 6, March 12, 1997

Ellie to receptionist - "Yup, you know, I like being here. This is one of my favorite places...and I mean it."

Linda (the receptionist) - "*mine too*".

Field Notes 5, February 26, 1997

Interestingly, there is the acknowledgment that the "specialness" of "we" is bounded and that not everyone that works with animals is "special" or part of the "we".

Leighann, "where I worked before, the guy wasn't like these ladies here. He'd cut part of their toes off for a declaw. Just cut it straight across."

Technician to me,
Field Notes 6, March 12, 1997

Dr. Cloutman, "It's a great thing [a scanning device for animals]. Researchers are starting to use it. When bad people sell animals to research, this [the scanning device] is something they can't take off. Most researchers aren't bad, it's the nasty people who sell to the researchers. If the research companies use this scanner, and most big research companies do, it'll catch those animals that belong to somebody and stop her voice trailed off.

Veterinarian to me,
Field Notes 8, March 29, 1997

Conclusions

This is a qualitative research piece analyzing the patterns of behavior of one veterinary practice. It is not meant to form an overarching theory of how people in veterinary offices behave; it is a recounting of constructed life in this particular veterinary practice. The analyses and resulting conclusions were based on a grounded theory methodology, utilizing the framework of chaos theory and in particular the fractal-like patterns emerging from my observation. It has been a unique venue from which to approach the analyses.

It needs to be stressed that this is a preliminary study and certainly is not meant to be an exhaustive nor definitive look at how participants in veterinary practices construct their realities. The data can and should be argumentative; there are many more questions that could be posed and many more theoretical frameworks that can be explored. The use of comparative data gleaned from the observation of another or perhaps several veterinary clinics would provide fertile ground on which to base other sociological analyses. The in-depth comparison of a "people's doctor" practice and this veterinary practice offers wonderful possibilities, as well.

However, in looking at the research question, "*What about this worksite makes the patterns I observed unique?*", I think there are discoverable truths here. I've explored two patterns or fractals - one that transcends dissimilar roles and statuses, one that acquiesces to the gendered literature that says that women are "different", they talk "differently", they develop "differently". Whether the fact that these people are female accounts for the fractal pattern of role and status negotiation remains to be discovered. It can conceivably be thought of as such, then again, perhaps not. There is another argument that I wish to pursue here that may account for both analyses.

I think that these people in this practice speak for the voice of the "other". I believe that these people firmly see themselves as part of the triangulation that is owner, pet, and veterinary worker. I believe that these people see as their mission adding to the voice that is the other, to the entity that has no voice. I believe that these people, by virtue of their "calling" and education think of themselves as a part of the other and that their attachment to the other, of giving voice to the other even to the disparagement of their "own kind", places them at the top of the triangulation that is veterinary worker, owner, and pet.

In chaotic terms, I think that the attractor, the "big pull" of this particular veterinary practice has to do with the voice of the other, in this case the voice of the animals. The literature is replete with the interaction and deep attachment of animals and humans (e.g., [Case](#), 1987; [Joubert](#), 1987; [Kidd & Kidd](#), 1995; [Netting, Wilson, & New](#), 1985; [Sable](#), 1995; [Schwartz](#), 1996). It is the work with the animals and the ability to give them another voice that is the attractor for this system.

"You know, Linda grew up on a farm and she used to tell me that when she was little she used to play veterinarian. When she grew up, she got this job here and she never left. Most people would use this job as a stepping stone, you know, but not Linda. No, she never left. This is all she ever wanted, to work with the animals. It's like she knows all of them."

Interview with a former neighbor of Linda, a receptionist,
Field Notes 11, April 11, 1997

Endnotes

1. All human names connected with this veterinary practice, save that of the researcher, are pseudonyms. All references to places, other than Temple University, College of Arts and Sciences and Temple University, Harrisburg are fictitious as well. This was done to protect the privacy of those people mentioned as actors in this research. All animal names are their given names.

2. This researcher was invited to continue her observations at the veterinary practice. I sincerely hope that I am able to do so.

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