The nature (and politics) of knowledge and paradigmatic assumptions in Kinesiology research

Kinesiology 250
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Class Agenda

- Try reconcile some of the tensions in KIN research
- Outline why different types of research are different in fundamental ways
- Highlight, in particular, what makes qualitative forms of research click
- Explore the politics of epistemology

Notes on the subdisciplinary view of Kinesiology

- Disciplinary knowledge has gained depth
- Sometimes at expense of breadth and interdisciplinary or transdisciplinary connections
- Some subdisciplines more attuned to variety of research methodologies than others
- So, interdisciplinary work may have methodological tensions
- But...many questions in Kinesiology are BEST answered via interdisciplinary, mixed-methods research!
- So, we are allowed to be “paradigmatically promiscuous” (Haley, 1999)

Ways of obtaining information

- Authority, Personal Experience (Idiographic approach), Deduction, Induction, Scientific method...
- While some have been favored over others, many contemporary scholars across academic have come to recognize the centrality of the research question and the politics of knowledge! (Denzin & Lincoln, 2005)
- Ways of knowing always connected to larger politics (Marshall & Rossmann, 2006)

Knowledge and Paradigms

- ALL of this info forms the foundation from which research is conducted, and the infrastructure of knowledge production
Introduction
As Sparks (1992) suggests: There are many ways of knowing, understanding and explaining the world.
- There are different kinds of knowledge, as we've discussed
- How do we produce and use knowledge in our sub-disciplines?
- Human movement can be viewed in many ways.
- To be a competent researcher, reader of research, and professional in Kinesiology, it is important to be aware of latest trends and paradigms in research.
- We are FAR past “paradigm wars”...or are we?

Note on old-school and educational preparation
- As we go through this, keep chronological age and “moments” in mind...
- In most KIN subdisciplines, qualitative work only took off in mid-1980s
  - Some senior faculty & researchers have adapted and flourished
- Thus...that SJSU is now in the position we are in is saying something.
- NIH, for example, has guidelines for health and social sciences for qualitative research...
- SD: Qualitative and Quantitative researchers are not adversaries!

Class Activity
A. On your own, make a list of five things that you feel that you KNOW! Then think about the following questions:
1. How do you know what you say you know?
2. How would you defend and confirm what you know?
3. How would you seek to find out more about the things you know?
B. Now, in groups of 4-5 discuss your answers and create a “top-three” list of the things you know - be sure to answer questions 2 & 3 as well.

Purposes of the rest of this class:
- Examine the paradigmatic assumptions of research in terms of:
  1) ontology, 2) epistemology, 3) axiology, 4) rhetoric, and 5) human nature
  - All of these, in turn, relate directly to methodological decisions...
- Again, we must never simply choose a research method without taking some philosophical considerations into account.
  - TRUTH, on this perspective is tenuous at best!
  - What is MY view of reality? What is the relationship of the knower and known?
  - All this WILL influence your project of co-creating knowledge and ultimately doing your thesis or project!

Purposes Continued...
• Must understand from what perspective you are gathering information about in the first place
  • Not just taken for granted!
  • “Common sense” is the ENEMY of good research!!!
• Just because you are familiar with a certain research paradigm does not mean that should automatically select what kind of questions you ask.
  • But just what is a research paradigm anyway!
Research Paradigms

- Paradigm: A worldview, which involves “a basic set of beliefs that guide action.” (Lincoln & Guba, 1990, 2000)
- Think of them as lenses or models for seeing and making sense of the world or topic of interest.
- Shape how we think of the world AND how we find out more about the world.
- Each paradigmatic position has assumptions that go along with it.
- SO: On this view, there is NO “God’s Eye View” in research!

So...

- ...to NOT understand research paradigms is to be lost, and to probably not know you are lost!
- Any questions so far?

4 Epistemological Stances (Estes, 1994)

1. Rationalism: “I know what I infer” We construct knowledge through logic, and thus it is systematic in nature.
   - Rene Descartes in the enlightenment even went as far as to systematically deny his existence because he could not verify it.
   - Realizing this, he concluded cogito, ergo sum. In kinesiology, the idea of building blocks of knowledge is associated with science and rationalism.
2. Empiricism: (John Locke [tabula rasa], Thomas Hobbes, Bacon): “I know through direct observation of the external worlds.” Observational data is important. Is different from Rationalism since you corporal experience is knowable and verifiable.
   - Induction is important here. Make educated inferences based on what we observe.

Paradigmatic Assumptions

1. Ontological – related to the nature of reality
   - Does the world exist apart from you?
   - Internal/idealistic v. external/realist
2. Epistemological – relationship between researcher and knowledge.
   - How do we know what we know?
3. Axiological: – what is role of values?
   - Is bias acknowledged or suppressed?
4. Rhetorical: – What is the language of research?
   - Is it neutral, technical, narrative, personal, descriptive, etc?
5. Human Nature – Are people determined or “freely choosing agents”?

Expanding on Epistemology

- Ways of knowing about a given phenomenon.
  - What knowledge is most reliable?
  - How does such knowledge arise?
  - How should we search for knowledge?
  - How is knowledge best taught?

- Since our field is so broad, it is important that we have an understanding of the sorts of knowledge that are most related or relevant to different subdisciplines.
  - A biomechanist may ask different questions, seek different sort of knowledge, and thus use different methodologies than a sport psychology researcher.
  - All of which relates to particular knowledge paradigms...

Epistemology-II

   - Dewey (American pragmatist) argued that we purposefully observe (not passively), infer through past experiences, and then test!
   - Stranglehold for so long that many accept this way of knowing uncritically, even though it has been constructed. It is NOT the answer, but rather one among many systematic ways of knowing.

That some departments are called “Exercise science” is not unrelated to this! Exercise physiology exists here, as does exercise psychology, and might human factors. For many things, this may be completely appropriate.
Epistemology-III
4. Subjectivism: “I am conscious of what I know.” (Sarte, Merleau-Ponty)
   • Though scientific method is often promoted in research; subjectivism is the means of communication for most KIN students. The reality lies within YOU.
   • Phenomenology of the body (rock climber e.g.)
   • Used a great deal in sport psychology consulting

Major Paradigms of Research
• **Positivist Paradigm**: In Kinesiology sub-disciplines, most research (until recently) has mimicked the scientific method as practiced in the natural sciences.
  – Importantly, this paradigm and an adherence to it have been associated with aligning ourselves with the “hard” sciences.
  • Because of marginalization in higher education, perception of doing “scientific, rational” work was tied to legitimacy
  – So, numbers/statistics were seen as the way of “proving” that we were doing good work!

Assumptions of Positivism
Ontological: Theory is absolute, as is the uni-dimensional nature of Truth and reality.
   • Find Truth and generalize as best as possible to other populations/situations.
Epistemology: Because knower and known are separate, objectivity is crucial.
   • I am removed behind the glass, observing my project.
Axiology: Knowledge & research are neutral, and all biases are eliminated
Rhetoric: Language is distant and impersonal; “technical”
Human nature: Humans are reduce-able in terms of study
Methodology: scientific method was relied upon to ensure that the most systematic means of going from theory to proof was conducted.

Paradigms Continued...
*Interpretive paradigm*: Associated most with qualitative research
   • only been firmly established in the human performance/kinesiology areas within the last 15 years
   • Positivist paradigm and reigned supreme.
   • Interpretivism is:
     • inclusive of a number of approaches,
     • refuses to solidify dichotomous opposition with quantitative,
     • focuses on meaning making, as opposed to finding.

While scientific method is necessarily discarded here, qualitative research is still quite systematic. It is not “anything goes!”

Assumptions of Interpretivism
Ontological: Because the social world is not biology, we can consider reality as socially constructed.
   • We make meaning of the world.
Epistemology: Subjective knowledge is necessary, and there is no separation between knower and known.
   • Since people help create meaning, it is impossible to be completely objective!
   • So: Even “objective” research is political/politicized!
Axiology: Research is value-laden, and values are openly discussed and negotiated
Rhetoric: Acknowledgement of author and voice, as well as audience
Methodology: Design needs flexibility, and is generally “emergent.”;
   • Inductive logic
   • Approach may be adjusted as needed. You may think you know exactly what you want to look at, but find people describe something a bit different!!
Philosophical Assumptions of Qualitative Research (Creswell, 2007, p. 17)

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<tr>
<th>Qualitative vs. Quantitative</th>
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<tr>
<td><strong>Qualitative</strong></td>
<td><strong>Quantitative</strong></td>
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<tr>
<td>Researcher knows clearly in advance what he/she is able to collect and analyze data.</td>
<td>The researcher may only know roughly in advance what he/she is able to collect and analyze data.</td>
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<tr>
<td>The researcher aims to understand the subject in its entirety, and the data is rich and meaningful, reflecting the subject's context.</td>
<td>The researcher aims to control for variables, and the data is numerical, reflecting the subject's attributes.</td>
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Characteristics of Positivist & Interpretive Modes of Inquiry (Glesne, 1999)

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<tr>
<th>Positivist Mode</th>
<th>Interpretive Mode</th>
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<tr>
<td>Researcher starts with hypotheses, then data is collected to test them.</td>
<td>Researcher begins with data, then hypotheses are generated to explain the data.</td>
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<td>Objective measurements are used to quantify phenomena.</td>
<td>Subjective measures and methods are used to explore data.</td>
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<td>Data is analyzed statistically to find probabilities.</td>
<td>Data is analyzed thematically to shape narratives.</td>
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<tr>
<td>Researcher's role is to remain objective and neutral.</td>
<td>Researcher's role is to negotiate meaning with participants.</td>
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Paradigms Continued

Critical paradigm: refers to a collection of different theoretical and paradigmatic positions, all of which have power as a central concern.

- Who has power, and whose voice is not heard, and how can research point to empowerment and justice.
- Possibility that research searching for a particular truth can also integrate elements of critical thought (e.g., physiologists examining body fat %, and tying it with poverty and exercise patterns.)

- So, much work is now critical interactionist, in which reality is socially-constructed and knowledge is seen as value laden.

- The key here is that power is examined as it relates to who is in best position to construct and shape reality and knowledge!!!

Types of Critical Qualitative Work

1. Postmodern theory – Grand narratives and “‘Truth
a) Cyborg theory
b) Low socioeconomic status women exercisers & how related to race and ethnic background
c) Whiteness/stereotype threat
2. Feminist Theory – Issues of gender/male hegemony
a) Male experiences as well (Messner, 2004)
3. Critical Race Theory – Social construction of race/ethnicity perpetuates inequality
a) Barriers to access in coaching
b) Low socioeconomic status women exercisers & how related to race and ethnic background
c) Whiteness/stereotype threat
4. Queer Theory – sexual orientation as main focus
a) Experiences of harassment
b) Experiences of hetero men and women athletes/exercises “proving” themselves
a) Gym study
5. Cultural Studies – class, power, hegemony, and pop culture
a) Media analyses; representations of ATs or SP in tv/film
Ok...so where does qualitative work fit into all of this...

The Qualitative Researcher as *Bricoleur* (Quiltmaker or montage) (Denzin & Lincoln, 2005)

- The “Qualitative Bricoleur” uses the tools of his or her methodological trade
- Choice of research practices depends upon the questions that are asked, and the questions depend on their context, what is available in the context, and what the researcher can do in that setting
- Understands that:
  - research is an interactive process shaped by his own personal history, biography, gender, social class, race, and ethnicity
  - Product is a bricolage, a complex, dense, reflexive, collage-like creation that represents the researchers images, understanding and interpretations of the world or phenomenon under analysis
  - Bricolage will connect the parts to the whole, stressing meaningful relationships that operate in social worlds

Qualitative Research...notice how *interpretivism* plays a role

**Definition:**
“Qualitative research is a situated activity that *locates the observer in the world*. It consists of a set of *interpretive*, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self (i.e. *signification*). At this level, qualitative research involves an *interpretive, naturalistic approach* to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the *meanings people bring to them*.”
(Denzin & Lincoln, 2003)

The eight moments of Qualitative Research-I

**Traditional Period: 1900's-World War II**
- Wrote “objective” accounts of field experiences that were reflective of positivism (anthropology & urban sociology)
- Concerned with offering valid, reliable, and objective interpretations in their writings
- The ‘subject’ who was studied was alien, foreign, and strange

**The Modernist Phase: 1950s-1970**
- Formalization of methods
- End of traditional colonial research (e.g. newly independent nations)
- In sociology, it allowed for a voice for society’s ‘underclass’

The eight moments of Qualitative Research-II

**Blurred Genres: 1970-1986**
- Increasing diversity of paradigms, methods and strategies
- Applied qualitative research was gaining in stature
- Thick description (Geertz, 1973)
- Researcher acknowledged as being part of the research process ***

**Crisis of Representation: Mid 1980's-Current**

Clifford & Marcus (1986): *Writing Culture*
- Focus on multiple interpretations & need to negotiate lack of “Truth” vs. relativism
- Who is the author of texts, and how is author accounted for? (e.g. use of first person)
- Made research and writing more reflexive and called into question the issues of gender, class

The eight moments of Qualitative Research-III

**The Fifth Moment: Dual crises**
- Defined and shaped by the dual crisis of representation and legitimisation
  - “voice”
  - Concept of an aloof researcher abandoned
- Influence of technology (analysis, recording, new ethnographic spaces)
- Action oriented research on “local subjectivities” and political issues (Lather, 1990s-present)
- Postmodernism: Search for grand narratives is being replaced by more local, small-scale theories fitted to specific problems and specific situations
The eight moments of Qualitative Research-IV

  - New journals devoted to method (QR & QI)
- Eighth moment (2005-??): Confrontation of “evidence” and politics of funding
  - E.g. No Child Left Behind emphasis on standardized testing, etc.

A very brief look at different forms of QR common in KIN

- Numerous forms of qualitative research have emerged within sport sociology, sport psychology, adapted sport & physical activity, athletic training, exercise science, history, and sport management
- Published in virtually ALL of the MAJOR journals in each sub-discipline, when it makes sense...

Using multiple qualitative methods: Different brushes, different paintings

- “Straight-forward” interview-based qualitative research (thematic analyses)
- Focus groups
- Ethnographic research (Subcultures/worlds)
- Historical research
- Narrative research (Collections of stories)
  - Narrative analysis or paradigmatic analysis of narratives
- Existential-phenomenological research
  - Body is “point of insertion into the world” (Heidegger)
- Content analysis
  - How does media cover a particular phenomenon

Same general topic, different qualitative approaches: Case of Mixed Martial Arts

- Beyond the Octagon: The Ascension of Ultimate Fighting in America (Masucci, 2005, NASSS)
- From Blood Sport to Brand Name: The Brief and Turbulent History of the Ultimate Fighting Championship (Masucci & Butryn, 2006, NASSH)
- A qualitative examination of motivational and coping factors in Mixed Martial Arts (Butryn & Masucci, 2006, AAASP)
- As real as it gets?: An ethnographic autonarrative of a MMA academy (Masucci, 2006, NASSS)
- Ascending and contending: A qualitative, longitudinal case study of coping in MMA (Butryn & Masucci, 2007, AAASP)
- Writing About Fighting: A Critical Content Analysis of Newspaper Coverage of The Ultimate Fighting Championship from 1993-2006 (Masucci & Butryn, IUSC, under review)
- Reality television, popular culture, and MMA (Masucci, 2007)

How might a qualitative 298/299 look similar/different?

- No hypotheses, and possible delimitations
- Cautious of overstating limitations
  - No apologies
- Possible use of “I” in the write-up
- Preface with own narrative
- Participant profiles
- Stories infused with analysis
  - Results/discussion meld together
  - Chpt. 5 more of a conclusion and recommendation

Questions?

- So, the point of all this:
  - You never choose a research question simply because it’s easy or it seems “interesting.”
  - There must be a reason to do it, and a framework from which you are working from...
  - The good news?
    - You are FREE to work from any paradigmatic position in KIN!