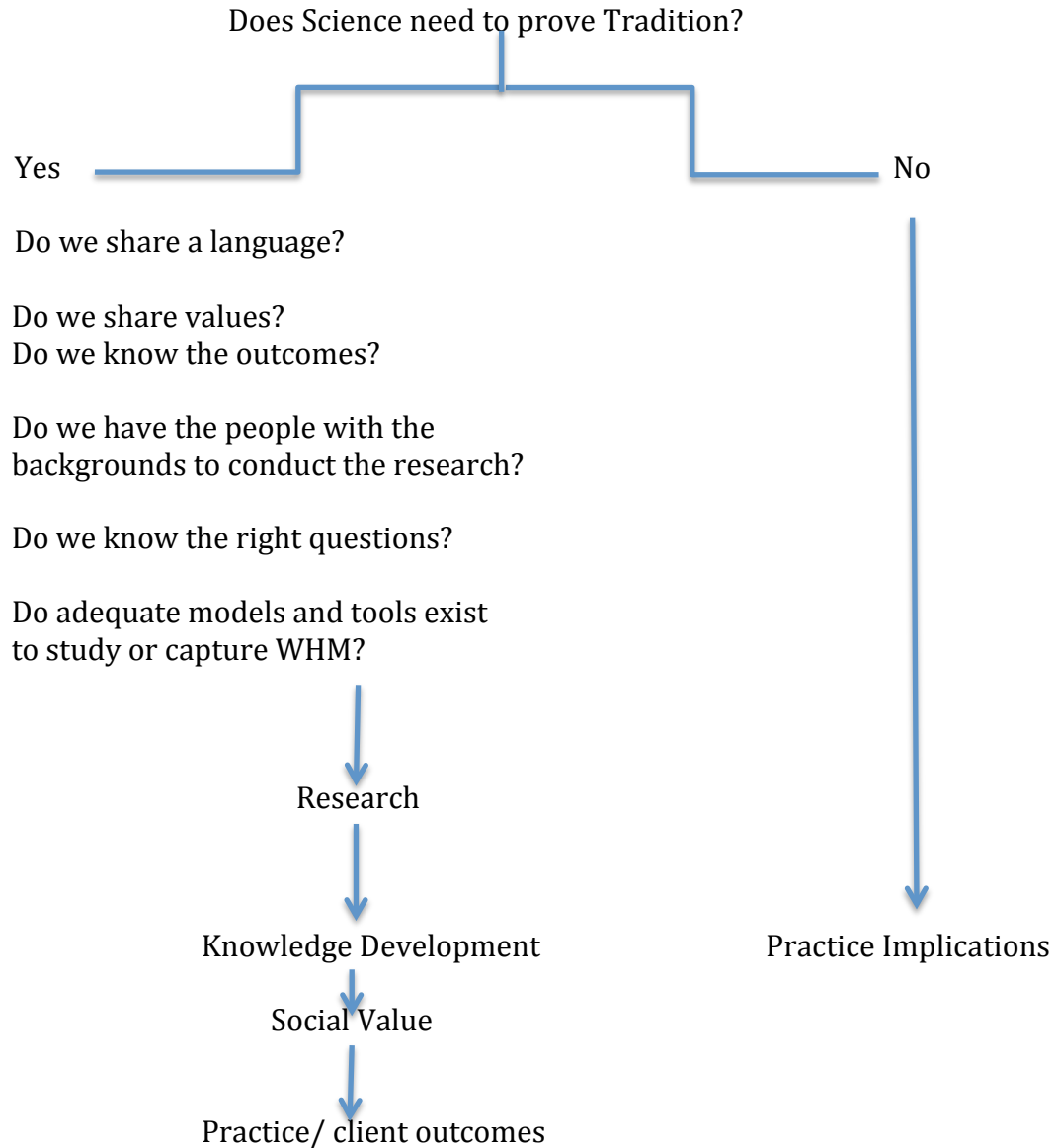


Western herbal medicine at the intersection of science and tradition: Documenting the practice of herbal medicine

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Background

What is at risk if we fail to preserve the accumulated knowledge of traditional herbal medicine and to thoughtfully and skillfully evolve the practice of WHM?



Contrasting Modern Bioscience with Person-centered models like traditional systems of medicine

Bioscience	Traditional WHM
Reductionistic perspective (linear) <ul style="list-style-type: none"> ○ Coupled with control and power ○ You can know the whole by knowing the parts 	Whole systems perspective <ul style="list-style-type: none"> ○ Integrative and coexistent ○ Whole is greater than the sum of the parts
Paternalistic and autocratic <ul style="list-style-type: none"> ○ Client is passive recipient 	Partnering, collaborative, cooperative <ul style="list-style-type: none"> ○ Client is active participant
Disease-centered	Person-centered (constitution, symptoms, ground, root)
Protocol-driven and decontextualized	Individualized and contextualized
Aimed at single targets with a goal to reduce the symptoms or weaken the disease	Multiple target/modes of treatment with a goal to strengthen the person
Singular way of knowing (quantitative)	Multiple ways of knowing
Research model: reductionistic	Research model: pluralistic

This is a basic philosophical difference. (positivism and post-positivism to interactionism and organicism)

Traditional Knowledge

Built by a group of people through generations in close contact with nature. This includes rural communities not necessarily removed from the mainstream culture (Johnson, 1992)

Traditional knowledge includes: (Johnson, 1992)

- Knowledge of current use, previous use, or potential use of plants
- Knowledge of preparation, processing, or storage of useful species
- Knowledge of formulation with more than one ingredient
- Knowledge of individual species
- Knowledge of ecosystem conservation
- Classification system of knowledge (plant taxonomies)

Traditional knowledge is indigenous knowledge characterized by: (Johnson, 1992; Dods, 2004; Durie, 2004)

- Transmitted orally
- Learned through observation and hands-on experience
- Based on understanding that matter has life force
- All life forms are interdependent and interrelated
- Holistic rather than reductionistic
- Intuitive rather than analytical, qualitative rather than quantitative
- Based on data generated from users rather than specialized groups
- Explanations of environment is from collective spiritual experiences
- Traditional ecological knowledge
- Inseparability of people and natural world and dynamic relationships arise from the interaction of people with their environment

➤ A collective good

The Intersection of Science and Tradition: (Niemeyer, 2013)

Plants as Complex Systems

Plant Synergy	<ul style="list-style-type: none">• When the effects of the whole plant as intact chemical matrix are greater than the effects of individual constituents, additive, or polyvalent effects of individual constituents (Ganora, 2009; Niemeyer et al., 2013; Spelman et al., 2006).• Healing emerges from the relationship and interaction of the parts and cannot be predicted from what is known about individual plant constituents (Ganora, 2009; Niemeyer et al., 2013).• Synergy arising from interaction with humans is potentiating, attenuating, and physiological or complementary (Ganora, 2009; Niemeyer et al., 2013).• Supports the traditional use of crude plant parts with minimal processing in multiple plant formulations.
Plants Coherently Coupled with Humans from Environmental Coadaptation	<ul style="list-style-type: none">• Interactive coevolution has joined the dynamic complex human with dynamic complex plants in structural congruence or coherent coupling (Spelman, 2006b)• Accounts for structural changes in both organisms related to information exchange and interactions over time (Spelman, 2006b). Plants shaping humans (Spelman, 2011).• Resulted in a broad range of safe herbal medicines in use today (Duke, 2000; Spelman, 2006b).• May account for deep body-knowing of herbal medicine in humans (Duke, 2000; Niemeyer et al., 2013).
Nonlinear Healing Causality with plants: Indirect and Bidirectional	<ul style="list-style-type: none">• Nonlinear or indirect interactions between plants and humans result in small or local perturbations yielding global nonspecific effects and emergent coherence. The global feeds back into the local, with network and bidirectional information flows modifying aggregate behaviors and characteristics (Spelman, 2011).• Herbal medicines have multiple low affinities providing multiple modes of activity in contrast to single targets with high affinities (Spelman, 2011).• Address the root of human dysfunction or imbalance and to a lesser degree the alleviation of local symptoms through affecting self-organization (Klein & Dunkel, 2003; Niemeyer et al., 2013).• Reflected in traditional language of herbal classifications used in WHM such as adaptogen, alterative, or tonic (Mills, 2005; Niemeyer et al., 2013).
Plants as Compounded Complexity	<ul style="list-style-type: none">• Complexity is compounded with multiple plants in formulation.• Phytochemical plurality supports complexity (Ganora, 2009; Kitano, 2004).• Complexity is compounded within the dyad of the social encounter of practitioner and patient that is embedded in social and environmental relational networks (Niemeyer et al., 2013).

Persons as complex systems → self-organizing, interconnected to the environment,

whole is emergent from interaction of the parts. Persons are interactively linked in

interactive mutuality to plants and coupled through coevolution

Chronic disease as complex system → nonlinear, dynamic, emergent

The client-practitioner dyad (triad with herbal medicine) as complex system →

nonlinear, dynamic, emergent

Implications

What does this mean when we talk about research of herbal medicine?

- Reductionistic Research of Herbs (extracted ingredients, amplified or purified ingredients or isolated fractions, synthetic replications)
- Research Hierarchy
 - The parts
 - The controls
 - Clinical significance vs statistical significance
 - Validity and reliability
 - Application to herbal medicine: Does this research and findings if valid represent reality and can the findings be generalized to the practice of WHM?
- Research of traditional WHM → Research of the whole
 - The models: pragmatic trials, qualitative study,
 - What to look for
 - Examples of applied research in WHM

Implications for Research and Practice:

New insights are requisite for new growth in WHM.

- Documentation of Practice
 - Case studies → what to include
 - The Phenomenological approach
 - Outcomes
 - Complex formulations
- Traditional preparations (whole medicinal plant parts in polyherb formulation and real-life applications with individual approaches)
- Exploring herbs in interaction as creating an internal environment conducive to self-healing or creating the best conditions for healing.
- Client-related outcomes
- Diverse and flexible and new methods which consider the wisdom and strengths of traditional knowledge that informs the practice of WHM
- Research that illuminates the value of a healing system rooted in time-tested, individualized, complex, whole-person approaches.

Conclusion: what happens when we loose diversity?

References available upon request.