

Linguistic Mechanisms Cause Rapid Behavior Change Part Two: How Linguistic Frames Affect Motivation

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Written and spoken language contains inherent mechanisms driving motivation. Accessing and modifying psycholinguistic mechanisms, links language frames to changes in behavior within the context of motivational profiling. For example, holding an object like an imported apple feels safe until one is informed it was grown in a toxic waste dump. Instantly linguistic processing changes the apple's meaning to dangerous. Qualitative data change from static into dynamic measures of motivational changes. Linguistic cause-effect mechanisms dramatically enhance the results and meaning of qualitative research methods, resulting new applications for behavioral engineering, including opinion polling, persuasive marketing campaigns, individual psychotherapy and executive performance coaching. Motivational mechanisms, especially linguistic frames, engineer deliberate and predictable improvements in outcomes, impossible with popular statistical methods. Key Words: Motivational Profiling, Motivation, Systems Analysis, Behavioral Engineering, Content Analysis, Linguistic Frames, Psycholinguistics, Behavioral Prediction, Qualitative Mechanism of Action, and Behavior Change

Introduction

The past one hundred years have seen technologies in aerospace rapidly develop into commercial aviation, rocket science, spaceflight, and planetary exploration. One major reason for rapid development in technology is the simple and profound notion of *consequences*. When aviation disasters occurred, methods changed immediately. Progress was swift. By comparison, the technology of the behavioral sciences has not developed as effectively during that same century. Dominant statistical methods, lacking cause-effect rationales, largely bypassed concerns for consequences in the real world.

In contrast to statistical methods, during the last decades of the 20th century a cause-effect technology developed in the field of psycholinguistics. Consequently, by utilizing the structure and dynamics of language to manage the ever-changing phenomena of motivation, linguistics introduced cause-effect tools to qualitative data gathering. The measurement difference is like the difference between a series of still photos compared to an entire Hollywood movie. The mechanisms of language and the tools of systems analysis have been combined to offer methods that diagnose, prescribe, and change an extraordinary range of motivated human behavior. The cause-effect mechanisms in language dramatically enhance the results and meaning of qualitative research methods.

Motivation and Language

The behavioral professions accept that any behavior, any choice, requires motive, opportunity, and means as necessary ingredients. Without all three, no behavior occurs (Turvey, 1999). Setting aside opportunity and means in this discussion, our focus here considers effective linguistic methods for understanding motivation and its successful modification to alter an individual's choices. To state the obvious, motive is what people *want*. As far back as ancient Greece the principle has been accepted that motive precedes behavior. Decoding, remodeling, and recoding language directly causes behavior to change. Thus, one can change the language within the motive to change the behavior. Mechanisms are now known, which produce interventions that cause immediate behavioral and motivational changes. Consistent cause-effect methods for changing motivated choices are a development of the last decades of the twentieth century. The value for qualitative research is to upgrade research findings into hard scientific data.

Qualitative researchers have a reliable and valid dynamic mechanism of action and measurement. The mechanism is language itself. When language is framed as psycholinguistic motivational phenomena, many qualitative tools such as focus groups and interviews are transformed from relative and subjective measurements into hard-copy measurement tools. Linguistic frames operate within the structure of any given motive as the equivalent of a game plan in competitive sports. Linguistic frames prefabricate the specific ways in which a motive's lesser components will operate. This is because a motive's game plan (i.e., its frames) precludes a motive from operating out-of-context of its dominant defining frame.

Linguistic frames offer leverage to experts seeking to measure or cause rapid changes in human motivation and choices. Linguistic tool kits of "systems analysis" and "content analysis" methods routinely separate the linguistic properties of spoken or written language into component parts. The parts are changed with various methods to modify or enhance the effectiveness of choices people make in pursuing goals. Techniques for this approach to behavior change, especially motivation, have rapidly developed over the last generation (Dilts, 1998; Yeager, 1983).

The most common unit of behavioral analysis is the "sentence," and its related body language. As children learn in grade school, "a sentence is a group of words expressing a complete thought" (Tierney, 1950). Applied linguistics has used that essential idea of literal language, as opposed to interpreted language, at the "evidence" level of observable events. The coding of literal language avoids derivative higher order interpretations and conceptualizations, which abandon hard data in favor of theory. Observable verbal and body language overlap in their communications role as do, for example, the visual and auditory senses. Thus, human language has built in redundancy allowing many channels of access. Language isn't *about* behavior: Language *is* behavior. The resulting technology of behavior change allows precision, prediction, and modification of behavior in a wide range of situations (Yeager, J. and Sommer, L. 2005). Language architecture, its components and resulting interrelationships, provides the rationale behind a systems approach. The way "reality" is organized by language is accessible by coding systems that form system boundaries and operational characteristics. As Campbell notes, "Something is codable if it falls within the scope of readily available

terms used in whatever particular language.... So the more highly codable a concept is, the easier it is to retrieve from the unconscious” (section 4).

With precision, reliability, and validity, systems analysis of linguistics currently provides researchers the “who, what, when, where, why, and how” of coding motivational mechanisms, including unconscious components. The combination of systems analysis and psycholinguistics allows dividing language into complex components resembling a close cousin to grammar. The primary value of this capability is the sophisticated ability to assess, model, predict, and change behavior in virtually any context. Various experts (Cameron-Bandler, 1978; Yeager, 2003) have demonstrated changes that have produced results such as resolving phobias in one session and improving advertising campaigns by more than 100 percent. Language allows direct and immediate access to inherent mechanisms of behavior change.

Motivation and Systems Analysis

Literally, a motive is a system. A motive is a system, in part, because of its dependence on language, which is a much larger system than any given motive. Any system’s mechanisms can be revealed with the tools of systems analysis offered by Ashby (1952) and Churchman (1968). The evolution of those tools continues in Heyligen, Joslyn, and Turchin (1999).

Systems science argues that however complex or diverse the world which we experience, we will always find different types of organization in it, and such organization can be described by concepts and principles which are independent from the specific domain we are looking at. Hence, if we would uncover those general laws, we would be able to analyze and solve problems in any domain, pertaining to any type of system. The systems approach distinguishes itself from the more traditional analytic approach by emphasizing the interactions and connectedness of the different components of a system. Although the systems approach in principle considers all types of systems, in practice, it focuses on the more complex, adaptive, self-regulating systems, which we might call “cybernetic.” (¶2)

A motive and its linguistic architecture comprise a very complex, adaptive system at the level of cognitive-emotional operation. In terms of the definition, above, humans are adaptive cybernetic mechanisms. Behavior change is an adaptive, cybernetic function of motivation. The components of any given motive involve the subject individual’s goal and its associated emotion and physiology. That also includes the unconscious components, and dozens of deeply embedded major linguistic components (Dilts, 1998; Yeager, 2003).

This paper focuses on an examination of motivational frames within the linguistic frame of reference and systems analysis perspectives. One of the most important aspects of a motivational system occurs in the way in which an individual “frames” a motive. Motivational frames organize the most powerful components of any motive’s architectural rules because of the simple fact that they pre-empt any violations of the rules of the frame(s) within the individual’s motive. For instance, baseball as a game frame represents a set of rules. By analogy, if an individual frames his or her mental

“game” (i.e., a motive) in terms of baseball, he or she will be motivated in terms of hitting, throwing, and catching baseballs as well as running to bases during segments called innings.

By changing a frame, behavior can be dramatically modified. Football is a time-driven game and the framing is one of territory gained or lost. Both game frames overlap via the common concept of scoring. Each game seeks higher scores than the competitors, but little else is shared between the two game frames.

Any miscast components from another frame of reference can't operate within the framework of the motive that excludes alien components. Motives must operate with internal consistency to make sense of the final analysis of matching the requirements of the relevant context at hand.

The observation by Lawrence Sanders (1981) in his novel *The Third Deadly Sin* describes how a belief works to frame the consistency and operational boundaries of a motive. The protagonist, Detective Delaney, is asked why a female serial killer kills. He replies,

She has her reasons. Maybe they wouldn't make sense to anybody else, but they make sense to her. It's a completely different kind of logic. Oh yes, crazies have a logic all their own. And it *does* make sense --- if you accept their original premises. For instance, if you really and truly believe that the earth is flat, then it makes sense not to travel too far or you might fall off the edge. The premise is nutty, but the reasoning that follows from it is logical. (p. 326)

If motives do not operate within the boundaries of internal consistency (their frames), the tendency is to label the resulting behavior as abnormal or dysfunctional. Badly framed behavior can also be defined as “out of context” to the local customs. For instance, “wife beating” is a domestic example of a “frame disorder/dysfunction” in psychotherapy, yet in some sub-cultures wife beating is acceptable. Differences between definitions of propriety in dress and public displays of affection are quite dramatic between East and West. The way an individual frames and organizes personal experience, quite literally, frames the motivational game for the individual. This in turn, frames it for the researcher or practitioner to observe and document. If you know the frames, you know the game.

Motives do operate with lightning speed in spite of being quite complex. One entire class of psycholinguistic tools, among many classes of related tools, exists for behavior change. They are known as “reframing” techniques (Bandler & Grinder, 1982). Motives can be altered systematically to suit the purpose at hand with reframing techniques.

Motivation and Linguistic Frames

In the behavioral community “motivation” is central. Motivation is about what people want. Motivation, as a systems-engineering phenomenon, operates in a complex manner dominated by linguistic mechanisms. Even simple motives process very complex

cognitive-emotive linguistic machinery. All motives in all situations operate within the boundaries of how any given motive is linguistically framed.

That is, by analogy, if one *frames* a game as baseball, the features of football are excluded from that baseball game frame. The motive then operates consistently within the parameters of its dominant frame. As a norm, hundreds of motives are processed by any individual every day. The way any given motive is implicitly framed by the individual predetermines the way the motive will operate and conclude because the frame(s) of a motive constrain its many parts to operate within its self-defined parameters. People, as a rule, are unaware of their frames because framing a motive is largely an unconscious process.

Classic novelists such as Steinbeck, Hemmingway, or Faulkner make clear that individual characters or personalities are context dependent, coherent entities that behave with consistency. Baseball players play baseball, in context, not ice hockey. No one reads novels or sees movies where the characters behave literally “out of character.” As in the baseball analogy, above, the motives of people operate with a comparable internal consistency. People who don’t function with internal consistency within their frames are found in the realms of abnormal psychology.

Internal consistency of linguistic operations in any given motive makes thinking and choices possible in human experience. The fragmented approach of test-construction in motivation, personality, and attitude is a counter-example of the limits of statistical methods. A comprehensive linguistic systems approach is much more fruitful in comparison to the usual test constructions’ fragmented itemized approach.

The predictable structure and function of day-to-day motivation occurs as frames are drawn from previous experience. Like a baseball player, the individual constructs a context-and-motive-specific game plan within frames that encompass the perceived situation. The choice may involve stepping up to bat, running for a base, or taunting an opponent with insults. Frames act as a repertoire of memorized *recipes* for managing generic situations as they recur in daily experience. All choices occur within frames.

Ordinary examples of framed behavior might be shaking hands during an introduction to a new acquaintance or when being introduced to a new project team. There are frames for routine daily events as well as unusual daily events. Frames range widely, for example, from getting dressed, to getting to work, to solving an unusual problem at work, choosing lunch, to talking to the boss. Every motive has a dominant frame, or frames, which engages its constituent game plan to produce a winning outcome.

Any given motive involves many documented components and sequences of observable linguistic behavior. Interested behavioral practitioners or researchers, during interviews for example, can know an individual’s dominant frames in any situation. Once the researcher knows the frames of that individual’s motive, the remaining thinking of the interviewee will unfold, revealing the motive’s overriding “game plan.” Knowing the “game frame” allows straightforward prediction and modification of motives by modifying the frame or components of the frame’s game plan.

While this “framing” characteristic applies to motives in general, it also applies to those professional researchers and practitioners who study motives. Two different frameworks normally define how professionals frame their study of motives and related phenomena. Quantitative-statistical analysis of motivation dominates research design in psychology and has done so for a century. Qualitative analysis has been considered

relatively soft by comparison to quantitative methods through much of the 20th century. Quantitative strategies have held the high ground in psychometric status, but the quantitative approach as described by Yeager and Sommer (2007), has offered little of substance to show for a century of efforts. The arrival of cause-effect linguistic methods changes the game frame for researchers and practitioners.

Simultaneous Frames

Many frames operate simultaneously within any given motive. Structurally, frames are nested within one another in a manner similar to the way popular Russian and Japanese dolls are nested one within another. Examples of common cultural frames are one's nationality, religion, political affiliations, and gender. Nested within those larger frames are more subjective frames with examples such as: how one frames issues of strong emotions, identity, cooperation, guilt, competitiveness, violence, brand preferences, suspiciousness, interpersonal dominance, lying, risk, loyalty, consequences, odds of a good outcome, self-interests, and so on.

Cultural frames and personal frames operate seamlessly together at the overt surface of behavior. Usually, the more immediate frames obscure the larger, implicit frames. For example, in the context of recent world events, how an individual frames national identity (perhaps covertly) has newfound significance. Nationality, in times of peace, often becomes a background issue. In war, it comes to the foreground. Naturally, motivational components vary in emphasis and effect upon the motive's outcome.

In any case, one can elicit any motivational frame by questioning and observation. A motivational interviewer needs to probe deeper to separate the frames that distinguish the foreground from the background frames. The frames at issue vary according to the priorities of the interviewer's task at hand. The frame makes the game. Rapport skills to conduct such interviews are taken for granted as a prerequisite among those who conduct in-depth interviews. Numerous resources offer an in-depth presentation of rapport skills (Dilts, 2004).

Frames, Personality, and Attitude

Many of us commonly name some easy-to-see motivational frames as "attitudes" or "personality" traits. While that is a valid commonsense observation, it is not a correct understanding of how traits and attitudes actually operate in the context of motivational systems architecture. Within a motivational mechanism, traits or attitudes are often motivational frames, hidden in plain sight.

For instance, someone with a suspicious "attitude" in actuality has already framed a great deal of experience as untrustworthy. With such a frame dominating one's perceptions, interpersonal encounters will frequently be framed in terms of that suspicion. In other words, many personality traits and attitudes are pre-fabricated, ready-to-use motivational frames that are applied to various situations. The training industry has thrived on just such beliefs.

In effect, terms like personality, attitudes, and frames can change hats depending on the role they play in a largely invisible motivational mechanism. The phenomenon is analogous to the way we speak in everyday conversation. That is, only an English teacher is likely to notice if we split an infinitive or use an intransitive verb. However, if we say

that someone is “beautifully devious” or “deviously beautiful” the meaning can seem to be much the same although the nouns and adjectives have changed hats.

Motivational frame analysis usually seems obvious only to a trained eye. The expertise is similar to the skill of an English teacher in recognizing the various components of grammar. As is true among experts in English, there are various levels of expertise in linguistic motivational parsing. There are those who are intuitively effective at identifying selected components of persuasive verbal content. Examples are advertising copywriters, therapists such as the renowned Milton Erickson, and many sales professionals as well as political “spin doctors”.

Generally, an introductory program offered by any of numerous training institutes at the “practitioner” level of expertise would be an excellent beginning (Dilts, 2004). Topics such as *reframing* become familiar tools for motivational analysis and intervention. Reframing is a class of techniques routinely used in sales, advertising, and psychotherapy. Reframing, in essence, changes the meaning of a given stimulus so that a change in behavior occurs. The behavior in question may involve an individual in therapy, a customer changing a brand preference, or a population as large as a nation being influenced by an advertising campaign or political slogan.

A simple example of a “reframe” would be to suppose you, the reader, are holding a pen or pencil in your hand. If someone were to convince you that the pencil was dangerously radioactive you would instantly drop that object. The stimulus, the pencil, has stayed the same, but its meaning, and hence your response, has changed. That change is a reframe (i.e., “same stimulus, different response”). Your “frame of reference” regarding the object has changed, not the object.

As another simple example, in fashion shopping, should an ad for a brand of product convince you that your original brand preference was “out of fashion,” your choice would be to choose another, more fashionable brand which meets your criteria. The motive, to buy a fashionable item, would remain the same, but the brand choice has been reframed to a different choice. Reframing is a staple method in advertising and sales and psychotherapy as well as in educational circles (Bandler & Grinder, 1982).

Context and Motivational Strategies

Context affects frames: At home someone may be deferential to an elder in response to a learned frame of cooperatively respecting one’s elders. At work, one may be forceful toward elders who are junior in the local organizational hierarchy because the game of work is framed as a competition. In essence, people frame their situations uniquely. Once we have an example of the way a person frames different contexts, prediction becomes much more effective.

Motivational frames are the first to fall in a series of dominoes that make up an individual’s decision strategies. To make a choice or a decision, an individual has to engage a complex mental process with numerous steps within which the psycholinguistic mechanisms operate. For instance, everything has to happen *somewhere*, so the perception of context, or situation, generally sets the stage for numerous other steps.

Examples of the steps are to: (1) identify and frame a problem or opportunity; (2) set a goal; (3) consider optional ways to reach the goal; (4) characterize one’s role; (5) consider tradeoffs among the options; (6) anticipate consequences; (7) consider risks; and (8) estimate the worth of pursuing the goal to its payoff.

These steps happen in an eye-blink within the mind. Yeager (2003) has illustrated such components in applied settings. In spite of the lightning speed of the process, behaviorally engineered questions will reveal the motivational process in a manner analogous to analyzing a strip of movie film examined in slow motion, frame-by-frame. Language is an indirect map, or model, of reality. Questioning techniques to elicit language maps are an entire subject unto themselves. A direct map is sensory experience such as taste, touching, hearing, vision, and so on. Language maps direct experiences to provide mental representations of that experience. Language is the means for delivering that stored experience in the form of individual maps of reality. Since language is a representation, an individual requires training in real time “testing” of the reality of the maps one learns. Some of these maps are transmitted culturally by imitation of parents, while others are learned individually. The result is a system of belief-maps that range in quality from high to low. Those whose training in language usage is of high quality tend to have high rates of success in managing reality. Bandler and Grinder (1975) developed a fundamental set of questions labeled the *Meta Model* (Appendix A). The role of systematic questioning is to improve the rates of success in achieving one’s motives. The questions elicit the architecture of a given belief (or reality map, if you like) and test the reliability and validity of that particular map.

An example of a belief is, “I hate all journalists for being such insufferable liars.” Such a statement has a great many architectural components that are recognized by Bandler and Grinder’s psycholinguistic *Meta Model* (Appendix A) map-test. The test is stated in the form of questions: “Do you hate all journalists,” questions the generalization feature of the statement; “Is there even one journalist that doesn’t lie,” questions the deletion feature of the statement; and “How do you know that all of them are liars,” questions the distortion feature of the statement.

These are selected questions among many that might be asked. The reasons for the *Meta Model* questions are that all language has inherent architectural limitations. That is, no language is a perfect replica or model of any given reality. Therefore, virtually any statement will express deletions, distortions, and generalizations compared to hardcopy reality. The *Meta Model* questions are designed, in part, to enrich the speakers’ language by eliciting a more accurate map than might be realized by the speaker at first. Often, the mere process of asking the questions alters the perception of one’s sense of reality and changes one’s behavior in a corresponding way (McKay, Davis, & Fanning, 1983).

Reciprocal Interventions: Matching Structure to Structure

One application for this, or similar useful motivational characteristics, is simply to match the communications characteristic with the person at hand. An individual’s motives can be organized (i.e., framed) for example, in terms of “same” or “difference,” which is an embedded, unconscious pattern in language structure. Savvy marketers know that the wordsmithing used in advertising must match the consumer’s mind-set (i.e., frame of mind within the overall motive). Matching a frame of the consumer, such as “same” or “difference,” establishes and maintains rapport during the persuasion process by reflecting the consumers’ pattern. The terms “new” or “different” are routinely found on product packaging.

As mirrors prove every day, people find their own reflection mesmerizing. The result of the embedded pattern's reflection, to oversimplify, changes the consumer's choice from "no" to "yes" regarding the product or issue in question. For example, a consumer with a *sameness* frame of mind would find a product offer appealing even when a "new" product is framed as the "same kind" of product they are used to using. A difference-framed individual would get that same offer framed in terms of the product being something new and different. The effects of such matching strategies have proved to be profoundly effective.

In any given motive, there are literally dozens of unconsciously organized language structures in the operation and execution of the motive at hand. Many of them are elicited with specially phrased questions that produce nicely predictable types of answers. Extending the previous example from fashions to jobs, one could ask: "What is the relationship between the work you are doing this year and the work you did last year?" The information embedded in the answer reveals the person's unconscious orientation to a pattern of framing a job situation as essentially the same, versus essentially different, over the time span. Echoing the embedded sameness or difference of their frame of reference (e.g., in a job offer) is a basic persuasion technique. "This job is very much like the one you are used to" would motivate the sameness person. "This job is unique, exciting, and a new experience for you" is motivating to the difference person. Echoing that individual's perceptual bias in a job offer makes the offer very enticing. This cause-effect, structural connection between question and answer means that research designs are under the specific control of the designer, and not left to chance. This is especially productive with frames. Frames dominate the overall systems architecture of any given motive under consideration. Leveraging that dominance offers significant intervention potential. Preferences for brand X or Y, or the preference to identify with one peer group versus another, are equally accessible to the intervention potential in frames. The effects of such cause-effect linkage added to qualitative research are impressive.

Situational Recognition and Framing One's Role

The most important part of motivational analysis occurs at the initial step, where the individual identifies a problem or opportunity. Cognitively speaking, not much happens until we notice we have a situation, for good or ill, on our hands. We all know the famous phrase from the Apollo space program, "Houston, we have a problem." At that point of recognition, the situation is instantly *framed* according to the individual's experience. For example, while tuning a car radio, one person will notice music, and another person will notice a news broadcast. Frames predispose attention to focus motivation in terms of those frames.

Roles in life also frame motives. When building a house, a carpenter frames his or her role toward the house and subsequent involvement in terms of timber and nails. A plumber frames the role toward the same house in terms of pipes and pumps and valves. In a related aspect of frames, experience from forensics offers an interesting perspective. That is, essentially all "bad guys" frame their role as "good guys" in spite of their criminal acts. Frames such as "It was not my fault" or "I had no choice" or "I couldn't help myself" or "The devil made me do it" allow rationalizations that frame the behavior

that follows. In marketing circles, this assists in profiling similar dominant features of customer behavior. The same is true of profiling in therapy, education, and politics.

Frames, typically implicit and unconscious, often occur in perception as paired opposites, antonyms. Some individuals perceive the opposites as either/or while others perceive the opposites as a continuum of degrees from one opposite to the other. Some common motivational frames are: competitive versus cooperative; dominant versus subordinate; defense versus offense; emotional versus logical; winning versus losing; good versus evil; male versus female; and direct versus indirect. Some time frames are: past tense, present tense, and future tense; and cause-effect versus superstition.

Routinely, a number of frames such as those listed above will engage and operate simultaneously. Some will come obviously into the foreground as overt conversational terms; others will merge into the background and are found only with probing techniques. In behavior change interventions, often changing one single frame will cause a significant change in behavior.

For instance, consider male versus female gender. In the 1970s, male and female behavior had some fairly distinct, rather mutually exclusive frames, which were not easily modified. Women used hair dryers as a matter of course. Men did not use hair dryers because it was a feminine thing. However, vigorous advertising campaigns of the period changed the rules of the game and “reframed” the use of hair dryers by men as an acceptable masculine behavior. This kind of intervention and change is now understood as being deliberately accomplished by the use of “reframing” technology from an applied linguistic toolkit. Qualitative research results can be upgraded from soft to hard data.

Behavior Change and Linguistics

As noted almost 50 years ago in the apocryphal dictum by linguist, Benjamin Whorf (Campbell, 1997), in its paraphrased form, “the limits of my language are the limits of my world.” Often named, the “Whorfian hypothesis,” or the Sapir-Whorf hypothesis, it says (Wales & Sanger, 2005), “The fact of the matter is that the 'real world' is to a large extent unconsciously built upon the language habits of the group” (section 5).

To illustrate, in the African Congo lives a group of people known as the Mbuti. They conceptualize time as a bubble, and everyone is in the center of that present-time-tense bubble. Partially, their environment helped shape this feature in their language. If they were cold, they merely wrapped up in a big leaf from some nearby plant. If they were hungry, they could find food under most any rock. Everything in their world happened in the present time tense. Their language maps that reality.

Imagine that an executive arrives in their village from New York City attempting to sell life insurance to people who literally can't conceive of “tomorrow.” The practical implications of language shape the reality of our perceptions and vice versa. If a language does not have a word for something, thinking that thought will be quite difficult.

In the Sapir-Whorf hypothesis, Whorf's ideas along these lines are captured by Campbell (1997).

We dissect nature along lines laid down by our native languages. The categories and types that we isolate from the world of phenomena we do not find there because they stare every observer in the face; on the contrary, the world is presented in a kaleidoscopic flux of impressions

which has to be organised by our minds - and this means largely by the linguistic systems in our minds. We cut nature up, organise it into concepts, and ascribe significances as we do, largely because we are parties to an agreement that holds throughout our speech community and is codified in the patterns of our language. The agreement is, of course, an implicit and unstated one, but its terms are absolutely obligatory; we cannot talk at all except by subscribing to the organisation and classification of data which the agreement decrees. (Campbell, 1997, section 7, ¶3)

One of the premises of applied linguistics is that speakers of the same language, nonetheless, do see the world in different ways. Language is our “reality-mapping tool.” Sometimes the tool does not represent reality as well as an objective observer from Mars might prefer.

The *Meta Model*, displayed in Appendix A, illustrates one way to use questioning processes to provide a closer match (a more objective map) of reality between the initial map of a situation versus an enriched map. Harmonizing the views of people with differing experience is often a crucial agenda item in many situations, even if the parties are nominally using the same language. Experienced negotiators and family counselors know that any given word often does not connote the same meaning to everyone in a shared context. In a shared context a word such as “fairness” might elicit anger from one individual while calming another.

Any experienced negotiator in business or diplomacy learns to “parse” the vocabulary of the parties to the transaction in order to minimize misunderstandings. As a curious aside, the authors have spoken to countless scientists in a variety of fields over several decades, and many were not native speakers of English. Essentially, all of the non-native speakers of English stated that English, a second language, was their preferred language for science because it was better than other languages at objectively representing scientific reality. Nonetheless, linguistic motivational parsing has worked in the languages explored by the authors. Those languages range from Spanish to Greek to Japanese.

In other words, people cannot think, be motivated, or decide without linguistic mechanisms. Linguistic decoding, originally enabled by the “transformational grammar” discoveries of MIT’s Noam Chomsky (1968) opened the door to technological developments, using the architecture of language that today permits efficient and effective, widespread analysis of motivation.

Summary

In sum, linguistic mechanisms of change are well established. Linguistic mechanisms of motivational research and change represent a new technology that bypasses the non-causal methods of statistics. Linguistic cause-effect mechanisms dramatically enhance the results and meaning of qualitative research methods. The behavioral sciences, which lag behind the developments of aviation and aerospace, require new approaches to understanding human behavior. Motivation is especially singled out for attention since human motives may be the measure of all things human,

and all things human are the focus of qualitative research. Linguistics and systems analysis offers new potential for moving the behavioral sciences and qualitative research forward. As a magnet in a science class draws iron filings toward its poles, motivational systems analysis draws to it previously fragmented research such as memory, judgment, attitude, attribution, personality, and many other fields. All of these aspects of behavior are focal points in qualitative research. Motivational mechanisms within the architecture of language offer researchers and practitioners a new, proven, and direct means to change motivation for better results in pursuits within applied and basic research (Yeager, 2003).

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Appendix A

Meta Model for Behavior Modification via Applied Linguistics¹

Communication enhancement occurs when beliefs are questioned to elicit the full representational map of the speaker. Deletions, generalizations and distortions represent closed mini-systems. The questioning response opens the closed system to new information and behavioral options. The closer the speaker's map is to hard-copy reality, the more effective the results of the motive at hand.

Questioning Procedures for Gathering Missing Information

DELETION: STATEMENT WITH MISSING, EXCLUDED OR DEFICIENT INFORMATION	CHALLENGING QUESTION	PREDICTED RESULT OF RESPONSE
<p>Ex. I am uncomfortable. Ex. I don't understand.</p>	<p>About what? About whom? You don't understand what? What do you mean? What/who are you talking about?</p>	<p>Recover the missing information and gather fuller description.</p>
<p>COMPARATIVE DELETION: MISSING STANDARD OF EVALUATION</p> <hr/> <p>Comparative Deletion: Missing standard of evaluation. Ex. She's a better person. Ex. He's the worst presenter. Ex....statements with words like "best/worst, more/less, least/most."</p>	<p>Better than whom or what? He's the worst amongst whom? Compared to what or whom? What do you mean?</p>	<p>Recover the standard of comparison.</p>

¹ Bandler & Grinder (1975).

<p>LACK OF REFERENCE TO PERSON OR THING: UNIDENTIFIED PRONOUNS</p> <hr/> <p>Ex. They don't listen to me. Ex. That doesn't matter.</p>	<p>Who, specifically, doesn't listen? What specifically doesn't matter? What do you mean?</p>	<p>Identify non-specific pronouns.</p>
<p>VAGUE VERBS: VERBS THAT DELETE SPECIFICS OF HOW, WHEN, WHERE</p> <hr/> <p>Ex. She rejected me. Ex. He left me.</p>	<p>How did she reject you? Where did he leave you? What do you mean, "left me"?</p>	<p>Recover specific information about the experience.</p>
<p>VERBS MADE INTO NOUNS, THUS OBSCURING THE PROCESS OR ACTION</p> <hr/> <p>Ex. I want recognition. Ex. I must improve communications.</p>	<p>How do you want to be recognized? How would you like to communicate? What happens if you add "...ing" to that word? (e.g., recognizing?) What is a verb synonym to that noun? How about changing that noun to a verb?</p>	<p>Re-establish the noun as a verb (as a dynamic, ongoing act).</p>

Questioning Procedures for Expanding Limiting Generalizations

GENERALIZATION: STATEMENT WITH INTRINSIC LIMITATION	CHALLENGING QUESTION	PREDICTED RESULT OF RESPONSE
Generalizations that preclude assuming exceptions or	Never? What would happen if	Recover the exceptions, contradictions, counter-

<p>alternative choices.</p> <p>Ex. She never listens to me. Ex. No one tells me the truth. Ex...statements with words "all," "always," "never," "every (one)."</p>	<p>they did? Is there really only one way? Isn't there at least one exception?</p>	<p>examples, alternative choices, and consequences.</p>
<p>No Choices Allowed: Words that require particular action.</p> <p>Ex. I need to do that. Ex. I can't do that. Ex. Statements with words "won't," "may not," "must," "should," "have to."</p>	<p>What would happen if you did/didn't do that? What would that get you? What stops you? How do you know that? Who says so? Is there a precedent that requires this? Is this written in stone somewhere? Is this required or merely desired?</p>	<p>Recover outcomes or consequences. Recover causes for the generalization.</p>

Questioning Procedures for Exploring & Reforming Distortions

CAUSE-EFFECT: ASSUMING A SPECIFIC STIMULUS CAUSES A SPECIFIC EXPERIENCE	CHALLENGING QUESTION	PREDICTED RESULT OF RESPONSE
<p>Ex. He makes me sick. Ex. His voice irritates me. Ex. He made this happen. Ex. They did this to me.</p>	<p>How does he make you sick? How does his voice irritate you? How do you know that for sure? How could you prove it in court?</p>	<p>Recover imagined process of the causal connection.</p>
<p>MIND READING: ASSUMING YOU KNOW WHAT THE PERSON THINKS, FEELS, ETC.</p> <p>Ex. You don't like me. Ex. He should know that I like him. Ex. He knows what I mean.</p>	<p>How do you know I don't? How should he know you like him? How can you be certain of that?</p>	<p>Recover source of information.</p>

<p>OBSCURE OR OBSOLETE RULES: ASSUMING A VALUE JUDGMENT OR OPINION IN WHICH THE SOURCE OR RELEVANCE OF ASSERTION IS MISSING AND NO CHOICE IS POSSIBLE</p> <hr/> <p>Ex. It's bad to be inconsistent. Ex. This is the right way to do it. Ex. This is official.</p>	<p>How do you know it's bad? According to whom? Who says? How do you know that?</p>	<p>Recover source of opinion or belief.</p>
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Author Note

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*ACFEi: American College of Forensic Examiners, International
DABLEE: Diplomate American Board of Law Enforcement Experts
DABPS: Diplomate American Board of Psychological Specialists