METAPHORICALLY SPEAKING

A Linguist's Perspective on the Power of Unorthodox Questions to Uncover Unique Patient Insights

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NTRODUCTION

If asked "What's your favorite animal?" your inner child would probably perk right up, and you would have a ready response without much effort. After all, this is something that you've been thinking about at some level for years, decades even.

In market research, we ask familiar questions like this that elicit practiced responses all the time. The question "How has your disease affected you?" is a staple of most in-depth interviews with patients. There's a good reason for this: straightforward questions like this work. Specifically, they work well to understand someone's personal narrative, the story we all tell ourselves that helps us understand how we fit into and interact with the world around us.

However, what do we as market researchers do when we want something more insightful than a traditional interview provides? When we want something richer. Something less rehearsed, more of the moment. Something less concrete. At inVibe Labs, we get to more by asking unorthodox questions that respondents have likely never thought about before, and we analyze them using a linguist's toolkit. Before delving into the reasons why we do this, think about how you would respond if you were asked, "If your disease were an animal, what would it be and why?" If you're like most people, you would have to pause, reflect, and think of a condition that has likely affected your physical and mental health in profound ways, and look at it through a novel lens.

What is the significance of that pause? What is so powerful about asking people to think about something in a new way? As experienced researchers, we must ask ourselves whether a new or unorthodox question really increases our insight into those whom we seek to better understand.

Listening to responses to a projective question like this one allows researchers to explore how an individual approaches living with and managing their illness in their own authentic voice. Linguists rely on the power of metaphor to uncover how individuals view their condition outside of their familiar narrative.



FINDING THE TRUTH IN THE METAPHOR

In healthcare, several metaphors have become so familiar that we all tend to forget they're not literal speech: living with a disease is a journey, diseases are wars to be fought, treatments are weapons. However, we're not going to focus on these familiar, almost cliché, metaphors. As important as these metaphors are in healthcare communication, metaphorical language extends far beyond this.

For linguists, our training teaches us to recognize the more subtle, everyday metaphors in our common speech: more is up and less is down, the past is behind us and the future is in front of us, people can be warm or cold to others. When you know how to analyze them, metaphors are jam-packed with information, cultural references, and hidden meaning. Eliciting salient metaphors specifically is a simple-yet-powerful way to extract complex meaning and to understand how a person relates to their condition on a basic, personal level.

There is no greater agony than bearing an untold story inside you.

- Maya Angelou

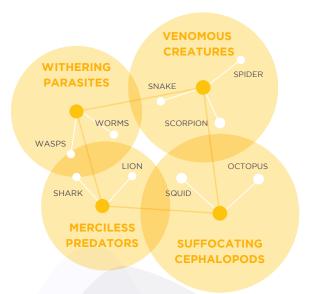
But why does understanding the way that patients understand their illness matter? For the last 40 years, research has repeatedly found that the beliefs that patients hold about illness and health have measurable effects on health outcomes and on their interpretation of those outcomes. In short, research has shown that understanding how an individual conceptualizes their condition and treating them in ways that are responsive to their reality leads to happier, healthier patients overall.

Let's return to the question "If your disease were an animal what would it be?" and examine two possible responses and their implications. If a person describes their disease as a snake, that indicates that they view it as something that is potentially lethal, that is elusive, and that lies in wait to ambush its prey, striking it suddenly with toxic venom. If they describe it as a lion, that indicates a different point of view. Both animals can be deadly, but a lion is powerful and relentless. It hunts by stalking its prey, attacking with its full strength.



Although both animals evoke images of disease as predators, the responses paint very different pictures. The metaphor of the snake emphasizes how it is unseen and able to sneak up on the patient, while the metaphor of the lion emphasizes the forcefulness of its assault on the body. Psychologically, a patient who considers their disease like a snake is likely to be hypervigilant, unsure of when it will next strike and threaten their health. A patient who sees it as a lion may be more confident about knowing what signs to watch for, keeping their eyes on the grass line and expecting to see the threat before it poses a significant danger.

These separate metaphors set up one consistent solution: we have to root out the disease and protect ourselves from harm—but how? If the condition is insidious like a snake, the patient will probably be more receptive to messages of a targeted treatment that is able to find the disease where it hides in the body. If the disease is powerful like a lion, the message that will resonate likely involves having a strong enough treatment to overcome the disease directly.



66 Metaphorically Speaking...

How unorthodox questions can teach us more about illnesses.

ABANDONING TRADITIONAL DISEASE TROPES

"Fight" or "battle" metaphors have nestled themselves into descriptions of chronic disease, especially over the course of treatment. However, overreliance on fossilized metaphors like these limits self-expression and provides researchers a consistent-but-limited view into the patient experience. Encouraging patients to use figurative language that makes sense to them encourages authentic responses.



VENOMOUS CREATURES

The snake, scorpion, or spider bites its victim and inflicts a slow but deadly wound (the illness).



WITHERING PARASITES

Wasps, worms, and other insects suck the life out of their hosts. They are invasive and spread disease.



MERCILESS PREDATORS

The predatory disease is stealthy, hungry, and out to kill. It attacks without warning and takes what it wants. It is vicious, destructive, and has no room for kindness.

SUFFOCATING CEPHALOPODS

Sie

Diseases can wrap their many arms around you and squeeze the life out of you; for many, the image of an octopus or squid wrapping its tentacles around them is relatable.



REFLECTING REALITY IN NOVELTY

You may be thinking to yourself, "Why can't I just get the same insight about an individual's perspective by just asking them directly?" Well, you can.

Patients know the words they should use; their physicians (and Dr. Google) have given them more than enough information and jargon terms to 'talk the talk.' Especially in the cases of highly-engaged patients and of those living with a chronic condition, they're not ill-informed by any means. It's just rare for medicalese (the specialized language of the healthcare community) to be their native tongue, and as such some part of their perspective is lost when they have to translate it into someone else's way of speaking.

When researchers recognize this challenge and use familiar, traditional questions that have become fixtures of healthcare surveys, they create a new problem. By fossilizing the metaphorical language that surrounds disease, researchers have created a linguistic trap for respondents. This trap creates stories that are compelling but inaccurate.

...some part of their perspective is lost when they have to translate it into someone else's way of speaking. There are three features of how brains process information at work to create this trap: **practice effects, narrative framing**, and **reconstructive memory.** Without delving too deep into each concept, the problem goes something like this:

- 1. **Practice effects:** The more we do something, the better we get at it.
- 2. Narrative framing: The more we tell stories, the more entrenched the themes within them become.
- 3. Reconstructive memory: As our life circumstances change between telling the story, accuracy decreases as the narrative becomes an argument that justifies the outcome.

These cognitive tendencies mean that, every time a patient describes what it's like living with their condition, their narrative flows more smoothly and the story's themes become richer, but their descriptions drift further away from what really happened and are less reflective of how they felt in the past. That is, when we as researchers repeatedly ask the same questions, patients may tell better stories, but those stories are less accurate.





When was the last time your research brought you authentic and novel insight into the patients you serve? Something provocative? Something that made you stop and think? To uncover this level of insight, we need to leverage both the power of the process and the people behind that process—in our case, linguists. The unique ability linguists have to bring order to messy, real language in any context allows us to expand the way patients think about their conditions.

Finding the best ways to help clients achieve the understanding they need is the goal of any market research agency. Just as we as an industry develop our quantitative analyses to be as generalizable and strategic as possible, so too must we leverage novel ways to qualitatively listen to our stakeholder communities — to hear their stories in their own words — in order to direct the development of the tactics required to achieve our goals.



At inVibe, we help healthcare organizations generate meaningful evidence and gain actionable insights by unlocking the signals in the human voice. We accomplish this by combining innovative technology that allows us to capture rich voice data quickly and easily with linguistic and computational analysis. In traditional in-depth interviews or focus groups, you have the ability to ask dozens of questions, but you're limited by the number of people you can include. With only a handful of respondents, researchers have to rely on entrenched ways of asking and analyzing questions in order to make any sense of the data. At inVibe, our automated voice-response methodology asks more precise questions of a larger number of participants. This allows us to structure qualitative data in a way that lends itself well to capturing stories.

Our linguistics toolkit then allows us to find patterns and themes that are under the surface of the responses, made apparent through analyzing not only what is being said but how they are saying it. When our language-centric analysis is combined with advanced technologies and machine learning, we can delve even deeper into these underlying patterns. For example, employing speech emotion recognition (an AI-powered tool) allows us to provide unique emotion insights by quantifying and validating intuitions surrounding the emotional tone of a person's speech.







In this whitepaper, we explore the following topics:

- The power of ubiquitous, familiar metaphors and figurative language
- How conventional question design traps patients into giving compelling but inaccurate stories
- The use of novel questions and methods to produce more authentic and resonant stories

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