Motivational interviewing (MI) has been criticized for lacking a theoretical explanation of its efficacy. Indeed, as with the person-centered approach of Carl Rogers,\(^1\) the origins of MI were atheoretical, arising inductively through observed practice by posing and testing tentative hypotheses.\(^2\) Logical linkages have been made to various psychological theories that reflect but do not really explain the emerging observations of MI.\(^3\) A useful theory does more than rename currently-observed phenomena. A good theory organizes observations and suggests yet-to-be tested hypotheses.

What are some MI-related observations in need of explanation? In a way, the question that puzzles me most is why MI works at all. How is it that a relatively brief conversation can trigger change in behavior that has sometimes persisted for decades? In the original formulation\(^4\) I conceived of MI as a preparation for treatment, but not as an intervention in itself. A surprise in our first studies was that an MI intervention alone led to enduring behavior change.\(^5\) Now there are more than eight hundred controlled trials of interventions involving MI in some way, including many examples of its use as an effective brief treatment. What’s going on here? Other observations that might also be addressed in an integrative explanation of MI include:

1. Why is it common that people do not submit or comply with pressure or advice to change, even if they agree? This phenomenon has been termed psychological reactance\(^6\) but why does it occur? Carl Rogers\(^7\) observed that “The common practice is to be completely directive. Since time is short, the counselor quickly grasps the problem as he sees it, giving advice, persuading, directing. The results are almost inevitably and thoroughly bad (p. 172).”

\(^{*}\) A version of this paper was presented as a plenary address at the 20th anniversary Forum of the Motivational Interviewing Network of Trainers, Malahide, Ireland, October 5, 2017.
2. Why is it that despite #1, our default inclination as care providers seems to be a complementary “righting reflex,” telling people what they should do and why they should do it?8

3. Why do providers often seem to “recognize” MI as familiar, as though it were something they had already known at some level?

4. Why do clients often visibly relax within the early minutes of an MI session?

5. Why do providers often report that learning and practicing MI seems to relieve a burden, making their work less stressful and more enjoyable?

6. Why do MI-consistent counselor responses promote client change talk and subsequent change?

7. Why do MI-inconsistent counselor responses tend to be followed by client resistance and lack of positive change?

8. And why does MI seem to cross cultures so readily, currently taught and practiced in at least 52 languages? In 2017 alone, new controlled trials of MI were published from Africa (Egypt, Kenya, Nigeria, South Africa, Uganda), Asia (Bangladesh, China, India, Iran, Malaysia, Marshall Islands, Turkey), Central and South America (Brazil, Chile, Mexico), Europe (Netherlands, Norway, Sweden, Switzerland, U.K.), Oceania (Australia, New Zealand), and North America (Canada, U.S., and three Native American nations: Cherokee, Chicksaw, and Zuni).

“An explanation as to why and how MI influences behavior may lie in our evolutionary past” according to Bill Neto,9 an Australian psychologist who began his career working with Robyn Richmond10 offering MI counseling for smoking cessation. Specifically Neto invoked the phenomenon of social dominance that is readily observable in many species. When faced with a dominance challenge, an individual may counter-attack, yield, or withdraw. These highly evolved behavioral routines serve to promote survival of a species through selective reproduction of the strongest individuals without a need to kill rivals. They tend to stabilize social structure in group living. Challenges and responses can be expressed through vocalizations and language. Neto argued that in humans, dominance struggles have been “became detached from their specific contexts to become active in any situation in which humans sense they are in a position of power.”
A specific example is the previously-described phenomenon of psychological reactance, a seemingly innate tendency to act contrary to advice or pressure. When directed or advised what to do, exerting the freedom not to comply signals a higher position in social dominance. Compliance, in contrast, represents submission and subservience. Opposition to demands emerges very early in life (think 2-year-olds) and can be particularly evident in adolescence. Fights and road rage incidents often begin with a perceived challenge to social dominance. From an evolutionary perspective, psychological reactance is “an adaptive system operating as it was designed to.”

Humans seem keenly primed to “detect dominance-related cues in interpersonal interactions with minimum of neural computation.” Reactance may be triggered and operate largely outside of conscious awareness via subcortical functions that bypass or inhibit cortical processing. Such resistance to limitations on freedom can be extreme. In his history of Australia’s penal colonies Robert Hughes recounted a 19th century convicts’ song defying penalties for drinking alcohol:

Cut yer name across me backbone, stretch me skin across a drum,
Iron me up to Pinchgut Island from today till Kingdom Come!
I will eat your Norfolk dumpling like a juicy Spanish plum,
Even dance the Newgate hornpipe if you’ll only give me rum!

Pinchgut Island was a bare rock in Sydney harbor where convicts were chained without food; a Norfolk dumpling referred to a hundred lashes with a cat o’ nine tails; and the Newgate hornpipe described the dancing legs of a hanged man. In other words, convicts professed their willingness to risk starvation, torture, and even death for access to alcohol. It is notoriously difficult to punish away addictive behavior.

Psychological reactance is likely to occur in situations where a person feels influenced, pressured, or manipulated to act. As illustrated in the quote above, it can be particularly strong in contexts where hierarchical discipline or competition for power is salient. Individual differences in reactance are also apparent. Some individuals are extremely sensitive to any perceived criticism or status challenge, and may counter-attack reflexively. Anger-prone people tend to misperceive facial expressions as hostile, a perceptual bias also
associated with alcohol intoxication.\textsuperscript{12} Neto maintained that psychological reactance and other responses to dominance challenge involve limbic arousal that inhibits cortical processing and decision making.

Behavior change interventions represent an ideal milieu in which to trigger psychological reactance. There is a direct attempt to influence (advise, persuade, pressure, coerce) behavior change in a person’s life outside the interventionist’s purview. Furthermore, there is often a power/status differential between providers and recipients of behavior change interventions. Because people are the ultimate decision makers regarding their own behavior, noncompliance is an easy way to assert freedom of choice and might be a default outcome.

What is different about MI? Neto described MI as “adaptively significant, signaling to the individual that he/she is social-hierarchically and physically safe, allowing the human cortex to process information and engage in cognitive reasoning and decision making without strong influence from these unconscious instinctual subcortical processes that ruled behavior prior to cortical evolution.” In essence, MI begins by yielding: “You are in charge. You are the decision maker.” This might be regarded to be just a technique, were it not also the truth. The interviewer is merely accepting and affirming what is already true. Central practices of MI also involve taking the lower place:\textsuperscript{13} respectful listening, asking questions with curiosity, nonjudgmental acceptance, affirmation, and autonomy support. These tend to diminish subcortical defenses so that the human cortex can process information and engage in cognitive reasoning, allowing clients to “make rational autonomous decisions in a supportive and caring atmosphere.” A dim awareness of this relative flow of energy was reflected in a fanciful electrical diagram that I included in my original 1983 article.

Most of this dynamic, Neto maintained, typically plays out below conscious awareness. MI prevents or diminishes activation of instinctual defensive arousal that can interfere with behavior change. Clients often appear to relax early in MI sessions and become more collaborative. Neto extended this subconscious awareness to providers of MI: “I personally believe that MI clinicians are actually non-consciously aware of what they are doing and why.” This may account for the phenomenon of providers “recognizing” MI.

Carl Rogers stressed the fundamental “attitudes” of the clinician as more important than technique, an emphasis mirrored in our own explication of the underlying “spirit” of MI. An initial description of this spirit\textsuperscript{14}
was prompted in part by our observation of trainees applying techniques that we had taught them, but with something important missing, like the “words without the music.” This led us to emphasize the underlying mindset with which MI is practiced. Why would attitude be important from an evolutionary perspective? Neto averred that humans have evolved to be subconsciously alert for and attuned to social dominance cues. If a clinician is employing techniques with the mindset of controlling (tricking, manipulating) the client, it is likely that this intent will be detected at least subconsciously. In contrast, MI is practiced with a mindset of empathy, collaborative partnership, and full acceptance of clients’ autonomy as the ultimate decision makers regarding their own lifestyle and behavior. This overlaps with Rogers’ emphasis on the importance of genuineness in counseling, rather than posing as a detached expert delivering procedures to or on clients. MI is to be practiced with and for people, having the client’s welfare and best interests as the prime directive. When this spirit is in the clinician’s mind and heart, it also is likely to be communicated subconsciously.

These power dynamics are not specific to motivational interviewing, but presumably operate as a general factor in interpersonal interventions. This may be one significant source of the substantial therapist effects often observed in psychotherapy research – that “the same” treatment yields quite different outcomes depending upon the person delivering it. The power-yielding style of accurate empathy is associated with better clinical outcomes across various kinds of psychotherapy.

In any event, this evolutionary perspective offers a plausible explanation of why MI-consistent responses evoke collaboration, change talk and subsequent change, whereas MI-inconsistent counselor responses elicit resistance and maintain the status quo. It also makes sense of why MI may cross cultures so readily, and why clinicians often “recognize” it (literally: know it again) as if were already familiar, finding it a less stressful way of working. Neto’s evolutionary account is not a comprehensive explanation of MI, but it does seem to encompass a wide range of MI-related observations.

More importantly, a range of testable hypotheses could be derived to test this theory and extend our understanding of MI and of behavior change counseling more generally. Some predictions could pertain to conditions under which MI might be differentially beneficial.
• Will MI benefit from a contrast effect when practiced in contexts that are characterized by high dominance or competition (e.g., sport, correctional settings)?

• Might MI have less impact in cultures where deference and obedience to authority are more normative (such as military populations)?

• Could MI be particularly effective when practiced by providers of relatively high social status (like doctors in white coats)?

• Is MI especially important when talking to clients who are themselves of relatively high social status?

• Or might it be more effective when working with populations unaccustomed to being treated respectfully (as observed by Hettema\textsuperscript{17} with minority groups)?

MI-consistent and MI-inconsistent counselor behaviors that are more closely linked to social dominance may be particularly important in predicting client change talk and change. Level of MI spirit may moderate the relationship between MI-consistent counselor behavior and client responses. Counselors who are highly sensitive to cues that challenge social dominance may find it more difficult to learn and practice MI. New verbal and nonverbal responses linked to social dominance might be added to MI coding systems.

Neuroscience hypotheses could also be generated and tested. If subcortical arousal is linked to social dominance conflict, limbic activation in either counselor or client might be associated with the client’s in-session change talk and sustain talk and with post-session outcomes. The ratio of cortical to subcortical arousal might be particularly informative.

Finally, it is worth noting that patterns of dominance are very old in evolutionary terms, and it is therefore unsurprising that the discoveries of MI mirror ancient wisdom about shunning rather than claiming dominance. Beyond the three classic responses to a power challenge – counter-attack, yielding, or withdrawal, none of which promote long-term behavior change – humans have evolved sophisticated forms of nonviolent resistance to domination that are represented in the teachings of the Buddha, Jesus, Gandhi, and Martin Luther King. These responses that do not oppose but “roll with” power can appear on the surface
to be passive acquiescence, a worry sometimes leveled at MI: “You’re just going along with the client!”

This is an often misunderstood aspect of this teaching of Jesus:

> Do not resist one who is evil. But if any one strikes you on the right cheek, turn to him the other also; and if any one would sue you and take your coat, let him have your shirt as well; and if any one forces you to go one mile, go with him two miles (Matthew 5:39-41).

Walter Wink\(^{18}\) explained that within the social context of the time, these responses would be understood as alternatives to either violence or passivity. In the first instance, a back-handed slap to the right cheek was a classic reprimand to someone lower in the social hierarchy. To then turn the left cheek toward the aggressor prevented repetition of the act. Such a slap would not be done with the left hand, and a straightforward punch would acknowledge the person to be a social equal. Secondly, a poor man might use his only warm outer garment as collateral for a small loan. If unpaid, the lender could take the borrower to court to seize the collateral. The advice is essentially to “give him your underwear as well,” leaving the borrower naked and thus shaming the lender. Finally, Roman law permitted a soldier to require any male civilian to carry his pack for one mile, but not more. If the bearer happily continues for a second mile, the soldier is now disobeying the law. All three examples involve suddenly turning the tables on the oppressor without either fight or flight.

In dramatic societal applications of nonviolent resistance, both Mohandas Gandhi and Martin Luther King gradually overcame brutal social domination.

This dynamic of intentionally taking the lower place is not limited to humans. I had the good fortune two decades ago to meet Monty Roberts, whose life work has been devoted to the nonviolent treatment of horses. In contrast with the traditional model of “breaking” horses into submission through 2-3 weeks of violence, Roberts is able to cause a new horse to accept its first blanket, saddle and rider within half an hour on average without violence through his method of “Join-Up” that he has successfully taught to many other trainers.\(^{19}\) Rather than being tied up and overpowered, the horse engages in its natural behavior of running away and then, through specifiable communications of movement, is invited to come voluntarily to and work
with the trainer. The parallels to MI are striking. Both reject domination in favor of collaboration, voluntarily taking the lower place as a way of sharing power. It is a path in the short run that is at least as effective as asserting dominance, and more likely to in the long run to inspire trust, relationship, and change.

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Notes