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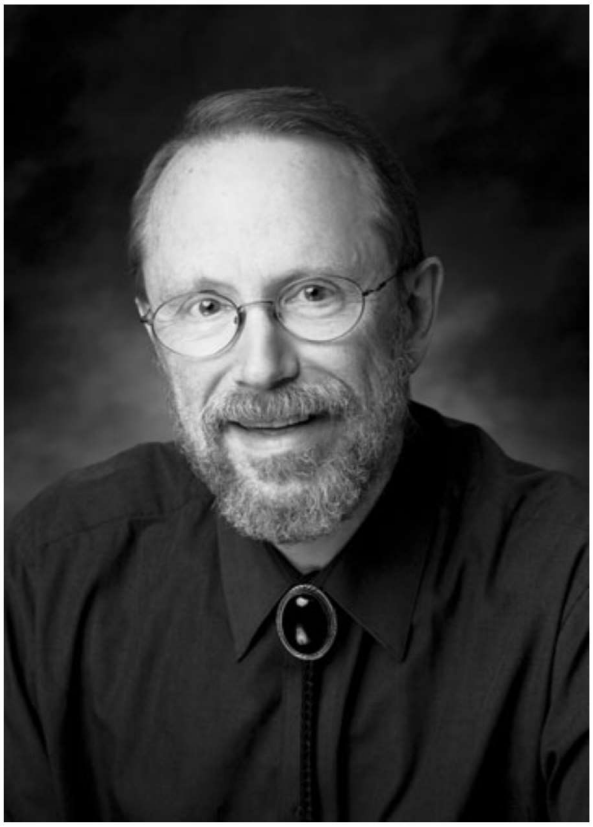
Conversation with William R. Miller



In this occasional series we record views and personal experience of people who have specially contributed to the evolution of ideas in the Journal's field of interest. William Miller is an American psychologist whose creative contributions have, over a professional life-time, exerted a profound personal influence on the treatment field.

A transcription of the full interview can be found at http://casaa.unm.edu/AddictionInterview

FINDING A LIFE DIRECTION

Addiction (A): I thought it would be helpful for the people who are going to read this to first get the basic facts of your life.
William R. Miller (WRM): I grew up in Appalachia in a little coal-mining town in Pennsylvania, and went to college with the intention of going to seminary. Along the way I had the fairly common faith crisis of having a childhood faith that was no longer going to work for me and not yet having an adult faith that was viable. So I found myself in my senior year an agnostic, and it did not make sense to go to seminary. I had majored in psychology and so applied to graduate schools in psychology. I wanted to go to the University of Oregon, but did not get in. Instead I got into the University of Wisconsin, and so I started graduate school there in 1969, attended for one summer semester, and then my number came up in the draft lottery. This was during the Vietnam War and I had already filed as a conscientious objector, so I worked for 2 years as a psychiatric aide at Mendota State Hospital in Madison, following in the footsteps of Carl Rogers, where he did his research on schizophrenia.

A: What happened after that?
WRM: After a couple of years of service I was ready to go back to graduate school. At that time there had been a political conflict within the psychology department and Loren Chapman, the Director of Clinical Training, called me to say that my advisor was leaving along with half the clinical faculty; there would be no new graduate students admitted and no classes offered, financial aid was uncertain and there was no one on the clinical faculty working in my area of interest. Nevertheless, he said I could come back, or he would help me get into another school. Obviously Plan B sounded better.

A: What happened?
WRM: This time around I got into Oregon, and I loved my graduate experience there.

A: Who was your primary mentor there?
WRM: Hal Arkowitz was my first mentor. Back then there were summer internships with the Veterans Administration. My wife Kathy, whom I met in Madison, and I both liked Wisconsin so we said, 'Let's go back to Wisconsin for the summer'. We chose the Wood VA hospital in Milwaukee. When I got there Jim Hart, the training director said, 'Look around and find a program that looks interesting and have a good time'. I toured around the hospital and there was this alcoholism unit being run by a psychologist, Bob Hall, Sharon Hall's husband, who asked, 'What do you know about alcoholism?'. I said, 'Nothing at all'. He told me, 'Well you need to know about this as a psychologist because it's the second most common diagnosis you'll see. Come on in, and learn something'. And I did.

A: Was this a paid placement for the summer?
WRM: Yes, it provided a stipend that supported a year of graduate study. That was my introduction to alcoholism, which I literally knew nothing about; I had not learned anything about it in graduate studies to that point and had no family history. It was just a blank slate for me. Bob (Hall) got me to look into some new research from the Sobells, which had been released in a State of California report and was just hitting the journals [1].

A: What year was this?
WRM: 1973. Bob said, 'Read this and see if it's something that we should be doing'. I did, and we tried out a little controlled drinking therapy at the in-patient unit and pretty quickly decided this was not the right thing for that population.

A: Why did you decide that?
WRM: It just seemed that the severity was too high and they were getting a lot of other messages about stopping drinking, and it was creating more difficulties than promise. So, it did not seem to be the right fit there, but I thought, 'Now this is something you could do with people earlier, farther upstream'. I had taken a class from Ed Lichtenstein, who was very much emphasizing preventive interventions and pulling people out of the river before they go over the waterfall.

A: This was in Oregon?
WRM: Yes, back at Oregon. Ed became my dissertation advisor. He was the only one in the department interested in addictions. Ed was conducting smoking studies at the time, but it was the closest thing to alcohol, so Ed took me on. I wanted to work with earlier problem drinkers from the community, so I advertised for people who would like to learn how to moderate their drinking. We received a large number of calls and it was not that difficult to find the people for my dissertation. We compared three different approaches for helping people to moderate their drinking. One of them was electrical aversion therapy. It looked promising in the literature, so we built a bar in the basement of the psychology clinic at the University of Oregon, and in that [aversion therapy] condition we had people come in and drink and receive electric shocks that were self-administered. A second condition that we called behavioral self-control training was just basically two people in a room chatting about strategies for moderating drinking. The third condition was an all-out training approach combining methods from the Sobells and from Syd Lovibond [2]. We had them practice moderate drinking in the laboratory bar setting, gave them feedback about intoxication levels and some skill training, and electrical aversion when they got above a certain blood alcohol level. These were about 3-hour sessions and the others were about 30–50-minute sessions. I really enjoyed conducting that first trial. The folks who came in were indeed earlier in the development of alcohol problems, and we had pretty good success helping people to moderate their drinking. All three worked about equally well [3], which is a finding I have replicated many times since then. So it seemed to me that the self-control training, which did not require a bar and shocks and alcohol and all the rest of it, was a parsimonious thing to do to help people moderate their drinking.

A:You said that matter-of-factly—you wanted to look at problem drinkers who are further upstream, but that was not common thinking at that time.
WRM: No, not at all.

A: Probably the most common information on progression at the time was Jellinek's work. So, where did your idea come from?
WRM: Well, my training was behavioral and so I have always thought about drinking as a behavior, and it did not seem to me that alcohol problems came in only one flavor. That was the belief at the time, though, that either you were alcoholic and incapable of moderate drinking, or not alcoholic and you could drink whatever you wanted with impunity. It was pretty clear that was not true from the medical literature. In fact, one early effect of my reading the medical literature on alcoholism was a big decrease in my own drinking, and so it had that benefit for me as well.

A: After graduate school, where did you do your internship?
WRM: At the Veterans Administration hospital in Palo Alto, California. I worked with John Marquis, and also did a neuropsychology rotation with Jim Moses. I had experience at the front door as an intake worker, which is one place I realized that practitioners often get almost no feedback. I would work up people who came in, give them a provisional diagnosis and refer them to what I thought was the appropriate place in the system, but never heard whether I had it right or got it wrong or if they even got there. That is a theme that has stayed with me, that it is easy when you are in practice to operate in a feedback vacuum and literally not get any better at what you are doing because you just do not receive corrective feedback. I also did a couple of studies while I was on internship. One of them was with this self-help manual called *How to Control Your Drinking*, co-authored by Ricardo Muñoz [4]. Ricardo and I put together a self-help resource with short modules on other issues to give to people so they would have something else to consider besides drinking.

A: Did you assess the effectiveness of this manual?
WRM: Yes we assigned people randomly to get or not get the manual at the end of treatment, and then after the 3-month follow-up we gave it to the rest of them. To our surprise, the people who received the self-help manual continued to decrease their drinking over that 3-month period, so by 3 months it was a statistically significant difference. The next obvious question was: what if we just gave people the book? The shocking outcome was that they finished dead even with those seeing a therapist [5]. My training had taught me that the more time you spend with me, an expert therapist, the better you get, so that

was sort of a surprising finding. In Palo Alto, we also tried a group therapy version of this and it seemed to work well, too [6].

A: What next?
WRM: I did not know what I wanted to do after internship or what I would apply for. I thought I might go into a clinical role. New Mexico had this faculty opening so I got my resumé together and sent it in. They interviewed me in November and offered me a job. Nobody else was even interviewing yet, so it was either a bird in hand or wait for someone else to perhaps interview me, and I am not a big risk taker, so I took it. We came here and never left. I have loved New Mexico; it has been a wonderful place to work, and so happenstance, once again, affected the direction of my career.

THE DOORWAY BETWEEN RELIGION AND PSYCHOLOGY

A: This gives a good framework to understand the basics. Let us go back now. You said you went to college planning to go seminary. Was that in your family?
WRM: No, not at all. I felt a personal calling to do this. It seemed to me that was what I was supposed to do, so it was quite a struggle to make the decision not to go to seminary. I found my way back into an adult faith a couple of years later. There was a point in my life, soon after I received tenure, where I again felt the tug, the doubt, and that was another struggle. What I came out of that with was the sense that I am on the right path. The fruit that has come out of my living in that doorway between religion and psychology has been wonderful.

A: What has standing in that doorway meant to you? How has it been a good place to be?
WRM: Being a person of faith and also a hard-nosed scientist in the addiction field, both just fit naturally with who I am. I started out writing a pastoral counseling text with Kathy, thinking, 'Here are some things I've learned in psychology that I can share with pastoral ministers to use in their work'. [7] I also wrote a little book for Christian laity called *Living As If*, which was basically cognitive therapy and the psychology of self-fulfilling prophecies, how that can be lived out in one's life [8]. Then I started passing things in the other direction—taking things that I knew and had learned from the religious side of my life, and passing those into psychology. I think the first of those was with John Martin at AABT [Association for Advancement of Behavior Therapy]. John was the program chair for a year in the mid-1980s, and he invited me to develop a symposium with him on religion and behavior therapy. I agreed, and we put a symposium together. The room was packed and a little book came out of it on behavior therapy and religion [9].

A: Were you talking at all about addiction in that?
WRM: Not particularly. No, this was more about behavior therapy and how it interacts with people's spiritual views. My chapter was about doing cognitive therapy in a way that is not arrogant, that does not assume you have the right answers and the client has got it wrong. I described an approach to help people change their cognitions in a way that is consonant with their own guiding values and beliefs. Then I began writing about spirituality and psychotherapy and how they could be put together. I was invited to chair a panel on addictions for the Templeton Foundation. Sir John Templeton told us, 'What I want you to do is to tell me what we know from good science about the relationship of spirituality and religion to your area'. There were panels on physical health, mental health, addictions and neuroscience. 'What do we need to know? What is keeping us from finding out what we need to know?' That was the assignment. So I got a group of colleagues together [10]. I also invited a couple of colleagues from NIAAA (National Institute of on Alcohol Abuse and Alcoholism): Margaret Mattson and John Allen. They went back and began talking to Enoch Gordis, the Director of NIAAA, about the possibility of doing some research on this interface. Enoch was nervous about it but very open-minded, and he put together a conference on spirituality and alcoholism. It went well, and Enoch approved a Request for Applications for research on spirituality and alcohol. I think he worried whether they would they receive enough applications, and if they would be of good enough quality to fund.

A: What happened?
WRM: They received a record number of applications—over 80—and many more good ones than they could fund.

A: How did the Fetzer Foundation fit in?
WRM: Fetzer agreed to fund a similar number to those funded by NIAAA, which created a nice set of studies on this topic. After that I received a call from NIH asking me to chair a trans-NIH panel on spirituality and health to which all the institutes would be invited. Out of that came a set of papers that appeared in *American Psychologist* [11]. I wrote a paper with Carl Thoreson on spirituality as a cutting-edge area for health research. So I started working on an edited book on spirituality and psychotherapy. I ran into a colleague who was an editor at APA (American Psychological Association) Press, who asked, 'What are you writing?'. I told her, 'You probably wouldn't be interested in it'. She was, and to my astonishment APA published it [12]. It was one of the first

things they had ever published on spirituality. Then along came an initiative from the Pew Charitable Trusts. They issued a challenge to eight academic disciplines to compare and contrast the dominant view of the person in that discipline with a Christian view of the person, and explore what would be the implications for scientific methodology and areas for future research of considering the view of human nature that is held by Christians.

A: Sounds interesting.
WRM: It was. Harold Delaney and I chaired a third panel. Now, the dominant *Menschenbild*, the model of a person in psychology, is fairly mechanistic, deterministic and very different from the way in which Jews and Christians think about human beings and, I submit, different from the way in which most human beings think about human nature. We wound up with a set of chapters that I sent to APA. They published it, which is the first and only book ever published by APA with 'Christian' in the title [13]. Anyhow, it has been fun being in that doorway and seeing things happen at this interface. It is a very lively place to be.

A: Do you feel the door has ever swung back and hit you in the face? Or that it has been pushed back? Have you paid any price?
WRM: No, quite to the contrary. Many wonderful opportunities for stimulating conversations with smart people have come out of that. In the Pew project in particular, I got to go to national meetings where there were eight disciplines at the table, having fascinating discussions on literature and philosophy and law, and it was just what a university is all about. You will notice, though, that my first publications on spirituality happened after I was tenured. It was indeed a kind of anti-tenure factor. Certainly, in my department, there was a great deal of skepticism about it at that point. But I also developed some wonderful colleagues in this area within the department. And there has been interest in the science of it, so we had dissertations and theses on spirituality and religion, which is reasonably unusual.

A: You said that you decided not to go to seminary after a lot of struggle during college, and then decided to go to graduate school in psychology. Well, an awful lot of people major in psychology and then get jobs or do other things outside psychology. What was the draw of going to graduate school?
WRM: I have been fortunate to have great mentors every step of the way. I had a couple of professors at Lycoming who loved psychology and there was a contagious curiosity; we just had to know the answers to these questions. They taught me that there is a scientific methodology for finding out answers to things. One of them was George Shortess, who was the chair of the department and my primary mentor there. I maintained the rat laboratory for him, as my financial aid, and pushed frogs off jumping stands because he was studying the frog's visual physiology. I almost went to graduate school in physiological psychology. The other important psychology mentor for me there was Cliff Smith, who was a clinician trained at Stanford. Both of them fired in me a curiosity about people and this interesting way of discovering new knowledge.

A: So the call for you in psychology was knowledge, in a sense. I am asking because you were at college in the 1960s, and for some people the call was for social action and social change.
WRM: Well, they are intertwined. In Madison I was a hippie radical, long-haired, bearded guy out in the streets so I sort of fit that stereotype of the 1960s. I edited an underground newspaper when I was an undergraduate. But honestly, I am not sure that either of those—scientific curiosity or social action—was the real call. It sounds very unhumble, but I have felt moved by God in certain directions, not by hearing voices and seeing visions, but a door just opens and other doors close, and I walk through that door and wow, what happens is astonishing. I feel as if there has been some intentionality to it. There have been various points in my life where I have just felt as if I belonged with something. Christians use the word 'call' for that, but it is a sense of 'I belong with that. That's the direction I should go in'. It is subtle, but whenever I have paid attention and followed one of those, amazing things have come out of it. I simply cannot believe the career I have had. I grew up fairly poor. My dad finished eighth grade and worked on the Reading railroad, and my mom finished high school and worked in factories. I had no vision outside my hometown. What has happened in my life is just astonishing to me.

RECURRING INTEREST IN ALCOHOLISM

A: Let us move on to talk about alcohol. So you became interested in alcoholism on the summer practicum.
WRM: Yep. Just happenstance.

A: Lots of people meet people with alcohol dependence and they do not like them. You obviously had a very different reaction. What was the draw?
WRM: I benefited from ignorance. I had not read anything about alcoholism. Knowing nothing, that summer I mostly listened. I had had the good fortune of being trained pretty well in client-centered counseling right before I did my internship in Milwaukee, so I mainly just put on my Carl Rogers hat and with reflective listening asked these people—mainly men—to teach me about their experience. 'How did you get to this place in your life?'; 'What's been happening in your life?'; and 'Where are you going from here?'. I did not have any therapeutic

advice for them, so I just listened, and they seemed to appreciate that, to respond well. I learned an awful lot from these folks' own stories. And there was also chemistry. I immediately enjoyed talking to them and working with people with addictions. Then I began to read the literature and it said, 'Alcoholics are liars and they have this immature personality that it so defended that you can never get through it. You've just got to hit them with a brick to get anywhere, and you can't trust them'. It puzzled me, because those were not the people I had been talking to. It certainly was not my experience on my dissertation, either. I really enjoyed talking to the problem drinkers I worked with. We were doing behavior therapy, but also with a good amount of empathic listening. In one study here in New Mexico we actually used the accurate empathy scale developed by Truax & Carkhuff to rate listening skills, while counselors were treating problem drinkers. It was that study, published in 1980, in which we found a huge relationship between therapist empathy and drinking outcome [14]. It was so much stronger than anything else we found, accounting for two-thirds of variance in outcome, that it really surprised me. Here is an aspect, a relational aspect, of behavior therapy that had not been given much attention. It just happened that I was trained both in behavior therapy and in Rogers' approach.

A: When was your first review on motivation published?
WRM: In 1985 [15].

A: Was that a kind of fulcrum in terms of your beginning to move away from thinking about skills to thinking about these other factors?
WRM: No, it is not that black and white. The community reinforcement approach that I have subsequently collaborated on with Bob Meyers [16] is very skill-focused, and I have continued to be interested in cognitive behavioral approaches through Project MATCH [17] and the COMBINE study [18]. I did not lose interest in that side of things. I have been interested predominately in evidence-based approaches and what seems to work. In addition, there is this interesting line of work around relationship, listening and empathy and those other interpersonal aspects that used to be called 'non-specifics' or 'general factors'. I've been trying to specify them, and finding that they are actually related pretty strongly to outcomes.

THE EVOLUTION OF MOTIVATIONAL INTERVIEWING (MI)

A: Okay. Let us talk about how you started to focus on motivation.
WRM: Well, it is more happenstance [19]. I went off with Kathy to Norway on my first sabbatical leave. This one I spent at an alcoholism hospital near Bergen, the Hjellestad Clinic. They brought me in to lecture on cognitive behavioral treatment of alcoholism and addictions. Jon Laberg, the director of the center, asked if I would also meet with a group of psychologists who were working there, many of whom were pretty green, and have a conversation every other week or so to see what would come of it. I agreed, and we began meeting. What they wanted to do was to role-play some of the more difficult cases they were seeing.

A: Clinician role-plays usually are harder than real therapy.
WRM: Right—no client is really as difficult as the client role played by a therapist but I did not know that then, so I just did my best. I noticed that they interrupted me frequently, which is related to the philosophical, reflective, analytical way in which psychologists tend to be trained in Europe. They would stop me and ask, 'What are you thinking now at this moment in this session?'; 'You asked a question there. Why did you ask *that* question, because there are other things you could have asked?'. They were really good questions. I began verbalizing a set of decision rules that I had been using that I was completely unaware of, that had to do predominately with having the client make the arguments for change. I was avoiding doing so myself, not being the person responsible to say, 'You have a problem and you need to do something about it'. And, also, eliciting their confidence and hope, but especially having the client make the arguments for change. I began writing down these decision rules as they were emerging, and gave it the working title of 'motivational interviewing'. If I had called it anything else, I think it would have been 'motivational conversation'. I sent this to a few colleagues, for discussion and comments, including Ray Hodgson . To my surprise, Ray wrote that he wanted to publish it in *Behavioural Psychotherapy*, which he edited. I told him that I had absolutely no data but he said that was fine, he thought it was an important contribution and he would like to publish it. It appeared in 1983 [20], and I figured that would be last I would hear of it. I came back to New Mexico and began conducting some studies on brief interventions designed to elicit motivation for change. That is how the Drinker's Check-up emerged [21].

A: So first you were still thinking that something structured needed to occur?
WRM: Yes, there is a great deal of structure to that. I was thinking of this as something you would do to encourage people to get into treatment.

A: Was it modeled after Griffith Edwards' advice condition from the advice versus treatment study?
WRM: Actually, I did not know Griffith's 'plain treatment' paper at the time, but when I read that description later it made a lot of sense [22].

A: Really?
WRM: I was delighted because it was so similar. But the Drinker's Check-up arose because we had carried out a literature review on effective brief interventions, including the Edwards study. We were not the only ones finding that brief treatment made a difference. Reviews I did with Victoria Sanchez [23] and with Tom Bien [24] found that brief interventions were working pretty well, so our control group finding was not anomalous. We wondered, 'If it does not always work, what is true of the studies where the brief intervention did work?'. That is where FRAMES came from.

A: For people who do not know about FRAMES, would you run through the acronym?
WRM: FRAMES is an acronym for six things that often appeared in effective brief interventions: giving people Feedback about their individual status on assessment variables, emphasizing a person's Responsibility for change, clear Advice to change, and a Menu of options for doing so. The 'E' is Empathy, because whenever we asked authors about the counseling style, which often was not described in the articles, it was a supportive, empathic, respectful style; the 'S' is support for Self-efficacy. Those things together in various combinations seemed to be there most of the time in the brief interventions that worked, so my thought was 'Let us be intentional about that and try to build something from the ground up that would be FRAMES from the very beginning'. And that is where the Drinker's Check-up came from, which is a combination of the motivational interviewing style with giving people structured feedback from assessment, both pieces of which seem to have an independent impact. In the first study with the check-up we gave people treatment referral information and expected a higher rate of entering treatment [25]. It did not happen. Almost nobody went to treatment, but the people who had the check-up had the gall to do better on their own. We replicated that in a later study, finding that people responded rather well to a single session of what has now come to be called motivational enhancement [26]. These first studies were with self-referred problem drinkers from the community, which might be considered an easy population, so the next question was what would happen with more severe populations. Here we had a series of three studies in which we assigned randomly people coming into a treatment program to either have a motivational interview or not. Janice Brown did one at a private residential treatment program [27], Tom Bien did his at the Veteran's Administration adult out-patient program [28] and Lauren Aubrey's dissertation was done at CASAA's substance abuse treatment program for adolescents [29]. They were conducted in different years by different investigators, but they all had the same basic design.

A: These were all PhD students of yours?
WRM: Yes. Each study had a similar finding, which was essentially a doubling of the abstinence rate for people assigned randomly to the motivational interviewing session, in comparison to people receiving the same treatment program without an initial motivational interview. On virtually any drinking outcome variable there was a much larger reduction in drinking in the MI group, even though both groups received the same treatment program otherwise. In the Aubrey study, she also examined out-patient treatment retention and again there was a big effect. The control group stayed for eight sessions and the MI group stayed, on average, for 20 sessions.

A: These were the adolescents, right? And they did not do anything with the parents?
WRM: Not much. The main focus was on the kids. So there were three studies with large effect sizes, and these effects were all in addition to treatment as usual. Something that we found later, in Jenny Hettema's meta-analysis of MI studies [30], is that you actually get the most enduring effects of MI when it is added to another active treatment, which is sort of surprising because you have beaten the effect of the active treatment itself. But what I think is happening is that motivational interviewing and the active treatment are both working better because they are synergistic.

A: In some sense, it is opening the client to the other interventions that are available to them.
WRM: Yes. In the Brown study, we did not tell the residential treatment program staff which patients had received the motivational interview, and we had them rate patients at discharge. The patients who had received MI were rated as working harder, being more motivated, coming to group sessions on time and having a better prognosis. There was this kind of halo around these people in the staff's eyes and that predicted outcome, so basically it seemed to be improving their involvement in the program, which was a fairly traditional disease model program.

A: When you think about the mechanisms that underlie this, what do you think this invention is doing?
WRM: So far I see two likely candidates. We have pretty good evidence that the relationship aspect itself is important. Empathy has been a fairly strong predictor of outcome—never mind motivational interviewing; just empathy during behavior therapy in our early study was predicting good outcomes.

A: What do you think the experience of empathy is doing?
WRM: I think Rogers had it right. I think the experience of acceptance is transforming and lets people look at their

life in a context that is safe. The normal experience of ambivalence is to think about a reason why you should change, then to think about a reason why you should not change, and then stop thinking about it. When you are talking with someone to whom you can tell things that are scary and embarrassing and nothing bad happens, you are not judged or criticized, you are not given advice, but they listen to you—it is safe to keep talking and keep exploring and people do. I think that as people are enabled to talk about their present situation without immediately being given advice, without being judged, shamed, scolded and so forth, they literally talk themselves into changing [31]. The critical conditions that Rogers talked about are sometimes enough to do that just by themselves. Steve Rollnick and I have described the relational spirit of motivational interviewing as a collaborative partnership style, one that respects people's autonomy to choose their own life-course, and one that evokes from them their own wisdom rather than trying install something in them [32]. That style itself affects behavior change. Terri Moyers is finding, in her research at CASAA, linkages between MI spirit and outcome, so I think that is a potent piece in itself that is not new, but is fundamentally what Rogers was talking about. Then there is the technical side of motivational interviewing, which people often miss. They understand that MI is about being nice to people, but miss the skillful directive side.

A: Beyond empathy?

WRM: Yes, beyond skillful listening. Even if all you learn is client-centered counseling with accurate empathy, that is pretty good. But, beyond that is this piece that I was first verbalizing in the 1983 paper on causing people to make the arguments for change. There are strategic things that one does in motivational interviewing to encourage that [33]. Some of them are simple, not necessarily easy to learn, but simple—like asking an open question, the answer to which is change talk. There are ways to help people begin talking about change. Then we reflect this material selectively. Good reflections and summaries in MI are more likely to include the client's change talk than other material.

A: Do you think Rogers would have hated some of what you are doing?

WRM: I think Rogers would not have liked this directive component, because there is a direction in which you are trying to steer the person. MI is not a counseling method to use for everybody all the time. It is intended for the particular situation where there is a change goal that the person is ambivalent about, and motivation is a key piece of the puzzle. If the person has already decided to make the change, you do not need to do MI.

A: What would be an example?

WRM: The one I used in the 1983 paper was somebody trying to decide whether to have a child. Do I want to have a family? You have no right steering people to reach a particular decision. At least that is my opinion. You actually have to be careful to keep your balance so you do not steer them inadvertently in one direction. But if you are *trying* to move people in a particular direction of change, you ask certain questions and not others, you reflect certain things and not others. When you put together a summary, you mainly emphasize the client's own change talk. There are many other ways to construct a therapeutic summary, but that is how we do it in MI. That is the directive piece and we have some good evidence, particularly from the work of Paul Amrhein and Terri Moyers, that change talk predicts outcome. Paul, who is a psycholinguist, found a particularly strong relationship between commitment language and outcome [34]. Terri's finding a relationship between change talk in general and outcome. So, essentially the more the person argues for change, the more likely they are to actually change, which is consistent with the cognitive literature on implementation intentions. You literally talk yourself into changing, but if the counselor is making the arguments for change, then the client tends to talk himself out of changing [35,36].

A: Because they have to disagree.

WRM: When you talk to a person who is ambivalent and take up one side of the argument, they naturally respond with the opposite arguments.

A: A traditional view would be that alcoholics would say anything to get the clinician or others off their backs. So, how is change talk different from what people might view as empty promises?

WRM: First, the whole dynamic is different. What you are talking about is not unique to people with alcohol problems. Human beings may say anything to get out of a situation where they are being judged, criticized, put down or threatened. That evokes defensiveness. So, motivational interviewing is a different interaction to begin with, a different context. There are also verbal and nonverbal clues to help you tell the difference between defensive posturing and those who are genuinely talking themselves into change. It is easy enough to refute the cynical assertion that, 'Well, change talk is irrelevant', because empirically it is not. Nevertheless, there are situations where the person is not being honest. Clinically, I can usually tell the difference by just asking for a little more detail. If a person says, 'I'm going to quit drinking, I really am', I want to know, 'How are you going to do that?' and 'Why would you want to do that?'—to have the person unpack it a little. If you get clear answers to those

things and there is a thoughtful structure about why the person would want to do that and how they would go about it, you are moving in the right direction. I think clinicians pick up on those verbal and non-verbal cues without necessarily knowing exactly what the cues are.

A: What are some non-verbal cues?
WRM: Well, consider when you say, 'I promise'. If you extend your hands forward as you say it, that increases the intensity of the commitment. If you shrug your shoulders while you say 'I promise' it detracts significant seriousness from the intentional meaning. Some people are better at detecting such cues, but for the most part I do not experience dissimulation that often.

A: Angry push back?
WRM: Sure, angry push back happens. It is one kind of defensive response. For a few decades the field misattributed these responses to client personality defects, but it is understandable as a normal response to confrontation.

A: There are a number of other people who have been interested in issues of motivation and addiction and have certainly conducted research, but your ideas have seized people's imaginations in a way that is really unusual. What is it in your ideas or in the way you have disseminated them that has made such a difference?
WRM: The response really is amazing, and it has spread into corrections and health care and many other areas. I am not sure I understand it. The verb that I use is that people seem to 'recognize' it. When they hear MI described, it is not as if they are hearing it for the first time. The people who take to it sort of recognize it. They seem to have a sense that, 'I belong with this' in a way. People often tell me, 'You have put into words something that I kind of knew and have tried to do, and you've helped me to do it more systematically'. But why is it that people recognize it, and how did I even learn it in the first place? I was doing it without knowing it consciously, and thanks to my Norwegian colleagues, they literally called it forth from me. Michael Polanyi's writings on 'Tacit Knowing' really resonate for me: that there is a great deal of unspoken knowledge in many artful things. He uses the example of making stringed instruments. There is this tacit knowledge that does not wind up in textbooks and yet is a powerful way of knowing. I think some of that is going on here. We have not done that much to disseminate it. It just seems to flow naturally.

A: What about Steve Rollnick's piece?
WRM: On my second sabbatical in Australia I met Steve, a South African who lives in Wales. 'Miller', he said: 'You're that guy that wrote the article in 1983 on motivational interviewing'. I was surprised that somebody had actually read it. 'I can't keep up with the demand for training; this has become something of preferred practice in addiction treatment in the United Kingdom. I'm going all over the UK teaching motivational interviewing, and I'm not even sure that I'm doing it right! You need to write more about it'. Well, I did not know that this was happening. We wound up writing the book together [37], a book that the publisher says 'has long legs'. People began using it in health care and corrections and psychotherapy, so the second edition needed to be a book about change more generally and not just about addictions. It disseminates with very little in the way of marketing.

A: Everett Rogers was a colleague of yours here at UNM.
WRM: Yes, he was. A remarkable man.

A: He had very clear ideas about the diffusion of innovations. Did his work guide you?
WRM: Not really. I met Ev and read his brilliant book on diffusion after MI was well out of the barn. His theory makes sense to me, but we never went into this planning proactively to disseminate MI. And I do think that MI has many of the characteristics that Ev wrote about as favoring diffusion [38]. It is fairly compatible with other things that practitioners do, such as 12-Step approaches and behavior therapy, so you do not have to be converted to MI and forsake everything you have done before.

A: It also occurs to me that it expresses a view of human beings, a certain philosophical view that is different than either cognitive behavioral or 12-Step models. I am wondering if you have some sense that you are tapping into an optimism and hope about humanity in this approach.
WRM: Well, it is certainly a way in which we want to think about ourselves and each other. It is a self-fulfilling prophecy. If you assume that people are defensive and not likely to change very much in the course in their lives, that becomes true. And if you take a more quixotic, optimistic view of human beings, that also tends to become true. I am not sure that behavior therapy itself has a particular view of human beings, but behaviorism is a philosophical view of human nature, and I have never been a behaviorist. I have been a behavior therapist, but with a humanistic personal philosophy about human nature. As for a 12-Step approach, when I read Bill W [co-founder of Alcoholics Anonymous]. I hear a great deal that is familiar in terms of how you work with other people—a patient, compassionate approach that is not blaming or judging. It is nothing like what the treatment industry created with '12-Step disease model treatment' [39].

THE STUDY OF QUANTUM CHANGE

A: Let us talk about quantum change next.

WRM: Okay. That was another product of a sabbatical. I became interested in transformational change—fairly major shifts that happen over a relatively short period of time. I had seen some of them and certainly read about them, and I have always loved *A Christmas Carol*, the classic fictional representation of this, and *It's a Wonderful Life*, a film where something mysterious happens and the person is transformed by it. I began wondering, 'Is this a real phenomenon?'. So on the sabbatical in Australia I also was meeting with a group of people to explore how we might study transformational change scientifically. We did not get past the descriptive point, and decided that a first study would try to find people who have had an experience like this and let them tell their stories, then see what came of it. We had one small article in the Albuquerque newspaper describing this kind of experience. I had no idea if anybody would call, but the phone rang. Many people called, and 55 people came in and finished a 3-hour interview for no compensation at all. We recorded their stories and Janet C'de Baca and I tried to understand what we were hearing: what seems to lead up to it, what the common elements of the experience itself are, and what the changes are in people [40]. In 35 years of research this was the most fun I ever had with a study, and the most uplifting. I love stories. And these people kind of glow. There is something about them that makes you feel privileged to be in their presence. They are from all walks of life but they have something in common, which is this experience, which has some fairly consistent qualities to it. It felt a privilege to hear their stories.

A: What were some of qualities that you identified?

WRM: Well, leading up to it, perhaps half the people were in some kind of crisis. They hit the bottom, which was certainly Bill W.'s story. In that moment is when it occurred. A third of the time they had been praying at the moment that it happened, often the first in a very long time, which also maps onto Bill W.'s experience. But for another set of people, 30 or 40% of them, there was nothing particularly out of the ordinary. Just the ordinariness of life, and uninvited, unexpected, *bam*! It just happens to people and that quality was another common one—the surprise of it, the unexpectedness [41]. It is very like Maslow's description of peak experiences, profoundly benevolent experiences, with a transcendent quality to them. There is also a noetic quality in the sense of things being revealed to them. The most common example of this is the sense of unity with all people or all creation, not being a separate individual but part of a much larger reality. About half the people experienced being in the presence of some Other, for whom some had a name if they had a religious background, some had no name for it, but what they described was always the same, which is intriguing: a profoundly, accepting, loving presence. For just a brief moment they experienced that radical sense of being accepted as they are, in a way that was transforming, and it left them with a fairly permanent sense of safety—not that they would never have anything bad happen to them, but in some ultimate sense being very safe and centered. Their values also shifted radically. We did a values card sort, borrowing from the research of Milton Rokeach. The usual response was that values were just turned upside-down, so that the things that had been highest priority previously went to the bottom of the list, and things that had been nowhere on the radar screen previously, such as spirituality and forgiveness and relationship, came to the top of the list. Men and women both moved from sexual stereotypes to a calm and universalistic kind of perspective.

A: That is incredibly interesting.

WRM: It is fascinating. So, I took the stories off to the Oregon Coast during my third sabbatical, to spend a week with them. I tried to integrate them as best I could and discover what was happening before, during and after. It also struck me that the things that had been revealed to them were similar, despite how different these people were. I put on a little 'what if' hat and thought, 'Suppose that these are messages that are trying to get through to humankind, and these people happen to be the recipients at this particular moment. What are those messages?'. There were consistent revelations that came to these folks that have to do especially with compassion. It could be the text of a talk by the Dalai Lama. And the knowledge came in a way that changed them. Something that surprised me was that there was no evangelism, no proselytizing that came of this. They had no need to convince other people of truth of what they saw. They knew.

A: It was very personal.

WRM: It was very personal and they knew it all the way to the depth of their soul. Another surprising thing about quantum change was they went through a one-way door and knew there was no going back. So, now I know that these remarkable changes happen, and I think they are not even unusual experiences. I think they are fairly common.

A: This obviously seems like an important topic to you. Of all the things that you have done professionally, why does this one stand out?

WRM: In some sense, that study still feels to me like the most important piece of work in my 35 years. If you go to Alcoholics Anonymous you hear these stories. We do not understand how it works but it really happens, and

people to whom it happens definitely know it and can tell you about it. So that struck me first of all: if this is real, if people can literally, in the course of minutes or hours, be transformed in that way, go through a one-way door and be a different person, should I not be interested in that as a psychologist? I sense in some way that it is related to MI, that what is happening in a motivational interview is like the same thing on a small scale, around a particular behavior. The closest model that I can find that encompasses both of those is Rokeach's model of personality [42]. It is a hierarchical model and it nicely describes the things that I see happening with the discrete behavior in motivational interviewing, and on a larger scale in quantum change. Most people, however, have no idea that I even conducted this study.

PIE AS FAR AS YOU CAN SEE

A: One of the other things that is characteristic of your career has been your collaborations. I would be interested in hearing how you think about collaboration.
WRM: Well, collaboration does not seem extraordinary to me, it just seems that that, of course, is what you would do. It is not even something that I was seeking out intentionally. It is just that I enjoy talking to people, and ideas arise in conversation and lead naturally to, 'Why don't we do something with this together?' . . . so that is just fun. And that is coming from a profound introvert. It is the thing I miss most having retired, those collaborations with students and colleagues.

A: But in traditional academia people worry about getting credit for their ideas, credit for their work, being first author, being the Principal Investigator on a grant, being 'top dog' or their own dog, but you say, 'It seems like a natural thing to do'. How did you not worry about all those things about credit?
WRM: It is a set of assumptions. I have had more a sense of plenty than of scarcity. That mentality of 'I need credit for this and I need to be first' involves believing that there are only scarce resources around and I need to seize as much as I can for myself. That is a self-fulfilling prophecy of its own. My experience has been that when I collaborate, find ideas together and do things together, in Scott Tonigan's words, 'There's pie as far as you can see—so much pie, that you can't possibly eat it all'. You can choose to believe that people are selfish and will be self-serving, or you can assume the opposite and you will have mostly the experience that you assume, with some exceptions along the line. So, why not choose the reality that you want? It is how I came back to faith, really. I did not come back to an adult faith by having a brilliant light revelation; I came back to faith because it made sense to me to believe. It feels right to me, and the way I look at myself and other people and the world has more integrity and meaning and vibrancy to it through the eyes of faith. I choose to have faith. You do not have any scientific proof of this. It is a choice, and one that, to me, has been a very rich center of my life.

A: Talk about your students.
WRM: Well, the very best thing about my career has been the students I have worked with.

A: How have you worked with them?
WRM: I hope I have done it evocatively, by calling out their own strengths. The one thing that I have insisted upon in a dissertation was that the student be passionate about it, had to have a question that they just had to know the answer to. Not a performance hurdle to gain your degree and move on to real life, whatever that is. No! Conduct a piece of science that you just have to know the answer to. Early on in my career I was less experienced and did not know how to do that, but at my best anyhow, I think that is what I was doing. I did not ask students to conduct my research. I hired people to do my research, but I did not expect students to be slave labor and do the next study in the series I wanted done. I wanted them to do what they wanted to do, what they had to know the answer to.

A: Is that being a scientist?
WRM: That is being a good scientist, I hope. It is an incredibly thin reinforcement schedule, and certainly in the beginning it is very thin. I think it takes that kind of passion and curiosity to sustain you through the early years, and I think that if you do not impart that to clinical psychology students there are so many other rewarding things they can do that they are not too likely to want to do science. I certainly did not start out to be a scientist. We caught it in the course of our training at Oregon. We came to understand that this is exciting and interesting and you can find partial answers at least to things you care about, and have fun doing it and get paid for it, for heaven sake! I cannot imagine a better career than I have had. I just cannot.

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