



MIND & LIFE

Mind & Life Podcast Transcript

Simon Goldberg – The Shape of Healing

Original Air Date: April 4, 2024

Retrieved from: <https://podcast.mindandlife.org/simon-goldberg/>

Opening Quote – Simon Goldberg (00:04): *If I can step back from my need for there to be one modality that's better than everything else, it's really beautiful that as human beings, we have, I think this inherent capacity to heal. And in particular, to heal through relationships and through meaning-making, having some explanation for what's happening and some way to work with it. And then, that we have a fundamental need to feel safe, physically safe, certainly, but also emotionally and interpersonally safe. So it's really not a surprise when we think about fundamental qualities of human beings that we can heal in these different ways—and thank goodness we can because we need this to show up across society and to show up across time.*

Intro – Wendy Hasenkamp (00:45): Welcome to Mind & Life. I'm Wendy Hasenkamp. Today I'm speaking with psychologist and contemplative researcher, Simon Goldberg. Simon studies mindfulness-based interventions from a big-picture perspective, looking not just at individual studies, but across the entire field of contemplative science and the multitude of studies that have been done to determine what we can really say about how and even if meditation works.

(01:13) As you can imagine, that's quite a process, and we get into some of the nitty-gritty of studying meditation scientifically in today's show, which I think will be really useful for anyone who has an interest in meditation as an evidence-based intervention. (Or if you're just a science nerd, like me.) Simon is also trained in counseling psychology, which allows him to weave in perspectives from research on psychotherapy techniques. This takes us into a fascinating discussion of the common factors underlying many different health interventions. And I really love the way this can open up our understanding of at least part of how meditation and mindfulness interventions might be helpful for people.

(01:54) There's lots more in here too, and as always, check the show notes for a deeper dive into Simon's work. I think his perspective is so important in the midst of claims that meditation has been scientifically validated. For example, what does that mean exactly? It behooves us all to think more deeply about how science determines whether something is effective and which aspects of the whole contemplative landscape might be beneficial. As I think you'll be able to tell, I really enjoyed this conversation and I hope you do too, and that it gives you a better understanding of what Simon calls the shape of healing. I'm so happy to share with you Simon Goldberg.

Wendy Hasenkamp (02:38): It is my great pleasure to be joined today by Simon Goldberg. Simon, it's great to see you. Welcome to the show.

Simon Goldberg (02:44): Thank you for having me, Wendy.

Wendy Hasenkamp (02:46): I am very curious about your path into all of the work that you do. How did you get interested in clinical psychology, mental health, and when meditation wove into that?

Simon Goldberg (02:58): Yeah, for sure. So I think like many of us, it sort of started with my own suffering, and own getting curious about the sources of suffering and trying to find ways to work with my own mind. And for me, that happened when I was in college. I was in music school, actually, I was training to be a jazz trumpet player. And I kind of abruptly fell out of love with music, and it was a really painful, confusing time. I was 20 years old, and my world was really turned upside down. And I happened to encounter a friend who was a meditator who told me about mindfulness and introduced me to some basic practices. And I just found it to be incredibly helpful for making sense of my experience and giving me some tools to work with my mind. Really, since the very first touching into it, I was really taken with the kind of deeply countercultural orientation of being with experience rather than having to do something about it. And the idea that happiness could be found in our own minds and in our orientation towards experience, rather than something out in the world, the external world. I continue to find that super inspiring, and that's really been a thread that's continued now for over 20 years, exploring practice.

(04:16) And then, my last semester of college, I had a chance to study in India and the then Antioch program in Bodh Gaya, the Buddhist studies program. And then went and lived at a Zen center for a couple years. It was really when I was there that I decided I wanted to go back to graduate school and study meditation scientifically, and also get trained as a psychotherapist. So that was when I ended up in Madison, Wisconsin.

Wendy Hasenkamp (04:38): Okay, interesting. So your goal even in the beginning of graduate school was already around meditation, and then also weaving in the psychology.

Simon Goldberg (04:49): Yeah. And I mean, I feel so fortunate that the field was available, and now it's even more that way, that there were people studying this stuff seriously, and also people who had really deep connections with these practices and a personal commitment to doing the best by science and also having some richness in our understanding of the contemplative traditions.

Wendy Hasenkamp (05:11): Well, I'm excited to dig into your work, and you've been in this field for a long time now, and I really love how you have taken a bird's eye view, or really stepping back from the field and trying to look at the field itself, and how do we know what we know, and those kinds of questions. I really appreciate that. I think part of it is a really basic question that often gets missed about... you know, we're building these interventions, ostensibly giving some skills to people, which happens, of course, in all sorts of mental health approaches. But we can talk specifically around mindfulness for now. How do we know what it's doing? How do we know that it's working? It's a really basic question, but it's a really central question, especially when it comes to science and research. So I feel like you've spent a whole lot of time thinking about that, and I'd love to maybe for the listeners get into a little bit of the challenges that come with that, and how that plays out in the way that we set up our studies and things like that. So, I'd love any reflections from your expertise there.

Simon Goldberg (06:20): Yeah. Well I could geek out about research methods for the rest of our time together. *[laughter]* I'll spare you and any listeners that. But of course, the gold standard method for establishing efficacy is the randomized controlled trial, and that comes out of the medical tradition and

really more out of pharmacology as far as I understand. And we've adopted it to use for psychosocial interventions and it works pretty good. It has some problems...

Wendy Hasenkamp (06:45): Is it maybe worth explaining what that is?

Simon Goldberg (06:47): Yes. Yeah, yeah.

Wendy Hasenkamp (06:49): You were probably about to do that. Sorry.

Simon Goldberg (06:50): I wasn't, so I appreciate the nudge. The crucial part of the randomized controlled trial is that participants, when they enter into your study, they sign up to do your study, and they have an equal probability of being in any of the groups. So let's say we're wanting to see if mindfulness-based stress reduction is superior to a health enhancement program that includes psychoeducational content around health and well-being but doesn't include any meditation practices.

Wendy Hasenkamp (07:21): Right, the question underneath that, that you're trying to answer is, is the meditation actually an important part of this intervention, right? Can we piece it apart and say what are the parts of this intervention that actually matter?

Simon Goldberg (07:35): Yep, exactly. And we're fortunate because in the past 30 years, there have been literally hundreds of randomized trials that have tested many different mindfulness-based interventions, but also loving-kindness style, mantra-based meditation interventions, in the U.S. and really all over the world we've seen these studies showing up. So there's this massive literature that's available that can address the question, does meditation work? This basic question. And it turns out answering that from a giant literature can be really challenging.

Wendy Hasenkamp (08:06): Yes, it is. I feel like I might've derailed you before when you were talking about randomized control trials. Were you going to go down another path?

Simon Goldberg (08:13): Well I wanted to talk about the importance of the control group, because I think that this is a little bit of a subtle piece. But I think actually having gone through a really important set of randomized controlled trials during the COVID pandemic, I think it's a topic that we all have a clearer understanding of, maybe. Right? Because they're wanting to develop this vaccine very quickly and they had to run trials, in particular where they're comparing the effects of people getting an active COVID vaccine with a placebo. And then having that data is a crucial part of deciding whether the vaccines work. We all saw that happening in real time.

(08:49) One of the challenges with psychosocial interventions is it's not clear what the placebo equivalent is, because part of what makes these treatments work is all of these... squishy is the word that's coming to mind, but all these juicy, human qualities of connecting with a teacher or an instructor, in the mindfulness-based stress reduction delivered in a group setting, that group context, some sense of expectancy around 'this is going to be helpful for me,' some explanation for why these particular practices relate to my particular difficulties. And so it's hard to know how much of that to try to remove, and it's actually pretty hard to remove those things with any precision.

Wendy Hasenkamp (09:31): Yes, exactly. Thank you. I think that's a really good explanation of some of the challenges that come with trying to evaluate these interventions and why they might be effective in different ways. So I remember in 2018 you published a meta-analysis looking across the field, particularly around psychiatric outcomes that had been measured from, as you said, this massive

literature at that point. Which at the time for me, following the field, I remember in the very early days, I think the first attempted meta-analysis was maybe 2007, and their conclusion was basically, "We don't really know anything." And then I think another one came out in 2014, and it was maybe a little bit more conclusive, but they were still like, "Basically, it's still really tough to say anything." And so, yours was the first meta-analysis that I remember being like, "Okay! Now we actually have a little bit of a sense of, from a vast amount of literature, what's going on." So, can you maybe share your experience and process of how you went about that, and what you found?

Simon Goldberg (10:35): Yeah. Can I give the metaphor that I like to use to describe meta-analysis?

Wendy Hasenkamp (10:40): Please.

Simon Goldberg (10:41): The thing that I think it's closest to are Yelp reviews. Because you go on Yelp, and you want to know which pizza place in your town is going to serve the best pizza. And what you get is an aggregate effect size, meaning how many stars do people on average give? And it's based on many, many (hopefully) ratings from lots and lots of customers. And then we hope that it will generalize to our experience. And I think it's the same way with meta-analysis, where they've run hopefully lots and lots of studies, and then you get this aggregate effect size, which you hope will generalize to how your study might turn out, or how if you participated in that intervention, what your outcome would be.

(11:22) For us, I think, maybe similar to you, Wendy, watching the field, we're seeing trial after trial come out and actually many meta-analyses starting to appear as well. And we got really curious about in particular, the effect of the control group. That was a question, because oftentimes when the literature is small, people conducting these meta-analyses will have to combine across a variety of different control groups. And if we think that the control groups themselves differ in their effects, that can lead to of scientific ambiguity, where you don't really know whether mindfulness is better than a control group because it might depend on what the control group is. And that's exactly what we found in our study. And we graded the control group, I believe it was a five level gradation. From 1) a waitlist control to 2) minimal control, where people got very small amount of support, but it really wasn't intended to be an equivalent amount, to 3) a control group that was equivalent in structure, but didn't have any content that was intended to be therapeutic or intended to be helpful, to 4) a control group where the content was intended to be helpful, and it really was starting to get really closely matched. And then the most rigorous comparison was 5) comparisons with treatments that are on the evidence-based treatment list. In our case, we use the American Psychological Association Division 12 Clinical Psychology, and then also anything that was FDA approved, like a medication.

(12:49) For me, the most important result from that meta-analysis was that when we compared these mindfulness interventions with evidence-based treatments—with our gold standard frontline treatments—they were absolutely indistinguishable. There was no difference when they were compared head to head. Which to me really changes the narrative around these practices as alternative therapies, because when we give them a shot, we do this fair comparison, we see that actually they're quite effective, and they're similar to the best things that we have available.

Wendy Hasenkamp (13:20): Right. And can you share what kinds of outcomes you were looking at, that you saw that same kind of efficacy?

Simon Goldberg (13:26): So that overall effect was combining across basically anything that's in the DSM, but a lot of the studies were looking at things like depression, anxiety, there are a number of substance use studies that were in there. We also looked at pain outcomes in that meta-analysis. So it

was a wide variety. And then it differentiated a little bit when you start to drill down. And that's one of the things that can be maybe a little frustrating about doing meta-analysis. You're not running the trials yourself necessarily, so you're at the whim of the literature. And once you start to drill down, you might see, oh, there's really not that many studies with this particular comparison. So if we put the filters on where it's comparisons with evidence-based treatments focused on anxiety, for example, there might not be that many studies. That comparison actually was one of the ones that I think went a little bit of a different direction, where we saw that some of the frontline... Cognitive behavioral therapy, for example, for anxiety we know is quite effective. That was a case where the effect size actually went in the direction of the evidence-based treatments.

Wendy Hasenkamp (14:29): Oh, interesting.

Simon Goldberg (14:30): That was one where we saw it sort of go the other direction. Although, we also have a recent paper in JAMA Psychiatry showing that mindfulness-based stress reduction is equivalent to antidepressants for anxiety. So I think if we included that in an updated meta-analysis, we would maybe see that same 'no difference' that we saw in 2018.

Wendy Hasenkamp (14:50): Right. Of course, the field is always evolving, so every so many years, someone as generous as you needs to take the time to do these meta-analyses. But they really are—we're getting a little bit in the weeds, I guess, methodologically, but—they really are the best way that we have to aggregate (like you said with the Yelp review, I think that is a great metaphor), to look across so many different studies and try to get a sense stepping back, what do we know about this?

Simon Goldberg (15:20): Yeah, one piece, just to add for full disclosure, there has been some criticism of meta-analysis in the last few years in particular. The issue that they raise is that, there's concerns that the studies that are published in the literature don't represent all of the studies that were conducted. And they call it the 'file drawer' problem. It's this idea that people ran a study and then (this is in the olden days where) you would put it in a file drawer in your desk and never publish it. And it can be a big problem because you might end up with an overly sunny depiction of the literature. So actually, there's been a movement arguing that meta-analyses are great, but have that major limitation, and it's more trustworthy to run a really large study, like the MYRIAD trial, for example, that was done in the UK testing mindfulness in schools, and that we should trust a study with 8,000 students more than we should trust a literature that might be biased in a systematic way.

Wendy Hasenkamp (16:17): Right. And just to unpack that file drawer effect a little more, in case listeners aren't familiar, it's fairly common in science to run a study and something either goes wrong or you can't necessarily determine the outcomes, or you find that there's no effect that you were looking for, and then you just don't publish that, for a lot of reasons that are biased in the literature, that journals actually prefer to publish things that are exciting and actually 'find things.' That's a big problem I think, in all of science. So, yeah thanks for raising that.

Simon Goldberg (16:50): And that one's been changing. It's really exciting. There's a whole movement towards open science and even working with journals ahead of running a study and saying, "We're going to run this study, will you publish it no matter what we find?"

Wendy Hasenkamp (17:03): Yeah, because it's just as important to know if something... You do a really rigorous study and you find it didn't work, that's very important. Just as important as if you find it did work.

Simon Goldberg (17:13): Definitely. So there's been some really cool corrections that are starting to appear, but it takes time to accumulate.

[\(17:19\)](#) – *musical interlude* –

Wendy Hasenkamp (17:40): That brings me to the next wave of something you've been focusing on more recently, which is from your experience with clinical psychology. Because these questions around how interventions work and how, in that case different psychotherapies work, has been around for a very, very long time in that field. So can you take us through a little bit of how you're weaving those domains together?

Simon Goldberg (18:03): Yeah, I'm happy to. This has been a topic that was close to my heart during training. I had a number of amazing mentors during graduate school. One of them was Richie Davidson and Lisa Flook doing research on meditation-based interventions. But in the counseling psychology world was researcher Bruce Wampold, who's done a lot of work around understanding differences between various forms of psychotherapy, like you were saying, and falling into this tradition of emphasizing factors that are common across many different forms of therapeutic intervention. And I alluded to this before—the relationship between the therapist and client is a key one. Having a healing setting where the healing takes place; having some rationale that explains the sufferer's difficulty, if you will; and then having some ritual that they engage in during the healing interaction and maybe outside of the healing setting in the form of, say, psychotherapy homework, that is tied to the difficulty.

[\(19:05\)](#) If you think about it, that same model applies to all forms of psychotherapy arguably, just as well as it applies to going to the dentist, or going to the shaman, or going to your doctor. And so you start to see, "Oh, it has this shape of healing that's really not specific to one particular treatment." And we like to think of treatments in boxes because we have this medical metaphor, we want to think of them like a pill. CBT is this pill, and you take it (CBT being cognitive behavioral therapy), and you get some effect. And the data, remarkably, really suggests that on the whole, just like we saw in our meta-analysis, when we compare treatments that are intended to be therapeutic, they tend to work about equally well.

[\(19:47\)](#) For me, this was a really confusing thing to grapple with in graduate school because here I am, I've fallen in love with meditation. I went back to school to study meditation. It's been really helpful in my life, I think. And here's this model saying that really everything works about equally well, and it's more perhaps related to these common factors, to these expectancy effects, to this feeling of connection with someone who's helping guide you through the experience. That the specifics of the modality are maybe less important. So for me, there's always been some internal tension around those two perspectives.

Wendy Hasenkamp (20:21): I find this fascinating and I really love that you're bringing this forward. Because just like you say, in a way, it's like anything helps—just do something as long as it follows this shape. Which really kind of hits hard when you're attached to one thing and you're really invested in one thing that you think works. So that makes me think about what does it say about the structure of our minds or our nervous systems, that there is this more generalized framework that is helpful to us? You mentioned the therapeutic alliance, or the relationship between the person who's helping or healing, and the person who needs help. I think that's huge. That speaks to a really deep need we have for connection in a healing way. So that's fascinating to me. Also, you mentioned having a framework which is a little bit more conceptual. So there's a relational side and a conceptual side. I wonder too, I've been thinking a lot recently about safety and just a context of safety, and the healing effects of that. I don't know if that's something you've thought about across modalities too.

Simon Goldberg (21:37): Yeah. I think all of that's right. For me it's really... if I can sort of step back from my need for there to be one thing that's true with a capital T, or one modality that's better than everything else, it's really beautiful that as human beings, we have, I think, this inherent capacity to heal. And in particular, to heal through relationships, just like you said, and through meaning making, having some explanation for what's happening and some way to work with it. And then just like you said, that we have a fundamental need to feel safe, physically safe, certainly, but also emotionally and interpersonally safe. So, it's really not a surprise when we think about fundamental qualities of human beings, that we can heal in these different ways. And thank goodness we can because we need this to show up across society, across time. We have that inherent capacity, I think, built in.

Wendy Hasenkamp (22:28): I love that reframe too. I think there can be a sense sometimes when you step back and look at it in that way, like we were saying of, "Oh, well, I thought this thing was really helpful for me. Maybe it's not this thing." So, it can diminish or somehow in a way you're like, "Oh, well, maybe that wasn't true." But I think now the way you just said it is really beautiful—that many, many things are true. Many, many things are equally helpful. It's not that they're not helping, it's that they're all tapping into this more basic framework.

Simon Goldberg (23:04): Yeah. And I'm not a contemplative scholar, like a traditional Buddhist scholar, but my sense is that even in the contemplative traditions, you have aspects like faith, where the belief in the thing has its own power and actually can be transformative. And I think there's some corollary of that where that alignment with the explanation for one's difficulty and the alignment with the practices or techniques that are being offered to address that, that has its own power. And it really can be quite powerful. And that's not something we have to be scared of, or ashamed about, or it doesn't mean that the thing that we're studying isn't real. It is real. It has a real effect. It might also work with these other dimensions. That might a part of it, but that's how it is with all of these interventions.

Wendy Hasenkamp (23:51): Yeah, I love that. Another thing I was thinking regarding, when you think about psychotherapy and meditation-based interventions next to each other, and you think about, as you were just saying, the many commonalities between them, I was also thinking about some of the differences between them. Something that comes up on the show a lot is just the concept of self, and how different interventions and practices approach that. So, I'm just curious, since you're so well-versed in both the psychotherapeutic world and the meditation-based world, differences in the way that they think about the self or try to heal the self, or remove it or diminish it. Just curious your reflections on that.

Simon Goldberg (24:36): It seems to me that even in the mindfulness-based interventions, they sort of don't, as far as I can tell, really get into the deep end of the self or no-self pool, if you will.

Wendy Hasenkamp (24:49): That's true. The more secular-based [programs] stay away from that, yeah.

Simon Goldberg (24:54): Which I think was an interesting choice. I can understand why that's an iconoclastic suggestion to make in the context of a therapy. People aren't coming to have their whole worldview turned upside down, they're coming for stress reduction or depression relapse prevention or whatever it is. So in that way, I think there's a lot of similarity. And the lines, I think, get even blurrier as time goes on, because the third wave behavioral interventions, which include mindfulness-based stress reduction, and dialectical behavior therapy, and acceptance and commitment therapy, all these acceptance-oriented approaches are showing up in mainstream cognitive behavioral therapy. It's really

become very mainstream. And just the notion of acceptance—that we can be okay with what's happening right now, and seeing the therapeutic power of just that shift in stance towards experience.

(25:46) I think that that's one of the fundamental pieces. It might lead towards no-self, in a way, if we really start to let go and not just of, "Okay, I'm having this physical experience or this emotional or cognitive experience," but really shifting into "Who's having this experience?" or "What is experience?" And I do think that mindfulness-based cognitive therapy, seeing thoughts as only thoughts, sort of points in that direction. I don't know if they tend to take people all the way there, but you can see it pointing that way a little bit.

Wendy Hasenkamp (26:15): Yes. That's been my sense when I talk to folks who've developed these interventions. My sense is that there's the pointing... It's not an explicitly laid out goal, but many times people tend to shift in that direction, I guess. Whereas would you say in psychotherapy that happens as well? I feel like sometimes psychotherapy is a little more based on the reified self, and just stays a little bit more in that realm.

Simon Goldberg (26:44): Yeah, I think that is true. There are depth therapeutic approaches that might sort of point some of these directions. But I think the mindfulness interventions have had the good fortune of having this framework that has a lot of exploration of the self behind it. That's, like you said, such a fundamental part of Buddhism certainly, and other traditions as well. My sense is that that's not necessarily the backdrop of psychodynamic or psychoanalytic traditions or even the existential or humanistic traditions necessarily.

Wendy Hasenkamp (27:16): Yeah, that's interesting. And you mentioned too, the critical role of acceptance, and the stance of acceptance of experience. That's just making me think of David Creswell's work (he's been on the podcast too) about what's called a dismantling trial... back to our discussion of study design, when you try to take out a piece of it.

Simon Goldberg (27:38): And he has his model, that Monitoring and Acceptance model. Based on their work, it seems that acceptance is a crucial ingredient, that the monitoring alone isn't as effective as their combination.

Wendy Hasenkamp (27:49): That's right. So, he separated the idea of acceptance, or the stance of acceptance, from this attention-based monitoring practice. So that's interesting too, when you're thinking about the common factors.

Simon Goldberg (28:02): Yeah. And that's such a beautiful, the work that Dave and Emily Lindsay have done, and their group has done around that is some of, I think, the most beautiful mechanistic work, really trying to disentangle what are the key aspects of that, and what are the key aspects of these practices.

Wendy Hasenkamp (28:17): Another thing that's coming up as we're talking about this. Stepping back, there's a real philosophical influence, I feel, on the way we approach evaluating these practices. Western science and our industrialized society is so reductionistic, and like, "Let's take apart all of the pieces, and which is the piece that works," which is very much the medical model and pharmaceutical model, versus a more holistic view of a whole experience of an interaction or a training. So, I don't know if you have just reflections on those stances.

Simon Goldberg (28:54): Yeah. For me, a lot of it comes down to measurement. I mean, the measures that we use in a lot of these studies are pretty crude, and they're often reliant on someone filling out a questionnaire, or maybe having a conversation with a clinician who's doing some assessment. But it's hard to talk about. It's hard to know our own experience. It's hard to share our own experience with others. I think it's baked in that we assume that we're good reporters on our own experience and that we can capture what's happening. I don't know that that's necessarily true, and I don't know that that's true in particular for the kinds of transformations that people can have over the course of contemplative training. I know Richie Davidson and others have talked about the value of having second-person report, where you ask someone's partner or roommate or kids how they're doing, because sometimes the people in our orbit might have a better sense of what's happening to us, for better or worse, in the course of training.

Wendy Hasenkamp (29:48): Absolutely, yeah. There's a lot of challenges with our own abilities to accurately see or understand or report on what's going on with us, which is a huge challenge in these types of psychosocial interventions.

Simon Goldberg (30:02): Totally. And we're also studying kind of miniature versions of these practices, right?

Wendy Hasenkamp (30:06): Right.

Simon Goldberg (30:08): An eight-week MBSR course, or a mindfulness-based cognitive therapy course is pretty long relative to many of the interventions out there. Someone might use an app and might use it five times or something like that, and we consider that a mindfulness intervention. But these come out of traditions that were monastic traditions where people were committing their whole lives to exploring these practices. And many people, I think, have written really beautifully about that—not conflating these as all being one thing and really recognizing that the dosage, if you will, really can make a difference in terms of the effects that can happen.

(30:42) One of the things, and in some of the writing and thinking that we've done around common factors, one of the pieces that I think for me is an important distinction is the... what's the 25 cent word, soteriological, the orientation towards liberation that's in the background of the mindfulness interventions that, again, as far as I know, doesn't have the same depth of perspective in the psychotherapeutic tradition. So I don't think cognitive behavioral therapy would ever imagine itself to lead to the complete cessation of suffering.

(31:20) But you have these contemplative traditions that say, that's where this path leads, and that's the human potential that these practices are related to. So that to me is a really fundamental difference. You might see, okay, if we compare these side by side for eight weeks, they perform about equally well. But that's not a fair comparison if we're trying to evaluate the contemplative tradition itself, and the sort of traditional forms of the practices that we're studying in this, again, kind of miniature version.

Wendy Hasenkamp (31:48): Right. That's a really good point. Also, it relates to the outcomes that we're looking at. In clinical and mental health spheres, we're looking at depression, anxiety, things like that, which are arguably not really the original intent of these practices in the traditional space. As you say, they're more oriented towards liberation, and major change in your conscious experience day by day. Oh, I love this.

Simon Goldberg (32:14): It's fun. Sometimes I feel like this is... like I'm not allowed to talk about common factors in the meditation research spaces, so it's fun to get to explore this together. It's funny, because in the psychotherapy spaces, I feel like everyone already has concluded that everything works about equally well. So no one gets particularly excited about whatever your treatment is, because they're all sort of effective.

Wendy Hasenkamp (32:39): No, I love this perspective. I think it's really important to embrace. And like we were just saying, of course there are differences within the traditional contemplative path, but the way that a lot of the practices have become applied in our society today—in the shorter and secularized forms—are kind of for similar goals that psychotherapy is used for. So, it makes sense that we'd be evaluating them similarly and maybe looking at the mechanisms similarly.

Simon Goldberg (33:07): Yeah. I think another important piece... So even if everything works about equally well, it doesn't mean that it works about equally well for all individuals. And there's this whole precision medicine movement, or personalized medicine movement, that says that we shouldn't be giving the same treatment to everybody, and there might be individual characteristics that predispose someone to benefit more, say from cognitive behavioral therapy versus a mindfulness intervention. You need really large data sets, typically, to study those sorts of things. We haven't historically had the data that we would need. We're starting to get in that direction, but that's a whole possibility. And I don't know that we know, quite frankly, for psychotherapy in general or for the more contemplative based interventions, who are the folks who might respond better?

Wendy Hasenkamp (33:57): It's a perennial question in medicine too, in physical medicine that's a major goal.

Simon Goldberg (34:04): As far as I understand it, cancer treatments have gotten really good, because they can look at the DNA of the cancer itself and target treatments to specific... But we don't have measures like that, and we don't have interventions like that. So, we're working in a much... It's so much more crude.

Wendy Hasenkamp (34:18): Yeah, it's a much more nebulous space. Really appreciating your work and efforts in this whole space. It is so hard to pin down from a scientific perspective. So your work, I think, is really advancing our ability to understand things from a 30,000-foot perspective.

Simon Goldberg (34:39): Well that's very kind of you to say. And I'm just so grateful that we have such a rich community, and Mind & Life has been such a huge part of that, I know, for so many of us. So, really grateful for you and all your work.

(34:48) – musical interlude –

Wendy Hasenkamp (35:05): I know you've been recently studying app-based work, so we were just talking about these shorter forms and also more accessible forms of these interventions. Do you want to share a bit about the work you've been doing on apps?

Simon Goldberg (35:20): I'd love to. We've had the good fortune of having an in-house app to study. There's an app called the Healthy Minds Program that was created by our partner nonprofit, Healthy Minds Innovations. We've been able to run a number of different randomized trials testing the app in the last few years. And as a data nerd, it's been really exciting because we can run, in the span of four months, for example, during the start of COVID, a study with over 600 folks from, in that case the

Wisconsin public school system. So, it's really this amazing opportunity to run these large studies and start to get a sense of how these practices work when they're out in the world. That was the second trial actually, that we ran on the app was during the early days of the COVID pandemic. And then we've since run a replication. Matt Hirschberg is the scientist who's been leading that work.

[\(36:13\)](#) It's been really cool to just put this stuff out in the world, see how people are engaging with it. One of the amazing things about doing app work is that you can collect a lot of data, not just on a large number of people, but you also know when people are using the app, and how they're using the app. And you can have questions in the app itself, for example, that assess aspects of their meditative experience. So from a scientific perspective, it's really incredible in those ways.

[\(36:39\)](#) Some of the challenges are that, because I think it's sort of a lower bar to get into the study, and there's maybe less of a connection with the study team, it's harder to keep people in the studies. So, the attrition rates in the app trials tend to be much higher. And then the dosage, if you will, is also typically fairly low. So, people might only use the app say five minutes a day, which is different than in a mindfulness-based stress reduction course where they're supposed to be practicing 30 to 45 minutes a day. So it's a very different intervention in those ways. And then some people won't download the app at all, so they might get assigned to the group... I know many of us have a bunch of apps on our phones that we maybe opened once, or never opened at all. That's the same with the meditation trials too.

Wendy Hasenkamp [\(37:27\)](#): Right. Which I guess is balanced out by being able to get larger numbers of people in the first place.

Simon Goldberg [\(37:31\)](#): Yeah, that's the hope. Yeah, exactly. It's been really fun to run. We're doing a big national depression trial, and we have folks from all 50 states. And the hope is that these kinds of data sets will help us answer some of the personalized medicine questions too, in terms of what works better for whom, and we're not just restricted to people who we can recruit in Madison, Wisconsin.

Wendy Hasenkamp [\(37:54\)](#): Are there different kinds of interventions within the app that people can experiment with?

Simon Goldberg [\(37:59\)](#): Yeah, so the Healthy Minds Program app is based on the Awareness, Connection, Insight, and Purpose model of well-being that Cortland Dahl and Christy Wilson-Mendenhall and Richie Davidson published a few years ago. So the Awareness section is more of your traditional mindfulness practices, but then you have compassion and loving kindness in the Connection, and then self-inquiry practices and the Insight module, and then practices reflecting on purpose and meaning in the Purpose module.

Wendy Hasenkamp [\(38:26\)](#): Great. So, you could compare between-

Simon Goldberg [\(38:28\)](#): In that trial, we're not randomizing people to different versions. We are planning a study that'll be starting this spring where we are going to randomize what they get first, so we'll have some sense of, do some people... Again, it's these questions I think that many of us have had for years and they're hard to answer using our traditional interventions. But for example, do some people respond better to getting loving kindness first, or is mindfulness better to start with? And what are some of the characteristics that might predispose someone to respond better to one or the other?

Wendy Hasenkamp [\(38:57\)](#): Right. Because surely that will be an individual effect, depending on the person. You were bringing up that model. Maybe we could just go through it really quickly because I was

thinking about your common factors, and I was thinking if those four factors are also maybe common factors?

Simon Goldberg (39:16): Yeah, that's a good question. I hadn't thought about that. I love that.

Wendy Hasenkamp (39:21): So, it was awareness, connection, insight, and purpose.

Simon Goldberg (39:25): Yeah.

Wendy Hasenkamp (39:27): I mean, those sound like pretty common factors for other things too.

Simon Goldberg (39:31): Yeah. I mean, Cort and others would argue they're constituent parts of well-being. So, it would make sense that we would want interventions that improve those areas if we agree that they're important aspects of well-being.

Wendy Hasenkamp (39:44): Right. Yeah, that's great. Any results yet to share from the app? Like specific findings, specific outcomes?

Simon Goldberg (39:51): Yeah, the short version is that it seems to work fairly well. We've seen effects in three different randomized trials now where we're seeing significant reductions in anxiety, depression, and stress, and improvements in measures of well-being. We're seeing that effects persist up to five months later is the longest that we've measured it out. We see that people randomized to the app are significantly less likely to report increases in symptoms. That was one of the ways that we've tried to look at this question of harm from meditation, which becomes a concern, especially as you're putting these things out in the world and there isn't a guide associated with it. So that's something we've wanted to look at. And at least using the randomized design, being randomized to the app seems to be protective against symptom worsening. So whether that's capturing the harm that meditation might cause is another question, but that's been heartening to see that it seems to have the opposite effect, that it actually is protective rather than increasing risk for symptoms.

Wendy Hasenkamp (40:49): Yeah, that's great. And you just raised the idea of meditation causing harm... We've had Willoughby Britton on the podcast in the past, and I know it's a whole other area of this application of mindfulness in clinical settings. Did you do some work with Willoughby?

Simon Goldberg (41:05): Yeah, yeah.

Wendy Hasenkamp (41:06): I'm just thinking about that. And yeah, maybe if there's anything to say there, or how you weave that into thinking about interventions.

Simon Goldberg (41:14): Yeah, we, with Willoughby's generosity, have been including her measure and adaptations of her measure in our studies. We're running a big depression trial right now that compares two versions of the Healthy Minds Program, inspired by David Creswell and Emily Lindsay's work, where we have a version that includes meditation and then a version that just includes these well-being podcasts. And we have Willoughby's measure, a version of it, looking at different challenging experiences that people might report. And I think that'll be a really useful comparison to see, okay, what are the rates of challenging experiences doing meditation versus listening to a podcast? And I don't know that we know the answer to that.

Wendy Hasenkamp (41:54): Right. And again, it'll be individual, I think, depending on people's histories.

Simon Goldberg (41:59): I think you're right, yeah. One other thing that we've seen so far, and this is an early finding, but I'm super intrigued by it, is that there doesn't seem to be a super strong dose-response relationship in how much people are using the app. So, it's not as though the people who use it more are the folks who necessarily benefit more. We've seen some evidence for a signal there, but it's not a loud and clear, more is better. And I just think that's super fascinating. It's something that we haven't really had the tools to study in this rigorous way where we're able to objectively assess their use of this tool and see if it relates to their outcomes. So that's been really fun.

Wendy Hasenkamp (42:40): Yeah, that's exciting because in the past, yeah, we've just basically had to rely on people self-reporting, like how long do you practice? Now with apps, it's much easier to get. So yeah, I can see the scientific rigor is pretty exciting, the possibility there. And I think the accessibility is way more obviously accessible than... Many people wouldn't be able to afford or attend an eight-week program or something like that.

Simon Goldberg (43:07): Yeah and the app is available all over the world. There's hundreds of thousands of people who have downloaded. It's free—I didn't mention that, but it's free. So that's been fun to study a tool that really could just be out in the world.

Wendy Hasenkamp (43:21): And what's your sense about... I know that in the beginning of the rise of apps and there was a lot of concern about the lack of teacher-student relationship from that platform. What's been your sense of that having an effect or not?

Simon Goldberg (43:34): I think it's a great question. Actually, we're later this month going to be starting a study where we're including a small amount of teacher support at the beginning of people's experience using the app. There's more and more work coming out around, the mobile health term is 'digital navigators,' or people who are involved to support one's experience with a digital tool. It seems not surprisingly, like people do better when they have a little bit of human support. For me, the scientific question becomes, "Okay, what's the best way to fit that in, and what's the best time to fit that in, and what should be the content of that?" So, it's a rich scientific question, I think.

Wendy Hasenkamp (44:13): Well, this has been really great to chat with you, Simon. I'm excited about all the work you're doing, and just really grateful for your efforts in this field and for helping us get a better picture of the work of mindfulness and helping us better understand, really, the effects of these interventions and contemplative practice, and what it can do for us in the world. Anything else that you wanted to chat about that I haven't touched on?

Simon Goldberg (44:38): Yeah, I think just one piece I'd love to add about the technology side. I think our current apps, which many of them are basically a playlist of guided meditation practices, maybe with some different instruction or psychoeducational content mixed in. But from my perspective, that's really just the beginning of the potential of these tools. Like you said, the integrating human support might be part of how they continue to evolve, but I think there's lots of technological ways that they might evolve that are maybe a little hard for us to imagine now. But if we can train large language models in your chat GPT to respond to challenges that come up in people's practice in ways that we would actually trust the AI to respond in helpful ways, that would be one example of having some sort of human feeling support built into it. And then all sorts of ways that we could be, with passive sensing through sensors on people's phones, for example, could be customizing content based on these other inputs.

(45:40) So, I think we're really just at the beginning of where these tools can go. And to me, that's really exciting. Trying to think of ways that, how can we build technology to support the development of the mental qualities that we've mostly been studying with these traditional formats. But we have these new tools, and they might be able to help us in ways that are only available, really, for the first time.

Wendy Hasenkamp (46:01): Yeah, that's a refreshing and exciting perspective in the midst of AI and tech explosion that is often framed in much more negative outcomes. Well, Simon, thank you so much for all of your work, and for taking the time to chat with us today. This has been really fun.

Simon Goldberg (46:20): My pleasure. Thank you for having me.

Outro – Wendy Hasenkamp (46:26): *This episode was edited and produced by me and Phil Walker, and music on the show is from Blue Dot Sessions and Universal. Show notes and resources for this and other episodes can be found at podcast.mindandlife.org. If you enjoyed this episode, please rate and review us on Apple Podcasts, and share it with a friend. If something in this conversation sparked insight for you, let us know. You can send an email or a voice memo to podcast@mindandlife.org.*

(46:57) *Mind & Life is a production of the Mind & Life Institute. Visit us at mindandlife.org where you can learn more about how we bridge science and contemplative wisdom to foster insight and inspire action towards flourishing. If you value these conversations, please consider supporting the show. You can make a donation at mindandlife.org, under Support. Any amount is so appreciated, and it really helps us create this show. Thank you for listening.*