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Societal addiction therapy: from motivational interviewing to Community Engaged Scenario Planning

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Societies, like individuals, can become addicted to patterns of detrimental and unsustainable behavior. We can learn from one of the most successful therapies at the individual scale, motivational interviewing (MI). MI is based on engaging addicts in a positive discussion of their goals, motives, and futures. One analogy to MI at the societal level is community engaged scenario planning, which can engage entire communities in building consensus about preferred alternative futures via public opinion surveys and forums. Effective therapies for societal addictions are possible, but require re-balancing effort away from only pointing out the dire consequences of current behavior and toward also building a truly shared vision of a positive future and ways to get there.

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Introduction

The need for human society to rapidly deal with climate change, limit population and material consumption growth, transition to a renewable energy path, distribute wealth more equitably, and deal with a host of other interrelated problems is widely accepted in the scientific community and, increasingly, in the policy community [1•]. However, movement toward these ends has been slow. To many, this lack of movement is hard to understand. Given the increasingly obvious warning signs, why has society still not taken appropriate action and changed its behavior accordingly?

In this paper, we draw an analogy between defensive denial at the society level and defensive denial from drug or alcohol addicts when warned about the long-run implications of their behaviors. It is well known in addiction therapy that it is rarely effective to directly confront addicts concerning the damage they are causing to themselves and others. Rather than motivating addicts to change, such interventions often result in a reactive denial on the part of the addict and lack of progress toward overcoming the addiction. Yet, such a confrontational approach is typical of the strategies used by scientists and activists who try to effect change at the societal level regarding climate change, overconsumption, overpopulation, inequality, misplaced use of GDP growth as a societal goal, and many other issues. From a psychological perspective, then, the lack of progress in ameliorating these issues is to be expected as long as these topics continue to be approached in a confrontational, judgmental way. Perhaps more progress would be made with a different way of framing and discussing the issues that is more analogous to the practices that help people overcome individual addictions.

We begin this paper by first defining addiction at the individual level and then exploring how entire societies might also be thought of as addicted to specific modes of behavior. We then consider some of the characteristics of therapeutic approaches that have been successful for treating addictions at the individual level. Finally, we propose an approach to 'societal therapy' for problems facing contemporary society and conclude with suggestions for how this approach might be implemented.

What is addiction?

Addiction is typically understood as encompassing several features [2,3]. For example, the most recent edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-V*) specifies that people suffering from substance-use disorders often experience a lack of control (manifest in cravings and in failed attempts to quit or regulate intake of the substance), negative consequences (such as problems in work and relationships), and a failure to quit using the substance despite negative consequences (like physical and psychological problems). Addiction to drugs (and apparently to gambling as well) occurs because

short-term rewards provided by the ingestion of the substance have become so powerful and enticing that an addict's life becomes increasingly oriented around the substance, such that other, healthier behaviors diminish in frequency and substance use behaviors persist even in the face of (sometimes dire) negative consequences.

How can a society be thought of as 'addicted'?

Unfortunately, many 21st century social institutions and incentive structures parallel those found in addicted individuals, in that short-term rewards are sometimes so powerful that other, more adaptive actions are diminished and damaging activities continue despite evidence of longer-term negative consequences. Individuals (or firms or communities or countries) pursuing their own narrow self-interests in the absence of mechanisms that account for community and global interests frequently run afoul of these more adaptive long-term goals and can often drive themselves, and the communities of which they are a part, to less desirable ends.

The inconsistencies of these short-term rewarding goals for individuals and incentives with long-term adaptation for the community have been described many times before, beginning with Hardin's [4] classic paper on the tragedy of the commons (more accurately, the tragedy of open-access resources) and continuing through work on 'social traps' [5,6,7•,8,9•]. Social traps occur when local or individual incentives that guide individual behavior are inconsistent with the overall goals of the individual, society or system. Cigarette and drug addiction are examples at the individual scale. As has been noted, addicts often know full well the harmful effects of their substance use but they nonetheless continue to use the drug. Similar examples at the societal level include overuse of pesticides, fetishization of GDP growth, over-consumption, privatization of information, fossil fuel consumption leading to climate change, and overfishing. In the example of overfishing in an open-access fishery, by following the short-run economic incentives, fishers are led to exploit the resource to the point of collapse. Because social traps have many parallels with societal addictions, in that both provide immediate gratification and are accompanied by hurdles to sufficiently regard future costs, we will use the terms interchangeably in what follows.

Social traps, or addictions, are also amenable to experimental research on how individuals behave in trap-like situations and how to avoid and escape these traps [10–13]. The bottom line is that, in cases where social traps exist, the system is not inherently sustainable and special steps must be taken to harmonize goals and incentives between local, national, and global scales, and between individual and community scales. In economic jargon, short-term private costs and benefits must be made to reflect long-term social costs and benefits.

It is worth pointing out that most of the existing research has studied how individuals respond to entrapping incentives, rules and norms. In essence, to remove the trap, one has to change the rules and incentives that set the trap in the first place. In this paper we are concerned with how *societies* can go about changing these entrapping rules and incentives, rather than changing individual behaviors in spite of the entrapping rules and incentives.

It is also true that it is not easy to predict individual behavior in response to different societal incentive structures from simple 'rational' models of human behavior prevalent in conventional economic thinking. The experimental facts indicate the need to develop more realistic models of human behavior under uncertainty, acknowledging the complexity of real-world decisions and our species' limited information processing capabilities [14,15]. The limitations of the current economic approach have been recognized by some economists, and there is growing academic and government interest in behavioral and experimental economics approaches that seek to understand how people actually behave, rather than how an idealized 'rational' individual should behave [16–19].

What has not been adequately addressed in the social trap or behavioral economics literatures is the question of the methods that can be most effective for escaping these traps. 'Traps' are obviously best avoided, and strategies that help avoid traps and prevent addictions are preferred. But little has been done to design effective escapes or 'therapies' once the societal level trap has been entered. Fortunately, much **has** been done to help individuals escape their own traps or addictions. We now turn to a discussion of one of the most effective of these therapies before discussing how these results might be applied at the societal level.

Therapies that work to treat addictions at the individual level, and analogies to the societal level

One of the most successful treatments for addictions is Motivational Interviewing (MI) [20••]. Unlike many other forms of therapy, MI is rated by Division 12 (The Society for Clinical Psychology) of the American Psychological Association as having strong research support for mixed addictions.[1] Several review studies have documented the relative effectiveness of MI [21–23].

MI is a therapeutic approach designed as a collaborative conversation aimed at strengthening the patient's motivation for change. We focus here on MI because it is explicitly designed to increase motivation for change in situations where people are ambivalent about changing. A

[1] http://www.div12.org/psychological-treatments/disorders/mixed-substance-abusedependence/.

comprehensive definition of MI offered by Miller and Rollnick [20••] is:

"*Motivational interviewing is a collaborative, goal-oriented style of communication with particular attention to the language of change. It is designed to strengthen personal motivation for and commitment to a specific goal by eliciting and exploring the person's own reasons for change within an atmosphere of acceptance and compassion.*"

MI is a technique that helps patients to explore and resolve sources of ambivalence regarding change in order to build intrinsic motivation to change. MI draws from a patient-centered tradition [24,25], meaning that it is based on principles of warmth, empathy and an egalitarian relationship between therapist and patient that involves reflective listening and questioning. That said, MI is also somewhat directive in that the therapist contributes to identifying workable goals for treatment and to suggesting effective techniques for behavioral change.

Miller and Rollnick [20••] propose four key processes underpinning motivational interviewing:

1. *Engaging* is about creating a working alliance between the therapist and patient.
2. *Focusing* is about setting an agenda for the engagement.
3. *Evoking* is the core of motivational interviewing where the therapist works with patients to help elicit their own goals and motivation for change.
4. *Planning* is about both increasing patients' level of commitment to change and the development of a specific, concrete plan of action for making an actual change.

Some key elements of MI relevant to the current paper include:

1. **MI targets and reinforces 'change talk'** offered by the patient.
2. **MI supports the patient's own autonomy and choice.** Practically, MI enacts this principle and supports patients' autonomy via five key communication skills: *asking open questions, affirming, reflecting, summarizing, and providing information and advice with permission.*
3. **The essential spirit of MI is partnership.** *People are more likely to be persuaded by what they hear themselves say* than by what their friends, loved ones, or therapists argue for. MI recognizes this and therefore tries to encourage the patient to make change statements in the context of a dialogue between equals.
4. **MI is strengths and values focused.** Ultimately MI aims to appeal to people's deepest needs. MI is about setting goals to increase the likelihood of something positive happening rather than to decrease the likelihood of something negative occurring.
5. **Therapists must embody and express acceptance and compassion.** Dialogue needs to be non-judgmental. Making people feel badly about themselves or punishing them is rarely effective for motivating change; when it is effective, it is rarely effective for long, as these types of approaches simply lead to either momentary compliance or to reactance and resistance to change.

To get a better idea of the fundamental differences between the confrontational and the MI approach we direct the reader to these two YouTube videos, which show application of the two approaches to helping someone feel motivated to quit smoking:

Confrontational approach: https://www.youtube.com/watch?v=80XyNE89eCs

MI approach: https://www.youtube.com/watch?v=URiKA7CKtfc

How might ideas derived from MI be applied at the societal level? Societies certainly seem ambivalent about changing their current behaviors even though the scientific consensus is that change is imperative if humanity is to avoid massive problems in the future. However, confronting society directly, as the scientific and activist communities have often done thus far, may not be the most effective intervention—instead, it seems to have often evoked denial and resistance. Drawing on the MI analogy, we hypothesize that it may be more effective to employ analogies from the key processes and elements of MI described above by engaging society in positive change talk in empathic and supportive ways, focusing on shared goals, evoking and motivating positive change, and planning effective pathways to change.

Of course, society is more than just the sum of individuals, and there are many distinct subgroups and interest groups within it at multiple spatial scales. Some of these groups and territories are more ambivalent about change than others. Probably the closest analogy is that the scientific and activist communities play the role of therapist, able to take a more detached view of the implications of current behavior for the future. Just as a physician would not support a patient's goal to continue smoking given the overwhelming evidence of the health costs down the road, there is an overwhelming amount of scientific evidence that changes in societal behavior are needed. But, as the research on MI and the two YouTube videos mentioned above clearly demonstrate at the individual level, how this information is conveyed can make a huge difference. We hypothesize that one reason for the relatively low success of scientific and activist communities in motivating societal change may be that these communities have not been employing an effective therapy to encourage positive change. A part of this therapy also

involves framing the issues in ways that better relate to the diversity of people's underlying values and worldviews [26].

Therapies that might work at the societal level

To review, MI suggests that there are four key processes that underlie successful therapies. In a societal context, these key MI processes can be reformulated by analogy as:

1. ***Engaging:*** *building relationships with diverse stakeholders to enable change talk*
2. ***Focusing:*** *establishing shared goals and identifying shared values among those stakeholders*
3. ***Evoking:*** *helping stakeholders identify their own motivations for positive change*
4. ***Planning:*** *helping stakeholders move from goals to actual change*

How might activists and scientists work with whole communities and societies to help them engage in thinking about their goals and alternative futures in ways analogous to MI? We describe one possibility below, but of course recognize that others might exist or could be developed.

Community Engaged Scenario Planning

Scenario planning is one technique that could be used at larger community, national, and even global scales to help people discuss societal goals, motives, and futures in a manner analogous to MI. Scenario planning provides an opportunity to discuss and develop consensus about what social groups want, and there are several examples of its effectiveness at a range of scales [27•]. The fundamental idea behind scenario planning is that predicting the future is impossible, but people can lay out a series of plausible scenarios that help them to better understand future possibilities and the uncertainties surrounding them. Put in terms of MI principles, laying out plausible future scenarios is analogous to encouraging people to engage in change talk. Scenario planning differs from forecasting, projections, and predictions in that it explores *plausible, possible* rather than probable futures, and it lays out the choices facing society in whole systems terms. With appropriate extensions to engage the public via, for example, opinion surveys and deliberative dialogues, Community Engaged Scenario Planning (CESP) can be seen as incorporating the key MI processes. It first engages participation in a broad discussion of change (plausible futures). This then allows focusing on shared goals revealed by preferences for particular futures. CESP can then evoke positive change toward preferred futures and motivate planning for effective change.

Scenario planning exercises have been successfully conducted at a range of geographic scales and for a range of purposes, including global futures [28–30,31•], regional futures [32,33], corporate strategy [34], political transition [35••] and community-based natural resource management [36].

One of the most compelling examples of the application of scenario planning at the national scale was during the transition in South Africa after apartheid. Adam Kahane convened a scenario planning workshop that involved leaders from both the white and black political parties [35••]. They decided as a group to go beyond recriminations and to create together four possible future scenarios for the country (*i.e.*, the MI principle of engaging in change talk), only one of which – the 'flight of the flamingos' – envisioned a shared country with everyone rising together with truth and reconciliation (*i.e.*, the MI principle of focusing on shared goals). The adoption of this scenario by all parties as the preferred future (*i.e.*, the MI principle of planning from goals to actual change) enabled a relatively smooth transition in a situation that could have been much worse had this important consensus about a vision for the country not been reached (*i.e.*, the MI principle of evoking positive change).

CESP can be seen as a way to engage the broader public directly in a positive discussion of societal goals, motives, and futures in a way that is very analogous to MI, as discussed above. However, to date, as in the South Africa example, scenario planning has largely been used by small groups of planners, policy makers, and strategists and has yet to be effectively extended to stimulate discussions of alternative futures and goals among the broader public.

Some small steps in this direction include Costanza [28] and Landcare [37•]. Both of these studies included limited surveys of opinions and ranking of the scenarios, and both revealed large mismatches between desired and predicted futures.

To broaden participation, Costanza *et al.* [38] proposed a country-wide survey of scenarios for Australia. They reviewed a broad range of scenarios for the future developed for Australia and globally in a range of participatory processes and developed a synthesis set of four scenarios for Australia. These four synthesis scenarios were structured around two axes: (1) individual vs. community orientation and (2) continued focus on GDP growth or shift of focus to broader well-being. This created four distinct futures labeled (1) Free Enterprise; (2) Strong Individualism; (3) Coordinated Action; and (4) Community Well-Being. For each scenario a narrative and other descriptions of the scenario were created. A country-wide opinion survey of the scenarios and follow-on activities are currently underway to engage the public in thinking about the kind of future they really want and sharing their opinions with others. Preliminary results again indicate a large difference between predicted and desired futures.

People exhibited a strong preference for the Coordinated Action and Community Well-Being scenarios, both of which emphasize long-term thinking and community goals—the opposite of the emphasis on short-term, individualistic goals that perpetuate our current societal addiction. On the other hand, the majority also thought that the country was headed toward the Free Enterprise future.

These kinds of examples point to the kind of societal therapy that might work in a manner analogous to MI. Scenarios by definition focus on 'change talk', although skill is required to encourage participants to think beyond business as usual. Well-facilitated scenario planning can be autonomy supportive by encouraging participants to identify aspects of the future they wish to encourage and other aspects they would like to avoid. This can both create a wish to be involved in making the future and generate ideas about how this can be done in partnership with others. CESP processes that encourage empathy, compassion, and acceptance through listening and understanding before debate and action, can help participants see their own strengths and weaknesses and reveal strengths and weaknesses in others that can give participants more hope about creating and implementing sustainable and desirable futures.

Other relevant approaches

This is not to say that scenario planning is the only possible therapy at the societal level. The climate change adaptation research community and other research communities involved in tackling common pool resource and sustainability issues are increasingly drawing on participatory approaches that emphasize inclusive, respectful listening aimed at eliciting values and goals, exploring potential change and co-developing plans for change without prescribing predetermined solutions. These include adaptation pathways approaches (*e.g.*, [39,40]), approaches for assessing social-ecological resilience (*e.g.*, [41]), and calls for wise stewardship of Earth's ecosystems (*e.g.*, [42]). There are other diverse tools and methods for facilitating such inclusive participation. For example, mathematical modeling can be used as a form of consensus building (*e.g.*, [43]) and fostering respectful dialogue and engagement with diverse stakeholders (*e.g.*, mediated modeling [44], companion modeling [45], or multi-model approaches [46]).

Like therapists working with addicts, activists and scientists involved in these approaches choose methods that enable and support change. This is different from the role of an impartial observer, in which one only reports the facts and leaves others to act on those findings. In this way, these MI-analogous approaches require some care to ensure that any decisions to change are owned by the stakeholders and not imposed by the scientist or activist. Just as is the case in MI, patients' autonomy is respected. To quote Miller and Rollnick [20••]:

"MI is not a sleight of hand for end-running, outwitting, or hijacking an individual's motivation. It is about eliciting the person's own inherent arguments for change, not imposing someone else's."

That said, MI is also not about seeking to explore all perspectives, nor does it involve focusing on reasons not to change. The MI agenda is to inspire and foster healthy change, and it is only change talk that is reflected back to the patient and strengthened: 'it makes little sense to intentionally elicit and give equal air time and attention to the counter-change arguments' [47].

Perhaps the most important global change process relevant to the current discussion is the United Nations Sustainable Development Goals (SDGs) [48,49]. These 17 global goals were agreed to by all UN member states in September, 2015. They embody an essential recognition that we live in a finite and interconnected world where we must integrate prosperity, equity, and sustainability. They cover poverty, inequality, economy, the environment and more. Taken together they represent a positive set of global goals meant to apply to all countries. While the SDGs have been agreed to by all UN member states, converting that agreement into a shared vision among the world's people that can drive change is another matter that will require significant additional work [50]. We suggest that using the principles of MI in a version of CESP might be useful in this regard. The SDGs represent a vision of a positive future not unlike several that have been put forward in the context of scenario planning [28,29,31•,37•]. But the 17 SDGs in their present form (with 169 targets and over 300 indicators) will be difficult to communicate to the global public [51]. However, a narrative description of the sustainable and desirable SDG vision as one possible future scenario might be more compelling to more people. Global surveys of people's preferences for this scenario in contrast to other scenarios would begin the broader engagement and discussion of the future among the global population that would follow in the spirit of MI.

Our point is that there are parallels between MI therapy aimed at fostering change in individuals and a range of approaches that are working to support change in social-ecological systems. These parallels suggest the potential to learn more from MI clinical and research experience. Interdisciplinary and transdisciplinary research initiatives aimed at better understandings of cultural evolution are central to all of these advances in better navigating complex social-ecological futures. There is certainly much room for further development, and we propose that consideration of what works at the individual scale may help to fruitfully guide these societal processes in more productive directions.

Rigorous empirical testing of the effectiveness of societal therapy is impossible because it cannot involve controlled experiments with large sample sizes like those that are possible with individuals. However, comparative and historical research can help to demonstrate the effectiveness of the approach we are recommending, and we hope that this article will stimulate more of this kind of research.

Conclusions

MI is successful at the individual level because of its balanced combination of patient-centered attitudes and goal-oriented processes. It helps individuals to recognize and articulate what is not working for them in their current behavior, without being too confrontational or directing. On the other hand it is goal-oriented and helps individuals to envision and create more positive futures for themselves.

At the societal level, making the transition to a sustainable and desirable future will not be easy and will require more nuanced conversations and consensus building about societal goals than has so far been the case. In many ways humans are locked-in, trapped, and in a very real sense 'addicted' to the current regime. Growing knowledge of how to overcome individual addictions may help break that impasse if that knowledge can be applied at the societal level. Evidence suggests that directly confronting addicts with their problems in an effort to scare them into changing often leads to denial and reactance, and is therefore often counterproductive. Our view is that this strategy is exactly what many scientists and activists currently do at the societal level regarding issues like climate change, overpopulation, overconsumption, and inequality. Presenting evidence about risks is important, but how that evidence is presented and contrasted with values and positive goals is critical if we hope to change behavior at either the individual or societal levels.

At the individual level, MI therapists engage with addicts in a non-judgmental way to help them overcome ambivalence and develop a positive vision of a better life that is based in their own deepest values. Such a vision can often motivate substantial change. This is what could be provided at the societal level by Community Engaged Scenario Planning. What is necessary to implement this strategy is to fully engage the larger society in discussing and sharing alternative futures and building consensus on preferred futures. Preliminary results suggest that putting future scenarios out to the public in the form of public opinion surveys [38], dialogs, media events and so on can do just that, but this is a largely unexplored approach. There is ample room for creative design and testing of a range of societal therapies. Applying knowledge about what works at the individual scale may be an important path to more effective societal therapies to allow humanity to build a sustainable and desirable future.

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