
A Model and a Method to Study Agency, Adaptation and Adult Development

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Abstract

Cognitive scientists are committed to study human intelligence, system by system, and systems related to all other systems. As a psychiatrist I am committed to help a person make their life work better, system by system, and systems related to all other systems. We share a common interest but operate in two different worlds. I am trying to open up a conversation of mutual interest about two important questions: What are the key cognitive systems required to make a life work better? How do these systems operate over the course of a life to promote optimal agency?

1. Introduction: Making a Life Work Better

This is a big topic that can only be roughly sketched out in the text. Here's the bullet point version:

- Optimal agency is necessary to make a better life.
- Agency is challenged every day.
- Agency is a conflict state.
- Agency is a consequence of, and prerequisite for personal development.
- Agency is embedded in the existential issues of time and safety.

I realize that, as a psychiatrist, I am an alien in the world of cognitive scientists even though we share a common goal, trying to understand human intelligence:

The early days of artificial intelligence were guided by a common vision: understanding and reproducing, in computational systems, the full range of intelligent behavior that we observe in humans (Langley, 2012).

We use two different methodologies. In my world I observe and discuss “agency” with people called patients, and by the nature of that work am forced to examine the issues discussed in this paper. In your world you build artificial agents to demonstrate and study more discreet elements of human intelligence in greater detail, and probably consider subjects like this as something for the distant future.

I am tasked, as a doctor, to reduce human suffering by using a simple but powerful tool. I talk and listen and then talk some more.

The patient gets better if the therapeutic conversation leads to a modified understanding of their world that is instantiated by the behavior we are calling agency.

Weizenbaum's Eliza turned out to be a toy in the early days of AI but the idea of using AI to help people heal themselves is still a good one.

I would like to contribute what I have learned about agency over a 40-year career of simultaneously practicing psychiatry and building a digital therapy program:

- The first thing I learned was that the action-decision conflict about problems of daily living is the crucible where the agency challenge is best worked out. This allows for a sharp and manageable research focus.
- The second thing I learned (and probably the most important) is that there is a mental structure that actually opposes the attainment of self-confident agency—the self-doubt system. This system is composed of subsystems well studied in the cognitive literature.
- The third thing I learned was that the agency challenge embedded in the immediate context of a personal problem also represents a piece of unfinished personal development, with important implications for the person's overall well-being.

While sharing what I have learned, I will also be describing the model that incorporates this learning, and the digital therapy method based on that model that helps people optimize their agency. Both the model and the method may be of value to scientists working on the subject of agency, or the larger question of how humans construct and maintain a life.

2. The Operating Definition of Agency

My patient was a success at work. Once he decided something was right to do, he did it. When he decided it was right to have a serious conversation with his wife and intended to do so, he was too afraid to act.

At work he was a fully enfranchised agent. At home he could not summon the courage to act and therefore forfeited an opportunity to address a problem in what he had decided was the best way and the right time.

This simple act...avoiding a discussion...represents all three elements of my title: He was not an effective agent in a very specific situation, he did not optimally adapt to a changing marital relationship, and he did not activate the part of him that felt entitled to speak up.

Agency definition: If after a careful consideration of the safety, costs, benefits, risks and rightness of a potential act that creates a definite intention to do the act; and the person does not change his mind about the rightness but also does not do it; then that person has temporarily forfeited his opportunity to influence the course of that particular segment of his or her life. That person has demonstrated sub-optimal agency in that life arena.

Based on that definition, I believe optimal agency is a critical factor for successful adaptation and personal development throughout the life cycle. I believe it is well worth serious study as a complex sub-system of human intelligence.

3. Unsolved Problems: When Agency is Challenged

The action-decision conflict about very specific problems of daily living is the crucible where the agency challenge is best worked out. The pain of living with an unsolved problem provides the sustaining motivation necessary to work out the problem. In our DigitalTherapy method we have

identified 4,000 different problems-in-living, which establishes a sharply defined research focus when the person chooses “the one” that is his problem.

People come into therapy because they are suffering and feel stuck. All they want to talk about are the problems they have been unable to solve. Persistent unsolved life problems make an insistent demand on the mind. By definition, a persistently unsolved problem has a built-in conflict about actually doing what is thought to be the correct thing to do. The stakes are high. The patient’s sense of well-being and the shape of a future life course are on hold. It’s not just patients; everyone faces a continuous flow of problems and challenges.

I believe every human being goes through the same kind of agency-action decision conflict in some low amplitude form like the man I mentioned above who couldn’t bring himself to talk about what’s bothering him with his wife. If he had not been in therapy this conflict would be obscured and expressed as moodiness and blunted intimacy. Agency conflicts during transition and crisis periods are usually accompanied by some degree of anxiety and depression for everyone.

It was during my collaboration at U.C.L.A. with Ken Colby (a pioneer in your field) that the digital therapy method I had developed shifted focus to action-decision-conflict (agency) as the center of what was previously a personal problem-solving process.

Problem solving and action decision conflict resolution are now the two pillars of our current model. The problem-solving component establishes the detailed finely grained experience-near situational context for the same kind of everyday problems people bring to therapy. This problem context establishes the crucible of change. Then, through a series of algorithms, the program helps the person sort through their options to arrive at a decision about what they could do to help themselves, creating a very specific do-able action intent (talk to my wife about x).

This answers the first two common sense questions of our model: What’s bothering you? What can you do about it? This sets up the third question in our model: Why don’t you do it? This puts the spotlight on the action intent conflict (the agency issue to be resolved).

From a common sense point of view one could ask, “If you think this is the right thing to do now and know the right way to do it, why don’t you just do it?”

Those of us who have studied cognitive systems are well aware that there are many elements of mental functioning that do not obey common sense.

Once we have the intent that can’t be executed we start examining the person’s fears of actually doing what they decided and intend to do in order to help solve the very specific and personal problem or challenges they identified. There are many very specific fears that compose what I have tentatively been calling the self-doubt system. The therapeutic task is finding and examining the right ones in a way that convinces the person the fear is not based in reality and the intended action is safe to do (or in some cases that the fear has some basis in reality and the risk was too great to act).

During the course of answering these three common sense questions (what’s bothering you, what can you do about it, and why don’t you do it), we are having a conversation in great detail, about agency, which is no longer just a useful abstraction to discuss but instead has been transformed into a real life visceral/emotionally-felt experience.

(Specific contextualized unsolved problems-in-living)>>>>suffering>>>>(decision to do x in order to reduce suffering)>>>>(intent to do x)>>>>(resistance to do x)=adaptational/agency conflict.

Successful resolution of the adaptational/agency conflict creates a developmental step (a new conflict-free arena of functioning) where optimum agency prevails.

4. The self-doubt structure: An Umbrella Term for a Complex Set of Cognitive Systems.

The second thing I learned (and probably the most important) is that there is a mental structure that actually opposes the attainment of self-confident agency—self-doubts. It is composed of many fear sub-systems well studied in the psychological/cognitive literature.

It is a dynamic system organized around a deeply embedded core belief that “I am flawed”, which must be hidden from others to avoid shame and also denied by self for fear the damage is immutable. It is experienced as something scary at the core, deep and real, always there, never to be addressed directly for fear that would make it realized.

When substance abuse patients open up, they describe themselves as unlovable, evil, unworthy or stupid. The general population is a little less harsh; their flaw is that they are lazy, too dependent, helpless, cowardly, too selfish, too manipulative, untrustworthy, unethical or immoral, mean and cruel.

Certain things trigger these doubts like being criticized, misunderstood, judged, manipulated, accused or ignored.

When triggered the person has to automatically cover up and protect themselves by putting up a defensive false shield like being a busy person, a perfectionist, a loner, a people pleaser, a work-horse, a self-indulger, a clown, an expert, etc.

Self- doubt system: trigger>>>activate flaw experience>>>protective shell

Example: When someone judges me, I believe I am selfish, and I protect myself from that accusation by trying to please people (automatically becoming an inauthentic people pleaser).

Experimenting with any new behavior would trigger this response if there is any danger of being judged.

That would put the new proposed optimal agency behavior outside the comfort zone, limiting the person’s range of adaptive strategies.

But this self-doubt system can be challenged or over-ridden under the right life circumstances.

5. Optimal Agency is Required if Development is to Continue.

The third thing I learned was that the agency challenge embedded in the immediate context of a personal problem also represents a piece of unfinished personal development, with important implications for the person’s overall well-being and course of life.

Example: A young man in his early 20's had been so shy that he rarely had anything but distant friendships with any woman. He was painfully timid and would never take any chance of rejection, which would have confirmed his flawed self-doubt label as a dull or permanently uninteresting person.

One day after weeks of agonizing he contacted the girl in class who seemed to like him. Over time, she became his first girlfriend. This started with one simple act of agency, talking to someone who might befriend him in a romantic way. A simple act for most but not for him. He was letting down his guard and taking a big risk, “thank god for the developmental force” (hormones in this case?) a famous psychoanalyst once said when asked how therapy works.

This initial success starts a cascade of changes.

(Specific contextualized unsolved problems-in-living)>>>>suffering>>>>(decision to do x in order to reduce suffering)>>>>(intent to do x)>>>>(resistance to do x)>>>>(do x)>>>>(new behavior free from conflict).

Successful resolution of the adaptational conflict creates a developmental step, resulting in an enlarged conflict free space of optimum agency functioning.

The once-painfully shy person opened up a “conflict free space of optimum agency functioning“ by asking for a date and creating a relationship. Over the next few years he developed more functional relationship skills in that relationship (personal development). That upgraded function became part of the platform for the next developmental challenge (ability to be with a potential life partner). This newest developmental demand would be inconceivably difficult if the person had not succeeded in increasing his conflict free relationship skills in the prior developmental challenge.

6. Agency is Embedded in the Existential Issues of Time and Safety

The discussion about agency, adaptation and development is part of the larger topic, making a life work. I would like to sketch out two additional frameworks I have written about earlier in my career that need to be part of any model addressing the life course.

6.1 Time

Our discussion about agency, adaptation, and development is embedded in the flow of time, which during the course of lifetime can be roughly demarcated by age periods that make specific demands on the essential task of making a life work.

Erikson’s work introduces the idea of stages of life, each with a different focus and a different challenge. In his last book, *Themes of Love and Work in Adulthood* (Smelzer & Erickson, 1980), I contributed a chapter laying out a more detailed mapping of the age periods beyond adolescents based on my research and book “*Transformations: Growth and change in Adult Life*” (Gould, 1979).

Each culture makes implicit demands for personal development, e.g. independence and becoming economically self-sustaining for the young adult in the western world. There are

rewards for success and costs for failure which become the context-specific problems-in-living that require optimal agency to resolve.

In addition to demands that shape behavior and development from the general culture, there are specific opportunities and obstacles in the sub-culture of the immediate everyday world of family, work and community that make it easier or more challenging to sustain optimal agency.

I have thought about this (the structures of culture and sub-culture operating on the structures of the mind) as a mix of structure changing and structure maintaining forces creating the problems-in-living. For example, if you are engaged in work you love in a well-run organization that supports your sense of self, it is unlikely you have a big work problem. But if you are doing work you don't want to do at a place you don't want to work that diminish your sense of self-worth you are likely to have problem, and a big agency challenge.

The systems embedded in the culture and subculture have a structure changing and structure maintaining effect on the inner systems discussed in this paper. A framework for this is spelled out in Preventative Psychiatry and the Psychoanalytic Field Theory of Reality (Gould, 1970).

6.2 Safety

We talk about anxiety and fear as both emotions and symptoms, but I think that when trying to understand cognitive systems we should be talking about safety instead, and the two different brands of safety.

- Real safety: based on careful calculations of the real-world risks and benefits determining a degree of confidence upon which to base an action decision, being fully aware there is no absolute safety.
- The illusion of safety: hope, wish, magical thinking and over dependence on others to protect and reward.

6.3 Age and Safety

The young child's primary mode of both real safety and the illusion of safety is dependence on the parents as demonstrated in the phenomenon of separation anxiety.

As the child grows, there is a mixture of reliance on the two forms of safety because she gradually acquires the cognitive skills required for real safety thinking. Throughout the remainder of life the person will have to rely primarily on real safety thinking in order to be the optimal agent of his or her life, but will never be totally immune from the pull of the illusion of safety.

I have described this transformation process for the general audience in my book Transformations (Gould, 1979) and in more detail for the professional audience in a chapter in the Comprehensive Textbook of Psychiatry (Kaplan & Sadock, 1989).

7. Conclusion

Cognitive scientists are committed to study human intelligence, system by system, and systems related to all other systems.

As a psychiatrist I am committed to help a person make their life work better, system-by-system, and systems related to all other systems.

We share a common interest, but operate in two different worlds. I have tried to sketch a bridge framework around these two questions:

What are the cognitive systems required to make a life work better? How do these systems operate over the course of a life to promote optimal agency?

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Ken Colby was a colleague, friend, and role model. He was a scientist-doctor devoted to understanding and modeling how minds work early in the history of cognitive science. I am deeply indebted to him for helping me nail down this sprawling concept of agency, and to represent it in concrete and accessible ways.

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