

Psychotherapy in Cyberspace: A 5-Dimensional Model of Online and Computer-Mediated Psychotherapy

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ABSTRACT

This article proposes a dimensional model for conceptualizing the various approaches to conducting psychotherapy in cyberspace, including "cybertherapy" involving the internet, local networks, and stand-alone computers. As compared to in-person therapy, computer-mediated therapy is unique in how it offers the opportunity to interact with clients via different pathways, each one having its unique pros and cons, each one involving a different type of relationship between client and therapist. The model explores the communication features of five dimensions: synchronous/asynchronous, text/sensory, actual/imaginary, automated/interpersonal, invisible/present. The various dimensional elements can be combined and sequenced in a variety of ways in order to design a therapeutic encounter that addresses the specific needs of individual clients.

INTRODUCTION

RELATIONSHIPS IN CYBERSPACE rapidly has become a new field of study in psychology. Within that topic area, we may include the study of computer-mediated psychotherapy (i.e., "cybertherapy") involving the internet, local networks, and stand-alone computers. Clinicians have already begun to explore methods for using virtual environments and the internet to help their clients.¹ How do these methods compare to in-person therapy? Although in-person therapy in most cases is preferred, there are some advantages to computer-mediated and online interventions. One benefit that applies to all forms of online therapy is the opportunity to reach people who are unable to visit psychotherapists for geographical, physical, or lifestyle reasons. Computer-mediated

therapy also may be an important initial step in the establishment of what could become an ongoing, in-person treatment. Other advantages, as I'll discuss later, are specific to particular types of online therapy. Although I won't discuss these in depth, some of the biggest stumbling blocks to cybertherapy involve legal and ethical issues.²

Some people say that in psychotherapy, it's the relationship that heals. If this is true, then might cyberspace offer different types of therapeutic relationships based on the different types of communication it offers? As compared to in-person therapy, online therapy is unique in how it offers the opportunity to interact with clients via different pathways, each one having its unique pros and cons, each one being a slightly different type of relationship. The boundaries of time and sensory stimulation can

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be altered. Imaginary environments can be created. Some or all of the features of the interaction can be automated.

In the sections that follow, I'll explore five features of the communication pathway between therapist and client within a cyberspace environment:

1. synchronous/asynchronous
2. text/sensory
3. actual/imaginary
4. automated/interpersonal
5. invisible/present

Each of these features is not a dichotomy, but rather a bipolar dimension with a gradient between the two extremes. The five dimensions also overlap and interact. Any given style of communicating can be classified on each of the five dimensions.

SYNCHRONOUS/ASYNCHRONOUS

Synchronous

Unlike in-person encounters, cyberspace offers the choice of meeting in or out of "real time." In synchronous communication, the client and therapist are sitting down at their computer at the same time, interacting with each other at that moment. Some examples include text-only and avatar chat, internet telephoning, and audio-video conferencing. Technical factors, especially transmission speeds, will determine just how closely a synchronous meeting approaches the temporal pace of an in-person encounter. In text-only chat, for example, "lag" may slow down conversation between the client and therapist, so that there are seconds, or even minutes, between exchanges.

The pros include:

- The ability to schedule sessions defined by a specific, limited period of time. In most cultures, people understand the boundaries implicit in "an appointment."
- A feeling of presence created by being with a person in real time (this may serve important self-object functions, according to self psychology³).

- Interactions may be more spontaneous, resulting in more revealing, uncensored disclosures by the client.
- Making the effort to be with the person for a specific appointment may be interpreted as a sign of commitment and dedication.
- Pauses in the conversation, coming late to a session, and no-shows are not lost as psychologically significant cues.

The cons include:

- The difficulties and inconvenience in having to schedule a session at a particular time, especially if the client and therapist are in very different time zones.
- There is less "zone for reflection"⁴ (the time between exchanges to think and compose a reply), with the possible exception of lag, which offers a small zone for reflection.
- In the mind of the client, "therapy" may be associated specifically with the appointment and be less perceived as an ongoing, daily process.

Asynchronous

In asynchronous meetings, the therapist and client do not have to be sitting at their computers at the same time. Usually this means there is a stretching of the time frame in which the interaction occurs. Examples of asynchronous encounters include E-mail, newsgroup or bulletin board postings, and delayed viewing of audio and audio-video recordings.

The pros include:

- There are no difficulties in having to schedule a specific appointment time; different time zones are not a problem.
- There is the simple convenience of replying when you're ready and able to reply.
- There is an enhanced "zone for reflection" that allows the therapist and client to think and compose a reply. For the client, this might have important implications for issues concerning impulsivity, stimulating an observing ego, and the process of working through.⁵ For the therapist, counter-

transference reactions may be managed more effectively.

The cons include:

- The professional boundaries of a specific, time-limited "appointment" are lost. Because there aren't yet any standards in our culture about interacting with a professional in an asynchronous time frame, the therapist must create them in a way that makes sense to the client.
- There is a reduced feeling of "presence" because the client and therapist are not together in the moment.
- Some of the spontaneity of interacting "in the moment" is lost, along with what spontaneous actions can reveal about a person.
- There may be some loss of the sense of commitment that "meeting with me right now" can create.
- Pauses in the conversation, coming late to a session, and no-shows are lost as a psychologically significant cues (although pacing and length of replies in asynchronous communication may serve as cues).

TEXT/SENSORY

Text

A large majority of the interactions occurring on the Internet are typed text. Lacking sounds and images, text conversations are not rich sensory encounters. Examples are text-only chat, E-mail, newsgroup/bulletin board forums, and even web pages that people use to express and explore themselves with the help of feedback from others (including, perhaps, a therapist). Currently, E-mail is the method most often used by psychotherapists—mostly because it's easy to use and rapidly becoming a very popular method of communicating. More sensory-rich styles of communicating (as in internet telephoning and audio-visual conferencing) require extra equipment, more technical know-how, and fast Internet connections in order to work smoothly. Even though I'm distinguishing text from sensory communication, there in-

deed is a visual component to typed text conversations—for example, in the creative use of smileys, spacing, capital letters, punctuation, and ASCII art. Also, the tools for embedding graphics and sounds into E-mail and bulletin board forums gradually is becoming more available. For the most part, however, people use typed text.

The pros include:

- It's easy to serve permanent records of some or all of the communications (text files are small). Theoretically, a whole psychotherapy could be preserved, word for word. Saved records give the therapist and client an opportunity to review and evaluate past encounters. They also could be valuable in supervision and research.
- The absence of face-to-face cues encourages some people to be more honest and expressive (the "disinhibiting effect").
- Some people, due to cognitive or interpersonal style, may naturally express themselves better through writing.
- Some people who may balk at seeing a therapist in-person (due to anxiety about self-disclosure, the stigma of being a "patient," etc.) may be more willing to seek text-based help due to the anonymity it offers.
- The process of writing may tap therapeutic cognitive processes and encourage an observing ego, insight, working through, and (especially in asynchronous text) the therapeutic construction of a personal narrative, as in journal writing and bibliotherapy.
- The sometimes ambiguous presentation of typed text can draw out transference reactions (which may be useful to the psychoanalytic therapist).

The cons include:

- Due to writing skills, typing skills, and cognitive/interpersonal style, some people cannot effectively express themselves through typed text.
- The absence of face-to-face cues encourages some people to regress and act out (the "disinhibiting effect"⁴).

- Important face-to-face cues (voice tones, body language, physical appearance) are lost.
- For some people the lack of physical presence may reduce the sense of intimacy, trust, and commitment in the therapeutic relationship. Typed text may feel "formal" and lacking a supportive, empathic tone.
- The sometimes ambiguous presentation of typed text can lead to misunderstandings and exaggerated projections and transference reactions.
- The identity of the person who sent the text messages cannot be accurately verified, which raises important confidentiality issues. People not involved in the therapy also could obtain access to saved messages.

Even though chat and E-mail are both typed text, the fact that chat is synchronous and E-mail is asynchronous makes them very different styles of communicating. As a result, the significance of the pros and cons listed above may vary for each. For example, the therapeutic value of self-reflection, working through, or writing personal narratives may be much more powerful in the slower paced E-mail correspondence than in "on the spot" chat. This is a good example of how the interaction of the five dimensions significantly influence the therapeutic aspects of a particular communication pathway.

Sensory

A robust sensory meeting includes sights and sounds. Audio-visual conferencing includes both, whereas Internet telephoning involves only voice. Both methods attempt to recreate the sights and/or sounds of an in-person encounter. In this category of sensory communication, we may also include the much more imaginary multimedia experiences. For example, in multimedia chat environments, people interact in a visual scene using sounds, typed text and sometimes voice transmission to communicate, as well as visual icons called "avatars" to represent themselves, these are fantasy-based encounters and not an attempt to mimic the "real world." I'll discuss the psy-

chotherapeutic implications of such imaginary encounters in the actual/imaginary section (Note: Sensory communication also could include web pages containing graphics, as illustrated by a colleague of mine who interacted for a short period of time with a severe schizoid patient almost exclusively through pictures uploaded to their websites).

The pros include:

- Multiple sensory cues such as visual appearance, body language, and vocal expression provide valuable information for understanding the client. Comparing cues from different sensory pathways can be very revealing (e.g., a contrast between what a person says and the body language that is used).
- For some clients, the feeling of the therapist's "presence" may be more powerful when multiple sensory cues are available, which can enhance the impact of the therapist's interventions, the therapist's self-object functions, the sense of intimacy, and commitment to the therapy
- Being less ambiguous than typed text, sensory encounters will reduce misunderstandings, projections, and exaggerated transference reactions
- Some people express themselves better through speaking than writing. Speaking is considerably faster and usually conveys information more quickly.

The cons include:

- Sophisticated sensory communication, as in audio-video conferencing, requires extra equipment, more technical know how, and fast Internet connections in order to work smoothly.
- Some clients may be less expressive when confronted with a face-to-face encounter, or may feel more uncomfortable with too many visual/auditory cues.
- Being less ambiguous than typed text, sensory encounters reduce the opportunity to draw out revealing projections and transference reactions.
- Sensory encounters via the Internet are difficult to save to permanent record (as in

multimedia chat), or would consume a great deal of storage space (audio-visual files are very large).

IMAGINARY/ACTUAL

Imaginary

When the face-to-face and environmental cues of the "real" world fall away, the opportunity for an imaginary world opens up. Cyberspace is filled with fantasy-based communities, some purely text-driven and some highly visual—such as MOOs and MUDs, the multimedia chat communities such as Palace and many other chat and forum communities where participants assume imaginary persona. Some people prefer the flight of pure imagination that is activated by text-only fantasy encounters. Others like the visual effect of imaginary graphical surroundings and creative avatars. Psychotherapists might use this potential for imaginary interactions in their work, including not only the creation of their own imaginary environments for their clients, but also having clients participate in MOOS, MUDS, or other imaginary communities as an experiential adjunct to the therapy.

The pros include:

- Well-known techniques such as role playing, psychodrama, dream analysis, flooding, and implosion could thrive in an imaginary cyberspace environment. Flooding scenarios could be created or dreams reenacted by using multimedia tools.
- A client's lifestyle experimentation in an imaginary online community may provide very valuable material to be discussed in psychotherapy.
- New styles of therapy can evolve out of imaginary cyberspace tools, for example, "avatar therapy" in which assumed identities become a central feature in exploration of the client's sense of self.

The cons include:

- An excessive focus on imaginary scenarios and identities can become a form of de-

fense and acting out, a diversion from true psychotherapeutic work.

- Some types of psychopathology may not respond well to imaginary scenarios, or may be exacerbated by it (e.g., psychotic conditions).
- Sophisticated technology and fast transmission speeds will be needed for multimedia environments to mature. (Will the imaginary "holodeck" experiences of *Star Trek* ever be possible?)

Actual

A *Star Trek* holographic experience that recreates all of the sounds, sights, and physical sensations of "being there" would be the most powerful simulation of an actual face-to-face meeting. But we're not likely to see this any time soon. In the meanwhile, audio-visual conferencing is the best Internet technology has to offer psychotherapists who want to meet clients in an encounter that approximates an in-person encounter. Internet telephoning, which obviously lacks in-person cues, weighs in at a distant second place and probably has only a few advantages over the conventional telephone.

The pros include:

- The therapist can very accurately verify the identity of the client.
- For some clients, the feeling of the therapist's "presence" may be more powerful when the therapist appears as a "real" person, which can enhance the impact of the therapist's interventions, the therapist's self-object functions,³ the sense of intimacy, and commitment to the therapy.
- Meetings with the "real" therapist may reduce misunderstandings, projections, and exaggerated transference reactions.
- Some people will feel more comfortable as "themselves" and can express themselves more effectively using their own voice and body language cues.

The cons include:

- Communication using audio and/or visual technology requires extra equipment,

more technical know-how, and fast internet connections in order to work smoothly.

- Some clients may be more anxious and less expressive when dealing with a realistic face-to-face encounter.
- If saved to permanent record, auditory/visual encounters require much more space.
- Some clients may expect that a computer-simulated in-person encounter will be just like an in-person encounter, which may lead to disappointment (the "close but no cigar" effect).

AUTOMATED/INTERPERSONAL

Automated

The basic purpose of the computer is to automate tasks for us humans—tasks that we can't do, don't want to do, or would take much longer to do. Theoretically, we could put this function of the computer to work in psychotherapy. It could automate specific tasks, or even conduct psychotherapy by itself with varying degrees of supervision by a human. Programs like "Eliza"⁶ have simulated a fully automated psychotherapy. Some forms of psychotherapy will be more amenable to automation than others.

The pros include:

- Computer programs may be efficient, objective, and accurate tools in the assessment, testing, and diagnostic phases of treatment.
- Computer programs may work well in helping people make decisions about entering psychotherapy and what type of psychotherapy.
- Diagnostic and treatment protocols that are very specific and programmatic may be very amenable to automation, resulting in a cost effective treatment.
- Some people may at first be more comfortable and expressive with a non-human therapist.
- Computers don't have feelings and can be programmed to have minimal counter-

transference reactions, making them potentially much more objective and neutral in their work.

- Computers have (in some respects) a superior memory to humans and may be better at detecting patterns of ideas and issues that surface in the dialogue with a client. They might even be capable of detecting changes in voice and body language, as they definitely are capable of detecting psychophysiological changes, such as heart rate, skin conductance, and blood pressure—biological cues that therapists usually cannot detect.

The cons include:

- Computer programs don't reason or learn nearly as well as humans, and therefore may be very limited in their ability to adapt to changing or new psychotherapeutic situations.
- Some clients will not feel comfortable or expressive with a non-human relationship. Some say that "It's the relationship that heals" in psychotherapy. Can a relationship be formed with a machine?
- Programs have no feelings or countertransference reactions, which can be valuable tools in assessing and treating clients.⁷
- The complexities and subtleties of some forms of psychotherapeutic approaches may be impossible to recreate in a computer program.
- Empathy, which is a powerful human healing force,^{3,7,8} probably can't be simulated by a computer program.
- A computer program in some ways cannot be better than the psychotherapists who programmed it, meaning it often will be a "second best" choice.

Interpersonal

I think it's fair to say that humans need humans. Our interpersonal relationships shape us, ideally for the better. Completely eliminating the therapist's psyche from psychotherapy will probably be a big mistake in many cases. It's probably not necessary to list the pros and

cons of having a "real" therapist present. They are obvious. Although computers may be objective and dispassionate in their work—although they may have better memories and be more efficient at detecting some changes in the client's words and behaviors and although some clients may feel more comfortable with a computer—they are far inferior to the human in feeling and reasoning about the human condition. And that's what psychotherapy is all about.

INVISIBLE/PRESENT

Invisible

The invisibility of the therapist that computers allow overlaps with the automated/interpersonal dimension. If psychotherapy is automated, then it's possible for human therapists to oversee the machines' work, either continually or periodically. Therapists can adjust the program, if necessary, or even "step in" to intervene themselves. If clients believe they are only talking with a computer, then the therapist is essentially invisible. Other variations of therapist invisibility might include professionals "listening in" on another therapist's individual or group session—for example, "lurking" on an e-mail list, perhaps to supervise or back-up the therapist through private communications, not unlike the "bug-in-the-ear" method used in some training programs. Obviously, the client's being unaware of the fact that an outsider is listening and/or secretly intervening raises an ethical red flag. With informed consent, the invisible professional then does become a bit more "present" for the client. Over time, some clients will forget that there is someone observing, allowing the professional to slip more into invisibility. Other clients may never feel comfortable in what becomes a self-conscious, even "paranoid" environment.

It's possible for clients to be invisible in the treatment. They can listen in on individual or group sessions, either with or without the knowledge of the therapist and other participants, resulting in "vicarious" learning and psychotherapy.⁹ Again, ethical concerns are crucial.

The pros include:

- Some clients may be comfortable and expressive when they believe a human therapist is not present.
- Invisible supervisors could be a valuable technique in the training psychotherapists.
- Some invisible clients may benefit significantly from a vicarious learning experience.
- Being an invisible client can reduce or eliminate the cultural stigma of being a psychotherapy patient.

The cons include:

- Invisibility of the therapist or client poses serious ethical dilemmas.
- The curative effects of a healing human relationship are lost when either the client or therapist are not present.
- The client's or therapist's commitment to the therapy may be greatly reduced when their counterpart is not present.
- The idea of being completely "invisible" could lull a therapist or client into a false sense of security. With enough technical know-how, a person can detect others participation in any type of Internet meeting. This raises serious confidentiality issues (as is true for all types of computer-mediated therapy).

Present

The pros and cons of the client or therapist being present follow logically from the above discussion of invisibility. Psychotherapies that rely on a healing human relationship (including the development of rapport and trust between client and therapist) will require a present professional. The fascinating aspect of computer-mediated therapy is that the degree of presence can be regulated. In mailing lists and chat, one can mostly or always lurk, or periodically "pop in," or maintain an ongoing active participation. The presence of the client or therapist will be maximized when the communication is synchronous and sensory. Here and now, seeing and hearing the real person—as in audio-visual conferencing—will make that per-

son feel more real, alive, and present for most people (some people claim they feel a more direct connection to other's presence during typed text communication). Although the "interpersonal" and "present" factors overlap considerably, it is possible to have an interpersonal psychotherapy that lacks a present therapist (a therapist pretending to be an automated psychotherapy program), as well as an automated psychotherapy with a present therapist (psychotherapy with a computer program in which the client knows that a therapist is silently observing).

DEVELOPING A THEORY OF CYBERTHERAPY

Psychotherapists from different perspectives may evaluate these dimensions of "cybertherapy" quite differently. Those who use a specific treatment package that is more procedure-oriented than relationship-oriented—as in some behavioral approaches—may find automated interventions very useful. Psychoanalytic and behavioral clinicians who work with fantasy-based material (dream work, exposure/flooding, implosion¹⁰) or invented role plays may be enticed by the imaginary dimension of computer-mediated psychotherapists who emphasize the construction of a personal narrative, as in some psychoanalytic therapies and bibliotherapies.¹¹ Some psychoanalytic workers also will be intrigued by the heightened transference and countertransference that occurs in text-based interactions. On the other hand, those therapists—especially humanistic thinkers—who uphold the therapeutic power of a face-to-face, authentic relationship may reject any type of computer-mediated intervention. They want a fully sensory, present, interpersonal encounter, and the best that computers offer still pales compared to an in-person meeting. Surely, clinicians who work closely with body cues and body contact (Thought Field therapies, for example) will find cyberspace very limiting, perhaps even useless. From a practical standpoint, however, it's hard to imagine any clinician who wouldn't find the asynchronous

dimension of Internet communication (especially E-mail) useful as a way to maintain contact with the client.

There are at least three ways to conceptualize computer-mediated psychotherapy. We can think of computers as handy tools to be incorporated into pre-existing theories of psychotherapy. We can define and develop a variety of "new" computer-mediated therapies, such as "E-mail therapy" and "chat therapy." We also can conceptualize "cybertherapy" as a single, multifaceted style of psychotherapeutic interaction that contains the five dimensional features described earlier, features that can be controlled, combined, and modified in a variety of ways to address the needs of different clients as well as the changing needs of a particular client. Each of the dimensions accentuates a certain aspect of psychotherapy. Some of these aspects may have been neglected or overlooked in more traditional forms of clinical work. In a sense, computer-mediated communication deconstructs psychotherapy (as it deconstructs "relationships" in general), not only revealing its elemental qualities, but also offering the opportunity to control those qualities. Most notable is the ability to regulate:

- the temporal boundary and pacing of the therapeutic interaction, including the degree of spontaneity and the "zone for reflection."
- how much of the therapeutic encounter can be stored and reviewed.
- the visual, auditory, and textual components of the interaction, including the resulting degrees of anonymity, intimacy, disinhibition, and transference.
- the imaginary and fantasy-driven aspects of the therapeutic encounter.
- the degree of human presence and invisibility, including the power to automate some or all of the therapeutic interaction.

There are numerous ways the various dimensional elements can be combined and sequenced in order to design a therapeutic encounter that addresses the needs of clients. People who can benefit from intensive depth

psychotherapy (e.g., those who are higher functioning, educated, and artistically-inclined) may fare well in rich imaginary and fantasy-driven scenarios, coordinated with a text-based evaluating and processing of the experience. Trauma that needs to be mastered gradually can begin with text-based explorations, then slowly incorporating actual sensory recreations to assist in the assimilation of the trauma. Some therapies (e.g., EMDR¹²) also may invent imaginary text and/or sensory resources to counteract the trauma. Developing the social skills needed to mastering specific difficult interpersonal situations can progress from imaginary/automated/asynchronous scripted role plays with minimal sensory cues (and perhaps an invisible therapist to evaluate and coach) to more challenging spontaneous role plays that are synchronous, interpersonal, and sensory enriched. In order to grapple with issues about intimacy and interpersonal anxiety, schizoid and socially phobic clients may benefit from a therapy that begins with encounters that are text-based, asynchronous, and perhaps even automated—then move toward more synchronous, sensory, present, and ultimately in-person encounters.

What's interesting about using a term like "cybertherapy" is that we're defining the therapy based on the type of communication pathway between clients and therapist, and the implications of that for technique. That's a bit different than the more traditional way of defining a therapy, which is more closely linked to one's theory of psychopathology (the "causes" of the psychological problem). It's even possible that our understanding of how different communication pathways affect the therapeutic process may lead to new frameworks for conceptualizing psychological problems. A client, for example, may be unable to leave an asynchronous, text-based style of interaction—in other words, humorously stated, "He's fixated at an E-mail level of interpersonal relationships." Psychological health may be assessed according to the person's ability to move among as well as integrate the dimensional elements of computer-mediated relationships.

As the technology of cyberspace advances, the methods of computer-mediated psychotherapy will also change. A critical component of this change will be a careful evaluation—and perhaps reinterpretation—of the ethical issues associated with the practice of psychotherapy. The foremost concern in the clinician's mind should always be the welfare and rights of the client as outlined by the evolution of professional guidelines.

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