

Robots in Mental Therapy: Its Possibility and Danger

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Abstract— The research discusses the meaning that communication robots have in the context of mental therapy. This theoretical discussion is undertaken from a psychological and sociological perspective. It investigates what happens when robots are introduced into current social situations. It focuses on applications of robots that substitute as autonomous artifacts behaving like humans for human therapists.

I. INTRODUCTION

SEVERAL studies have investigated the possible applications of software agents and robots in mental therapy [1][2][3][4][5][6][7]. Many studies of robotic therapy have also recently been conducted, particularly in Japan [1][2][8][9][10]. Moreover, Turkle [11] reported that interactive software agents have been accepted in psychiatric fields since the 1990's.

In this situation, a theoretical consideration from the perspectives of sociology and psychology has been done about the meaning that interactive agents and communication robots have in the context of mental therapy [12]. The paper surveys its important points and discusses what happens when robots are introduced into current social situations while focusing on applications of robots that substitute as autonomous artifacts behaving like humans for human therapists.

II. RELATED THEORIES IN SOCIOLOGY AND PSYCHOLOGY

This section surveys sociological and psychological theories having implications to robotic therapy.

A. Social reductionism toward psychology

Social reductionism toward psychology refers to a trend in modern society where an individual's psychiatric symptoms are internalized even though they may be caused by social or cultural conventions, and as a result, the root social and cultural problems that require clarification are concealed.

For example, under this cultural trend, an employee of a business organization could have a mental disorder related to the organization's extreme expectations for unrealistic outcomes. The employee feels that his disorder is his fault and depends on mental therapy for solving the problem

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without complaining about the inflexible position of the organization.

Mori [13] focused on social reductionism toward psychology in his discussion of extreme self-control exhibited by individuals in modern society. The theory presented in that literature is based on Hochschild's theory of "feeling rules" [14] and Ritzer's McDonaldization of Society [15]. Mori's theory, based on these concepts, is summarized as follows:

- In modern society, individuals are constantly forced to pay attention to their own and others' emotions in order to prevent painful emotions (cult of personality). In this way, the ideas of the cult of personality and social reductionism toward psychology complement each other.
- Furthermore, the ideas of social reductionism toward psychology and McDonaldization of Society are also complementary, and as a result, individuals are required to have a high degree of self-control over their emotions.
- Individuals executing a high degree of emotion management cannot permit even minor infractions of the 'feeling rules'. This strict observance of 'feeling rules' and the differences in interpretation or application of the rules cause disagreement in modern society (e.g. increasing child abuse in Japan).

In addition, based on the analysis of increasingly popular psychological self-help manuals, Mori [13] claimed that knowledge of psychological concepts strengthens the social pressure for self-control over emotions.

B. Sociology of health and illness

The sociology of health and illness is a reflective sociological method that analyzes and criticizes discourses on health which are dominant in modern society [16]. Research subjects in the sociology of health and illness include the relationships between culture and the application of the concept of "health," mutual interaction between medical staff and clients, and the power that the concept of "health" can have over society.

As an example of sociological research of health and illness, Ukigaya [17] analyzed the social situation surrounding lifestyle-related diseases, with a particular focus on diabetes. Her research clarified that government strategies regarding life-style related diseases encourage extreme individual accountability for health, for actions between bouts of illness, and for social situations (e.g.

excessive work situations which interfere with nutrition and exercise). Diabetics are socially and mentally pressured by this atmosphere of self-accountability for their own health. Moreover, it was reported that some diabetics develop their own distorted interpretation of the illness. For example, some diabetics did not strictly follow medical guidelines regarding nutrition and exercise, but regulated themselves according to their own interpretation of bodily and mental states. Ukigaya [16] interpreted this phenomenon as the processes that the diabetics used to regain control over their own bodies that were once dominated by medical discourses.

C. Narrative therapy

Narrative therapy is a therapeutic method produced from reflection in family therapy [18]. The narrative therapist assumes that the reality surrounding the individual does not objectively exist independently from the individual, but is produced and maintained by “narratives” that are socially constructed through linguistic interaction between individuals. These narratives provide consistency and structure for the situations and events in the lives of individuals. The narrative therapist aims to re-organize a client’s self-narrative, especially those elements that cause pain, in order to produce a novel narrative through conversations with the client, which are held on equal terms, while removing the professional position of the therapist. Thus, narrative therapy does not represent a concrete therapeutic technique, but an attitude that the therapist uses when engaging a client.

Asano [19] assessed the position of narrative therapy in modern society. Narrative therapy is also just another aspect of the narrative industry in the field of mental therapy, that is, a commodified product that satisfies the demand of individuals attempting to share their self-narratives, like publishers and products such as “how to” guides for making autobiographies. In fact, Giddens [20] also asserted that self-help books are simply commodified productions of self-actualization.

Narrative therapy provides the client with an alternative self-narrative in place of the dominant narrative that produces pain. This alternative narrative is produced by explicitly extracting issues that are concealed in a client’s self-narrative, through conversation held on equal terms between the client and the therapist. If the client consciously wishes to produce alternative self-narratives with the therapist, then the therapy may be successful.

However, many individuals in modern society wish to leave concealed issues hidden in their narratives, and maintain the existing narrative. These individuals may use narrative therapy as commodified productions to complement their existing narrative. In this case, narrative therapy merely assists these individuals to maintain their narrative without modifying it. Thus therapy is less likely to

be successful. If the narrative theorist is not conscious of this fact, narrative therapy is in danger of repeating and supporting the static desires of the individual.

III. IMPLICATIONS

This section discusses about implications from the theories mentioned in the previous section.

A. Encouragement of robotic therapy in modern society and its danger

The trend of social reductionism toward psychology implies that robotic therapy may be encouraged in future. However, it does not mean its usefulness for mental therapy, even if communication robots are theoretically possible.

The growing dependence on mental therapy increases the demand for psychiatry. The consequence is that the field of mental therapy begins to be further dominated by MaDonaldization. The therapy methods using robots are expected to contribute to this trend. In fact, Turkle’s study [11] also implied that robots might be introduced into psychiatric fields. As a result, it is likely that therapy methods using robots may be encouraged in the future.

However, individuals in modern society are sensitive to other’s emotion management and there is a difference in the ‘feeling rules’ between individuals. Thus, individuals in modern society must also be sensitive to emotional behaviors in robots. It is possible that the emotional behaviors of these systems would not obey the feeling rules of the clients. Thus, clients’ intentional stance toward robots may change from the stance that would normally be displayed toward human therapists. In fact, Turkle [11] suggested that people in modern society do not regard interactive computers as either living one or physical objects, but as objects with intention. In using these robots as substitutes for human therapists, there may be differences between clients’ predicted behaviors and actual behaviors; prediction of behaviors based on how clients would react toward human therapists and actual behaviors based on intentional stance towards systems.

B. Therapy robots as a popular product in mental therapy

Asano’s statements [19] have an important implication: the commodification of narrative therapy and the introduction of computers in mental therapy might lead to the substitution of communication robots as human narrative therapists. In fact, there are some studies on narrative software agents [6][21], and these technologies may encourage commodification of narrative therapeutic robots.

However, Asano’s argument implies another possibility that interaction with narrative therapeutic robots may also simply repeat the desire of many individuals to share their self-narratives while leaving concealed issues hidden. In other words, narrative therapeutic robots may merely be

used as commodified tools for narcissistic people to complement their self-narratives.

The statements by Ukigaya [17] complement this implication. The concepts of life-style related disease and social reductionism toward psychology have a common power in the sense that both apply pressure on individuals to exert their self-control, and subsequently conceal the social situations related to the source of the illness. Thus, clients who undergo mental therapy may develop their own distorted interpretations of psychological concepts to regain control of emotional and mental aspects that were once dominated by psychological discourse. This would be similar to how clients of life-style related disease attempt to regain control. These people may tend to prefer popular systems that seem to suit their interpretation of psychological concepts. They are more likely to reject systems that have been scientifically investigated and selected via medical markets.

Originally, narrative therapy did not represent a concrete therapeutic technique, but an attitude that therapists used in assisting clients. In this method, there was room for the client's own interpretation. The design of narrative therapeutic robots via medical markets may be sufficiently sophisticated not to allow for this type of self-interpretation. Asano [19] points out clients may repeat their own self-talk which leaves concealed issues concealed in their self-narratives. Conceivably, narrative therapeutic robots could be supplied without this sophistication. Narcissistic people wishing to talk about themselves while leaving concealed issues hidden in their self-narratives would appreciate these robots as complementing their distorted interpretation of psychological concepts; however, therapeutic effects will not be achieved.

IV. SUMMARY

Firstly, a gap between clients and therapeutic robots regarding emotion management rules may cause insufficient therapeutic effects. Mori [13] argued that even a minor gap in mutual understanding of the emotion management rules can lead to unproductive arguments among proponents of social reductionism toward psychology. The implication is that the gap is hard to bridge even in human-to-human communication, and therapeutic robots may make the breach more explicit. In other words, unless the position of social reductionism toward psychology is improved, therapeutic robots may not have therapeutic effects regardless of implementation.

Secondly, there are also narcissistic people who may use narrative therapeutic robots to complement their dogmatic interpretation of psychological knowledge. If narrative therapeutic robots have a limited interaction capacity, they may not satisfy the narcissist's desire for a complementary

narrative which leaves concealed issues hidden. If these agents explicitly draw out concealed issues in narratives, these agents are contrary to the narcissist's expectations.

Moreover, Giddens [20] argued that reflexive construction of the self is a struggle against commodification. However, there is a dilemma that construction of the narratives takes place in circumstances in which personal appropriation is still influenced by standardization of consumption. On the other hand, mental therapy is a methodology to achieve self-actualization in modern society. However, introduction of artificial systems into mental therapy implies standardized commodification of mental therapy since implementation of therapeutic robots requires standardization of therapeutic methods that can be translated into software programs. If clients are aiming at constructing their narratives with narrative therapeutic robots that use a standardized commodification of mental therapy, the dilemma in construction of the self may be made more explicit.

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