Software agents and robots in mental therapy: 
Re-consideration in the current social state

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ABSTRACT

There have recently been a number of studies on the application of software agents and robots in fields, such as education and welfare. In this situation, the author argued a possibility of dangers on the use of these technologies in mental therapy (Nomura, 2009). This argument consisted of the following three items:

- The cultural trend of social reductionism toward psychology implies the possibility of negative effects that interactive agents might have on clients in mental therapy. It means that the growing dependence on mental therapy and people’s intentional stance for computers (Turke, 1995) will encourage the introduction of interactive agents and robots into psychiatry, and people’s sensitivity toward others’ emotion management (Hochschild, 1983) may cause negative emotions toward these agents’ behaviors different from the people’s expectation based on their feeling rules.

- The trend of social pressure for health (Lupton, 1994) and self-narrative in the modern society (Giddens, 1991) produced the commodification narrative therapy (McNamee and Gergen, 1992). The introduction of computers in mental therapy might lead to the substitution of interactive agents for human narrative therapists. However, narcissistic people wishing to talk about themselves while leaving concealed issues hidden in their self-narratives would appreciate these agents as complementing their distorted interpretation of psychological concepts, without achievement of therapeutic effect.

- McDonaldization of Society (Ritzer, 1996) may encourage software and robotic therapy using interactive agents. Therefore, individuals in modern society may be forced to deal with therapeutic software agents and robots due to the social pressure that prescribes self-control over emotions and mental health. On the other hands, there are some people feeling anxiety toward these agents. Then, these people may experience double-bind situations (Watzlawick, et al., 1967), where mental problem cannot be solved regardless of whether or not they use the therapeutic system, and social pressure prohibits them from removing themselves from the situation.

Seven years have passed since the above statements were argued. The cultural trends that were a basis for the argument do not seem to have changed in the current situation. On the other hand, therapeutic applications predicted in the argument have still not appeared, perhaps due to technological limitations.

However, the modern society has a novel trend of expectation for artificial intelligence as shown in deep learning. Regardless of realistic capacities in interactive agents, this trend may encourage the introduction of interactive software agents and robots into mental therapy, again.

Figure 1. Developed robotic systems for elderly and caregivers in nursing home in cyber physical spaces.[1-2]

REFERENCES