

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Interaction in Acting Training and its Manifestations in Novices and Actors

Permalink

<https://escholarship.org/uc/item/6682z9sp>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 44(44)

Authors

Sun, Jingyan
Okada, Takeshi

Publication Date

2022

Peer reviewed

Interaction in Acting Training and its Manifestations in Novices and Actors

Jingyan Sun (sun-jingyan-49@g.ecc.u-tokyo.ac.jp)
Department of Interdisciplinary Information Studies, 7-3-1 Hongo
Bunkyo-ku, Tokyo 113-0033 Japan

Takeshi Okada (okadatak@p.u-tokyo.ac.jp)
Department of Educational Psychology, 7-3-1 Hongo
Bunkyo-ku, Tokyo 113-0033 Japan

Abstract

To explain the importance of interaction for a truthful performance in acting, the present study captures the characteristics of interaction and attempts to probe the underlying intrapersonal changes through interaction during an acting course which emphasizes paying attention to a partner. Novice participants tend to change their way of communication as the course progresses, the pattern of which further differs from that of professional actors. While actors devote themselves more to the connection with their partner and demonstrate more balanced communication, novices rely on general inference to speculate about others' affective states. This study offers a new perspective to elucidate the construction of interaction in acting, and emphasizes the significance of involvement in interaction when applying acting approaches to general training with the aim of improving social understanding.

Keywords: acting; interaction; utterance analysis; interactive learning; social understanding

Introduction

As a realm of art, theatre has developed into a wide variety of forms and attracted a whole range of audiences all around the world. Various branches of acting theory and training methods of contemporary theatre are considered to have their roots in Stanislavski's system (Stanislavski, 2008), which defined the goal of acting as a truthful performance in a theatrical setting. For the indispensable subjects – the actors – to give such a performance on stage that mirrors individual behaviors and social relationships in real life, different kinds of approaches have been established to prepare them for appropriate and natural role-playing (Cohen, 2010; Kissel, 2000; McGaw, Stilson, & Clark, 2011).

From the perspective that theatre is a reflection of real life, the social psychologist Goffman (1978) describes the construction of individual behavior as role-playing based on social relationships under different circumstances. The process of role-playing stimulates the understanding of self and the attainment of skills to create the desired impression in each relationship. Due to the potential of acting to promote social understanding and performance (Goldstein & Winner, 2010; Nettle, 2006), acting approaches have been applied in psychiatric treatment (Bailey, 2009), social deficiency improvement (Chandler, Greenspan, & Barenboim, 1974) and general education (Goldstein & Winner, 2012). The positive effect of acting is considered to come not only from entering and understanding a world of imagination, but the

acting itself also counts. For example, by comparing the scores in psychological scales before and after experiencing acting with a control group experiencing only narrative reading, it has been shown that experience of acting is associated with an improvement in several social abilities, such as empathy and emotional understanding (Watanabe & Kusumi, 2020).

While these previous studies pointed out the correlation between acting experience and scores in several dimensions of social abilities, the mechanism of how acting experience facilitates interpersonal understanding and social performance is not fully understood. Even for the most studied dimension, empathy, there have been differing results regarding whether actors score higher than non-actors in measures of emotional empathy, which show the level of sensing how someone else is feeling (Goldstein & Winner, 2012; Goldstein, Wu, & Winner, 2009). In addition to the difficulty of limited measures in showing the whole picture of social performance, another problem of prior literature arises from the lack of investigation into the detail of acting training. Not only scrutinizing the theatrical setting but stepping into the imaginary situation and interacting with other characters by playing a role is important for the understanding of the situation and the emotional experience. The present study focuses on such interaction in acting, trying to capture its characteristics and explore whether they can offer a possible explanation for the inconsistent results about actors' superiority in social understanding.

The importance of effective interaction with others for actors to experience how a character thinks and feels is emphasized by many acting practitioners (Meisner & Longwell, 2012). Such an opinion is analogous to that of creativity research concerning the synergistic effect of elements in a creative process (Glăveanu, 2013), through which lens light is shed on the creativity of actors arising from the tension between an actor and the surrounding actors, between an actor and the environment, and so on. The variety to which acting performance extends can be born from the different details of interaction from stage to stage, though constricted to some extent by the play script (Goldstein & Levy, 2017). The different details of interaction offer the possibility of breaking acting performance down into scrutable indicators, further enabling inference about intrapersonal changes through the interaction. For example, Sun and Okada (2021) examined the characteristics of utterance with the progression of acting training, showing

that within actors' interaction, the attention paid to their partner rather than themselves encouraged an extended variety of performance and immersion in the setting.

The present study tries to capture the interactive part in acting when the acting approach is applied to general education. Fieldwork was conducted during an acting course for non-actors with the use of a similar method to that of Sun and Okada (2021). The analysis consists of two parts. Study 1 focuses on the change of participants' utterances through interaction under particular circumstances and discusses how it relates to their change of inner states. Study 2 further examines the differences in interaction between the novice participants and professional actors in similar tasks. Such a comparison is able to clarify which part of interaction brings about a transformation in acting. Combining the two sets of results, we attempt to offer a new perspective on interaction in acting and provide a preliminary supposition about how experience of acting might improve social abilities.

The fieldwork

We conducted fieldwork during a one-semester acting course for university students from April to July, 2019. The instructor of the course was Bobby Nakanishi, who had learned realism acting in the United States and taken an active part in The Actors Studio, New York for fifteen years. Since 2011, he had devoted himself to acting instruction in Japan. The fourteen-class course began with an introduction to realism acting, followed by the main part of the course where students could experience the training method of the Meisner technique, which emphasizes paying attention to others and forging a real-time relationship during interaction. At the end of the course, there was a three-class scene work during which students tried to synthetically utilize what they had learned to analyze the script of a particular scene and perform it.

The course did not actually aim at competence in acting, but at improving communication skills through the acting training. All the training sessions took the form of pair work. The most basic practice was called *Repetition*, in which the participants simply formulated sentences about behaviors of their partner and repeated such sentences. Other practices were all based on *Repetition*, with a variety of particular characters and situation settings added. A brief introduction to the training sessions analyzed in Studies 1 and 2 is given in the following paragraphs.

Repetition

The participants were required to pay full attention to their partner. Either one of the two participants could start the session by formulating a sentence about the partner's behavior, as long as he or she perceived something in their partner. Such sentences were simply initiated by "You are ...", followed by a predicate. After hearing "You are (predicate A, e.g., laughing)" uttered by the partner, the other participant repeated the sentence with the subject substituted by "I". (That is to say, the other participant replied, "I am (predicate A).") The pair continued repeating the sentence

with predicate A in sequence, until one of them detected some change in the other and formulated a new sentence. The new sentence was also to be a description of the partner's behavior, such as "You are (predicate B)."

Data of *Repetition* sessions are analyzed in Study 1.

Advanced work based on *Repetition*

The fourteen-class course covered only a part of the advanced work designed to link the truthful expression in *Repetition* to truthful performance on the stage. In the present study, we especially focus on a training session called *Card* or *Puzzle* (Study 2), which was experienced by all the participants. In *Card* or *Puzzle*, one participant chooses to play with a card tower or a jigsaw puzzle (the choice itself does not essentially matter), and tries to finish it within ten minutes. The participant also decides a reward for success and a punishment for failure, which function as "a character's motivation to finish the specific task" to provoke a truthful emotional experience from the participant. The other participant observes the player in silence for two or three minutes (time for the player to focus), then starts *Repetition* with the player.

The present study captures the characteristics of participants' style of interaction, and changes in this during the course.

Study 1: Changes in novices during *Repetition* sessions

Participants

Sixteen undergraduate and graduate students from different departments joined the course, twelve of whom attended all the classes. According to a prior survey, none of the participants had received professional training in acting, while all of them were interested in acting or had had some experience in student theatre troupes.

All the participants and the instructor were informed about the goal and the content of the research. With the consent of everyone, all classes, including training sessions and the following discussions, were recorded with a video camera and an audio recorder. Students received two credits for full participation in the course.

Data processing

With reference to the video and audio recordings, utterances in training sessions were transcribed. The predicate of each utterance was recorded on its first appearance — the repeated ones were omitted — along with the participant who produced the sentence.

Utterances were divided into five categories following the classification listed in Table 1 (Sun & Okada, 2021). The categories indicate the extent to which the participant producing the sentence read his or her partner. All utterances were exclusively allocated to one of the five categories.

Numbers of each participant's utterances within every category in a session were counted and recorded. There were

Table 1 Categories of utterances (Sun & Okada, 2021)

| Number | Category | Definition | Examples |
|--------|-------------|--|--|
| 1 | Description | Ordinary doable verbs describing the overt behavior of the other actor | laugh, get closer, speak louder |
| 2 | Feeling | Words expressing one's feeling about the overt behavior of the other actor | take a sharp look, seem to give up, not in a hurry |
| 3 | Evaluation | Words evaluating the overt state of the other actor or the progress of the task | be calm, not work, laugh in a strange way |
| 4 | Speculation | Words indicating what is assumed to be the covert state of the other actor | be glad, worry, feel frustrated |
| 5 | Exclamation | Words uttered unintentionally, not following the rule "only speak about the other actor" | ah, oh my |

three classes for the practice of *Repetition*, the descriptive statistics of which are summarized in Table 2.

Results and discussion

A non-parametric test was conducted to examine whether the number of utterances in each category significantly changed in three classes (N=16, 14, 14 respectively). In addition, a pairwise comparison among the three classes followed, with p-values adjusted by the Bonferroni method. A significance level of 0.05 was adopted.

The results are as follows (for a summary, see Figure 1). There was a significant difference among three classes with respect to the number of Description utterances (chi-squared = 11.501, p-value = 0.003). A further pairwise comparison showed that the Description utterances tended to decrease in number in the sessions ($p=0.005$ for the comparison between the first and second class, $p=0.024$ for the comparison between the first and third class). The number of Speculation utterances was also significantly different among the three classes (chi-squared = 14.598, p-value < 0.001). Unlike the Description utterances, Speculation utterances were demonstrated to have a tendency to become more frequent as time progressed ($p=0.008$ for the comparison between the

first and second class, $p=0.001$ for the comparison between the first and third class).

In contrast to Description and Speculation, other categories of utterances were not significantly different in the three classes of *Repetition*. It can be seen that the decrease in Description utterances and the increase in Speculation utterances took place at the same time, which implies that participants attempted to form more sentences concerned with their partner's thoughts or feelings hidden behind their behavior instead of simply describing what they were doing. Although the Meisner technique requires trying one's best to focus on the partner's behavior and to understand the affective change at the scene as a natural result rather than the goal of their utterances, it is difficult for novices to avoid simply changing the sentence itself to convey what they think, possibly because humans bend towards making inferences about others' affective condition depending on perception and appraisal of current actions and outcomes (Ong, Zaki, & Goodman, 2019).

Comments and discussions about *Repetition* sessions by these participants were found to support such observation of utterance changes. In the first class, they were able to "focus on the rule of paying attention to the partner", and talked more about how they felt in the interaction by describing their partner's behavior. However, in the later two classes, there

Table 2 The statistics of the number of each kind of utterance in each class

| Category | 1 st class | | 2 nd class | | 3 rd class | |
|-------------|-----------------------|------|-----------------------|------|-----------------------|------|
| | Mean | SD | Mean | SD | Mean | SD |
| Description | 10.06 | 4.31 | 5.50 | 3.27 | 5.93 | 2.28 |
| Feeling | 3.63 | 1.87 | 5.64 | 3.08 | 3.79 | 3.03 |
| Evaluation | 3.19 | 2.96 | 3.86 | 3.25 | 2.43 | 2.61 |
| Speculation | 4.00 | 4.08 | 9.14 | 4.97 | 10.64 | 5.46 |
| Exclamation | 0.06 | 0.24 | 0.14 | 0.35 | 0.14 | 0.35 |

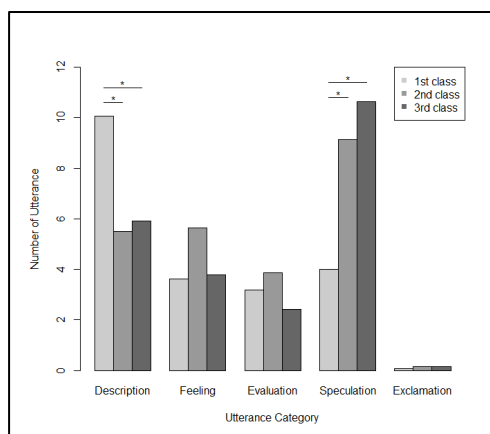


Figure 1 Temporal change in the number of utterances categorized (* $p < 0.05$)

was an inclination to “try to interpret what the partner is thinking” rather than the behavior itself, and end up “narrowing down my sight” and “finding it difficult to interact in a natural way”. The consistency between utterance analysis and subjective report shows the problem that these novice participants were faced with, as well as the significance of involvement in interaction to affect how participants interacted and understood each other in a theatrical setting.

Study 2: Differences in the way novices and actors interact in acting training

Data collection

To compare how novices differ from actors in the way of interaction during the training using the Meisner technique, we focus on training sessions of similar construction to courses designed for novices and actors respectively. For the novices, sessions of *Card* or *Puzzle* were analyzed, which have been introduced in previous section. For the actors, sessions named *Activity* from an acting course for people who

aim at professionalism in acting (organized by the same instructor Bobby Nakanishi, see Sun & Okada, 2021) were used, with the consent of the twenty-six participants and the instructor.

Activity is the name of a type of training in which an executor performs a ten-minute task under pre-set circumstances and an observer is involved in the circumstances by communicating with the executor in the way of *Repetition*. The construction of *Activity* is similar to that of *Card* or *Puzzle* because in both training sessions participants interact with each other in an imaginary situation based on a clear goal for the one who is to complete a specific task. Utterances in both sessions were transcribed in the same way as described in Study 1.

Result 1: Difference between novices and actors in the characteristics of utterances

In order to capture the difference in utterances in the framework of *Repetition* between novices and actors, a non-parametric test was conducted to examine whether the number of utterances in each category showed significant disparity in the training of *Card* or *Puzzle* for novices (15 sessions) and in the training of *Activity* for actors (82 sessions). This comparison was focused on the executors (the one who performs a task) or the observers (the one who is just involved in the dialogue), respectively. A significance level of 0.05 was adopted.

The descriptive statistics of utterances are summarized in Table 3. On the whole, communication between executors and observers showed a similar pattern for both actors and novices, that observers produced more utterances than executors in an overwhelming majority of categories. This is considered to be influenced by the different pattern of attention distribution between executors and observers. While observers only need to focus on their partner’s behavior, executors have to spare part of their energy for the task to attain the goal under the particular circumstances, which increases the cognitive load of executors and makes it difficult for them to have a margin for interactive communication.

Table 3 Statistics of the number of each kind of utterance in each session (* Significantly different between actors and novices, $p < 0.05$)

| Category | Actor - Executor | | Novice - Executor | | Actor - Observer | | Novice - Observer | |
|-------------|------------------|------|-------------------|------|------------------|------|-------------------|------|
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Description | 7.44* | 4.51 | 4.73* | 3.26 | 9.33 | 5.22 | 10.60 | 6.05 |
| Feeling | 1.44 | 1.55 | 1.20 | 1.90 | 2.51* | 2.30 | 7.27* | 6.08 |
| Evaluation | 1.41* | 1.58 | 0.40* | 0.61 | 2.09 | 2.26 | 2.13 | 2.50 |
| Speculation | 3.02 | 2.57 | 1.60 | 1.31 | 4.18* | 3.05 | 13.87* | 5.51 |
| Exclamation | 2.61 | 2.65 | 1.87 | 2.00 | 1.20 | 2.10 | 0.87 | 1.20 |

In contrast, the increased number of utterances by observers compared with that by executors is decisive in distinguishing the communication pattern of actors from that of novices. In the case of actors, though occupied with the task, executors are able to involve themselves in the circumstances and formulate comparative sentences with observers, keeping a balance of communication between each other. In contrast, novice executors produce prominently fewer utterances than observers in almost all categories. Such disparity between actors and novices can be explained by how much they understand the core of the Meisner technique that participants should attach importance to interaction. Compared with novices, actors play a more active part to carry forward their communication and make more changes in utterance together.

In addition, the non-parametric test described at the beginning of this section offers a deeper understanding of how actors differ from novices in each category of utterance. In the case of executors, actors made significantly more utterances of Description ($p=0.046$) and Evaluation ($p=0.010$) than novices. In the case of observers, novices made significantly more utterances of Feeling ($p=0.001$) and Speculation ($p<0.001$) than actors.

The difference between actors and novices in the propensity for utterance categories implies that they focus on different elements when dealing with the relationship with their partner. Through utterances of Description and Evaluation, actors tend to describe or assess how their partner behaves and alters in the circumstances, which cannot be done without emphasis on the context. Rather than acting like themselves, actor executors are fluently acting from the perspective of “a character in the circumstances”. In contrast to actors, novice observers are habituated to make judgments about the state of their partner that are conveyed by utterances of Feeling and Speculation. Furthermore, with respect to the details of their utterances of Feeling and Speculation, lack of variety tells that it is more likely for them to analyze their partner’s inner state with the use of intuitive inferences rather than relating behaviors to current conditions, which may differ from session to session. For novices, it is not easy to embed themselves in pre-set circumstances as an observer and really take part in the interaction.

Result 2: Difference between novices and actors in the way of taking turns

As described in the foregoing sections, in *Repetition* either one of the participants can form a new sentence at any time as long as the participant notices some change in the partner. The points at which an alternation in the speaker who introduces a new predicate occurs are counted as “switching”. The present study focuses on the switch because for the person making the switch, the preceding sentence is about himself/herself and has to be passively repeated, while the successive sentence is about his/her partner and is actively uttered. In addition to new discoveries about their partner’s behavior, there are two other possible initiators for such switching. The first is that the person switching feels too

uncomfortable repeating the current words about himself/herself, and escapes from this by creating a new status. The second is that the person making a switch is triggered by the words expressed and tries to tell the partner the feeling by putting it in the new sentence. All the above makes it important to capture the characteristics of switching and examine whether it differs between actors and novices.

Based on the five categories of utterance, there are twenty-five types of switching pairs represented by the combination of the respective category of the preceding and successive sentence (for example, the pair [Description, Description]). Non-parametric tests were conducted to compare the numbers of each kind of switching pair appearing in actors’ sessions and novices’ sessions, respectively, for the condition of whether executors or observers made the switch. A significance level of 0.05 was adopted.

In the case of observers switching, namely at the point where the two participants are repeating a sentence started by the executor and then the observer forms a new sentence, there was a significant difference between actors and novices only in the switching pair [Evaluation, Description] ($p=0.040$), not in the other twenty-four types of switching. Specifically, when repeating an utterance of evaluation about themselves by the executor, actor observers made more switches to Description utterances than novice observers.

In the case of executors switching, actors and novices significantly differed in more types of switching pairs. There were significantly more switching pairs [Description, Feeling] ($p=0.024$), [Description, Evaluation] ($p=0.024$) and [Description, Speculation] ($p=0.035$) in actors’ sessions than in novices’ sessions, meaning that when repeating an utterance of Description made by observers, actor executors were more likely to start an utterance of Feeling, Evaluation or Speculation than novice executors. In contrast, there were significantly more switching pairs [Speculation, Description] ($p=0.038$) in novices’ sessions than in actors’ sessions. This manifested the greater occurrence of novice executors in starting a new utterance of Description than actor executors when repeating the sentence about how their partner (namely the observer in the session) speculated about their feelings or thoughts.

On the whole, in acting training which emphasizes involvement in interaction, actor and novice observers did not differ much in the way of switching the conversation, while in the case of executors switching, actors tended to be more active in initiating a change in the interaction. In the process of repeating a Description sentence about their behavior, actor executors remained able to catch the observer’s point of view or feeling that accompanied the sentence even when they were busy trying to finish their task. By taking a turn to initiate a sentence of Feeling, Evaluation or Speculation, actor executors possibly brought about an important transformation in their interaction through the utterances they used.

General discussion

Integrating the results from Studies 1 and 2, the present research attempts to identify the characteristics and significance of interaction in the process of reaching a truthful performance under imaginary circumstances by means of acting training, which attaches importance to focusing on the partner and devoting attention to interaction. Studies in cognitive science have described how personal efforts in character understanding and interpretation influence real performance (Ando, 2007; Noice & Noice, 2006). However, as one of the performing arts, theatre acting inevitably requires synergy among all characters in the context (Glăveanu, 2013) to create an appealing reflection of real social relationships and life. It is not clear how actors' affective experience and social understanding change according to their interaction between one another. The present study captures the characteristics of utterance changing through interaction in acting training, revealing that switching attention from the self to the partner encourages participants to open up and read their partner's state in the context, which is possibly linked to an improvement in social understanding and communication skills.

Furthermore, by comparing the characteristics of interaction between novices and actors in the same framework of acting training, a new perspective comes to the fore to clarify the effect of interaction in role-playing, from which the level of involvement in interaction and the fluency of attention switching can predict closeness to a truthful performance. Differing from novices, actors with more experience in acting training adopt a more balanced communication, in which participants are not restricted to a large extent by the task of the character, but succeed in keeping their attention on the relation with the partner. This is consistent with the effect of training that participants are embedded within the situation and communicate with each other as their respective characters (Sun & Okada, 2021). In contrast, novices tend not to actively change the condition but try to read the partner in a way that is similar to general inference about others' mental state (Thornton & Tamir, 2017) regardless of the particular context. With better understanding of social relations as the natural result rather than the goal of this acting training method, the present study highlights the importance of involvement in interaction to improve theatrical performance, which may go against intuition.

By examining the temporal changes of interaction and intrapersonal state through realism acting training, this study has the potential to shed light on research about creativity in acting as well as application to general education. On the one hand, it is considered to be an important step in explaining how actors become able to connect with roles based on a script, allowing variety of expression depending on each performance. Differing from experimental research, characteristics of interaction are captured in a more natural way in this study to approach realism acting. On the other hand, this study offers a new and inspiring suggestion about how to improve the effect of training programs applying

acting methods to a general population with the aim of facilitating social understanding and communication. Independent of self-reporting which may produce inconsistent results about participants' changes in social abilities (Goldstein & Winner, 2012; Goldstein et al., 2009), this study focuses on the actual interaction between participants, analyzing how participants understand the situation through a description of their partners' behavior, and how involvement in the situation is related to differences in interaction. There have been theatre-based projects showing that interpersonal understanding of social relationships or other social issues acquired in dramatic experience can be transferred to a more flexible social attitude, which is necessary for professional skills and real life (Manzi et al., 2020; Massa, DeNigris, & Gillespie-Lynch, 2020; McCullough, 2012). However, the mechanism of this is still unknown. By emphasizing involvement in real-time relationships and experience based on such involvement, this study takes a preliminary step towards explaining how acting methods can be a more effective means for participants to open up and become able to communicate smoothly.

Furthermore, with the attempt to elucidate the characteristics and effects of interaction embedded in acting training, the present study can also provide a new perspective on the explanation of a general structure of human communication and the generation and inference of affective states within it. At the same time, we recognize the limitation that our fieldwork is not a thorough examination of all the channels of interaction, and does not provide a sophisticated explanation for the mechanism of intrapersonal change through interaction. Future research may focus on clarifying how multi-channel signals influence each other in acting, and how they are related to fluency in role-playing and the experience of truthful emotions. Acting training methods are expected to offer an applicable environment for such research to extract multi-channel information in a controllable but natural communication scene, where participants undertake actions based on particular settings and relationships.

Acknowledgments

This work was supported by the "Fostering Advanced Human Resources to Lead Green Transformation (GX)" project as a program of Support for Pioneering Research Initiated by the Next Generation (SPRING) of the Japan Science and Technology Agency (JST).

We thank Bobby Nakanishi and all the participants for their willing consent to the fieldwork. In addition, we appreciate the time and effort that the agency Handfast Point has dedicated to proofreading the manuscript.

References

- Ando, H. (2007). Expertise of actors: Three viewpoints in acting. *Psychologia*, 50(1), 5-14.
- Bailey, S. (2009). Performance in drama therapy. In *Current approaches in drama therapy* (pp. 374-389): Charles C Thomas Publisher.

- Chandler, M. J., Greenspan, S., & Barenboim, C. (1974). Assessment and training of role-taking and referential communication skills in institutionalized emotionally disturbed children. *Developmental Psychology*, *10*(4), 546-553. doi:10.1037/h0036735
- Cohen, L. (2010). *The Lee Strasberg Notes*. Abingdon, Oxon: Routledge.
- Glăveanu, V. P. (2013). Rewriting the language of creativity: The five A's framework. *Review of General Psychology*, *17*(1), 69-81.
- Goffman, E. (1978). *The Presentation of Self in Everyday Life* (Vol. 21): Harmondsworth London.
- Goldstein, T. R., & Levy, A. G. (2017). The constricted muse: Acting. In J. C. Kaufman, V. P. Glaveanu, & J. Baer (Eds.), *The Cambridge Handbook of Creativity across Domains* (pp. 145-160). New York, NY: Cambridge University Press.
- Goldstein, T. R., & Winner, E. (2010). A new lens on the development of social cognition: The study of acting. In *Art and Human Development* (pp. 221-247). New York, NY: Psychology Press.
- Goldstein, T. R., & Winner, E. (2012). Enhancing empathy and theory of mind. *Journal of Cognition and Development*, *13*(1), 19-37. doi:10.1080/15248372.2011.573514
- Goldstein, T. R., Wu, K., & Winner, E. (2009). Actors are skilled in theory of mind but not empathy. *Imagination, Cognition and Personality*, *29*(2), 115-133. doi:10.2190/ic.29.2.c
- Kissel, H. (2000). *Stella Adler: The Art of Acting*. New York, NY: Hal Leonard Corporation.
- Manzi, J., Casapulla, S., Kropf, K., Baker, B., Biechler, M., Finch, T., . . . Randolph, C. (2020). Responding to Racism in the Clinical Setting: A Novel Use of Forum Theatre in Social Medicine Education. *J Med Humanit*, *41*(4), 489-500. doi:10.1007/s10912-020-09608-8
- Massa, A., DeNigris, D., & Gillespie-Lynch, K. (2020). Theatre as a tool to reduce autism stigma? evaluating 'Beyond Spectrums'. *Research in Drama Education: The Journal of Applied Theatre and Performance*, *25*(4), 613-630. doi:10.1080/13569783.2020.1732810
- McCullough, M. (2012). Bringing drama into medical education. *The Lancet*, *379*(9815), 512-513. doi:10.1016/s0140-6736(12)60221-9
- McGaw, C., Stilson, K. L., & Clark, L. D. (2011). *Acting is Believing*. Boston, MA: Wadsworth Publishing.
- Meisner, S., & Longwell, D. (2012). *Sanford Meisner on Acting*. New York: Knopf Doubleday Publishing Group.
- Nettle, D. (2006). Psychological profiles of professional actors. *Personality and Individual Differences*, *40*(2), 375-383.
- Noice, H., & Noice, T. (2006). What studies of actors and acting can tell us about memory and cognitive functioning. *Current Directions in Psychological Science*, *15*(1), 14-18.
- Ong, D. C., Zaki, J., & Goodman, N. D. (2019). Computational models of emotion inference in theory of mind: A review and roadmap. *Topics in Cognitive Science*, *11*(2), 338-357. doi:10.1111/tops.12371
- Stanislavski, K. (2008). *An Actor's Work: A Student's Diary*. Abingdon, Oxon: Routledge.
- Sun, J., & Okada, T. (2021). The process of interactive role-making in acting training. *Thinking Skills and Creativity*, 100860.
- Thornton, M. A., & Tamir, D. I. (2017). Mental models accurately predict emotion transitions. *Proceedings of the National Academy of Sciences*, *114*(23), 5982-5987. doi:10.1073/pnas.1616056114
- Watanabe, T., & Kusumi, T. (2020). Experimental investigation of the effects of a theatrical activity on social abilities. *Cognitive Studies: Bulletin of the Japanese Cognitive Science Society*, *28*(1), 122-138. doi:10.11225/cs.2020.045