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Theater Majors Compared With Nonmajors: Investigating Temperament and Emotion Beliefs, Awareness, Regulation, and Perception

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Given how central emotions are to the field of acting, surprisingly little research has examined how actors' emotional tendencies and skills vary from other individuals. In a sample of 284 college students, we investigated how theater majors differed from other students who have limited or no experience with acting. We expected that theater majors would be more temperamentally emotional, have more positive attitudes about emotions, have better awareness and understanding of their own emotions, and be more skilled at regulating and identifying emotions. Results indicated that theater majors (compared with those with no acting experience or those with some experience) reported higher temperamental sadness and fear, more positive views toward anger and sadness, greater awareness of their own emotions, and greater ability to amplify their emotions. Theater majors more accurately identified pride expressions than nonactors, but students in the no-acting group more accurately identified anger expressions than those with some acting experience and theater majors. Overall, this study advances current understanding of how actors differ emotionally from other individuals and provides new insight into variations in temperament, emotional beliefs, and regulatory and perceptual skills.

Keywords: actors, temperament, emotion beliefs, emotion regulation, emotion perception

The acting profession requires actors to constantly and skillfully understand, react to, and express emotions. As pointed out by Goldstein, Lerner, and Winner (2017), the dramatic arts is a surprisingly understudied topic of research given that these activities can be a rich source of learning and could contribute to the development of important life skills such as emotion knowledge and regulation abilities. Limited research suggests that actors differ from nonactors in terms of their personality and levels of empathy (Nettle, 2006), and that youth change how they understand or regulate their emotions after taking an acting class (Goldstein, Tamir, & Winner, 2013; Goldstein & Winner, 2012; Larson & Brown, 2007; Moneta & Rousseau, 2008). Yet other facets of emotions, such as beliefs about emotions and emotion perception ability, are likely to differ in actors. For example, people may be drawn to participate in theater if they have relatively positive views about emotions. People may also change as a result of their acting training (e.g., Moneta & Rousseau, 2008), such as gaining emotion perception skills, in which they learn to more accurately identify others' emotions. The present study extended prior re-

search by examining novel ways that college theater majors may differ from college students with little or no acting experience. The next sections discuss five facets in which theater majors may differ from nontheater majors: temperament, emotion beliefs, awareness, regulation, and perception.

Despite the varied styles of acting training, all styles could be expected to foster emotion understanding and skills. Adopting characters' emotions is central to Konstantin Stanislavski's (1937, 1949, 1961) method of acting, which requires actors to understand how their characters would feel and take on those emotions (Konijn, 1997). Real emotions can be evoked in apparent realities, in that even if the person knows the situation (e.g., by adopting a character) is not real, it can elicit true emotions (Frijda, 1988). In contrast, Bertolt Brecht emphasized that acting should involve a more detached approach to emotions, in which actors enact emotions based on what they feel when performing for an audience and their conception of what the character should be like (Konijn, 1997). As Brecht (1964) explained, the actor should not be focused on becoming a character but instead should focus on making the events of the story understandable through the character's relation to them. Thus, both types of teaching methods necessitate that the actor be able to understand the character emotionally and portray the character's emotional expressions. Although our correlational study does not allow us to tease apart whether theater majors are different because of their acting training or because preexisting differences contributed to a desire to major in theater, this study adds to the limited interdisciplinary work integrating emotion research and theater in college students.

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Temperament

Temperament encompasses stable individual differences in people's emotionality (e.g., emotional intensity and frequency) and regulation of attention, emotions, and behavior (Rothbart, Sheese, & Posner, 2007). Our study focused on the emotionality dimension of temperament given its relevance to acting. Specifically, the proverbial "drama kids" in high school are frequently thought to be innately dramatic or temperamentally emotional, like the name suggests. Although stereotypes underestimate within-group heterogeneity, research does suggest that actors differ from nonactors in some ways. Examining the Big Five personality traits (Neuroticism, Extraversion, Openness, Conscientiousness, and Agreeableness), Nettle (2006) found that professional actors scored higher on Openness, Extraversion, and Agreeableness than nonactor adults. Actors also were found to be higher in absorption and imaginative suggestibility and be more prone to fantasy (Panero, Goldstein, Rosenberg, Hughes, & Winner, 2016; Thomson & Jaque, 2012). Additionally, actors may be more emotionally vulnerable, as they exhibited more unresolved mourning and greater dissociation from past traumas and loss than nonactors (Thomson & Jaque, 2012). However, no study, to our knowledge, has examined whether actors and nonactors differ in their temperament.

Although characters' emotions can be distinct from the private emotions the actor has (Konijn, 1997), we expect that actors who naturally experience intense emotions may have a wider repertoire of emotion expressions from which to draw. Applying Scarr and McCartney's (1983) theory on gene-environment correlations, people may choose activities that fit with their natural dispositions. Thus, in line with Nettle's (2006) findings for personality (e.g., in which actors were higher on Extraversion), individuals who are prone to intense emotions may be more likely to seek out acting opportunities to capitalize on their intense feelings and expressions. Although no studies have reported on the emotional intensity of actors, children enrolled in an acting class (vs. another type of class) tended to engage in more play in alternative and imaginative worlds than other children, potentially suggesting some proclivity and self-selection into acting in childhood (Goldstein & Winner, 2009). Our study could offer new evidence about whether college theater majors report more intense emotions than do nontheater majors.

Beliefs About Emotions

No research, to our knowledge, has investigated actors' beliefs or attitudes about emotions. Yet emotion research more generally suggests that people vary in how they think about emotions and that these beliefs predict a variety of behaviors and outcomes. First, when people have more positive attitudes toward emotions, they may be more willing to seek out or engage in scenarios in which these emotions are likely to be evoked (Harmon-Jones, Harmon-Jones, Amodio, & Gable, 2011). For instance, people with more negative attitudes toward specific emotions (e.g., fear, disgust, sadness) showed less interest in viewing pictures that would elicit those particular emotions compared with individuals with more positive attitudes (Harmon-Jones et al., 2011). In terms of actors, we expect that people who choose to pursue acting would have more positive views toward negative emotions because they are self-selecting into a career in which they must understand, display, and express both positive and negative emo-

tions. Second, research also shows that people vary in their acceptance of their own negative emotions, and that being more accepting of negative emotions is associated with other emotional competencies and better emotional health (e.g., Ford, Lam, John, & Mauss, 2018). Similarly, we would expect actors to be more accepting of their negative emotions. Finally, people vary in how controllable they think emotions are. Research suggests that believing that emotions are controllable is more adaptive and predictive of using effective emotion regulation strategies than believing that emotions are uncontrollable (Ford, Lwi, Gentzler, Hankin, & Mauss, 2018; Kneeland, Nolen-Hoeksema, Dovidio, & Gruber, 2016). Because acting requires extensive emotion control (of one's own emotions and for the role), even if a character is showing extreme emotions (Konijn, 1997), actors may believe that emotions are more controllable than do individuals without acting experience. Our study examines novel ways that college theater majors may think about emotions differently in their everyday life compared with nontheater majors.

Emotion Awareness

Theater majors may also show elevated awareness of their own emotions in that they have greater knowledge of and clarity in their emotional states. Actors must balance their own private experiences with that of the characters, resulting in a dual-consciousness experience while acting (Konijn, 1997). In line with Brecht's style of teaching, actors can learn to separate their private emotions from the characters' emotions. When the actor's training encourages fusion of the character and private emotions (e.g., Stanislavski, 1937, 1949, 1961), the actor merges the consciousness of themselves as an individual and that of their portrayed character during a performance. This method fosters an actor's understanding of, and connection with, a fictional character, which is facilitated through the active analysis of texts (Knebel, 2016) and interactions with other actors (Merlin, 2007). As a result, acting training may cultivate empathy in actors (Verducci, 2000) and a greater awareness of one's own emotions.

Empirical research is consistent with this hypothesis. In particular, results from a case study with adolescents completing a drama workshop indicated that participants increased their understanding of their emotions (Moneta & Rousseau, 2008). Research also indicates that people may increase knowledge about others' emotions. Specifically, from a 1-year acting class, children and teens gained in theory of mind (i.e., ability to understand that others have different perspectives and beliefs than oneself) and empathy (Goldstein & Winner, 2012). With adolescents rehearsing and performing *Les Misérables* for 3 months, Larson and Brown (2007) found that the students gained knowledge of others' emotional dispositions. Professional actors also were found to score higher on empathy (Nettle, 2006). Our study can extend the literature by empirically examining whether college theater majors may be more attuned to their own emotions and show greater awareness of their own emotions.

Emotion Regulation

Actors must have some degree of effective emotion regulation (people's ability to change what "emotions they have, when they have them, and how they experience and express these emotions";

Gross, 1998, p. 275). Emotion regulation (particularly outward expressions) is a primary way that actors communicate with the audience (Konijn, 1997). An actor's goal is to deliver a credible and believable performance of a character, which requires managing both their private emotions on stage (e.g., fear of making a mistake) and the expressed emotions for the character (Konijn, 1997). Some research has addressed how acting experience may enable youth to change or improve their emotion regulation skills. In particular, after a 1-year acting class, children and teens decreased their use of emotional suppression (Goldstein et al., 2013). Expressive suppression of emotion (hiding expressions of emotion) is a less adaptive regulation strategy, whereas reappraisal (changing one's thoughts about a situation) is a more adaptive strategy (Gross & John, 2003). In a qualitative study, Larson and Brown (2007) found that high school students gained emotion regulation skills that upregulate positive emotions and manage their behaviors in adaptive ways. Similarly, Moneta and Rousseau (2008) found that youth with behavioral issues who completed a drama-based intervention improved skills regulating their emotion expressions. Overall, this research suggests that youth with prior acting training may be better able to regulate their emotions and use more effective regulation strategies (e.g., less suppression, more reappraisal) than those with no training. The present study can provide new evidence on college theater majors' emotion regulation.

Emotion Perception

Emotion perception is the identification of a particular emotional expression in others, often tested using static images of facial expressions, without the requirement of a person feeling those emotions (e.g., Gabrielsson, 2002; Young & Brunet, 2011). Emotion perception is considered an index of emotional intelligence (e.g., Salovey & Mayer, 1990) and is a fundamental skill for successful social interactions. For example, people who are more accurate in identifying emotions are more social (Young & Brunet, 2011), whereas difficulties with emotion perception are linked to poorer social skills (e.g., Morrison & Bellack, 1981). Individual differences in emotion perception may stem from various factors, including temperament (Yi, Murry, & Gentzler, 2016), life experiences (e.g., history of abuse or neglect is linked to perceptual biases or less accuracy; Pollak, Cicchetti, Hornung, & Reed, 2000), or people's attitudes about emotions (Morey & Gentzler, 2017). Successful interventions that teach youth or adults how to more accurately perceive emotions suggests that this skill is malleable. For example, interventions have improved emotion perception in people with an autism spectrum disorder (e.g., Silver & Oakes, 2001), aggressive adolescents (Penton-Voak et al., 2013), and adults with schizophrenia (e.g., Penn, Roberts, Combs, & Sterne, 2007).

Research on emotion perception in relation to acting is limited. However, there are related findings on cognitive empathy (i.e., understanding others' emotions), which includes emotion perception (though cognitive empathy is broader because it can be based on contextual cues or people's knowledge of the target person; e.g., Jolliffe & Farrington, 2006). Two studies with youth indicated that those pursuing acting scored higher on measures of cognitive empathy or emotion perception. Specifically, Goldstein and Winner (2012) found that children who were taking an acting class

(compared with children in a visual arts class) were more accurate judging characters' emotions from film clips, and high school students majoring in acting (vs. comparison groups of music and visual arts majors) did better reading others' emotions from images of people's eyes. Given that actors must understand, embody, and react to others' emotions, we expected actors to show greater accuracy in emotion perception than nontheater majors.

The Present Study

In the present study, we investigated how acting students (i.e., theater majors) differed from other students who were not majoring in theater. Our sample was recruited from psychology courses and theater courses. However, we constructed three groups for comparison because some people from the psychology classes had previous acting experience. Thus, we gained more precision by splitting our nontheater majors into a group with no acting experience versus a group with some acting experience. Overall, we expected that theater majors would be most distinct from students with no acting experience, with the group with some acting experience to be potentially indistinguishable from either group. However, it could also be the case that individuals with any acting experience (both theater majors and those with some experience) would be indistinguishable but different from those with no experience, given that some findings in the literature (e.g., about emotion regulation) involved children enrolled in a single drama class (Goldstein et al., 2013).

We had five sets of hypotheses. First, we tested whether theater majors were more temperamentally emotional than nontheater majors, expecting that those who pursued theater will be naturally equipped with greater emotionality (i.e., feeling emotions more often and of greater intensity) than those who pursued other careers. Second, we hypothesized that theater majors would have different attitudes about emotions (have more positive views, be more accepting of their own emotions, and believe that emotions are more controllable) than nontheater majors. Third, we anticipated that theater majors would report greater awareness and clarity of their own emotions than nontheater majors. Fourth, we expected that theater majors would have better regulatory skills (than nontheater majors), in that they would report greater ability to amplify or reduce emotions, greater ability to accomplish goals and control impulses when upset, and control impulses, greater use of effective strategies, and use of more reappraisal but less suppression. Fifth, we hypothesized that theater majors would be better able to identify facial expressions of emotion compared with nontheater majors.

Additionally, because gender differences in emotion processes are relatively common (e.g., men suppress emotion more, women are often better at emotion recognition; Gross & John, 2003; Montagne, Kessels, Frigerio, de Haan, & Perrett, 2005), we included gender as a predictor in our analyses. By including gender (in addition to the acting experience group), we can determine whether there are main effects of gender or whether gender interacts with the acting group, because acting group differences may vary across gender (e.g., Are male acting students different than nonacting male students whereas female acting and nonacting students show fewer differences?).

Method

Participants

The sample consisted of 284 college students in three groups: theater majors, a some-acting group, and a no-acting group. Participants who were not theater majors (some-acting and no-acting groups) were 241 undergraduate students enrolled in introductory psychology classes. None of these participants identified as theater majors. Participants were also asked if they had any acting experience (explained in the measures section). Those who indicated any prior acting experience were categorized into the some-acting group ($n = 117$, 85.5% female, $M_{\text{age}} = 19.85$ years, $SD = 2.07$; 79.5% White, 7.7% Black/African American, 5.1% Hispanic/Latino, 1.7% Asian, 6% mixed). Individuals without prior acting experience were categorized into the no-acting group ($n = 124$, 71% female, $M_{\text{age}} = 19.92$ years, $SD = 2.01$; 90.3% White, 4% Black/African American, 2.4% Hispanic/Latino, .8% Asian, 2.4% mixed). The 241 psychology course students came from a larger group of 296 students, but 41 failed both validity questions and 14 had excessive missing data (including the required question about experiences with acting). Theater majors ($n = 43$, 65.6% female, $M_{\text{age}} = 20.00$ years, $SD = 4.78$; 87.5% White, 6.3% Black/African American, 3.1% Native American/Native Alaskan, 3.1% mixed) were recruited through theater classes at the primary university and theater departments through two other universities. The 43 theater majors were from a larger group of 61 students, but 14 had substantial missing data or were missing the acting experience questions, two failed both validity questions, and two did not list theater or acting as part of their major.

Procedure

Researchers recruited participants (no-acting or some-acting groups) through introductory psychology classes by showing advertisements for the study to students in class and online. Interested students accessed the online survey, gave their consent, completed the survey, and received course credit.

To recruit theater majors, the research team visited theater classes at the primary university to present information about the study and give students the link to the online survey. Two other universities' theater departments were contacted via e-mail and asked to send out the survey link with a brief explanation about the study. These other universities were contacted after data collection was complete at the primary institution in an attempt to equalize group sample sizes. In both the in-person and e-mail recruitment, participants consented online and completed the same online survey as the nontheater students but with several added questions at the end (not part of this study). Because theater majors did not receive course credit for research participation, they were compensated \$10 by the research team. The primary university's institutional review board approved this study prior to data collection.

Measures

Experience with acting. Participants were asked whether they had ever been on stage acting in a play or musical and whether they had any formal training in acting. If they endorsed

either one, they were asked to check any specific experiences from a list: (a) community theater as a child (elementary or middle school), (b) community theater while in high school, (c) drama class in elementary or middle school, (d) drama class in high school, (e) acting in plays/musicals in elementary/middle school, (f) acting in musicals/plays in high school, (g) acting in plays/musical currently, and (h) currently or previously taken an acting course in college. If participants endorsed at least one item, they were classified into the some-acting group. Those in the no-acting group did not endorse any acting experience or training.

Temperamental emotionality. To assess dispositional negative emotionality and positive emotionality (similar to extroversion and surgency) in participants' everyday lives, participants completed several subscales from the shortened Adult Temperament Questionnaire (Derryberry & Rothbart, 1988). Items were rated on a 7-point scale (1 = *extremely untrue* and 7 = *extremely true*). The subscales indexing negative emotionality were Fear (e.g., "I become easily frightened"; seven items; $\alpha = .46$), Frustration (e.g., "It doesn't take very much to make feel frustrated or irritated"; six items; $\alpha = .67$), and Sadness (e.g., "I seldom become sad when I watch a sad movie"; seven items; $\alpha = .62$). We examined three positive emotionality subscales: Sociability (e.g., "I like conversations that include several people"; five items; $\alpha = .69$), High-Intensity Pleasure (e.g., "I would enjoy watching a laser show with lots of bright, colorful flashing lights"; seven items; $\alpha = .59$), and Positive Affect (e.g., "It doesn't take much to evoke a happy response in me"; five items; $\alpha = .60$). Items were averaged and higher scores indicate higher levels of each dimension.

Attitudes toward emotions. To assess more positive (vs. more negative) attitudes toward specific emotions, we administered three subscales from the Attitudes Toward Emotions scale (Harmon-Jones et al., 2011): Sadness (e.g., "I like it when movies make me feel sad, the sadder they better"; six items; $\alpha = .74$), Fear (e.g., "I like to do things that scare me"; six items; $\alpha = .86$), and Anger (e.g., "I like the feeling of increased energy I get from expressing my anger"; five items; $\alpha = .72$). Disgust and Joy subscales were not administered because we did not expect actors to be particularly distinct on attitudes toward these emotions. Participants rated items on a 5-point scale (1 = *rarely/never* and 5 = *almost always/always*). Scores were averaged, with higher scores denoting more positive attitudes.

Beliefs about controllability of emotions. Individuals' beliefs about the malleability and controllability of emotions were assessed using the Implicit Theories of Emotion questionnaire (Tamir, John, Srivastava, & Gross, 2007). This scale comprises four items ($\alpha = .78$; e.g., "Everyone can learn to control their emotions") that were rated on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). Scores were averaged so that higher scores indicate that individuals believe that they have greater control of their emotions.

Emotion acceptance, awareness, and regulation. Participants completed the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), which includes six subscales: Acceptance, Awareness, Clarity, Goals, Impulse, and Strategies. Items are rated on a 5-point scale (1 = *almost never* and 5 = *almost always*). The items were averaged and reversed so that higher scores indicate greater competence (or less difficulty) with each aspect.

The Acceptance scale (e.g., “When I’m upset, I feel like I am weak”; six items; $\alpha = .92$) involves the inability to accept one’s emotions and feeling badly about experiencing emotions.

Two scales, Awareness and Clarity, pertain to recognizing and understanding one’s own emotions. The Awareness subscale measures attention and care about one’s feelings (e.g., “I pay attention to how I feel”; five items; $\alpha = .79$). The Clarity subscale measures understanding versus confusion about one’s emotions (e.g., “I have no idea how I am feeling”; five items; $\alpha = .80$).

Three subscales directly relate to emotion regulation capacity and ability: Goals, Impulse, and Strategies. The Goals subscale assesses how well people can meet their goals when experiencing negative emotions (e.g., “When I’m upset, I have difficulty concentrating”; five items; $\alpha = .86$). The Impulse subscale measures how well people can control behaviors when emotional (e.g., “When I’m upset, I feel out of control”; six items; $\alpha = .88$). The Strategies subscale reflects access to emotion regulation strategies and ability to improve one’s emotional state (e.g., “When I’m upset, it takes me a long time to feel better”; eight items; $\alpha = .90$).

Emotion regulation: Amplification and reduction. As another measure of emotion regulation skills, participants completed The Emotion Amplification and Reduction Scales (TEARS; Hamilton et al., 2009), which assesses people’s perceived ability to amplify and reduce their emotions. The Amplify subscale includes nine items assessing people’s perceived ability to intensify their emotions, harness emotions to their advantage, or prolong their emotions ($\alpha = .84$). The Reduction subscale includes nine items assessing the perceived ability to lessen the intensity or duration of emotion or to control or prevent their emotions ($\alpha = .87$). Items are rated on a 4-point scale (1 = *not at all true for me* to 4 = *very true for me*), and item scores for each scale are averaged, with higher scores indicating greater abilities.

Emotion regulation: Reappraisal and suppression. Participants also completed the widely used Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) to measure the use of particular regulatory strategies: cognitive reappraisal and expressive suppression. The Reappraisal subscale includes six items (e.g., “When I’m faced with a stressful situation, I make myself think about it in a way that helps me stay calm”; $\alpha = .89$). The Suppression subscale includes four items (e.g., “I keep my emotions to myself”; $\alpha = .73$). Both subscales are rated using a 7-point scale (1 = *strongly disagree* and 7 = *strongly agree*), with corresponding items averaged to create the subscales. Higher scores indicate greater use of the emotion regulation strategy.

Emotion perception. Participants were asked to correctly identify emotions in facial expressions using images from the Amsterdam Dynamic Facial Expression Set (van der Schalk, Hawk, Fischer, & Doosje, 2011). In this study, a subset of pictures was used that included four pictures of nine different emotions (six negative, three positive): sadness, contempt, fear, anger, disgust, embarrassment, joy, pride, and surprise. Models in images included male and female Northern European and Mediterranean individuals. Accuracy was computed for each emotion as the sum of correct answers ranging from 0 to 4. This set of images has been previously validated and demonstrated high recognition rates (van der Schalk et al., 2011).

Results

Preliminary Analyses

We first verified that our theater-majors group had more acting experience or training than the some-acting group (the no-acting group, by definition, had zero experience). Summing the eight acting experiences in the survey and conducting a *t* test verified that the amount of prior experience differed in the expected direction, $t(63.63) = -13.43, p < .001$. Theater majors endorsed 5.77 ($SD = 1.63$), whereas the some-acting group endorsed 2.04 ($SD = 1.33$), types of acting experiences. To provide more detail, in the theater-major group ($n = 43$), no participants reported only one type of experience, 9.3% ($n = 4$) reported two to three types of experiences, 39.5% ($n = 17$) reported four to five experiences, and 51.2% ($n = 22$) reported six to eight types of experiences. In contrast, in the some-acting group ($n = 117$), 45.3% ($n = 53$) reported one type of experience, 37.6% ($n = 44$) reported two to three experiences, 16.2% ($n = 19$) reported four to five experiences, and 0.9% ($n = 1$) reported six types of experiences.

We then compared groups on sociodemographic characteristics to determine whether groups were equivalent. There were no significant age differences for the three groups, $F(2, 281) = .13, p = .88$. However, there was a significant gender difference, $\chi^2(2) = 10.63, p = .005$. Although women were more prevalent than men across all three groups, the rate of women was highest in the some-acting group (85.5%), lower in the no-acting group (71.0%), and lowest in theater-major group (64.3%). By including gender as a second predictor, we can account for the variation in the gender distribution across groups. We also compared the theater majors who were recruited through the two different methods. There were no significant differences for age, $t(41) = -.18, p = .86$, gender, $\chi^2(1) = .11, p = .75$, or race/ethnicity, $\chi^2(3) = 3.72, p = .29$.

The outcome variables were checked for normality. Three emotions (joy, disgust, and surprise) for the emotion perception task were heavily skewed and kurtotic. The variance for three emotions (joy, disgust, and contempt) was also significantly different across groups. As a result, we dropped joy, disgust, surprise, and contempt from the article. Unsurprisingly, many of the outcome variables were significantly correlated (e.g., awareness and clarity of emotions were correlated at $r = .50, p < .001$). Thus, to test our hypotheses, we conducted 3×2 MANOVAs (with Acting Group and Gender as factors) for each set of outcome variables (temperament, emotion beliefs, emotion awareness, emotion regulation, and emotion perception). Descriptives for all measures are provided (see Table 1).

Primary Analyses

Temperamental emotionality. To test our first hypothesis, that theater students may be higher in temperamental emotionality, the multivariate group effect was significant (Pillai’s trace = .15), $F(14, 538) = 3.03, p < .001, \eta_p^2 = .07$, and the gender effect was significant (Pillai’s trace = .13), $F(7, 268) = 5.79, p < .001, \eta_p^2 = .13$. The Group \times Gender effect was not significant ($p = .17$). There were significant group effects for fear and sadness (see Table 2). Theater majors were significantly higher on fear than those with no acting experience (95% confidence interval [CI]

Table 1
Descriptives for the Total Sample

Variables	<i>M</i>	<i>SD</i>	Range
Temperament			
High-intensity pleasure	4.43	.98	1.57–6.86
Positive affect	4.79	1.07	1.60–7.00
Sociability	5.02	1.13	1.00–7.00
Fear	3.78	.89	1.43–6.00
Frustration	4.01	1.12	1.00–6.80
Sadness	4.26	.98	1.71–6.83
Emotion attitudes			
Anger	1.80	.73	1.00–4.80
Sad	2.54	.80	1.00–5.00
Fear	2.21	.86	1.00–5.00
Acceptance	3.51	1.10	1.00–5.00
Controllability	3.43	.82	1.00–5.00
Emotion awareness			
Awareness	3.43	.85	1.00–5.00
Clarity	3.54	.82	1.00–5.00
Emotion regulation			
Amplification	2.73	.60	1.00–4.00
Reduction	2.54	.61	1.00–4.00
Reappraisal	4.76	1.22	1.00–7.00
Suppression	3.45	1.28	1.00–6.50
Strategies	2.34	.94	1.00–5.00
Impulse control	2.11	.91	1.00–4.83
Meeting goals	3.08	.98	1.00–5.00
Emotion perception			
Pride	1.74	1.23	.00–4.00
Sad	3.48	.72	.00–4.00
Fear	2.37	1.26	.00–4.00
Anger	2.54	.91	.00–4.00
Embarrassment	1.92	1.41	.00–4.00

[.26, 1.03]). Those with some acting experience were not different from either group. For sadness, theater majors were higher than students with no acting experience (95% CI [.07, .93]) and those with some acting experience (95% CI [.13, 1.08]). There were no group effects for high-intensity pleasure, positive emotions, sociability, and frustration. Gender differences were found for positive emotions (95% CI [.10, .75]), fear (95% CI [.13, .65]), and sadness (95% CI [.29, .87]). Each indicated that women scored higher than men on these dimensions (see Table 2).

Emotion beliefs. Our second hypothesis was that actors may report more positive views toward specific emotions, greater acceptance of their emotions, and believe that emotions are more modifiable. The multivariate group effect (Pillai's trace = .17), $F(10, 540) = 4.87, p < .001, \eta_p^2 = .083$, and the gender effect (Pillai's trace = .04), $F(5, 269) = 2.25, p = .049, \eta_p^2 = .04$, were both significant. The Group \times Gender effect was not significant ($p = .73$). Specifically, group effects were found for attitudes about anger and sadness (see Table 3). Consistent with hypotheses, theater majors reported more positive views for anger compared with the no-acting (95% CI [.15, .80]) and some-acting (95% CI [.06, .78]) groups, and more positive views for sadness compared with the no-acting (95% CI [.49, 1.18]) and some-acting (95% CI [.41, 1.18]) groups. Contrary to hypotheses, no effects were found for attitudes toward fear, accepting emotions, or viewing emotions as more controllable. Women and men were not significantly different on any of the beliefs about emotions despite the overall gender effect (see Table 3).

Table 2
MANOVAs Examining Temperament by Acting Experience Group and Gender

Outcomes	Acting experience groups			Gender		Group \times Gender <i>df</i> = (2, 274)
	No acting (<i>n</i> = 123) <i>M</i> (<i>SD</i>)	Some acting (<i>n</i> = 115) <i>M</i> (<i>SD</i>)	Theater majors (<i>n</i> = 42) <i>M</i> (<i>SD</i>)	Women (<i>n</i> = 213) <i>M</i> (<i>SD</i>)	Men (<i>n</i> = 67) <i>M</i> (<i>SD</i>)	
Temperament: Positive emotionality dimensions						
High-intensity pleasure	4.29 (.93)	4.50 (1.01)	4.60 (.99)	4.35 (.99)	4.64 (.91)	1.69 .01
Positive affect	4.76 (1.00)	4.87 (1.10)	4.69 (1.23)	4.89 (1.08)	4.50 (1.01)	.49 .004
Sociability	4.93 (1.09)	5.06 (1.14)	5.13 (1.21)	5.04 (1.11)	4.92 (1.19)	2.86 .02
Temperament: Negative emotionality dimensions						
Fear	3.56_b (.95)	3.90_{ab} (.83)	4.10_a (.73)	3.89 (.89)	3.43 (.81)	1.76 .01
Frustration	4.08 (1.08)	4.02 (1.16)	3.83 (1.12)	4.07 (1.17)	3.83 (.92)	.18 .001
Sadness	4.16_b (.92)	4.20_b (1.00)	4.71_a (.98)	4.36 (.97)	3.93 (.93)	1.02 .01

Note. For acting experience comparisons, groups that do not share the same subscript are significantly different; Bonferroni's adjustment was used. *df* = degrees of freedom. Bolded values denote a significant group or gender effect.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3
Examining Emotion Attitudes and Awareness by Acting Experience Group and Gender

Outcomes	Acting experience groups				Gender		Group		Gender		Group × Gender	
	No acting (n = 123) M (SD)	Some acting (n = 114) M (SD)	Theater majors (n = 42) M (SD)	Women (n = 212) M (SD)	Men (n = 67) M (SD)	F	η_p^2	F	η_p^2	F	η_p^2	
Attitudes about emotions												
Anger	1.71 _b (.64)	1.72 _b (.67)	2.20 _a (.95)	1.76 (.72)	1.89 (.73)	6.52 ^{***}	.05	.61	.002	.17	.001	
Sad	2.39 _b (.72)	2.47 _b (.76)	3.16 _a (.84)	2.58 (.82)	2.40 (.73)	18.34 ^{***}	.12	3.19	.01	.41	.003	
Fear	2.14 (.79)	2.21 (.94)	2.47 (.84)	2.15 (.88)	2.42 (.79)	1.90	.01	2.89	.01	1.72	.01	
Acceptance	3.57 (1.15)	3.58 (1.06)	3.19 (1.06)	3.47 (1.15)	3.66 (.95)	2.74	.02	2.71	.01	.71	.01	
Emotion controllability	3.43 (.79)	3.43 (.87)	3.51 (.75)	3.40 (.83)	3.59 (.76)	.21	.002	2.19	.01	.47	.003	
Emotion awareness												
Awareness	3.34 _b (.86)	3.37 _b (.86)	3.86 _a (.66)	3.44 (.87)	3.41 (.79)	6.76 ^{**}	.05	.39	.001	.75	.01	
Clarity	3.54 (.82)	3.51 (.84)	3.62 (.74)	3.55 (.83)	3.49 (.77)	.37	.003	1.34	.01	.99	.01	

Note. For acting experience comparisons, groups that do not share the same subscript are significantly different. Bonferroni's adjustment was used. *df* = degrees of freedom. ** $p < .01$. *** $p < .001$.

Emotional awareness. For our third hypothesis, we expected actors to report greater awareness and clarity of their own emotions. The MANOVA results for the multivariate group effect was significant (Pillai's trace = .06), $F(4, 554) = 4.11, p = .003, \eta_p^2 = .03$. The gender effect ($p = .51$) and the Group × Gender effect ($p = .42$) were not significant. The group effect was significant for awareness but not for clarity (see Table 3). Specifically, theater majors reported greater awareness (fewer difficulties) of emotions than the no-acting group (95% CI [.14, .90]) and the some-acting group (95% CI [.18, 1.02]).

Emotion regulation. For our fourth hypothesis, we expected actors to report greater skill with regulating their emotions (i.e., greater abilities to amplify and reduce; greater use of effective strategies, controlling impulses, and achieving goals when emotional; and more reappraisal but less suppression). The MANOVA showed a significant group effect (Pillai's trace = .22), $F(14, 530) = 4.65, p < .001, \eta_p^2 = .11$, a significant gender effect (Pillai's trace = .08), $F(7, 264) = 3.07, p = .004, \eta_p^2 = .08$, and a nonsignificant Group × Gender interaction ($p = .46$). There was only one emotion regulation scale that showed a significant group effect: Perceived Ability to Amplify Emotions (from the TEARS; see Table 4). Theater majors were significantly higher than those with no acting experience (95% CI [.47, .96]) and those with some acting experience (95% CI [.42, .95]). Gender differences were found for suppression (from the ERQ) and meeting goals when upset (from the DERS). Specifically, men reported greater ability to meet their goals when upset compared with women (95% CI [.03, .62]) and greater use of suppression than women (95% CI [.26, 1.02]).

Emotion perception. Finally, with emotion perception, we expected that theater majors would be better able to identify the facial expressions of emotion than nontheater majors (see Table 5). The multivariate group effect was significant (Pillai's trace = .11), $F(12, 546) = 2.72, p = .001, \eta_p^2 = .056$, whereas the gender effect ($p = .09$) and Group × Gender effect ($p = .38$) were not significant. Regarding the specific emotions, there were significant group differences for pride and anger (see Table 5). The comparisons indicated that theater majors scored higher than those in the no-acting group in identifying pride (95% CI [.18, 1.29]). Contrary to expectations, students in the no-acting group scored higher on anger accuracy compared with the some-acting group (95% CI [.05, .74]) and theater majors (95% CI [.30, 1.10]).

Discussion

The present study is a novel investigation into how theater majors differ emotionally from other students who have limited or no experience with acting. We expected that those with theater training would be more temperamentally emotional and have better emotion-related abilities. Our findings generally supported our hypotheses, although some effects were not as pervasive as we expected. We found evidence that theater majors were more prone to intense emotions (fear and sadness), had more positive views toward anger and sadness, were more aware of their own emotions, and reported greater ability to amplify their emotions. Additionally, in support of our hypothesis, theater majors more accurately identified pride expressions than individuals without acting experience, but unexpectedly, those with no acting experience scored better at identifying anger expressions than theater majors and

Table 4
Examining Emotion Regulation by Acting Experience Group and Gender

Outcomes	Acting experience groups			Gender		Group <i>df</i> = (2, 270)	Gender <i>df</i> = (1, 270)	Group × Gender <i>df</i> = (2, 270)
	No acting (<i>n</i> = 120) <i>M</i> (<i>SD</i>)	Some acting (<i>n</i> = 114) <i>M</i> (<i>SD</i>)	Theater majors (<i>n</i> = 42) <i>M</i> (<i>SD</i>)	Women (<i>n</i> = 208) <i>M</i> (<i>SD</i>)	Men (<i>n</i> = 68) <i>M</i> (<i>SD</i>)			
Amplify ability	2.57_b (.51)	2.70_b (.59)	3.35_a (.44)	2.72 (.62)	2.81 (.51)	27.29***	.03	3.13*
Reduce ability	2.51 (.58)	2.54 (.68)	2.62 (.53)	2.52 (.62)	2.59 (.60)	.51	.25	.86
Effective strategies	3.72 (.95)	3.70 (.94)	3.43 (.87)	3.63 (.94)	3.76 (.92)	1.84	.94	.10
Control impulses	3.91 (.93)	3.84 (.98)	3.98 (.70)	3.84 (.96)	4.06 (.77)	.08	1.58	.24
Meet goals	2.99 (.95)	2.88 (1.04)	2.83 (.95)	2.84 (.99)	3.18 (.93)	.65	4.67*	.18
Reappraisal use	4.64 (1.19)	4.80 (1.31)	4.93 (1.06)	4.81 (1.26)	4.56 (1.08)	1.40	2.79	2.66
Suppression use	3.65 (1.29)	3.40 (1.28)	3.18 (1.23)	3.32 (1.23)	3.94 (1.33)	2.51	11.14**	1.11

Note. For acting experience comparisons, groups that do not share the same subscript are significantly different. Bonferroni's adjustment was used. The interaction effect for amplify is not discussed in text because the omnibus multivariate test was nonsignificant. *df* = degrees of freedom. Bolded lines denote a significant group or gender effect.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5
Examining Emotion Perception by Acting Experience Group and Gender

Outcomes	Acting experience groups			Gender		Group <i>df</i> = (2, 277)	Gender <i>df</i> = (1, 277)	Group × Gender <i>df</i> = (2, 277)
	No acting (<i>n</i> = 124) <i>M</i> (<i>SD</i>)	Some acting (<i>n</i> = 117) <i>M</i> (<i>SD</i>)	Theater majors (<i>n</i> = 42) <i>M</i> (<i>SD</i>)	Women (<i>n</i> = 215) <i>M</i> (<i>SD</i>)	Men (<i>n</i> = 68) <i>M</i> (<i>SD</i>)			
Pride	1.65_b (1.21)	1.68_{ab} (1.25)	2.17_a (1.19)	1.77 (1.20)	1.65 (1.34)	5.19**	.02	3.72*
Sad	3.44 (.80)	3.50 (.65)	3.52 (.63)	3.51 (.72)	3.40 (.72)	.10	1.52	.26
Fear	2.32 (1.31)	2.44 (1.20)	2.31 (1.33)	2.40 (1.25)	2.26 (1.31)	.26	.67	.25
Anger	2.73_a (.94)	2.50_b (.87)	2.10_b (.79)	2.62 (.87)	2.31 (1.00)	9.96***	8.50**	.01
Embarrassment	1.83 (1.42)	1.91 (1.35)	2.19 (1.50)	1.97 (1.39)	1.74 (1.44)	.78	1.96	.49

Note. For acting experience comparisons, groups that do not share the same subscript are significantly different. Bonferroni's adjustment was used. The interaction effect for pride and gender effect for anger is not discussed in text because the omnibus multivariate test was nonsignificant. *df* = degrees of freedom. Bolded lines denote a significant group or gender effect.

* $p < .05$. ** $p < .01$. *** $p < .001$.

those with some acting experience. Overall, this study contributes to the surprisingly research on actors' emotion-related characteristics and skills, and it has important implications for emotion research, as acting experience appears to be an important but overlooked predictor of these emotion processes.

Temperament

We found new evidence that college students who are pursuing acting experience more negative emotions than other college students. Specifically, theater majors scored higher on fear and sadness than those with no acting experience, indicating that theater majors may experience these emotions more intensely or frequently. Generally, the pattern of findings fits with prior theory that people actively select activities (and professions, in this case) that fit with their genetically influenced temperament (Scarr & McCartney, 1983). It may also be the case that these theater majors have been encouraged to pursue acting by others (e.g., parents or teachers) who believe their intense emotions make them well suited for acting. Conversely, if individuals have experienced cultural or familial injunctions against strong expressions of emotion, they may be drawn to acting because they are allowed to experience and express emotions that would otherwise be suppressed or expressed privately (Ridout, 2006). Interestingly, we found that theater majors were not significantly higher on sociability, which is similar to the personality dimension of extraversion and therefore conflicts with Nettle's (2006) finding that adult actors were more extroverted than nonactors. Although speculative, some theater majors may actually be more introverted, and getting into character enables the expression of emotions that were otherwise masked, such as is the process of drama therapy (Emunah, 1994). This possibility could be investigated in future research. There were also no group differences for frustration. Perhaps some people who are prone to frustration would be deterred from acting, for which they often receive feedback on their performance. Overall, the results suggest that young adults who pursue acting may be naturally prone to greater emotionality.

Emotion Beliefs and Acceptance

We had expected that theater majors would hold more positive attitudes toward negative emotions, would believe that emotions are more controllable, and would be more accepting of their own emotions. In line with hypotheses, theater majors had more positive views about anger and sadness than students who had no or some acting experience. These findings are a novel extension of research on attitudes about emotion, suggesting that seeing the value in negative emotions may predispose people to particular activities or career aspirations. Of course, the direction of effect is unclear, so it is also plausible that acting training may change people's attitudes and help them to recognize the value of and even enjoy adopting negative emotions. Longitudinal work would be useful to test these considerations. Contrary to expectations, theater majors were not more accepting of their own negative emotions. Thus, although theater majors had positive attitudes toward particular negative emotions, they were not more positive or accepting of their general upset feelings.

Also contrary to hypotheses, theater majors did not view emotions as more controllable. We had postulated that actors would

develop a view that emotions are modifiable because they often must manipulate and adopt emotions. If theater majors are prone to intense emotions, perhaps they view emotions as innate and unavoidable, or they may view the expressions of emotions as controllable but not felt emotions (and items simply referenced emotions without specifying expressions). It is also possible that they do not immerse themselves into the emotion while acting either because the style of their training or because the participants were so early in their professional careers. Therefore, acting majors may primarily be producing "surface"-level or expressive emotion regulation rather than altering their actual felt emotions.

Emotion Awareness

Our results supported the hypothesis that theater majors would be more aware of (i.e., paying attention to and caring about) their own emotions compared with students with no or some acting experience. Thus, acting may facilitate greater introspection about one's emotions, similar to findings in which drama programs furthered youth's understanding about emotions (Moneta & Rousseau, 2008). Again, however, with a single-time-point study, it may also be the case that these individuals were already focused on their emotions and that this interest contributed to an interest in the field of acting. Surprisingly, theater majors did not evidence greater clarity about their emotional states, so their increased attention to their emotions does not translate into a better understanding. Even if theater majors as a group do not have greater clarity about their emotions, it would be interesting to test whether theater students who have greater clarity about their own emotions make better actors.

Emotion Regulation

We included several indices of emotion regulation to determine whether people with acting training are better able to regulate their emotions than people without acting training. Yet the only index for which theater majors differed significantly was their reported ability to amplify their emotions. This result is not surprising given that increasing or harnessing emotions is a regular and central part of acting on stage when the audience is several feet away and needs to read and understand the actors' emotions. No significant differences were found for participants' perceived ability to reduce emotions or the use of reappraisal or suppression. The lack of effect for suppression contradicts an earlier finding with youth with acting training who engaged in less suppression than those with no training (Goldstein et al., 2013). Additionally, theater majors did not report significantly greater ability to use effective regulation strategies, meet their goals when upset, or control their impulses. Overall, our study extended the investigation of emotion regulation to college-aged students and found that theater majors reported greater ability to amplify emotions but not necessarily better regulatory abilities more broadly.

Emotion Perception

We also investigated whether theater majors are better able to recognize facial expressions of emotions than students who are not pursuing acting. However, the results were limited and equivocal. First, for pride, in line with hypotheses, we found that theater

majors better identified proud expressions than those with no acting experience. The finding for anger, that theater majors did worse at identifying anger than those with no acting experience, was opposite of our hypothesis. Further inspection of the accuracy for each of the four anger pictures indicated two had high accuracy rates (97.4% and 80.2%), but two had much lower rates (44.7% and 35.2%). If the latter two expressions contained some features that were less prototypical anger, it is possible that theater majors did correctly perceive these two expressions as mixed emotions or other emotions. In general, the emotion images were limited because we only included four examples of five emotions and used static images rather than moving expressions. Also, no body language was shown, which is a limitation, because with intense emotional states, people infer more emotion from body posture than they realize (Aviezer, Trope, & Todorov, 2012). Due to their training to embody emotions, actors may be especially skilled at seeing emotions through body language. Overall, given the ambiguity of our findings, more research is needed to make conclusions about actors' emotion perception ability.

Gender

Our results also showed several main effects of gender but, surprisingly, no Group \times Gender interactions. In particular, women scored higher on temperamental positive affect, fear, and sadness, whereas men scored higher on ability to meet goals when upset and use of suppression. The suppression finding replicates a large literature showing that men report suppressing emotions more than women (e.g., Gross & John, 2003). Additionally, women often report experiencing more intense emotions than men (e.g., Grossman & Wood, 1993). We had speculated that group effects may be more pronounced among men if male theater majors are more emotionally distinct from male nontheater majors, given general tendencies and stereotype pressure for men to suppress emotions (Gross & John, 2003; Grossman & Wood, 1993). However, the study may have been underpowered to detect small interaction effects. Notably, gender is often considered an important source of influence on people's emotional lives, yet our findings for the acting group were stronger than the findings for gender (eight variables significantly differed by acting group, with effect sizes ranging from .04 to .17, compared with five variables differing significantly by gender with effect sizes ranging from .02 to .05).

Limitations

Limitations of our study can be addressed in future research. First, the sample included a small number of theater majors. Although we were still able to detect significant small main effects, a larger sample with equal group sizes is preferable to better detect interactions. Second, we did not obtain precise information about students' acting training. Our questions to validate that theater majors had experience with acting asked about varied types of experiences at different ages but did not assess the amount of experience within each category (e.g., one person could have been in one production in high school but another person could have been in several). Another issue is that participants in the some-acting group may have included participants with only musical theater experience. Additionally, future research should ex-

amine whether the type of acting training (e.g., detachment vs. involvement; Brecht, 1964; Konijn, 1997; Stanislavski, 1937, 1949, 1961) matters for actors' emotional tendencies and abilities. Third, although we tested our hypotheses using multiple scales and indices, our method was still limited to a self-reported survey, and some scales' scores (e.g., for temperament) had low reliability. Future work should use more objective indices (observations, psychophysiology) and also assess emotional intelligence. Fourth, we did not assess psychopathology. Given that people with disorders have emotional difficulties (e.g., depression is linked to emotion perception deficits and emotion regulation difficulties; Aldao, Nolen-Hoeksema, & Schweizer, 2010; Kohler, Hoffman, Eastman, Healey, & Moberg, 2011), psychopathology may be an important covariate for future studies. Fifth, our study was a correlational study from a single assessment. We cannot determine whether our findings stem from innate differences (e.g., temperament) or developed from acting training (e.g., emotion awareness), or whether a third variable (e.g., fantasy proneness) can explain why some people are both distinct emotionally and pursue theater as a major. Longitudinal research would be useful to examine how students change across their college career. Additionally, children who pursue acting could be studied to determine whether similar variations are found in youth.

Conclusions

Despite the limitations, our study offers a novel investigation into college actors that provides a starting point for researchers to target different aspects of the measures we used (e.g., do actors think emotion expressions are more controllable but not felt emotions?) or to replicate our findings with a larger sample and across time. As proposed by others (Goldstein et al., 2017), more research on how groups with artistic experiences (e.g., acting) differ on emotional processes is needed, which could be used to inform arts programs to bolster emotional skill development. Finally, examining how variation in these emotional processes (e.g., emotion clarity, emotion regulation) may predict students' success at acting would be an important step for informing the pedagogy of acting.

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