

Promoting Psychophysiological Play: Applying Principles of Polyvagal Theory in the Rehearsal Room

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About the Author:

Sheridan Schreyer (she/her) is an interdisciplinary theatre artist and scholar passionate about the intersection of psychology, performance, and intimacy. She has studied with Intimacy Directors and Choreographers, Theatrical Intimacy Education, and is Mental Health First Aid Certified. Sheridan hails from Pennsylvania's Amish Country and holds a Bachelor of Fine Arts in Music Theatre with a Minor in Psychology from The Hartt School. While at Hartt, she appeared in *Head Over Heels* (Pamela), *No Exit* (Estelle), and two new works as a part of the Goodspeed Festival of New Musicals. Outside of her work as an actor, Sheridan has worked professionally as a stage manager, grant writer, and arts administrator at theatre organizations across the Northeast. She is currently the Associate Producer at Gretna Theatre and is pursuing independent research exploring the sociological influences surrounding theatrical intimacy.

Directors often ask their actors to "play" with the material they are given, encouraging artistic impulses free of pre-existing reservations. While proposed with no ill intent, this request has the potential to create inadvertent nervous system responses. Asking for spontaneous play has great potential to infringe upon an actor's boundaries; removing set parameters from the rehearsal space may create a lack of predictability, causing an actor's intuitive assessments to alert them of a threat that is not present. Yet if the ask of play is removed entirely from a director's vocabulary, actors and other members of the creative team may be left wanting more artistically. While it is impossible to create an objective "safe space" that accounts for everyone's emotional state at a given time, a working environment and practice can be created that supports actors' exploration without touching on potentially traumatic experiences from their past. I propose that a type of theatrical play can be created that incorporates the principles found within Dr. Stephen W. Porges's Polyvagal Theory in an effort to proactively account for potential trauma responses. Introducing the psychophysiological experience of the actor in rehearsal practices allows for an effective and trauma-informed processes from inception to performance.

To gain an understanding of contemporary rehearsal practices and contextualize the practical applications of Polyvagal Theory in the rehearsal room, an informal survey was conducted to gain the perspectives of those working in the theatre industry.¹ Of the 43 respondents, 48.8% reported members of the creative team frequently asking their actors to "play" with the material and/or their scene partner. This result indicates that the request for play is present in rehearsal practices among a range of theatre professionals. While respondents were very familiar with theatrical play, they lacked knowledge of polyvagal theory; over 97% of survey takers did not consider themselves familiar with Porges' work. Introducing and incorporating polyvagal theory's core principles into existing theatre practices has the potential to create a deepened cognitive awareness of actor autonomy without sacrificing creative aspects of the rehearsal process.

The Basis of Polyvagal Theory

Dr. Stephen W. Porges' Polyvagal Theory proposes that the body's response to traumatic stressors can be controlled through awareness of the brain's vagus nerve. The vagus nerve controls the parasympathetic division of the nervous system; the parasympathetic nervous system oversees

unconscious responses to stress and reacts accordingly to regulate the body emotionally and physically (Porges 2017, 15; 21). Polyvagal theory also states that other than solely serving as a means of recovery from nervous system dysregulation, the vagus nerve inhibits dangerous responses to traumatic triggers. The ability to inhibit feelings of distress is unique to vertebrate mammals and is split into two divisions: the dorsal vagal complex and the ventral vagal complex. The dorsal complex collects sensory information from visceral organs (the heart, lungs, stomach, etc.) and brings it to the brain while the ventral complex interprets the received information and uses it to inform the use of facial muscles (Porges 2017, 31-32). These two complexes communicate with each other and aptly regulate the nervous system.

Receiving information from the vagal complexes allows the brain to begin the process of neuroception. Porges introduces neuroception as the unconscious evaluation of signs of danger in one's surroundings that allows individuals to become aware of the physiological shifts around them (2017, 19-20). While neuroception is essential to the detection of potential threats, it is not always accurate; regardless of previously correct evaluations, there is a chance that risk may be perceived in the absence of a threat. For instance, an actor who receives unexpected physical stimuli from a scene partner may likely detect a potential risk through their process of neuroception. This interferes with the process of co-regulation, or the management of emotions across individuals; co-regulation has the power to share a sense of safety or feelings of physiological distress between multiple people depending on the context of a given moment (Porges 2017, 9). Both neuroception and co-regulation are essential for humans' evaluation of environmental stressors and allow for instant adjustments to an individual's psychophysiological state.

Glossary

The following is a brief glossary of terms and their definitions that will be referenced in upcoming sections:

Co-regulation: the mutual management of physiological states between individuals that build experiences of safety and connection; a core principle of polyvagal theory. (Dana 2020, 3; Porges 2017, 9)

Neuroception: the natural evaluation of environmental cues and subsequent communication of information to the nervous system; while essential to survival, the risks perceived are not always accurate. (Dana 2020, 2-3; Porges 2017, 19-20)

Parasympathetic Nervous System: the part of the nervous system that supports health and restoration; can act defensively in life-threatening conditions. (Porges 2017, 21)

Psychophysiology: the study of how the brain works based on the assumption that every behavioral event has a physical counterpart. (Longe 2017, 890-891)

Safety: the perceived absence of a threat and the following state of calmness; dependent on not being in a state of defense. (Porges 2017, 23-24)

Trauma: effects present as a result of severe cognitive distortions that steer the nervous system away from connection and towards protection. (Dana 2020, 7; Sajnani and Johnson 2014, 68)

Sympathetic Nervous System: the part of the nervous system that increases blood flow to support movement as necessary; can feed "fight or flight" responses. (Porges 2017, 29)

Vagal: referring to the parts of the brain that connect cognitive function to the body's thoracic organs, also known as the vagus nerve. (Porges 2017, 31)

Polyvagal Principles in Performance

In pieces that feature sensitive subject matter, actors may begin to rely on familiarity with their fellow performers to establish feelings of safety during performances. When actors lack the ability to co-regulate in this manner, signals from visceral organs begin to overpower the nervous system and elicit a trauma response. Porges himself notes that the presence of a trauma response increases the potential for dissociation, or a disconnection from reality that often affects the ability to maintain continuity between thoughts (2017, 11). A loss of touch with one's surroundings is hazardous in any occupation, but is especially dangerous in the performing arts where sharp focus is required on a busy stage. The ability to adjust one's psychophysiological state of being is essential to human survival, and the efficacy of this task is reduced when said adjustments take place during a performance (Heilman et al. 2012, 241). In their book *Trauma-Informed Drama Therapy: Transforming Clinics, Classrooms, and Communities*, drama therapists Dr. Nisha Sajnani and Dr. David Read Johnson discuss the difficulty of maintaining meaningful connections in everyday life; they add that it is incredibly difficult for an actor to remain connected to their scene partner or the character they are portraying, a task they feel obligated to do due to the nature of their job, when

surrounded by signs of potential danger (2014, 158). This creates a dynamic intersection between the nature of live performance and key concepts found within Porges' polyvagal theory.

The Social Engagement System

The polyvagal concept that is arguably most present in live performance is the social engagement system. Porges states that the system interprets signals from the nervous system and in turn, manipulates the body's facial muscles (2017, 26-27). External influences can affect the operations of a person's social engagement system; a person can look at another person and intuitively assess their feelings through muscle engagement and body language (Porges 2017, 48). After taking in the other person's physiological state, the interpreter's response will vary depending on previous behavioral conditioning and emotional history. An expected response from a partner's social engagement system provides feelings of reassurance and peace while an unexpected response can be jarring and disorienting. Co-regulation is also crucial to the function of the social engagement system; once systems are synced and no risk is detected, the body can enter a vulnerable state. It is only when humans share a calm physiological state that safety cues can be successfully interpreted (Porges 2017, 51). The trust formed between actors due to frequent proximity in the rehearsal process allows them to effectively co-regulate with their scene partner(s) while honoring feelings of perceived danger.

Audiences are able to understand that the emotions of the characters in front of them are elements of a fictional narrative, while the actors on stage are intentionally muddling their neuroception processes. While an audience member may have their own clear interpretation of an actor's social engagement system, a scene partner's assessment may vary greatly depending on patterns of behavior seen in the rehearsal process. Discerning what is a deliberate adjustment of the social engagement system and what is an acknowledgment of their partner's needs places the actor further in a vulnerable position. It is within the loss of co-regulation that an actor's neuroception begins to assess their partner's actions as real-time risks removed from the context of their rehearsed narrative. When the psychological barrier between a character's choices and an actor's blocking is lost, communication from the vagal complexes can overpower familiar grounding techniques.

The Vagal Brake

To control when and how the systems found within polyvagal theory are employed, the nervous system engages a mental mechanism known as the vagal brake. When in use the vagus nerve overrides stabilizing systems at the sight of threatening stimuli, slowing down heart rate and limiting the use of breath to engage in defensive behaviors (Heilman et al. 2012, 241-242). Deb Dana, a founding member of the Polyvagal Institute, discusses the vagal brake's capacity to do more than slow the body down to a "fawn" or "flight" response in *Polyvagal Exercises for Safety and Connection: 50 Client-Centered Practices*; when the body is relaxed, the clarity of an activated sympathetic nervous system can be experienced across a wide range of emotions (2020, 160). The ability for the vagal brake to be partially engaged while focusing on other tasks makes it likely to appear in theatrical settings. An actor's vagal brake allows them to perform material that features subject matter that may trigger a trauma response. The balance required to keep an actor's vagal brake relaxed amid manipulated social engagement systems is a delicate one, and awareness of its presence allows the vagal brake to be used without sacrificing emotional connection and actor autonomy.

Redefining Play

Acting is the combination of real actions and fictional intentions. While an actor may make an effort to separate the actions they are performing on stage from their reality, any movement performed has a corresponding physiological effect (Saltz 1991, 32). This makes unrehearsed moments created as a result of a director's request to play just as, if not more, artistically and psychologically significant as blocked actions. The suspension of understood boundaries increases the potential of trauma responses in the rehearsal room, and creating parameters rooted in the core principles of polyvagal theory allows dramatic play to occur while reducing the possibility of a psychological disconnect.

Porges defines "play" as: "[a] neural exercise requiring synchronous and reciprocal behaviors between individuals creating a deepened awareness of each other's social engagement system (2017, 22)." This definition implies that when an actor enters a sustained state of play, they can discern that their scene partner's manipulated social engagement system is not a threat. This makes the incorporation of polyvagal principles into rehearsal practices a valuable means of encouraging

and maintaining connections between actors. While play in a polyvagal context may initially be seen as more formal and controlled than existing methods of play, it can still be used to achieve the same artistic goal through a different set of tactics.

Working Memory

Rehearsal is a collaborative memorization process dependent upon the actor's ability to learn information, process it quickly, and perform it almost immediately. The methods of meeting this expectation vary. The previously discussed informal survey asked its takers how important the elements of repetition, movement, and practicing with a scene partner were in their memorization processes.² Of those that self-identified as both an actor and a director, 100% reported repetition being important when memorizing a piece of text, 77.8% reported movement important when memorizing a piece of text, and 88.9% reported practicing with a scene partner important when memorizing a piece of text. While reported levels of importance vary between given types of memorization, each method ranked high in each artist's process.

Despite being self-reported to be important in the memorization process, the addition of a scene partner increases the potential for errors in co-regulation. One missing line or unplanned movement at a given moment can alter an actor's working memory. Drama therapists Dr. Sajnani and Dr. Johnson discuss working memory as a core part of executive functioning in their works, holding information in an accessible place after its initial input (2014, 158-159). Unlike the traditional idea of memory being a stagnant archive, the working memory is active and allows for real-time problem-solving using previously memorized information. This information constantly contextualizes the signals of another person's social engagement system and allows the person to adapt their own social engagement system accordingly (Sajnani and Johnson 2014, 161). Yet focusing on a scene partner alone is not enough to prevent the presence of a trauma response; working memories are naturally prone to distractions due to the cognitive effort necessary to prioritize several mental tasks at once (Zhang and Lewis-Peacock 2022, 2). If the creative team seeks to assist with the maintenance of focus in the rehearsal room, its members should acknowledge actor boundaries early on and account for them throughout the addition of movement. No amount of bonding within an ensemble can ensure that boundaries will not be crossed in performance, but

the incorporation of trauma-informed practices will allow actors to feel confident in their processes on and off the stage.

Play in Practice

Play in the rehearsal room is often not controlled as it is commonly associated with improvisation. As freeing as improvisation can be, its use in scripted pieces has the potential to significantly alter the material (Sullivan 2010, 25). The removal of set movements through unexpected improvisation can remove psychological signals of safety and spark a physiological trauma response. Establishing a distinct set of conditions that encourage polyvagal play sets a standard of artistic practice that respects personal boundaries. Exploration of internal motivation that lets neuroception-driven impulses be acted upon honors artist autonomy amidst the current consent-based cultural renaissance. To achieve the artistic freedom seen in improvisation without unintentionally facilitating physiological distress, practices can be adopted with polyvagal concepts in mind.

Repetition and the Italian Run Through

A key aspect of successful polyvagal play is the intentional use of repetition to create reinforced psychological conditioning. Repetition is crucial in any rehearsal process, allowing actors to feel comfortable with prescribed dialogue and movement through frequent exposure to the material. The neural pathways formed through repetition become a loose framework for polyvagal play to occur. To create this sense of security, well-known rehearsal exercises can be applied in a trauma-informed manner. An example of this is the "Italian run through," or a performance where the actors speak their lines as fast as they can while maintaining accuracy (Sullivan 2010, 25). The addition of speed to repetition increases the potential for actor reactivity, changing the pace enough to create a sense of unknown and disintegrate the structures which have previously anchored actors' senses of safety. This makes the Italian run through an excellent option to rehearse material in a way that simulates evaluation-based stress. In his discussion of environmental stressors, Dr. Johnmarshall Reeve of Australian Catholic University mentions in *Understanding Motivation and Emotion* (2018) that when events feature an element of evaluation, levels of the stress hormone cortisol spike and prepare the body to take on potential threats (65-66). This makes rehearsals and

performances both instances where cortisol levels can interfere with an actor's concentration. Combining repetition and the simulation of performance-based stress allows unexpected artistic choices to present themselves without perceiving them as a risk. The Italian run through allows the actor to develop a physiological memory of stressors while further deepening their understanding of the material, letting them play without the fear of losing concentration in front of their creative team.

Vagal Anchors and Springboard Gestures

As previously discussed, the vagal brake has several potential applications within a theatrical context. To ensure the consistent application of an actor's vagal brake, a "vagal anchor" can be incorporated into an actor's movement. Deb Dana of the Polyvagal Institute introduces the idea of a vagal anchor as a deliberate action that assists in the management of a person's nervous system and helps guide them toward regulation (2020, 47). An effective vagal anchor helps the person quickly find aspects of their environment that generate feelings of safety in a variety of circumstances. While trauma responses themselves cannot be predicted, they can be proactively managed through the establishment of vagal anchors in the rehearsal process. An example of a vagal anchor in contemporary theatre practice is the "springboard gesture." A practice developed by Theatrical Intimacy Education, a springboard gesture is a specific movement or sequence that lives in the world of the piece to assist with mentally exiting a given action (Cuskey and Rollie, 2022). This is most often used after moments of choreographed intimacy, but can also be used following the performance of any sensitive material. Applications of a springboard gesture range from a discreet fist bump between scene partners after an intense moment to a personal movement sequence that takes place immediately offstage. When offered to actors as a resource during the rehearsal process, vagal anchors can become seamlessly integrated into performances before the presence of a trauma response.

Rehearsal as Performance

Rehearsal is more than just a key part of production; it is a memorization process that plays a significant role in the storage of information in an individual's memory. There are two distinct ways in which rehearsal can be used to create an effective working memory. The first application

of rehearsal prioritizes short-term memory and focuses on information maintenance (Longe 2017). This can be seen in tasks that are simple and repeated frequently; an actor repeating lines they forget under their breath before a run through on the "off-book" date is a practical example of this rehearsal tactic. The second type of rehearsal prioritizes connecting new material to information that already lives in a person's long-term memory (Longe 2017). This is often seen in the rehearsal process when lines of dialogue are directly connected to prescribed movement and gestures, employing an actor's unique skillsets. Performers are trained and expected to engage the range of motion within their bodies, embody their feelings in a realistic manner, and connect the two simultaneously.

While actors are entering states of self-induced vulnerability in the rehearsal room, the creative team watches and evaluates the piece. This makes rehearsal its own type of performance — one that juggles familiar memorized information, new stimuli from changing surroundings, and unexpected artistic discoveries (Potter 2020, 310). In his piece "How To Do Things On Stage," performance scholar Dr. David Saltz notes that rehearsal's nature requires a connection between psychological awareness and physiological function, blurring the lines of whether a given action was committed by the actor or the character they were playing (1991, 33-34). By removing potentially activating circumstances from rehearsal practices, confusion during play can be eliminated while remaining artistically engaged. Doing so also allows the process to be as consent-based as possible; actors do not enter a rehearsal space expecting a trauma response to occur. Incorporating Porges' key principles into an individual's pre-existing practices acknowledges the psychophysiological aspects of common rehearsal exercises, allowing actors and members of the creative team alike to fully participate in a trauma-informed process. The parameters set welcome the unexpected without sacrificing an actor's physical and psychological boundaries, allowing the piece to become electric without potential harm to the actor.

Notes

¹ An online Google Forms questionnaire was created on October 11, 2022, and was open to receive anonymous responses through October 15, 2022. The Form could be accessed through a link that was shared on the social media platforms Instagram, Facebook, and Twitter; the link was distributed in public and private groups where users shared interest in theatre and/or were working theatre professionals. The questionnaire presented users with a total of 41 questions, and respondents were instructed to answer the questions that best align with their identity, creative process, and rehearsal status. Questions were presented in six main sections: personal self-identification, professional self-identification, the nature of the respondent's most recent rehearsal process, the importance of memorization techniques in the respondent's process, familiarity with Polyvagal Theory, and consent from the responder for

their anonymous responses to be included in an article with potential for publication. The survey was created and distributed to contextualize research findings within the current state of the theatre industry and those working within it. All participants were asked for their consent to use their answers anonymously with the intent of collecting data for an academic article. All respondents consented to the use of their responses as data.

Of the 43 responses, 93% (40) of responders identified as White/Caucasian, 4.7% (2) identified as Hispanic or Latine, and 2.3% (1) identified as Multiple Ethnicities. No responders identified as American Indian or Alaskan Native, Asian or Pacific Islander, or Black or African American. 58.1% (25) of responders identified as a woman, 34.9% (15) identified as a man, 4.7% (2) identified as non-binary, and 2.3% (1) identified outside of the provided options. 53.5% (23) of responders lived in the Middle Atlantic region of the United States (New York, New Jersey, or Pennsylvania), 11.6% (5) lived in the New England region (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut), 9.3% (4) lived in the East North Central region (Ohio, Indiana, Illinois, Michigan, Wisconsin), 7% (3) lived in the Pacific region (Washington, Oregon, California, Alaska, Hawaii), 4.7% (2) lived in the East South Central region (Kentucky, Tennessee, Alabama, Mississippi), 4.7% (2) lived in the West North Central region (Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas), 2.3% (1) lived in the Mountain region (Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada), and 2.3% (1) lived in the South Atlantic region (Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida). 4.7% (2) of responders to the survey do not live in the United States. No responders lived in the West South Central region of the United States (Arkansas, Louisiana, Oklahoma, and Texas).

The respondents were asked to select the roles that best described themselves as a theatre maker, and were allowed to select more than one option. Of the 43 respondents, 86% (37) identified as an actor, 37.2% (16) identified as a musician, 32.6% (14) identified as a dancer, 30.2% (13) identified as a director, 23.3% (10) identified as a freelance theatre educator, 16.3% (7) identified as a stage manager, 16.3% (7) identified as a theatre educator in a K-12 setting, 14% (6) identified as a writer, 11.6% (5) identified as an artistic director, 11.6% (5) identified a choreographer, 11.6% (5) identified as a producer, 4.7% (2) identified as a dramaturg, 4.7% (2) identified as a fight director/choreographer, 2.3% (1) identified as a music director and instrumentalist, and 2.3% (1) identified as a stage technician and audio engineer. No responders identified as an intimacy director/choreographer or theatre professor.

² The responders were asked to rate how important repetition is in the memorization of a piece of text on a scale of 1 (Not Important) to 5 (Very Important). Of the 43 respondents, 7% (3) of responders answered 3, 20.9% (9) answered 4, and 72.1% (31) answered 5. No responders answered 1 or 2. The responders were asked to rate how important movement is in the memorization of a piece of text on a scale of 1 (Not Important) to 5 (Very Important). Of the 43 responses, 2.3% (1) of responders answered 1, 11.6% (5) answered 2, 30.2% (3) answered 3, 20.9% (9) answered 4, and 34.9% (15) answered 5. The responders were asked to rate how important practicing with a partner is in the memorization of a piece of text on a scale of 1 (Not Important) to 5 (Very Important). Of the 43 responses, 9.3% (4) of responders answered 2, 18.6% (8) answered 3, 34.9% (15) answered 4, and 37.2% (16) answered 5. No responders answered 1.

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