



Role theory and executive functioning: Constructing cooperative paradigms of drama therapy and cognitive neuropsychology



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ABSTRACT

This theoretical investigation reviews drama therapy theory within the framework of neuropsychology. In order to accomplish such a task, Landy's role theory (Landy, 1993, 2001, 2009) is outlined via its foundational components and re-examined within an executive functioning model. The focus of this work is on those executive functions which contribute to the development, selection, and activation of roles within a social context. They are: working memory, attention, cognitive control (inhibition), and theory of mind. As a result, conceptual groundwork is established for the development of a burgeoning cooperation between paradigms of drama therapy and cognitive neuropsychology.

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Constructing cooperative paradigms of drama therapy and cognitive neuropsychology

Current trends in drama therapy literature have highlighted a theoretical movement toward the dominant neuroscience paradigm within the field of psychology (Chasen, 2011; Crenshaw, 2006; Frydman & McLellan, 2014; McKenna & Haste, 1999; Wood & Schneider, 2014). While certainly not outmoded as an intervention, the scope of drama therapy theory stands to benefit from a continued and critical dialogue with neuroscientific subfields (cognitive, affective, developmental, behavioral, neuropsychological, etc.); joining in the larger psychological conversation about the impact of therapeutic processing on cognition in the context of psychosocial functioning (Rourke, 2008). In doing so, the field can partake in the contemporary discussion with neuroscience subfields and develop generative models to build upon. This paper provides a structural basis for the link between drama therapy and cognitive neuropsychology, by enlisting *role theory* and *executive functioning* (EF) as cooperative and interchangeable frameworks. In articulating the inherent reciprocity of these two constructs, a relatable and translatable language can be implemented, thereby constructing a new framework of drama therapy processes.

Within cognitive neuropsychology, a synthesizing model has attracted substantial attention: *executive functioning* (EF). Located within the framework of higher order cognitive processing, EF encompasses such tasks as working memory, attention, cognitive control (otherwise known as inhibition), and has an affiliation with theory of mind. These functions serve to promote goal direction, monitor thought and action, and include skills such as self-regulation, cognitive flexibility, and instantaneous reflection in order to serve the present moment (Carlson & Moses, 2001; McCabe, Roediger, McDaniel, Balota, & Hambrick, 2010; Smith, 2002; Suchy, 2009). Such functioning utilizes attentional processes to stimulate schema-based data while engaging in, or preparing for, a planned mode of action. In doing so, EF produces an archived or active role when socially engaged.

The drama therapy conceptualization of role enactment can be found within Landy's role theory (Landy, 1993, 2001, 2009). In his model, Landy (1993, 2001, 2009) explicitly claims role as foundational to personality expression and as a socially triggered function; reflexively responding to the surrounding environment in its conception and presentation.

In order to outline the current state and potential integration of these role theory and executive functioning, the following sections will consist of a literature review of the growing interface between the creative arts therapies and neuroscience, an overview of EF, followed by an outline of role theory, and culminating in an investigation of specific EF processes as understood through a role theory lens.

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Review of literature

The creative arts therapies and neuroscience

Beyond the growing references within drama therapy, other models of creative arts therapy have actively fostered connections with neuroscience subfields. Perhaps most closely related to drama therapy is within the field of psychodrama (Brown, 2013; Fonseca, 2009; Yaniv, 2011) where Yaniv (2012) explores the use of role reversal as an empathy builder, citing Theory of Mind (ToM) to facilitate advanced empathic understanding. Further, Hug (2007), discusses the power of psychodrama on hemispheric integration, outlining neurobiological aspects of brain-body connectivity.

Arts therapists have ventured into the territory of neuroscience for well over a decade, viewing art therapy as an effective tool in responding to hemispheric asymmetry as a result of trauma exposure (Klorer, 2005). Klorer goes on to identify that "...the bridge between neuroscience and art therapy is becoming more pronounced" (p. 218), as she outlines the neuroscience based work of art therapists in the early 2000's. The work indicated therein has been subsequently expanded upon (Belkofer & Konopka, 2008; Buk, 2009; Gantt & Tinnin, 2009; Lusebrink, 2010) with a repertoire that includes a compilation on art therapy and neurobiology (Hass-Cohen & Carr, 2008).

Music therapists have been also been active in their establishing of a critical dialogue with neuroscience. Koelsch (2009) provides an overview of neurologically modulated factors impacted by music therapy, Magee and Stewart (2015) engage in a contemporary discussion on the challenges of integrating practitioner-oriented music therapy and neuroscience, and Kelly and Magee (2013) focus on neural reorganization as an outcome in the treatment of disorders of consciousness (see Rojo, Mengual, Juncadella, Rubio, Camara, Marco-Pallares, & Rodriguez-Fornells, 2011; Sarkamo, Pihko, Laitinen, Forsblom, Soinila, Mikkonen, & Tervaniemi, 2010).

Dance/movement therapists (DMT) have entered the conversation by highlighting the mirror neuron system in inducing affective states based on body posture, positioning, and movement (Berrol, 2006; Homann, 2010; McGarry & Russo, 2011; Winters, 2008). Previous research in DMT focusing on adolescents with mild depression who underwent a 12 week clinical intervention demonstrated a positive modulation in neurotransmitter regulation, suggesting that DMT may help to stabilize the sympathetic nervous system (Jeong, Hong, Lee, Park, Kim, & Su, 2005).

Finally, poetry therapy has fielded its own investigation into the neuroscientific underpinnings of metaphoric processing, inclusive of figurative language and abstraction, outlining language processing by brain region and exploring the potential efficacy with a schizophrenic population (Shafi, 2010).

The contemporary work of creative arts therapies indicates a growing movement toward the neuroscience paradigm. While drama therapists have begun to identify their own contributions, this paper provides a theoretical model to promote understanding and motivate further investigation.

Drama therapy and cognition

Landy (2001) comments that "the dramatic metaphor of life as theatre and people as actors could be applied to an analysis of social and cultural life and inner psychological processes" (p. 29). As such, drama therapy seeks to view the individual from both an internal and external point of view. In doing so, attention to behavior and the analysis of cognitive functioning finds a bridge within the drama therapy process. In borrowing from this dramatic perspective, Landy derives a theoretical construct that serves as the foundational concept for his approach: *role*. By invoking the image of people as actors serving to illuminate reflections of insight and

awareness, Landy sets the stage for the function of theatrical language as a tool for the elucidation of psychological processes.

Cognitive correlates

If we align ourselves with role as both fundamental to internal reflection and social engagement, an exploration into the mechanisms of cognition can afford a greater context for how role is generated and defined. The language of neuropsychology presents a technical aspect of psychological functioning and attempts to systematize mental processing into a structured framework (Giesbrecht, Sy, Bundesen, & Kyllingsbæk, 2014; Meyer & Lieberman, 2012; Suchy, 2009). The reconciling of role and neuropsychological functioning can afford both paradigms a reciprocal mutuality. By invoking the language of neuropsychology, role theory's position as a theory confined to the archives of drama therapy will be generalized and utilized by a more expansive audience. Moreover, if role theory is to be utilized in service of this mediation, where does the focus lie within cognitive psychology, or, more specifically, within neuroscience? Perhaps the neuropsychological understanding of executive functioning provides the answer.

Executive functioning

As a compilation of mental tools, "EF refers to cognitive or supervisory processes associated with the active maintenance of information in working memory, the appropriate shifting and sustaining of attention among goal relevant aspects of a given task or problem, and the inhibition of prepotent or extraneous information and responding with a given task context" (Blair, Knipe, Cummings, Baker, Gamson, Eslinger, & Thorne, 2007, p. 151). Thus, from a social context, executive functions work to *supervise behavior, healthily incorporate and reconcile incoming information with established data, and regulate attention* in order to generate situation specific functioning. As a descriptor, EF operates as an umbrella term, encompassing a multitude of functions which work to facilitate identity in a social context (Lewis & Carpendale, 2009). This contextual understanding of personality, both from an internal and external perspective, allows the individual to create and recreate themselves according to their ever shifting environmental reality (McConnell, 2010; Suchy, 2009).

In understanding *role* as foundational to social being (Landy, 1991, 1993, 2009), role's function can be identified within the use of EF operations to access and perform congruent, efficacious, and desirable roles. Since EF incorporates a multitude of capabilities (understood here as working memory, attention, cognitive control, and theory of mind), its utility is identifying, classifying, and enacting various roles accrued over the course of the individual's experience. Since EF organizes the individual's social and internal processes, its operation parallels that of role theory's position on role definition: activation is predicated on social environment (Landy, 1993; Lewis & Carpendale, 2009; McConnell, 2010; Meyer & Lieberman, 2012; Ybarra, Burnstein, Winkelman, Keller, Manis, Chan, & Rodriguez, 2008).

In order to properly address these EF functions and how they influence the generation and presentation of role, a comprehensive explication of role theory is in order.

Role theory

Role

Role theory's understanding of its eponymous construct is presented by Landy (1993) as "a basic unit of personality containing specific qualities that provide uniqueness and coherence to that unit. ... [it is] the container of all the thoughts and feelings we have about ourselves and others in our social and imaginary worlds"

(p.7). As a unit of personality, role exists as “part rather than whole” (Landy, 1991, p. 29). Its presence does not provide a transparent view of the individual’s personality; rather, it demonstrates a single part of a greater whole. This presentation allows for further significance of role as the individual possesses a whole host of roles and is dependent upon their fluidity in order to maintain a multidimensional view of existence (Landy, 2009).

Framing role as a personality concept Landy (2009) writes, “Human experience, according to role theory, can be conceptualized in terms of discrete patterns of behavior that suggest a particular way of thinking, feeling, or acting. Role is one name for these patterns” (p. 67). Landy suggests that role is an organizing construct, helping to define the individual’s personality. It is how the individual interfaces with the world; the patterns we possess provide a rationale for (inter)action. How we see ourselves in context is dependent on the coordination and understanding of our experience. As a consequence, the individual is caught in the juxtaposition of simultaneously identifying a role (me), which automatically forges the birth of the other (not me). As the individual chooses a role, the defining characteristics must be drawn from what the role is not. It is in this paradox that role theory finds its multifaceted and ever shifting nature, a notion inherent to the dramatic process.

Role system

The key to understanding how these roles can maintain their uniqueness is through the notion of role paradox. By living within a reality of multiple and interchangeable roles the individual can enjoy a sense of integration and balance, taking and indulging in the qualities from roles most useful. By maintaining role paradox we can access our personal *role-odex* and search for the role we find most suitable for the situation. If we suffer from too little role paradox then our view of the world becomes myopic, providing few options. If we are over-inundated with roles and cannot maintain a paradoxical disposition then we find ourselves in role confusion. With too many options presenting themselves at any given moment we convolute our choices and cannot commit to or master any particular role. However, if we are able to adhere to the paradoxical nature of our role system, we can gain a sense of integration, allowing all roles to be at our disposal. With choice comes balance and with balance comes stability.

Counterrole

While remaining aesthetically distanced, the paradoxical disposition we attempt to maintain is located at the center of our role system. As was previously stated, role is defined in context of the other. If this is so, then the conception of role exists only in relation to what it is not, and we take opposing qualities of every role in order to define its counterrole(s). This dyad is at the heart of dramatic action, providing motivation through tension, which is created by the role reconciling with the counterrole. However, this dyad can be expanded outside of a simple dualistic relationship: for every role there can be numerous counterroles and vice versa (Landy, 1993). Since role does not strictly adhere to a set of standards, its flexibility is taken into account by the various roles which counter it. These counterroles are established once differing qualities of a particular role are displayed. Also, the context of any situation may call for an alternate counterrole than what had been originally conceived. This variety of roles comprises a wholeness, or system, from which an individual may extract certain roles when called for. In order to achieve wholeness and mental well being, one must find themselves to be a compilation rather than a specification. The more open and inviting we are for roles to develop through

counterrole and vice versa, the more options we give ourselves to achieve an ambivalent, and whole, state.

Guide

The guide is essentially a transitional figure, providing context, motivation, and clarity for the role and counterrole to negotiate with one another. Landy (2001) remarks that “the guide... is the final part of the role trinity. The guide is a transitional figure that stands between role and counterrole and is used by either one as bridge to the other. One primary function of the guide is integration. Another is to help clients find their own way. As such the guide is a helmsman, pilot and pathfinder, a helper who leads individuals along the paths they need to follow” (p. 33). At the outset of the journey the individual uses the therapist as the guide figure until they are ready to formulate an organically constructed guide from their own experience. Thus the paradox of role and counterrole finds a bridge in the form of guide, played originally by an external force and eventually integrated into the internal negotiation between role and counterrole.

The preceding discussion has illuminated the core concepts of role theory and established a basis for the development of a new model which utilizes executive functioning in its construction. In order to further this goal, the next section will address the cognitive concept of *schema*, or intra-psychically referred to as *self-schemata*, and introduce the reader to a cognitive perspective of role theory.

Schema

As a core component of cognitive psychology’s structure and language, schema, or intra-psychically referred to as self-schemata (Aronson, 2008; Markus, 1977; McConnell, 2010), operates as a holding mechanism for accrued knowledge. Therefore it will be identified here as a system of context dependent, interrelated memory banks. Schema can also be referred to, according to role theory, as the role system.

Schema and role

As has been previously discussed, a single role represents a unit of personality, offering itself as a piece of a larger whole. In negotiating the construction of the individual, Landy (2001) remarks that the “role system is another way of thinking about personality structure. It is the container of all intra-psychic roles. Within the role system are those roles that are available to consciousness and that can be played out competently... They will be activated when given the proper social or environmental circumstance” (p. 37). Such psychological organization represents a framework from which personality can utilize stored data (schemas) when needed; although a single role may be called upon, its parallels remain alert, awaiting their proper context.

In their discussion of EF, Rueda, Posner, and Rothbart (2005) address this concept, stating that “psychological processing systems rely on a number of hierarchically organized schema of action and thought used for routine actions. These schemas are automatically triggered and contain well-learned responses or sequences of actions” (Rueda et al., 2005, p. 576). Thus, action is often dictated by our learned experiences. Similar to Landy, Rueda et al. (2005) also identify context as a trigger, designating a social or environmental cue as the setting for schema activation and subsequent role selection. Therefore, schema and the role system are identical figures in that they are learned psychological structures organized into systematic units.

Schema’s service as a unifying construct that shapes our personal history into coherent memories, feelings, and beliefs, affords the personality an integrative perspective on its self-concept

(Aronson, 2008; Markus, 1977). In defining self-schemata Markus (1977) remarks that, “Self-schemata include cognitive representations derived from *specific* events and situations involving the individual. . . as well as more *general* representations derived from the repeated categorization and subsequent evaluation of the person’s behavior by himself and by others around him” (Markus, 1977, p. 64). Markus tracks categorization, selection, and activation via contrasting social contexts, thereby reinforcing both Landy and Rueda et al. in their positing of social environment as central to role activation. Furthermore, Markus clearly demonstrates the psychological processing occurring during role selection by articulating a schema based process for role reflection and selection.

Now that a basic model for cognitive correlates to role theory has been established, I will conduct a more thorough investigation by invoking the neuropsychological model of EF. In the ensuing discussion of EF, I will continue with the format of reviewing an executive function by understanding its operations within the structure of a component of role theory.

Components of executive functioning

Working memory

Working memory is used as an intermediary to negotiate external stimulus with accrued internal knowledge. In order to produce an appropriate response, working memory must initially intake and interpret the quality and intent of incoming stimulus (Meyer & Lieberman, 2012; Thornton & Conway, 2013). Following this intake, the information ascertained must be organized and classified (Byrnes, 2001). In doing so, the individual reconciles stored schematic data with informed behavioral response, resulting in the optimal behavior for the present moment.

As working memory is the term used to refer to the management of incoming information, it is critical to helping the individual adjust to their surroundings (Byrnes, 2001). It is precisely because of this ability that personality is pliable, benefitting from stimuli management, updating, and the classification of cognitive records into long term memory (Baddeley, 2012; Meyer & Lieberman, 2012).

Working memory and role system

We can directly link the function of working memory to role theory in its description of stimulus engagement and schematic categorization. In discussing role’s relationship to counterrole, Landy (2008) identifies the process of “creating dyads that are dynamic in nature, flowing toward and away from each other as the situation demands” (p. 104). Counterrole represents an important function in determining role selection. Since the counterrole is not in objective opposition, its creation is forged from the individual’s subjective experience. Such decision making is conducted by considering a variety of options based on stored schematic data, suggesting an interrelatedness of one’s role system.

Working memory’s integrative approach to observance of stimuli and response via the activation of one’s role system corroborates role theory’s assumption of role/counterrole construction. Once a role is conceived, the individual must consider when to activate the chosen role. This ability, known commonly as *planning*, affords the individual the capacity to arrange information advantageously; when the suitable situation arises, the chosen role, already thought out and well conceived, is brought into action. This ability, to order events and relate them to our present awareness, paves the way for the freedom to “rearrange events and ideas, leading to self-consciousness” (Smith, 2002, p. 346). We are able to determine the roles we play by revisiting our previous actions and, in doing so, gain a greater knowledge of ourselves. With this knowledge we can harness a sense of flexibility and ultimately become more

adaptable. Therefore, the working memory capacity of planning affords role theory the notion of possibility.

Without planning, a linear mode of being would cease and personality would be reactive in its expression. Planning allows for the process of role selection to occur with the most advantageous choice in mind (Hofmann, Schmeichel, & Baddeley, 2012). For example, if I am an employed father, then I will want to be aware of and plan for the transitions between work and family in order to capitalize on my time in either setting. As Smith (2002) states, “the resultant ability to reflect on past experiences and plan future actions are at the heart of human experience” (p. 366).

In addition to role conception, role playing (the enactment of an identified role) can also be articulated via working memory processes (Hofmann et al., 2012). According to Miyake, Friedman, Emerson, Witzki, Howerter, & Wager (2000) the working memory “model includes a central core structure called the *central executive* which is considered responsible for the control and regulation of cognitive processes. . .” (p. 51). Such a responsibility highlights working memory’s place among executive functioning as imperative—managing external stimuli while monitoring correspondent processing. Role theory’s alliance with this momentary attentional flow is cited by Landy (2001), stating that “role is not necessarily a fixed entity, but one that is capable of change according to the changing life circumstances of the individual role player” (p. 32).

Attention

Attention is the ability to highlight and focus on pertinent external stimuli. When attuning to a particular stimuli we are reducing or negating the presence of other competing stimuli (Giesbrecht et al., 2014; McAvinue, Habekost, Johnson, Kyllingsbæk, Vangkilde, Bundesen, & Robertson, 2012). Therefore, our attention determines our self-concept in that our focus comprises the limitations of our experience; it forms the tunnel with which we experience our social world (Ward, 2004). If attention is not strategically applied then we are left with an unfocused and misaligned response to external stimuli. By setting our attention on important factors we can gain a better understanding of how to navigate the external environment, generating an informed internal response (Ward, 2004).

Attention and the guide figure

The impact of focusing one’s attention invokes Landy’s notion of the guide figure. According to role theory “the guide is a transitional figure that holds together the role and the counterrole, offering the possibility of integration” (Landy, 2008, p. 106). The guide, then, is the figure called upon to comprehend the amorphous interplay between role and counterrole. It is how we incorporate, synthesize and (re)present role salience. Attention processes serve a parallel purpose. Past theory has framed attention’s true utility in its power to guide self direction (Nelson, de Haan, & Thomas, 2006; Rothbart & Rueda, 2005; Ward, 2004). This self-directive function surfaces from an internal negotiation of the role-counterrole dyad within the role system mediated by a guide figure. Once the integration of these figures is complete, attention directs its focus. Without a figure to bridge these roles the individual stands to remain stuck in a maladaptive pattern, perseverating on a single role or a limited number of roles (Landy, 2001).

Conversely, when the individual successfully employs the guide figure “they realize that sense of integration, they have indeed experienced a shift in consciousness” (Landy, McLellan, & McMullian, 2005, p. 291). This shifting consciousness can be likened to the deployment of attention in that they both indicate a realignment of schematic processing. Therefore the guide figure’s intentions come to fruition when attention refines its focus, paving the way for social awareness, definition, and

engagement—bridging internal role selection with external social action. Ward (2004) comments that attention “processes... seem to measure our ability to direct our free will. This means being able to concentrate processing resources on the resolution of complex novel tasks, while inhibiting irrelevant responses and staying free from distraction” (p. 106).

Cognitive control (inhibition)

The actual process of focusing and attuning attention is made possible by the function of cognitive control; the effortful shifting of attention onto goal-relevant stimuli while simultaneously ignoring goal-irrelevant stimuli (Munakata, Herd, Chatham, Depue, Banich, & O'Reilly, 2011; Rothbart & Rueda, 2005). Therefore, cognitive control is the way in which we control where our higher order cognitive processing is deployed. This is done by utilizing the functioning of inhibition to block out distracting and non-essential stimuli from our plane of focus (Bari & Robbins, 2013; Munakata et al., 2011).

Inhibition plays a major factor in determining self-concept. Without the successful deployment of inhibitory processing, the individual's self concept would be disorganized and volatile since it would be subject to an endless stream of incoming and unfiltered information (Bari & Robbins, 2013).

The manner in which we inhibit has also been associated with individual differences since how and where we manipulate the locus of our attention creates unique mental representations, which are then organized into self-other schemata and internalized as components of self concept (Carlson & Moses, 2001). Inhibition's contribution to executive functioning appears all-encompassing.

Cognitive control and role definition

If, according to role theory, the “human personality is a system of interrelated roles which provide a sense of order and purpose,” (Landy, 1994, p. 102) then, perhaps, cognitive control's deployment of inhibition is a key factor in providing such structure. By focusing attention on the other, the individual is engaging in a relational process. Such a focusing implies the deployment of a particular role to achieve a successful and desired interaction. This formulation identifies role, which is how we define ourselves in the moment, as the container for social action.

The invocation of inhibitory processes furthers the development and enactment of role definition by accessing the hierarchical role system and blocking out distraction (Fonagy & Target, 2002; Munakata et al., 2011). In doing so the individual is able to structure their self-concept from both internal schemas and external stimuli.

Theory of mind

The discussion thus far has revolved mainly around the individual's internal processing when encountering external stimuli. However, in order to successfully navigate social situations, the ability to conceptualize another person's perspective must be intact (Carlson & Moses, 2001; Hughes & Ensor, 2007; Nelson et al., 2006; Morris, Tarassenko, & Kenward, 2006). Theory of Mind (ToM), or mentalizing, is the ability to conceptualize and account for other's inner states in relationship to one's own inner states, engendering a multifaceted understanding of a given situation (Hughes & Ensor, 2007). This ability, to mentally represent others' beliefs and, in turn, acquire clarity into one's own disposition, has not been directly categorized as an executive function; however, its correlation to EF processes has been widely researched (Aboulafia-Brakha, Christie, Martory, & Annoni, 2011; Carlson, Moses, & Claxton, 2004; Carlson & Moses, 2001; Hughes & Ensor, 2007; McAlister & Peterson, 2013; Meyer & Lieberman, 2012; Nelson et al., 2006). Hughes and Ensor (2007) have described ToM's relationship with EF as “functionally entwined” (p. 1447) and claim their relationship to be mutually interdependent. ToM has been identified as a prerequisite for the ultimate arrival of EF; as the sophistication of mental processes

ripen, a developing individual will gain a better understanding of his own mentality and, consequently, better control his cognitive capacities (McAlister & Peterson, 2013).

Without the capacity for mentalization, the human experience would succumb to a myopic understanding of itself and operate under a limited set of presumptions regarding social interaction. It is precisely in the ability to mentalize that the individual can find the means to think beyond themselves and healthily grow in areas of self-regulation (Carlson & Moses, 2001; Hughes & Ensor, 2007).

Theory of mind and counterrole

As counterrole is not a direct opposite of role, rather “other sides of the role that may be denied or avoided or ignored in the ongoing attempt to discover effective ways to play a single role” (Landy, 2009, p. 68), a reliance on strict archetypal role definition cannot be employed. Therefore the conception of counterrole is represented by the implementation of ToM processes. In order to define one's role within interpersonal interaction, individuals must construe the station of their partners (Bohl & van den Bos, 2012; Carlson & Moses, 2001). In doing so, they must reflect on their own mental state and construct a counterbalance in order to present the appropriate role for the given context. Theory of Mind's capacity to investigate and comprehend the mental state of another allows the individual to entertain multiple possibilities for role selection. Consequently, the dramatic paradox of role-counterrole is further reinforced by ToM's capability of understanding the complexity of human experience. Instead of viewing human interaction through a tunnel vision of direct opposites, ToM creates the space for a broadminded conception of counterrole. In this way, a role can be reactively elicited and the dyad's interdependence can provide role definition for all parties involved (Landy, 2009).

Final thoughts

It is precisely the mediation of the intra-psychoic and the interpersonal that demonstrates EF's partnership with role theory as role is defined in context of the other (Landy, 1993). We are social beings, constantly looking for environmental feedback to trigger the appropriate role (Aronson, 2008; Lewis & Carpendale, 2009). Such a commitment to each other calls for a communicative language that connects paradigms. The partnering of drama therapy with cognitive neuropsychology affords researchers, practitioners, and students in both fields a chance to foster a reciprocity that transcends issues of theoretical separation: drama therapists can perform therapies based on a deeper understanding of neuropsychological processes, and neuropsychologists can become more flexible in their understanding of effective treatment methods.

This paper has demonstrated that action is needed when encountering a new stimulus and that action is drawn, via EF processes, into the forefront in the form of a role. The executive functions serve a parallel purpose as the guide role, described as an integrative figure, which help provide role clarity (Landy, 2008). These analogous operations are firmly grounded in the requirement for social interaction as a catalyst for the mobilizing of action.

In using social action as a vehicle for connection of functioning, drama therapy and cognitive neuropsychology call upon role theory and executive functioning to connect their respective positions. The evidence presented in this paper directly correlates core components of each model in order to facilitate the development of a new understanding of role theory as supported via executive functioning processes.

Areas for further research

In examining areas for ensuing work, a number of specific directions are possible: Firstly, while this work is particular to

drama therapy, other creative arts therapies should continue mapping their own theoretical models to a neuroscience framework. Doing so will help to further dimensionalize the field of creative arts therapy as whole and orient clinicians with a neuroscientific background to the merits of creative art therapy; Second, further correlation into executive functioning's permeability within drama therapy beyond Landy's role theory is necessary. If the field of drama therapy is to capitalize on this work, an investigation and application of numerous drama therapy modalities will serve to broaden and enforce the assertions initially founded in this paper.

Limitations

This paper has operated on a theoretical level, pooling research and logically reasoning its position. However, a practical basis for role definition can only be examined with the application of multimodal research. In remaining purely theoretical, the argument for correlation is dependent on a subjective review of information and, in order to stand on its own, must be empirically determined.

Lastly, as EF is an umbrella term, encompassing a wide variety of cognitive capacities, this paper concentrates on four applicable operations. However, this paper does not handle the extensive biological processing of the frontal lobes, specifically the prefrontal cortex, in its descriptive focus of processing. In order to provide a more foundational basis for EF, such an investigation is necessary.

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