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„The Role of Body Awareness and Judgment of Agency in Major Depression Disorder:

Approaching an emancipated spectator transformation in psychotherapy"

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Abstract

Agency, as the ability to act, is an essential component of being. However, the conceptual understanding has been undergoing much controversy in literature. While most research has focused primarily on the sensorimotor dynamics of agency, the higher-order level, the “judgment of agency” (JoA) has been barely acknowledged. As literature indicates, this acknowledgement may not only occur on a cognitive level but could also involve a bodily influence. A context where agency is aimed to be increased, is psychotherapy. However, psychotherapeutic settings are mostly conversation-based and operated in bodily stillness, i.e. sitting. Performative Arts theories by Lepecki and Ranciere, suggest that body awareness (BA) is a crucial component for the sense of agency and highlight how it may be enabled through movement therapies. This research therefore questioned: How is the level of bodily awareness connected to the judgment of agency in depression? In this study major depression disorder (MDD) patients are participating in a body therapy session either actively or by passively observing others. Their subjective level of body awareness (BA) and JoA are prior and after the session through the Sense of Agency Scale Questionnaire and the Body Responsiveness Scale reported. However, no effect of body therapy neither on body awareness nor on JoA could be found. Hence, active/ passive participation did not have an influence on BA and JoA reports. Through this study the conceptualization and implementation of agency

could not be redefined. Our theories could thus not be supported. Due to various aspects of limitation of this study, follow-up studies are necessary to emphasize our results or reveal underlying effects, after all.

Zusammenfassung

Handlungsfähigkeit (englisch: agency) ist ein wesentlicher Bestandteil des Seins. In der theoretischen Literatur, stößt das Konzept jedoch immer wieder auf kontroverse Positionen und widersprüchliche Ergebnisse. Während sich die meisten Forschungen hauptsächlich auf die sensomotorische Dynamik der Handlungsfähigkeit konzentrieren, wurde die höher kognitive Ebene, das „Urteil der Handlungsfähigkeit“ (englich: judgment of agency (JoA)) bislang kaum anerkannt. Wie aus der Literatur hervorgeht, kann diese Anerkennung jedoch auch nicht nur auf kognitiver Ebene erfolgen, sondern beinhaltet möglicherweise eine zeitgleiche, körperliche Beeinflussung. Ein Kontext, welcher die Handlungsfähigkeit zu verstärken beabsichtigt, ist die Psychotherapie. Psychotherapeutische Sitzungen sind jedoch meist Gespräch basiert und werden im körperlichen Stillstand, sprich Sitzen, ausgeführt. Theorien der Performativen Künste von Lepecki und Ranciere legen jedoch nahe, dass Körperbewusstsein (englisch: body awareness (BA)) eine entscheidende Komponente für das Gefühl der Handlungsfähigkeit ist und zeigen, wie es durch Bewegungstherapien ermöglicht werden kann. Diese Forschungsstudie stellte daher die Frage: Wie hängt der Grad der Körperwahrnehmung mit

der Beurteilung der Handlungsfähigkeit bei Depressionen zusammen? In dieser Studie nehmen daher Patienten, die unter einer Depression leiden (englisch: major depression disorder (MDD)) an einer Körpertherapiesitzung teil. Partizipation erfolgt entweder aktiv oder durch passive Beobachtung anderer. Der subjektive Grad an BA und JoA werden vor und nach der Sitzung durch den Sense of Agency Scale Questionnaire und die Body Responsiveness Scale gemeldet. Jedoch konnte kein Effekt der Körpertherapie weder auf das Körperbewusstsein noch auf die JoA festgestellt werden. Somit muss geschlussfolgert werden, dass die aktive/passive Teilnahme keinen Einfluss auf die BA und JoA hatte. Durch diese Studie konnte dementsprechend die Konzeptualisierung und Umsetzung von Agency nicht neu definiert werden. Unsere Theorien konnten folglich nicht unterstützt werden. Aufgrund verschiedener Einschränkungen dieser Studie sind Folgestudien dennoch notwendig, um unsere Ergebnisse zu unterstreichen oder gegebenenfalls doch zugrunde liegende Effekte aufzudecken.

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List of Abbreviations

BA	Body Awareness
JoA	Judgment of Agency
SoNA	Sense of negative Agency
SoPA	Sense of positive Agency
BR	Body Responsiveness
SoA	Sense of Agency
FoA	Feeling of Agency (Synofzik)
MDD	Major Depression Disorder
WHO	World Health Organization
PMR	Progressive Muscle Relaxation (Jacobsen)

One's flesh is the vanishing point of the distinction between subject and object, self and other, and the individual and the world. –Merleau Ponty, 1961

No-body has the right to obey. – Hanna Arendt

Introduction

CoVid-19 and Major Depression Disorder

On the occasion of the COVID-19 Crisis 2020 the world faced and is still facing a massive global transformation of life as we knew it. In order to contain the spread of the virus, many people were advised or even obliged to stay at home and curtail their living space and environment, and hence their scope of (physical) actions. A variety of mental health organizations called out that the reduction of external distraction, of the experience of self-efficacy and lack of social support would pose an alarming threat to the overall psychological well being. The estimated increased tensed states of major depression disorder (MDD) and anxiety illustrate a situation, which the New York Times termed the "dual crisis of physical and mental health"[1]. The urgency and severity of this crisis reaches so far that the federal

[1]"When the pandemic leaves us alone, anxious and depressed" (2020),Andrew Solomon, New York Times, https://www.nytimes.com/2020/04/09/opinion/sunday/coronavirus-depression-anxiety.html?smid=url-share

emergency hotline of the United States of America reported a 1000 percent increase of people calling in emotional distress in April 2020 compared to April 2019[2]. The Washington Post further emphasizes a warning by Meadows that this could potentially result in an increase of about 18000-22000 suicides, only in the United States. Apart from the financial aspect- "Depression and anxiety before the COVID-19 pandemic cost the global economy more than 1 trillion $ per year"[3], the personal and social effects would therefore question many existential and societal fundaments. Even before COVID-19 spread, approximately more than 300 million people were suffering from MDD world-wide[4]. According to the World Health Organization (WHO) major depression disorder is in fact the global leading cause of disability. In their report in 2017, the WHO declared that the prevalence of depression has risen by 18 % since 2005. Given the high suicide rate of approximately 800 000 people each year, which often have been preceded by a depressive episode, and in light of the persisting CoVid-19 restraints, the need to act is urgent.

This urgency, however, simultaneously offers us a chance to question the existing knowledge and methods underlying and treating depression among people. As Richards (2011) demonstrated, a notable proportion of MDD patients is not helped by the existing methods of

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[2] William Wan (2020) https://www.washingtonpost.com/health/2020/05/04/mental-health-coronavirus/

[3] WHO Mental Health in the Workplace - https://www.who.int/teams/mental-health-and-substance-use/promotion-prevention/mental-health-in-the-workplace

[4] WHO-Factsheet, March 2018 - https://www.who.int/en/news-room/fact-sheets/detail/depression (retrieved on July, 28th, 2019)

treatment and continue experiencing daily life as a major obstacle. Therefore, this crisis both allows and demands to push us to different ideas and actions for the same questions, yet in a new context: How do the CoVid-19 restraints demonstrate which factors are responsible for stressing the symptoms of depression? Which aspects of life as we knew it and experiences of ourselves within this, have changed so profoundly, that people are being so disrupted in their coping mechanisms with life? Where lie unrecognized chances within this extraordinary situation both to understand the phenomenon of depression deeper and to create novel, efficient and suitable ways of treatment?

Apart from the by the mental health organizations given factors outlined earlier, an answer for these questions could be found in the relationship between depression, agency and the body. In this paper I will argue that the change of the feeling of agency, which has been addressed indirectly by the mental health organizations, is in fact crucial for entering and overcoming depression and further, is tied to a bodily experience.

This research therefore aims to react directly upon the personal, social and economic need by investigating the influence of the body on the relationship between agency and depression. Through this study the by CoVid19 highlighted (bodily) influences on depression as well as agency should become clearer. In the following part of our Introduction we will at first create an overview of the connection between agency and depression. This outline should help us understand the complex phenomena before we draw any interferences upon that basis. Subsequently, the second part will

introduce the concept of an “emancipated spectator transformation”. This performance art concept offers a novel theoretical as well as methodological framework for understanding the relation between agency and depression. This part will thus emphasize how the integration of this performance arts concept into the discussion of depression and agency may serve crucial benefits for society both during and beyond a pandemic crisis. Moreover, the third part will tackle the up to this moment existing literature upon agency, and demonstrate another “dual crisis”, which we will turn on. Finally, our ultimate part will connect these topics by questioning the role of the body within this dynamic and highlighting the need for an emancipated spectator transformation in psychotherapy and scientific approaches. At last, the design of our study is being proposed. The transfer of our drawn conclusions and hypotheses is then being implemented and explained along our experimental design. Before we get to that, we need to understand: How are agency and depression related to each other?

Understanding Agency in Depression

Major Depression Disorder is commonly known as the experience of a continuously lowered mood, lack of interest and loss of energy over a longer period of time. One of the core but however less attended and addressed characteristics of depression and simultaneously the disturbing or even impeding factor for treatment and progress is lethargy, or precisely: the lack of the feeling of agency (Slaby & Stephan, 2012). Agency, is by the

Stanford Encyclopedia of Philosophy defined as “the ability to act”[5]. While Andrew Solomon shows that “the opposite of depression is not happiness but vitality”[6], he highlights the assumption that (physical) agency may play a major role in developing, keeping and overcoming depression. Slaby (2012) agree with this view but extend the definition of depression by describing it as a “somatic-motoric blockade and overall the inability of the person concerned to stabilize themselves, to adopt and maintain an attitude and to act purposefully on the basis of such attitudes.”

Beyond the somatic dimension, agency may therefore also carry cognitive implications. As Slaby demonstrated, depression is not only concerned with acts, but with *purposeful* acts. Agency can thus, among the somatic dimension further be regarded as a very essential subjective perception of being, namely to feeling as “the author of one’s life” (Braun et al. , 2018)[7]. Being the “author of one’s life” includes, as Toivonen, Wahlström & Kurri (2018) reinforce, “a storied representation of a belief that one is able to influence one’s circumstances and as a narrative theme including one’s sense of autonomy, mastery, achievement and therefore also one’s sense of meaning and purpose in life”. That the lack of meaning in life is often associated with depression[8] (Bennett, 2020, PsychCentral), again emphasizes the apparent connection between depression and a

[5] https://plato.stanford.edu/entries/agency
[6]https://www.goodreads.com/quotes/555275-the-opposite-of-depression-is-not-happiness-but-vitality-and
[7] https://maziqbal.net/tag/being-the-author-of-ones-life/
[8]https://psychcentral.com/blog/why-finding-your-purpose-is-important-when-battling-depression#1

cognitive, higher-level dimension of agency and how this form of agency is crucial for being. As Slaby, Paskaleva and Stephan (2013:2) showed: “central experiential changes reported by sufferers from depression likely result from an affliction of agency”. In their study, they demonstrated, how depression, as a mood disorder, reveals how the basic existential orientation of humans towards possibilities and (non-) existing potential, is always tied to emotion. As Mesquita and Markus (2003) phrased it, indeed “the worlds that people encounter are shaped in ways that reflect and perpetuate particular cultural models of agency“.

If the existential basis of experience is being tied to a necessary experience of agency, this would explain how a loss of both physical as well as a mere feeling of agency, for instance due to CoVid-19 restrictions, could significantly change our perception of ourselves in the world and would further explain the connection to depression.

Assuming that agency is indeed so vital and fundamental to understanding a person’s perception and consequently also the perception of individuals suffering from depression, it needs to be taken into account for (psychotherapeutic) treatment. However, although the research of agency has experienced a new wave of interest from the later 20th century onwards again (Tapal et al., 2017), the concept of agency is still suffering various ontological and methodological difficulties (Nisbett & Wilson, 1977; Karsh et al., 2016; retrieved in Tapal et al., 2017). While most research, for instance, has focused on the initially introduced mere physical, sensorimotor aspects of agency, the higher-level aspects of agency have

been mostly tackled by a strong theoretical approach but have barely integrated this knowledge in the practical context, offering a concrete possibility of an interdisciplinary perspective and implementation. In times of “dual crises”, another “dual crisis” of agency could however, rather block process instead of providing the necessary progress and practical integration.

In order to grasp and transform the pragmatic implementation of the connection between agency and depression an approach is needed, which takes both a conceptual as well as a physical form of agency into account. A discipline which has always worked like that is performance arts.

Performance Arts: Agency through Emancipated Spectator Transformations

In the performative research domain, cognitive concepts are generally interpreted and analyzed through a bodily, i.e. performative method. Additionally, within this discipline, agency plays a central role and is frequently being tackled: For instance, in the work by Jacques Ranciere. He introduced the concept of the “emancipated spectator transformation” (Lepecki, 2016) which has ever since been causing an ongoing discourse (Bishop, 2018; Lepecki, 2016).

Within this concept, he opposes classical conceptions of the spectator. While these tend to define him/ her as a passive, powerless

side-figure, modern approaches in performative arts demand to adapt a novel understanding of him/her: “The spectator also acts” (Ranciere, 2009, 13, retrieved in Breemen, 2017, 301) Ranciere claims and explains that the spectator functions as a “translator” of phenomena. Breemen supports this view and demands that “the spectator should not be approached as a matter of secondary importance, but as a necessary element actively creating the conditions and the content for performances” (Breemen, 2017, 301).

In his work “Singularities” (2016) Andre Lepecki therefore differentiates within Ranciere’s concept two roles of attending a performance: Spectators and Witnesses. While the spectator immerses him-/herself into a passive role, the witness, in contrast, chooses to take responsibility within his/ her watching role. Responsibility, in a sense, that the experience will be reflected on and surpassed further to others. “Only the witness sees the whole performance and is properly “subjective-corporeal-affective-historical”; the spectator, by contrast, checks in and out (173)” Claire Bishop explains (Bishop, 2018). These two different roles of spectatorship incorporate thus different modes of attention and consequently, different phenomenal perceptions and potential about both others, i.e. the external world and oneself as being part or separated by it.

The concept of Ranciere intends to remind therefore, that within being a spectator, an active impression on the art work is always immanent: Despite the attributed and likewise mostly passive sensed role,

the spectator interprets the proceedings, perceives it in his/ her own individual way and thereby continues and shapes the subjective process further. Whether this stays with him/ her or whether he/ she shares this with others: The art work develops itself further within this person and becomes through this an object of an active, although possibly unintentional and undesired creator. Although this potential may not be immediately present or reasonable for the, hence, both perceiver and actor, this potential comprises the chance to acknowledge it, use it and to recognize through this the novel feeling of being capable to act, i.e. experiencing the feeling of agency. And further: that this role does not only comprise the chance but rather the necessity and hence a responsibility to act. A necessity of oneself to use this potential or persist in a state of swoon. And further, that the only change we are able to control lies within ourselves and that these boundaries of possibilities are defined, broadened or limited by our own perception of agency and finally, on the acts we dare to take.

Indeed, as various sources report (Toivonen, Wahlström & Kurri (2018); Leiman (2012); Todd (2013)), patients undergoing psychological treatment often begin therapy while perceiving themselves as an object and, ideally, terminate by recognizing themselves as the subject they are. According to Lepecki, this role change from a “spectator” to a “witness” could also, apart from the altered perception, be ascribed to a shift of responsibility and thus, agency. Overcoming depression might thus require an, as Lepecki terms it- emancipated spectator transformation: To develop

an awareness of the own potential instead of perceiving oneself outside and distanced from the world and its possibilities.

As Breemen correctly recognizes, choosing a certain spectator-/ witness role, as well as taking responsibility, presupposes being active, or in other words the ability of agency, as “the manifestation of the capacity to act” (Stanford Encyclopedia of Philosophy). The presupposition of this ability or even merely the belief of having agency, known as the “Sense of Agency” (SoA), is especially relevant when comparing these modes of spectatorship in depression to understand the inherent challenges but also chances better. However, the presupposition of a SoA is not naturally granted, since the appearance of it is dependent on a variety of aspects, as I will elaborate on in the following chapter.

The Judgment of Agency

A wide field of research has been dedicated to the so-called “Sense of Agency” (SoA). The SoA, precisely formulated, refers to the “subjective awareness of initiating, executing and controlling one’s own volitional actions in the world” (Jeannerod, 2003), in other words: to feel as the author of one’s actions and being. This feeling however has been facing much conceptual controversy and methodological problems (Moore, 2016), presumably given its conceptual broadness and through this, wide applicability. Agency is, for instance, often confused with self-efficacy:

Self-Efficacy, however, attempts to describe “what can I do” instead of both “what can I do” but also “what I think I can do” as agency does (Duggings, 2011). Another reason for mistaking these two concepts with each other, lies in the diverse and, partly, contradictory definitions *within* the concept of agency. An attempt to differentiate the definitions of SoA has been introduced by Synofzik et al. (2008) and ever since created a strong influence in the scientific investigation of the topic. Yet, this acknowledgment has only reached a limited part of the insights which were made by Synofzik et al.: In fact, most research has focused on the by the authors termed “Feeling of Agency” (FoA). The FoA serves to describe the lower-level, motor control aspects of the SoA. These aspects are represented in the “Comparator Model” of agency by Frith et al. (2000). This model offers a naturalistic approach to agency, by explaining the appearance of agency through a match of the motor system. If a prior expected goal state and an actual state coincide, a sensorimotor signal will evoke a sense of agency to an individual. Given that this match occurs in an “all-or-none” manner, someone may either have agency or not. This theory therefore offers no room for different levels of agency, which, however, have shown to be present across cultures and within individuals (Mesquita & Markus,2003).

The complementary or sometimes rather treated as the juxtaposing phenomenon, the “Judgment of Agency " (JoA) has been lacking attention until this moment mostly. The JoA is referred to when addressing the

higher-level and thus conceptual aspects of the SoA, implying inter-personal, i.e. relational characteristics and it hence “arises in situations where we make explicit attributions of agency to the self or other.” (Moore, 2016). Duggings (2011) proposes that this type of agency can be regarded as the most crucial one: “Unless people believe they can produce desired effects by their actions, they have little incentive to act or to persevere in the face of difficulties. Whatever other factors serve as guides and motivators, they are rooted in the core belief that one has the power to effect changes by one’s actions" (Bandura, 2008, retrieved in Duggings, 2011). Braun et al. (2018) even extend this thought and ascribe “contextual knowledge and background beliefs" as part of JoA.

While the FoA offers a materialistic, and one could argue even reductionist conceptualization of the SoA, the JoA, however, introduced a chance to understand the subjective and perceptual characteristics of agency. De Mol et.al (2018) claim that the investigation of the phenomenon of agency cannot exclude these dimensions “because how one acts and perceives oneself as an agent depends on the social and relationship context in which they enact and experience their agency”. Vignemont and Fourneret (2004:16) agree with this by arguing that agency primarily can be regarded as the differentiation between oneself and the other. Mesquita and Markus (2003) likewise reinforced: “Models of agency are typically invisible to those who engage in or enact them, [although] they are defining of the nature of intentional individuals and their relationships. They are the

means by which people make sense of and coordinate their actions alone and in concert with one another." Agency, or as Claire Bishop would call it-spectatorship "is always a form of mediation" (Bishop, 2018). As in the performative arts scene, the literature of agency also stresses the contextual dimension of agency as a necessary component to understand the phenomenon. As Vermes (2018) phrases it: "The perception (…) is never isolated from others."

These theories thus give reason to believe, that the research of the concept of agency needs to be placed into a social context to truly understand its whole complexity and to use it for potential MDD therapy treatment. Furthermore, while the embeddedness of the JoA to an "other", i.e. a social group or other single individual, the decision on *choosing* a spectator or witness role, however, seems to be dependent on JoA, by acknowledging or redirecting self-inherent potential of agency. The "theory of apparent mental causation" by Wegner and Wheatly (1999), which explains the development of agency purely on environmental factors, in contrast to the mere naturalistic influence of Frith et al., can thus not be confirmed either. In his theory Wegner argues, that the sense of agency solely emerges if our intention matches our action – independent of whether we have actually caused this action. Yet, the research by Galbusera, Fellin & Fuchs (2019) demonstrates how agency, among other psychological concepts are being created in an interactive process of the individual with his/her body and the "outer" world. JoA is thus also a

“post-hoc reconstruction of authorship, contextual knowledge and background beliefs” as Braun et al. confirm in their study (Synofzik et al., 2013; Moore, 2016, retrieved by Braun et al., 2018). While both theories however highlight crucial aspects of agency, they cannot explain agency by focusing on one aspect, and excluding or even denying an influence of the other. The theories on agency should consequently rather overcome their Cartesian split and integrate the relevant insights they have gathered into a theory, which is more representative of how agency in the daily life experience of humans actually is.

Furthermore, with regard to the clinical need to improve and potentially to adapt new theories and methods of agency for higher chances of prevention and recovery in depression, the existing theories of agency do not offer sufficient evidence of conceptual validity nor potential of practical implementation. If JoA is both dependent on a specific social embeddedness but at the same time holding a potential to choose as which kind of spectator they perceive themselves in their own lives, how may people suffering from depression increase their JoA? As Braun et al. (2018) highlight: “Experiencing SoA is crucial for almost every therapeutic approach”. Furthermore, they propose a hypothesis about how this change of agency, the emancipated spectator transformation, may come about: “A SoA boost could be for instance realized by making patients more aware of their actions.”

The Body as the Point of Encounter

Given Bishop's earlier stated quote, performances mostly imply a "corporeal" part and even tend to place their major focus on the exploration of the relation between the "corporeal" and the "subjective" and "affective". As a third theory of agency, which recently has been developed by Gallagher (retrieved in Manetti & Caiani, 2011) suggests, agency can only be understood by placing it into a social *and* bodily context. In his "Interaction Theory", he claims "our everyday stance toward other people is not merely a detached observation; rather it is almost always the result of embodied interactions" and thus that our subjective life is always influenced and in interaction with other people's beliefs and values, apparent and expressed in their actions. For him, the individual self is therefore also always a social self and further a *bodily* self, because the individual is always embedded in a social context and the subjective, "cognitive" life is always entangled with a bodily source of knowledge. This theory therefore emphasizes and supports our so far substantiated arguments, that agency must be placed in a higher-order AND bodily context. Gallagher thereby demands for an enactivist approach towards overall cognitive concepts. A study by Cohen (2009), supports both Bishop's and Gallagher's view by finding empirical evidence how "physical movements of our body promote or pre-dispose us to adhere to certain mindsets, which can be associated with complex judgments about the world and moral behavior".

The adaption of a spectator or witness role can, thus, not entirely be explained by factors of decisions and responsibility. Being active/ passive and perceiving is also always tied to a bodily condition: “Everywhere in the world, self starts with the body.” (Baumeister, 1999). Jacques Lecoq, a French stage actor, taught that “not only movement is necessary, but movement in space. The movement produces a consciousness for the relation between myself and the world” (Fusetti & Wilson, 2002). Only through movement I can conduct in which relation to the world I am – literally, standing. Both, feeling subject to other people’s decisions, emotions and daily life as well as feeling as a self-efficient subject with the power to decide and act upon anything that might happen, always takes place in bodily presence and positioning oneself. While the other might either distract us from ourselves they may also confront us with who we are and offer a space to position ourselves towards them- physically and emotionally. If people suffering from depression generally enter therapy by perceiving themselves from an object position, then they indirectly place themselves outside and separate of their own lives and the people around them. Identifying themselves as the subject of their experiences again, requires to develop an awareness of their own potential, i.e. agency. This emancipated spectator transformation can, according to Fusetti & Wilson (2002), Vermes (2018), and others be enabled by engaging in body movement and through this, simultaneously to JoA, developing awareness for the body in space and relation to others. “We do not have our body (…): we are our body. If we would like to have a better life (…) we have to

recognize our body as an existential modality and cultivate our body consciousness in practice." (Vermes, 2018). Participating in body therapy as a form of therapeutic treatment is therefore more than merely increasing "vitality", but also potentially creating body awareness and additionally a different mode of agency.

Mehling et al. (2011) define body awareness as "a subjective, phenomenological aspect of proprioception and interoception that enters conscious awareness and is modifiable by mental processes, including attention, interpretation, appraisal, beliefs, memories, conditioning, attitudes and affect". However, Fusetti et al. give reason to believe that body awareness is modifiable and depending on the body in movement. If body awareness could be a crucial component in the relation of depression and agency, then mere body therapies are not enough, but need to include both, a moving body and higher-order processes to reflect on.

Furthermore, if higher-order processes influence the feeling of agency, but are yet again only pursuable through a body moving with others in space, agency and vitality should not be tackled separately in treatment for depression. As Benvenutti, Bianchin and Angrilli (2013) have demonstrated- emotional perception is being influenced by specific body positions. While "embodied experience and the relational world are so deeply intertwined that intercorporeality grounds and sustains our ability to relate to the world" (Johnson), psychotherapy however predominantly operates by a sitting patient, i.e. a patient in physical stillness (Landsteiner, 2017). Tackling body awareness through body therapies and talking about

agency only in psychotherapy, creates once again another form of dual crisis. However, given the reviewed literature, these concepts are highly interrelated and cannot be addressed one by one. As Wueschner emphasizes: „My sense of agency (and capability) is from the outset a sense of both myself and the world: as the space of my possible acting or being acted upon- and these aspects are inseparable “. In contrast, it is, with regard to the earlier stated studies, presumable, that patients of depression would highly benefit from this novel integration. This novel approach could thus incorporate a strong improve in the recovery processes of depression patients.

While a certain acknowledgement for the necessity of enacted psychotherapy has taken place in the last years (Galbusera, Fellin & Fuchs, 2017; Galbusera & Fuchs, 2013; Röhricht, 2009), the integration of agency within this dynamic has been mostly left out. However, as agency seems to be a crucial aspect of MDD, it is necessary to prove whether the framework of enacted body awareness influences the transformation of agency likewise or not at all. Through this, we aim to strengthen the support, by assigning the body a capacity of co-determining, yet causal influence on our mind, i.e. thoughts and perceptions (Wilson & Golonka, 2013).

Aim of this study

Until today, the concept of agency suffers from multiple theoretical and practical unclarity. While the SoA has been utilized for two very distinct aspects of agency (the FoA and the JoA), most research, however, has focused on the FoA. Moreover, while the theories of explaining agency either focus on a naturalistic approach- as in the Comparator Model (Frith et al., 2000), or on the contrary on a social, i.e. environmental approach- as in the Theory of apparent mental causation (Wegner and Wheatly, 1999), the outlined dynamics show how a theory of agency requires both aspects, and the necessity to overcome this apparent Cartesian split. A connection and integration of both factors within one theory has, however, not occurred until this moment. Gallagher (retrieved in Manetti & Caiani, 2011) pledging for an interactive perspective on an individual's being and doing has therefore not sufficiently been transferred to the psychological research.

The ambiguous word use of agency as well as the dualistic approach of agency in research and practice, however, both challenges theoretical progress and blocks people suffering from MDD from receiving efficient, suitable treatment. While neither MDD may be understood without agency nor the body, the performance art concept of spectators and witnesses have shown that both agency and the body seem to depend on each other in a co-determining dynamic likewise. Given the rare collaboration of performative arts and natural or social sciences, the

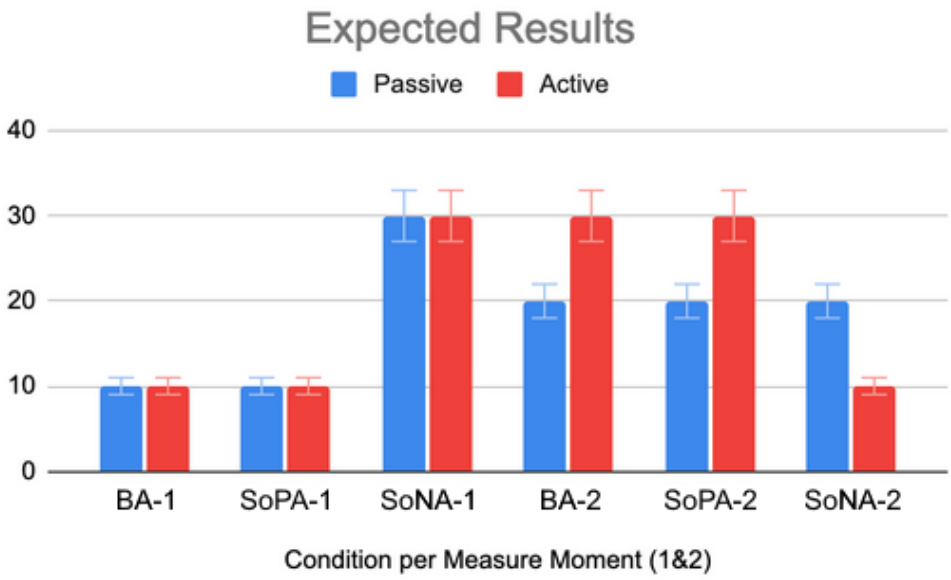
relation between JoA, body awareness and depression has to this moment not been implemented in the knowledge of psychological research though. Yet, especially in the earlier presumed relation between agency and depression this concept could deliver very novel perspectives and hence fruitful understanding. These could serve to draw new theoretical conclusions and thereby distinct practical inferences. The current urgency for those, is demanding science, politics and society to take these into consideration and generate new ways of thinking.

These theories therefore give reason to believe that a body in movement has a profound connection to cognition not only on a posterior level, i.e. when working with symptoms but also as a co-determining, causal factor. This thesis will therefore investigate what the connection between body awareness and judgment of agency is, if the body is moving and acting in comparison to the body in stillness. The research question will therefore be: How is the level of bodily awareness connected to the judgment of agency in depression?

In our study we will therefore in concrete investigate whether engaging in a body therapy has an influence on someone's JoA. For this purpose, we chose a psychosomatic clinic as the setting for our study, given that patients suffering depression have shown to report overall lower levels of agency (see earlier). Through our study we aim to both highlight the connection between depression, agency and body awareness by measuring the levels of body awareness and agency on multiple time sets.

Furthermore, we also hope to find empirical support for the enactivism theory as a novel approach for science. By comparing patients who are participating actively with others who are passively watching the body therapy session, we believe to reproduce the emancipated spectator transformation concept and thereby demonstrate how agency, as a cognitive-social-bodily construct needs to be enacted in order to develop. If the body should be essential for our self-perception in terms of agency, then moving actively from a subject perspective should evoke different agentic experiences than staying static and still from an observer and thus more likely a detached position. As Henri Bergson phrased it:" Bodily Motility is the single most important filtering device in the subject's negotiations with the external world".

Through investigating JoA in relation to body awareness in the context of MDD and in a performance art framework we are thus confident to contribute profoundly to the ongoing theoretical discussion and aim to enable new inferences, which, at best, might decrease the risk to develop MDD and aid more people to recover more persistently.



Graph 1. Hypothetical Results according to our theory and hypotheses for both conditions (passive/ active), both measure moments (1&2) with scores on BA, SoPA and SoNA

Method

Participants

Thirty-six patients (17-71 years old) of the Gezeitenhaus Schloss Wendgräben, a psychosomatic clinic in Germany were asked to participate in the study. However, three patients preferred not to participate in the assigned passive condition, and did therefore not participate at all in the study. Finally, thirty-three patients participated in the study. Of these participants 21 individuals were female, ten identified themselves as male and two participants did not wish to define their gender. The data of two participants who dropped out of the experiment after the body therapy session were excluded, leaving data of thirty-one participants. The participating patients were predominantly suffering from MDD symptoms, diagnosed by the ICD-10 (World Health Organization, 2004). Inclusion-criteria for this experiment were (1) German as first language, (2) no history of SoA or body research participation and (3) no severe physical impairment. All participants met these criteria. Additionally, the patients were participating all voluntarily.

Design

Our experiment was composed as a one-way repeated measures MANOVA design. The independent variable was a

between-subjects-variable: Participation (actively vs. passively as a spectator) in a 1,5-hour long body therapy session (as described below), which was attended, but not led by the researcher. The dependent, i.e. outcome variables were strength of BA and JoA. These were assessed both immediately before and subsequent to the Body Therapy session. The within-subjects-variable, i.e. the second independent variable was therefore: Time (pre vs. post (treatment measurement)).

Material

Instructions were given verbally by the experimenter. Participants were seated at a table and handed first the questionnaires of BR and subsequently the SoA questionnaire.

Questionnaires:

The following questionnaires were chosen in order to assess the level of JoA and Body Awareness among each individual: For JoA, the Sense of Agency Scale by Tapal, Dar & Eitam (2017) was rated as sufficiently equivalent to the by Synofzik et al. (2008) developed JoA concept, given the both social and higher-conceptual judgments, which participants have to rate. Furthermore, the Sense of Agency Scale utilizes items of inversion: These items serve to differentiate two aspects of JoA- a

so-called “sense of positive agency” (SoPA) and a “sense of negative agency” (SoNA). While the SoPA describes the factors of influence which people attribute to their own agency, the SoNA highlights the elements people believe to have no power on. This differentiation will allow us in our analysis to identify specifically, which internal or external agency has increased and whether these two shifts are related with each other.

The Questionnaire of body awareness was selected based upon the following inclusion-criteria: (1) higher-conceptual judgments and (2) judgments of body perception if in movement.

After a careful revision, we therefore decided on the Body Responsiveness Questionnaire (Daubenmier, 2005). For this purpose, we utilized the questionnaire compilation and comparison of Mehling et al. (2009) to warrant the ideal appropriate measure for high validity. All questionnaires were handed out printed on white A4 paper with letters in black color (Arial font, size 14).

Appendix G: Body Responsiveness Scale (Daubenmier, 2005)

For the following items, please consider how true each statement is of you and your body on a scale from 1 (*not at all true of me*) to 7 (*always true of me*).

	Not at all true of me						**Always true of me**
1. I am confident that my body will let me know what is good for me.	1	2	3	4	5	6	7
2. My bodily desires lead me to do things that I end up regretting.	1	2	3	4	5	6	7
3. My mind and body often want to do two different things.	1	2	3	4	5	6	7
4. I suppress my bodily feelings and sensations.	1	2	3	4	5	6	7
5. I 'listen' to my body to advise me about what to do.	1	2	3	4	5	6	7
6. It is important for me to know how my body is feeling throughout the day.	1	2	3	4	5	6	7
7. I enjoy becoming aware of how my body feels.	1	2	3	4	5	6	7

Figure 1. Body Responsiveness Questionnaire (Daubenmier, 2005)

Figure 2. Sense of Agency Scale by Tapal, Dar & Eitam (2017)

Body Therapy Session:

The Body Therapy session was led by an officially trained and well-experienced therapist and lasted 100 minutes in total. Participants in the passive condition and participants in the active condition attended separate sessions. This format was chosen to avoid participants in the active condition to become influenced by the knowledge of being observed by other participants during their performance. This could have potentially

shifted the perspective on one's own agency by viewing oneself from an outside perspective, instead of perceiving intuitively. The body therapy session was overall characterized by an attitude of the Mindfulness framework. Patients were repeatedly reminded to draw their attention to the "here and now" to increase a consciousness of the direct moment. The session began with a guided meditation and continued with a progressive muscle relaxation (PMR) sequence by Jacobsen (Golombek, 2001). Afterwards, the patients were asked to explore the room by moving freely. They were asked to stay attentive to their bodily sensations and upcoming thoughts and emotions and allow these to stay or pass, as they preferred. The decisions they would take, they were asked to observe further, in terms of upcoming emotions, thoughts and judgments. Finally, participants were asked to come together again and to share some experiences if they felt like it. The session ended by engaging in another guided meditation together and thereby reflecting what sensations have changed in comparison to the beginning. Afterwards, patients were thanked.

Exit Interview:

Finally, the instructor engaged in a short "exit-interview" to check for any possible individual differences in insight, state of well-being or appeared memories or connections to other prior experiences, which might have influenced the experiment in a biasing way. However, no unusual or stressful experiences were reported.

Procedure

Before starting the experiment, the participants were told that in this study their connection to their body would be assessed and that they will be asked to fill in questionnaires twice- before and after the upcoming body therapy session. The participants were verbally informed about the experiment and their rights to not participate or drop out anytime without any consequences. In addition, they were given an informative verbal briefing als well as a short brochure of the experiment to read and subsequently asked to sign an “informed consent”. Subsequently, all participants were randomly distributed into conditions: Active Participation and Passive Participation. Then, in the first execution of the experiment, all participants of the active condition filled out the BR and SoA questionnaires and followed and engaged in the body therapy session actively. Participants of the passive condition were not attending this session. The participants of the active condition thus were able to engage freely, without any observers. After this session participants filled out both questionnaires again. In the second execution of the experiment participants of both conditions were attending. However, only participants of the passive condition filled out both questionnaires prior to this session. Then, participants of the passive condition were seated in a circle roughly along the four walls of the room. There, they remained for the whole session, passively watching the active participants in the middle of the room engaging in the session. Afterwards, all participants of the passive

condition filled out both questionnaires again. Finally, a short exit-interview was conducted individually. The instructor was present during the whole experiment and could thereby detect potentially adverse levels of engagement or well-being. After completion of the experiment, all participants were thanked and debriefed.

Data analysis

The main question of this study, whether body awareness is crucial for an increased judgment of agency effect, compromises the hypothesis that when being exposed to a treatment with a strong focus on body awareness, JoA will increase simultaneously with BA. And further, that this increase is expected to be strongest, when exposure to treatment does not only happen “outside” but also in direct contact, and involvement, i.e. when interacting. We thus expect participants to score higher on both BA and JoA after having received the treatment, in comparison to before (Hypothesis 2). Furthermore, if our hypotheses will be met, participants will differ between each other, depending on which condition (Passive vs. Active) they were in (Hypothesis 3). Finally, an interaction effect between time of measurement and condition is expected: In line with our theoretical argumentation we believe that the highest scores of both BA and JoA will be demonstrated on the second measure moment by participants in the active condition, while the lowest scores are probable to be shown on the

first measure moment by participants of both conditions (Hypothesis 5). Here, no difference should be apparent. Finally, we expect participants to not differ from each other on the first measure moment (Hypothesis 6) but to overall show weaker scores for SoPA than for SoNA (Hypothesis 1).

To test these hypotheses results were at first compared in terms of their proportion; total scores of BR, SoPA and SoNA were compared inter- and intra-individually. Finally, those were plotted in graphics. Based on those results, first conclusions related to the in the introduction discussed hypotheses and outlined graphs were drawn. Subsequently, effect sizes and confidence intervals by applying “Partial Eta-Squared” were applied to further analyze our results. We therefore focused on the outcome which could be drawn from p-values, means, effect sizes and confidence intervals.

Nevertheless, we intentionally decided to investigate this research question via a quantitative method instead of the else in this field of research prominent phenomenological methodology (Bayne & Levy, 2006). Although the phenomenological approach offers a complex and novel insight and perspective in research, our research’s goal was first to discover a potentially existing correlation, before investigating it’s deeper, underlying structure. Instead of asking for „how“, we consider defining the „what“ essential to precede it. Moreover, the frequently demonstrated „social desirability effect“ was an additional motive to choose for an anonymous and objectified procedure. We thereby hoped to define whether

an overall JoA effect will be apparent.

Results

All thirty-six participants met the inclusion-criteria and could thus participate in the experiment. Nevertheless, three participants chose to leave the experiment before it started and two participants failed to complete the survey. The data of these participants thus had to be excluded afterwards. All remaining thirty-one participants were divided into two groups: Passively participating (NGroup0 = 13) by watching others engage and actively participating themselves (NGroup1 = 18) (Chart 1). If participants would not regard themselves to be in the state to actively participate, they were given the possibility to switch groups and become a spectator in place of an “actor”. Yet, this offer was not made use of by anyone. Additionally, no adverse events took place during the assessment of the data or the therapy session, which could have produced potentially undesired side effects.

Table 1. Mean scores on all dependent variables, divided by Condition (active-/ passive participation) and for both measurement moments individually (pre vs. post) with standard deviations (in brackets)

Condition	N	PRE-BR	POST-BR	PRE-SoPA	POST-SoPA	PRE-SoNA	POST-SoNA
Passive	13	28,84 (8,16)	28,23 (8,19)	21 (6,31)	20,15 (6,11)	16,84 (6,59)	17,84 (8,42)

Active	18	26,72 (8,75)	28,94 (8,06)	21,94 (4,69)	22,22 (5,63)	16,61 (4,70)	18 (7,69)

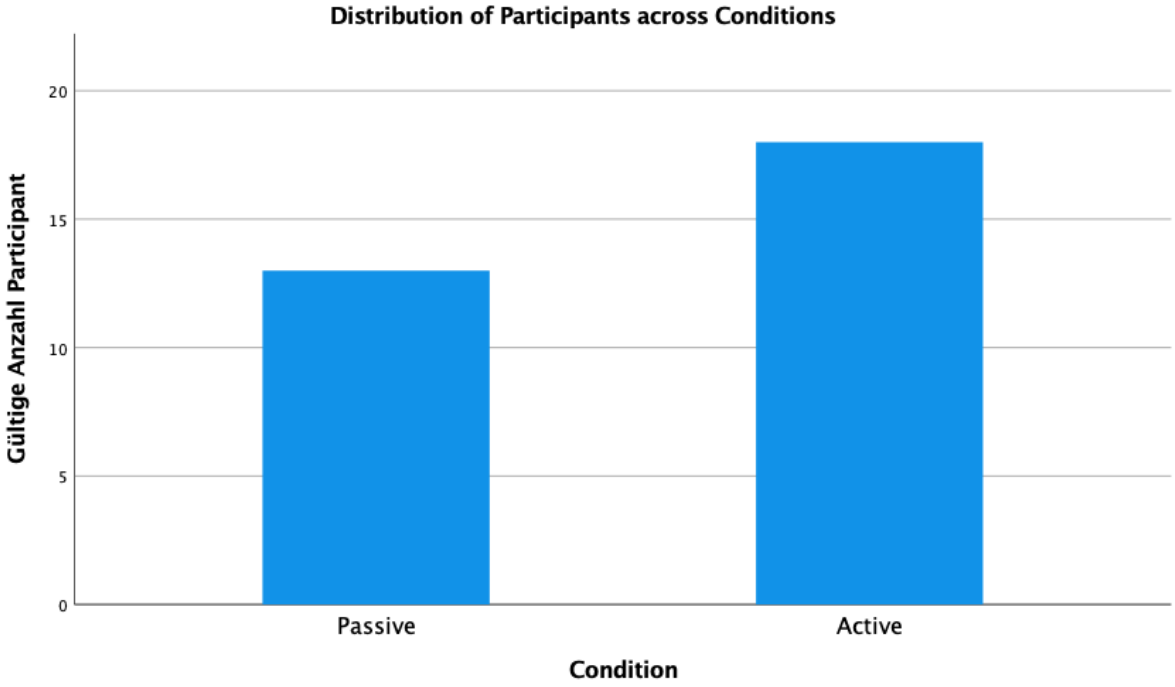


Figure 1. Total amount of participants, divided into conditions (Passive/ Active)

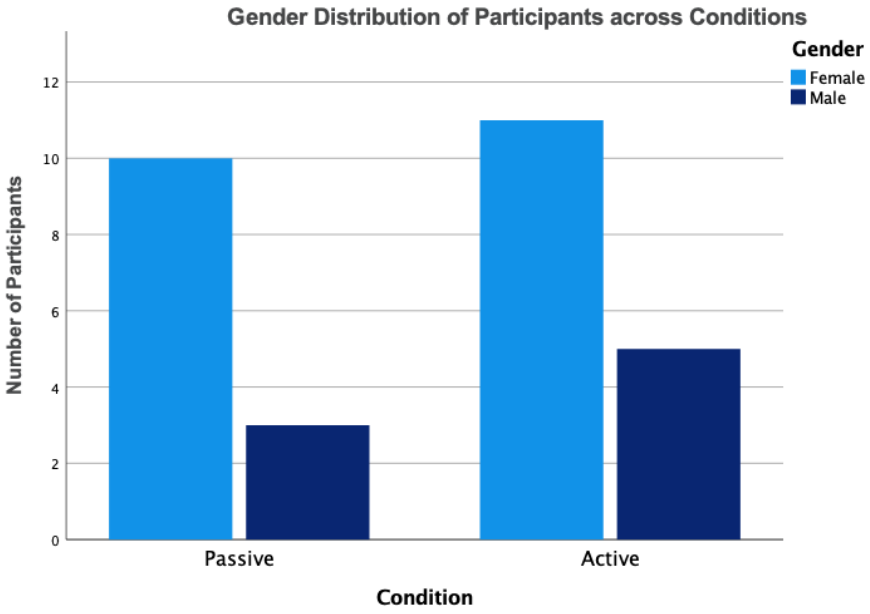


Figure 2. Total amount of participants per assigned condition, divided by gender (female/ male)

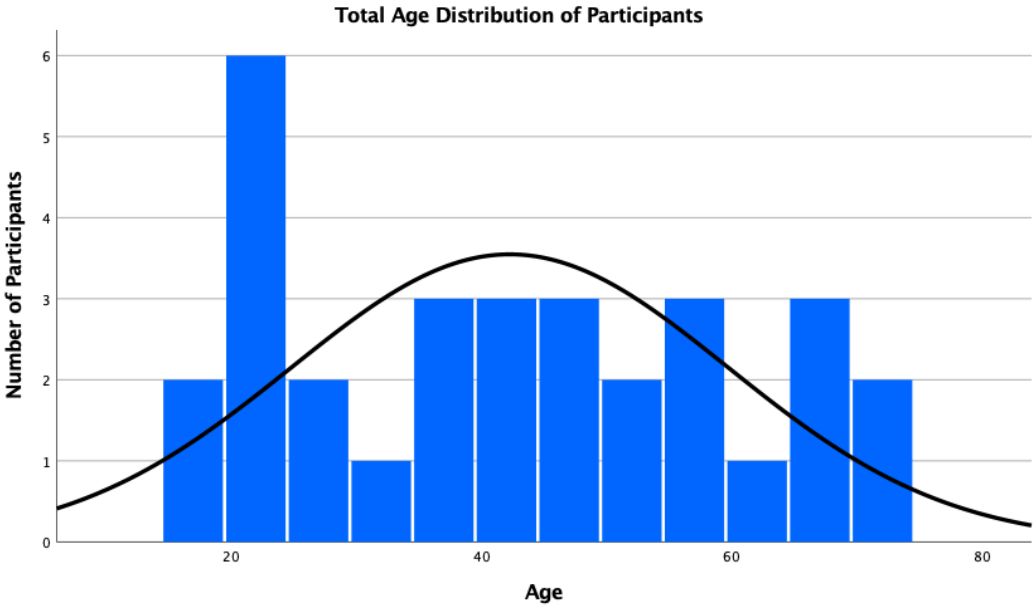


Figure 3. Total amount of participants, distributed by age (17-71)

All necessary assumptions for carrying out our analysis were statistically proved and met. With this regard, the Mauchly's test for sphericity, for instance, indicated no sphericity in the data. Moreover, body responsiveness and both SoPA as well as SoNA were normally distributed, as assessed by the Shapiro Wilk test, $p > .05$ (Table 1).

The Wilks's Λ showed that participants did not differ significantly in the total score of neither Body Awareness $F(1, 29) = 1{,}234$, $p = .276$, $\eta p2 = .041$, nor Judgment of Agency for both SoPA $F(1,29) = .081$, $p = .778$, $\eta p2 = .003$ and SoNA $F(1,29) = .127$, $p = .724$, $\eta p2 = .004$ across time. Accordingly, responses before and after the treatment did not reveal changes within individual self-perception. Levels of body awareness, positive agency as well as negative agency were estimated equally high or low by participants after the treatment as before the treatment. No significant difference could therefore be found within participants for the reported JoA and BA across time. Hence, a main effect of group could not be confirmed.

Furthermore, both SoPA $F(1, 29) = .757$, $p = .392$, $\eta p2 = .025$ and SoNA did not differ significantly between groups $F(1, 29) = .156$, $p = .696$, $\eta p2 = .005$. Additionally, no difference of BR between groups could be found $F(1, 29) = .058$, $p = 812$, $\eta p2 = .002$. Participants in the active condition scored equally high as participants in the passive condition. This contrasts our hypothesis, that the extent of bodily engagement in a body therapy is crucial for the level of BA and JoA. Engaging (actively) or not, however, did not seem to influence the perceived extend of body awareness or your

feeling of being in charge of yourself (i.e. JoA) differently. Therefore, contrasting our expectations, our results contrasted did not reveal a main effect for condition.

Finally, no interaction effects between groups and time for all dependent variables seemed to be apparent. Participants did not, depending on their group they were assigned to, differ within their given scores, between each other. Neither responses on BR $F(1,29) = 3.847$, $p = .060$, $\eta p2 = .117$, nor SoPA $F(1,29) = .315$, $p = .579$, $\eta p2 = .011$, nor SoNA $F(1,29) = .858$, $p = .362$, $\eta p2 = .029$ with regard to their condition and in relation to a specific measure moment were significant, i.e. different from each other. Changes in scores therefore did not occur depending on the group participants were assigned to and to the connected time set they were asked to report.

A revision of the related effect sizes also did not offer a distinct perspective on the found results but in contrast, reinforced the by the p-values demonstrated absence of a successful influence of body therapy on body awareness and agency.

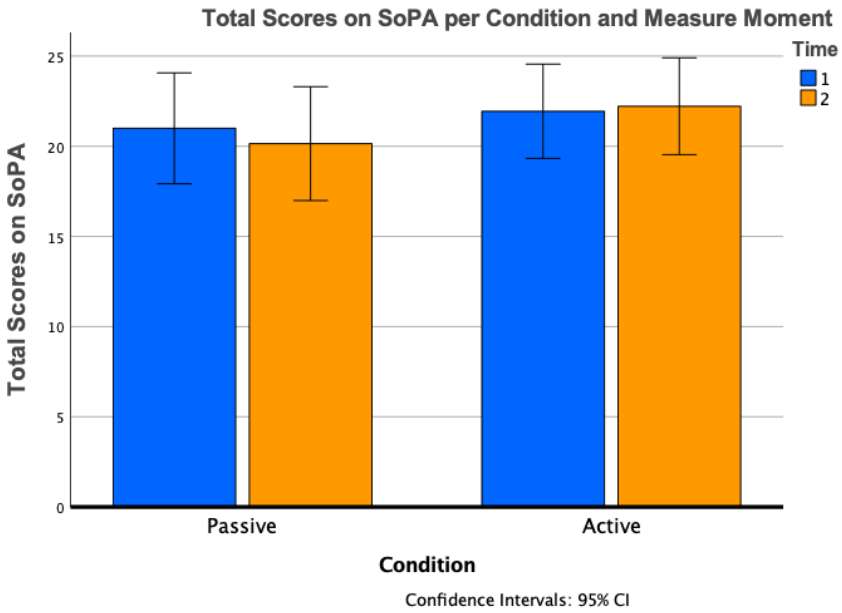


Figure 4. Total scores on Positive Agency for both Conditions (Passive-0 and Active-1) and both measurement times

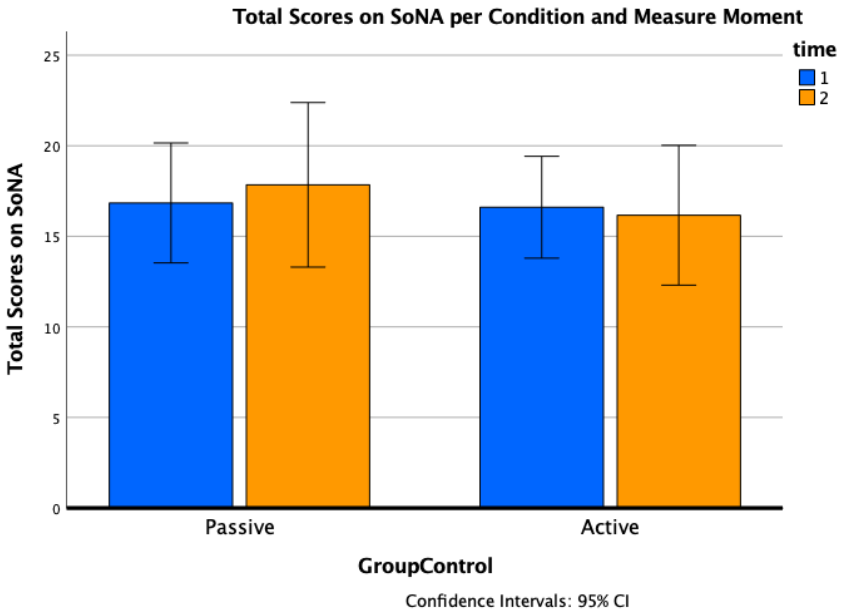


Figure 5. Total scores on Negative Agency for both Conditions (Passive

and Active) for both measurement times

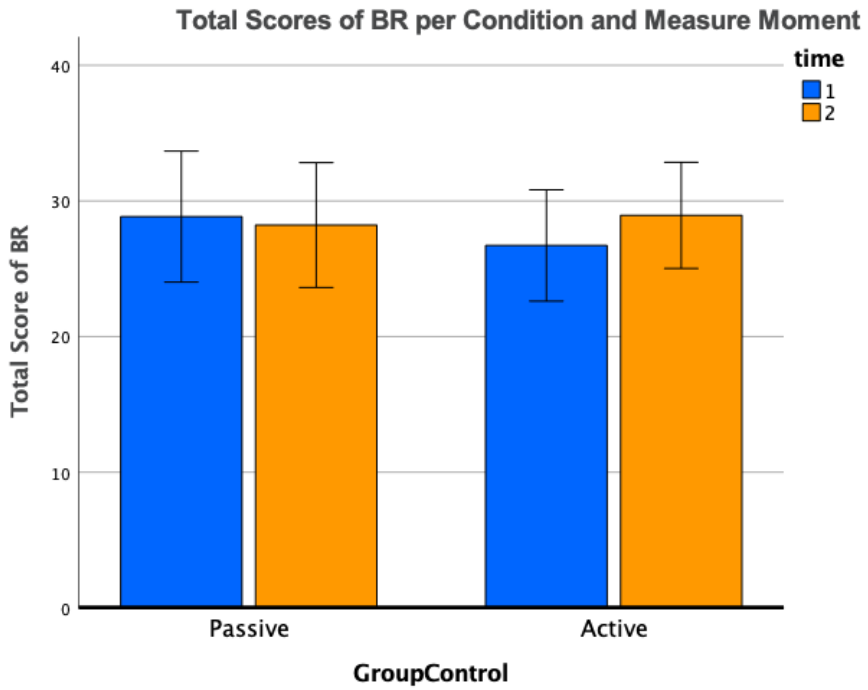


Figure 6. Total scores on Body Responsiveness for both Conditions (Passive and Active) and both measurement times with Confidence Intervals

Finally, an exploration of the results was deducted to control for all hypotheses and highlight potentially further biasing factors. One exploratory analysis contained the comparison of mean scores on SoPA and SoNA of all participants on the first measure moment. According to our hypothesis, SoPA should have been much higher than SoNA on the first measure moment. However, by plotting the descriptive values, it became visible that SoPA was on the first measure moment much higher than SoNA (Figure 6).

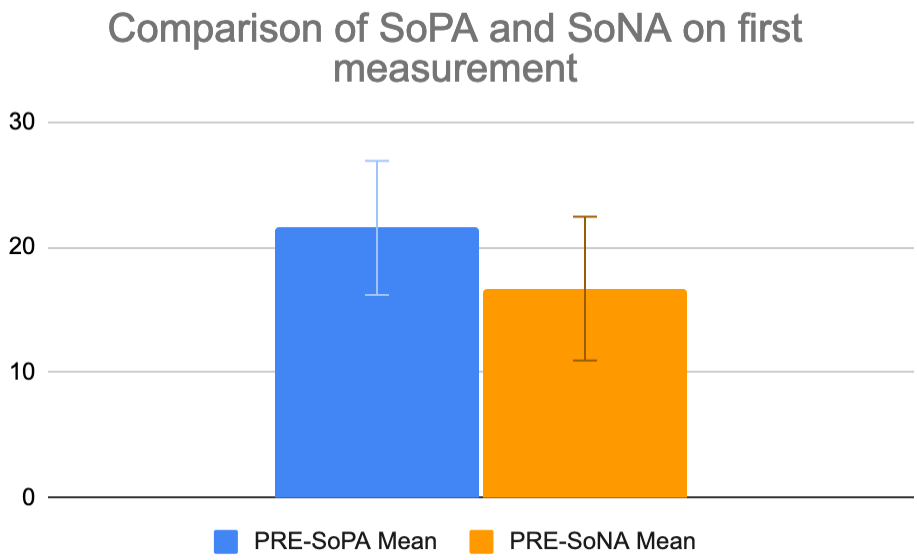


Figure 7. Comparison of mean SoPA and SoNA scores on first measure moment for all participants

Conclusively, the results contrast our hypotheses in various forms: Neither did participants score higher after having been exposed to the treatment, nor did their scores differ depending on whether they actively or passively took part in the session. Finally, participants did, against our expectations, not differ in responses across time, depending on the condition they were assigned to.

Discussion

Results, Tendencies and Interpretations

The aim of this study was to investigate the role of body awareness and JoA in depression. We aimed to question the persisting Cartesian split existing in the literature of agency, by showing how engaging in a body therapy influences the judgment of agency, as a cognitive concept, and simultaneously body awareness. Through this we aimed to show how an emancipated spectator transformation may take place in the psychotherapy setting.

However, neither did body therapy at all change the perceived level of body awareness nor JoA in comparison to not having participated (i.e. the perceived level before the session). In addition, the form of engagement, i.e. active or passive, would not differentiate these initial levels neither on an intra-individual nor on an inter-individual level, i.e. as a difference between participants. None of our hypotheses could therefore be confirmed.

Although we did not find any effects within our data, which would have confirmed or supported our hypotheses in some way, the finding of no effects also offers various conclusions as well as implementations for further follow-up studies. Our main analysis indicated no main effect for neither body awareness nor judgment of agency, independent of time of

retrieval, and further, independent of condition (active/ passive). Neither within the active nor the passive condition a change of body awareness or judgment of agency could be detected intra- as well as interpersonally. Further explorations effect-size wise also did not deliver novel insights into our weak findings. We had to conclude therefore that no BA and JoA effect had been apparent. However, the results shown by our graphs demonstrate very slight tendencies of differences between and within groups. As visible in Figure 4, participants of the passive groups in fact demonstrated lower SoPA on the second measurement. Additionally, in Figure 5, the reverse is the case: Participants of the passive condition demonstrated higher reports on the SoNA on the second measurement. Interestingly, Figure 5 demonstrates how this change is accompanied with a decrease of BA. If these results were significant we would conclude that passively attending a body therapy actually could decrease the JoA and the BR simultaneously. This simultaneous process could be an indication of the, by us assumed, existing connection between the three concepts. The existence of a reverse effect, i.e. decreasing JoA and decreasing BA by being in a spectator position and not being able or allowed to act, is however, to our knowledge, a new insight. This effect might either be ascribed to the externally controlling arrangement to join the group activity or could also be a hint of the emancipated spectator transformation not functioning the way as it is believed to until this moment. Further research is needed to investigate the mechanisms and naturally even the mere existence of this potential effect, to which our results solely may hint at. The

tendencies visible for the active condition are even weaker than for the passive condition, and yet, distinguishable. As our Graphs show, the reported SoPA as well as the BA increases (Figure 4 & 6), while SoNA decreases (Figure 5). Furthermore, while the BA scores on the second measurement are for the active condition not higher than the scores of the passive condition on the first measurement, the scores of the second measurement of the active condition for SoPA are higher than any other. This finding would support our fourth hypothesis of an interaction effect for JoA, although not for BA. This very small difference may also with regard to the effect sizes rather be a result of chance, but could also given the following explained limitations be that small in magnitude. Given that the weak but nevertheless visible difference showed tendencies in exactly the expected directions (or even stronger as for the passive conditions), these intriguing findings demand further follow-up studies to investigate these potential relations on a larger scale.

Limitations and Biases

Our experiment contains certain limitations which might have either decreased or increased the effect to its found magnitude. At first, a posteriori power analysis indicated that our research study would have required a much higher number of participants in order to detect potentially existing effects. However, the acquisition of participants in psychological

research can be challenging: First of all, given the presumably unstable wellbeing of patients undergoing stationary therapy as well as their assumable limited resources and potential to regulate stressful situations, research designs need to be carefully designed. Participants should not experience additional emotional distress but rather even have the opportunity to profit from participating. Although our study did indeed offer rather a chance to reflect and process own experiences and progress of their therapy program (i.e. the body therapy session), many patients showed doubt and no interest to participate. Even though the fear of not being analyzed anonymously could be addressed in the briefing and resolved in many patients, the amount of patients willing to participate remained rather low. Given that the number of patients in the clinic was at that time due to CoVid-19 extremely reduced, the acquisition of participants could not be realized to an ideal extent. As the earlier discussed tendencies within the graphs highlight, replicating this study with a larger sample size could reveal promising and crucial insights for this topic. Following studies should therefore aim to reproduce the experiment with a bigger sample size, in order to strengthen the reliability of our results.

Moreover, three participants even withdrew from the experiment upon being assigned to the passive condition. This reaction might hint at an inner desire to be active and to indeed, experience agency. Given that the low number of participants fails to give sufficient proof of possibly existing influences, the hypotheses on this reaction cannot be validated or rejected

by our data. However, follow-up studies should take this incidence into account. Conducting an additional survey prior to an investigation which concerns people's preference to be active or passive, should for instance deliver fruitful insights. This could not only increase the support for our theories, but could even shape the theories and hypotheses into a specific direction.

Additionally, highly correlated dependent variables are known to decrease the power of an analysis. A possibility could have been that our dependent variables were too much inter-correlated. As our theoretical outline suggested, body awareness could even be understood as a part of JoA itself. Or potentially even as a mediating variable to explain the relationship between body therapy and JoA. In both scenarios, however, the correlation of the variables would be presumably quite strong and thus, potentially leading to weak power of the experiment. Having a sufficiently big sample group of participants would in this scenario even be of greater importance. Further follow-up research should therefore adjust their research designs to these factors, and either investigate the variables primarily separately or by implementing BA as a mediating variable in the analysis.

Furthermore, our research question might require a longer research period in the form of a longitudinal study, to highlight the influence of body therapy on body awareness and agency. While people usually have dealt with gradually worsening symptoms of their disorder for a longer time,

before willing to receive professional help, the thereby imprinted patterns of their thoughts and actions cannot be restored within one day. Even further, some people might have never known any other reality and perspective than living with their disorder. They then learn in therapy to develop entirely new thought patterns, which is even more a time-consuming process. These concepts could therefore require more than just a single session to start a process or even enable a change and should in follow-up research thus be investigated by adding more measure moments across a longer period of time. Yet, longitudinal studies require cautious preparation: We chose to measure reports immediately before and after the received treatment, in order to minimize other potentially biasing factors of influence. If participants will be tested over a longer period of time, the researchers need to make sure that the finally found effects are explainable by the body therapy only, and not, by the for instance simultaneously ongoing psychotherapeutic process.

Another bias of our study could be the demographical characteristics of the sample group itself: Since the GezeitenHaus is a private clinic, patients who are being treated there, are rather likely to have higher income and a higher-educated background. These factors could be of major relevance, given the overlapping characteristics from agency with power and control. These presumably might be more frequently experienced in these better situated groups of society, where existential questions arise less. Assuming that the participants of the study have thus

been more accustomed to experiences of power, control and thus, JoA, various scenarios are possible: One option could be that these people have by experiencing depression experienced a much greater decrease of agency compared to their usual standard. This could result in them not or barely noticing small changes and steps towards an increased agency, because their earlier perceived agency was significantly higher. This would explain the lack of differences in their reports before and after treatment: Participants would have either not noted ongoing processes or else, judged their magnitude as not noteworthy.

Another major limitation of our study may be our chosen methodology. Questionnaires are a common method of assessing influences and relations in quantitative research designs. Since we were utilizing a structurally rather open, bodily method of manipulation, and given that JoA is defined as a higher-order, thus, consciously present concept, we were hoping to combine methods which are commonly understood and treated as juxtaposing each other. Through this, we were hoping to take a step further to overcome Cartenianism. However, we might have actually increased the split by this specific method. If body awareness and enacted cognition is itself not only a means but rather the substance of our perceiving and experiencing self, assessing only through the higher-order “language” might presume another step of perception, namely the translation, transfer and integration into higher-order cognitive perception and understanding. This would consequently not only exclude

all other gained information but further, measure a whole secondary kind of process, which needs to have occurred afterwards. If we are however interested in the sense making through the body, as presupposing that the body can never be isolated and is always a co-determining part of our experience and perception, we cannot leave the body out of assessment either. Reaching all information which has been acquired through enacted cognition by a purely theoretical assessment presupposes a process of reflection and translation, which might filter much crucial information out or even fails to recognize the essentials. Contrary to our argumentation in the introductory part of this thesis, it might be inevitable if investigating the "what" of a subject to investigate the "how" likewise. Ontological and epistemological aspects of concepts might therefore be more dependent upon each other, than often presumed. Further follow-up research therefore urgently needs to address this major obstacle, by choosing a more suitable method of assessment.

On the other hand, this process is also the core of JoA. JoA aims to address the higher-order a priori but also post-hoc inferences of one's own agency. If we turn back to our leading framework of the emancipated spectator transformation, then we draw various conclusions: Given that no difference was found between measure moments, independent of condition, we might interpret that the participants have demonstrated rather spectator, than witness characteristics. No difference between conditions could at first sight imply that adapting a spectator or witness role does not

rely on a moving body. Indeed, finding no difference between conditions on the second measure moment could highlight the potentially equally strong ongoing processes in people who observe although they are not involved. Investigating this hypothesis could be carried out through a comparison with a third group, a control group, would show that these two groups show equal, but stronger effects than a third group which would not have attended the body therapy session. This would emphasize the spectator and could give him/ her stronger accountability and acknowledgement. However, the measurement prior to the body therapy session could be understood as the third group reports. These did not differ from the second measurements. Therefore, there was not only no effect in condition but also not of body therapy. This resolves the theory of potentially inherent information on different kinds of processes within spectatorship. Based on our results, we must conclude that the emancipated spectator transformation failed to take place within participants.

This failed transformation could potentially be due to different statuses of the recovery progress in MDD. Patients who have been in a further progressed state of recovery presumably could either be more open to change or on the contrary, have already conquered the majority of their change in agency. As we have discussed in our introductory part of this study, patients tend to leave therapy with a higher level of agency, than when entering therapy. These differences in agency levels need to be controlled for, in case that the process of developing agency does not run

linear. A necessary consequence of this therefore is to divide participants in following studies in terms of their psychotherapeutic process duration.

Furthermore, another relevant factor worth addressing is the distribution of gender of participants. As it is visualized in Figure 2, both groups (Passive/ Active) showed a much higher number of female participants. While this might not necessarily be a relevant factor for the investigated topic, for agency it most certainly is. Given that women still not share entirely equal rights in most countries of the world, and demonstrate this disequilibrium by also perceiving and rating themselves generally as less powerful or competent, their judgment of agency is highly assumably also affected. The strong representation of women in our participants groups could thus have served as a biasing factor: A potential implication of this difference could be that women detect changes of their JoA less frequently or less intensely, because they would expect or even allow to accredit themselves more JoA less. Moreover, it is likeable, that body awareness is less/ more present between genders. Given the very limited number of male participants, a comparison within our study would have been not sufficiently reliable to draw conclusions. To test these hypothetical implications and the thereby potentially very diverse scaling results, further research is needed.

Similar to the factor of gender is the factor of age. Our sample group showed a wide variety of age across participants (17-71 years). We chose to not restrict the minimum/maximum age to participate on purpose,

believing that agency as well as body awareness is present and tangible at any age, and not only a physical aspect but also an individual, perceptual aspects: a *judgment*- not only a *sense* of agency. However, the perception of the body is also grounded in a physical experience with the world. And the body changes with age. And in a way how the body develops, it restricts or enables us to engage differently in the world and thus, to experience the world and oneself differently. Although, as we wish to emphasize, we do not regard this as a one-way road and that e.g. someone with physical disabilities may develop different, potentially even stronger JoA than someone without these kinds of impairments, the existence of any kind of effect of these differences cannot be denied. Changes through or along aging, therefore need to be taken into account. A follow-up study should thus distribute participants based on their age into groups and hence compare conditions between age groups of participants.

Additionally, a challenging aspect of our study may also be that the participants of the two conditions attended different body therapy sessions. Although the body therapy session was structured similarly, the execution of it is very likely to have been prone to subtle differences. A solution to reduce this gap could be achieved by having the passive group watch the active group behind a mirror glass. Through this, the active group would not directly notice the passive group watching them. However, due to ethical reasons it seems inevitable to inform the active group in advance that their performance will be observed. This could, again, produce the

same effects of not focusing on themselves and their own experience and therefore possibly making the mirror redundant. Another possibility might be to change the condition design into a within-subjects design. Participants would all be in one setting the observer and in the other setting the active mover. The order of the condition attribution would, naturally, be counterbalanced randomly to prevent sequence effects.

Furthermore, counterbalancing the conditions would also allow to gain insight into individual differences of conditions. An implementation of balanced conditions would have not only increased the number of participants in each condition in this study, but particularly the chance of discovering a potentially existing effect. Contexts which allow for merely a limited number of participants, especially in times of pandemic restrictions, would therefore highly profit from this type of design. While a higher number of participants increases the possibility of finding an effect, participants can also experience both types of participation. Experiencing both types of participation might even increase or decrease the experienced SoPA/SoNA in a condition: Having a direct comparison of different experiences of oneself in a group, during an event, might thus not become an obstacle, as initially assumed by us, but rather a chance. In this scenario, the influence of a specific order (e.g. first passive, then active) could also be investigated. If this order might play a crucial role for developing a stronger/ weaker JoA, this component may not be left out of the process.

A last point of critique can be found in the results on our hypothesis 1. As our results show, we did not find overall lower reports on SoPA and higher reports on SoNA in the first measurement. This contradicts our hypothesis 1, which is why we have to reject this hypothesis as well. However, this hypothesis formed the basis of our further hypotheses and therefore the grounding of our research: As outlined earlier, previous research demonstrated that people entering therapy show a low level of agency, i.e. a low level of SoPA and a high level of SoNA. Hence, we assumed that participants would score low on SoPA and high on SoNA on the first measurement, because they would not have received the treatment yet. Yet, the reported scores did not meet our expectations and were rather ambiguous. This might again, be ascribed to the different individual progress of therapy, which we mentioned above. Anyhow, if the basic conditions of our experiments are not matching the theoretical background, may we even draw any further conclusions on this basis? Or should not actually this mere finding indicate the relevance and necessity for replicating our study in a bigger framework, i.e. with a larger participant sample size? We would, in the face of the outlined factors of lacking reliability, highly recommend this step.

Finally, the analyzed results have offered us rather demands of adapting future research structurally and content-wise with regard to various aspects than concrete conclusions. While the dynamic of JoA, body awareness and depression could not become clearer and yield novel

information, the limitations of our study did, however, present fruitful insights anyhow. Given these relevant aspects of influence, it seems inadequate to conclude based on our results, that no connection between JoA, body awareness and MDD exists. Although we may not confirm the existence of this dynamic either, various aspects give reason to believe that more research is required to create a clearer picture in this controversial discussion. As Jacques Lecoq already phrased it: “Believing or identifying oneself is not enough, one has to act.”

Conclusions

The JoA has to our knowledge never before been investigated in relation to body awareness in the context of MDD and in a performance art framework. As our theoretical revision has indicated, similar concepts exist across disciplines, which are however seldomly connected, despite their diverse and at times, contrary approaches. These approaches which might be regarded as an obstacle, yet, rather offer a chance: Cognitive Science, as a discipline which is aiming to make use of these opportunities to understand something from an entirely new perspective, and by this, gain new insights. In this study, a concept of the performance art discipline was employed as a framework to gain a novel perspective and potentially fruitful understanding in a controversial debate of a cognitive concept- agency. The integration of the emancipated spectator transformation into the discussion of agency has revealed a potential relation between the phenomenon of agency, body awareness and depression.

In our study no interaction between the three concepts could be found though. Patients showed no different responses with or without being exposed to body treatment and did not differ if they engaged with a moving or static body. Based on our results no influence of body therapy neither on agency, nor on body awareness can be concluded. We therefore had to refuse all our introduced hypotheses. Given the multiple apparent flaws in our methodology, such as our very small sample size as well as our purely

quantitative assessment methodology, our conclusions are however limited and should be treated with caution. As for instance the lack of meeting our basic conditions emphasize, the existence of a connection between the three concepts, cannot be denied by our results either. While the very weak, but noticeable trend in our graphs demonstrates a slightly existing effect after all, these indications are not sufficient enough to deduce more than speculations. For a deeper understanding and possibly more valid results, further follow-up studies should therefore be realized. These should adapt changes of our design and align these closer to the existing theoretical background. Additionally, a longitudinal study could yield more reliable insights into the dynamic relation of JoA, MDD and body awareness.

Despite the lack of novel understanding on the JoA, the unexpected insights could also point at the growing demand and acknowledgement for the involvement of the enacted body in science and further urge the exigency of involving the body in psychotherapy. Furthermore, this could highlight the benefits of connecting knowledge and practices of disciplines tighter: Although our results did not support the insights of the performative arts discipline, we hoped to by least have raised a novel question in the discussion on the phenomenon of agency and demonstrated the relevance of adapting the psychotherapeutic methodology upon it.

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