Media Psychology “is not yet there”: Introducing Theories on Media Entertainment to the Presence Debate

Abstract

Contemporary theoretical explications of presence experiences can be advanced and completed by integrating theoretical frameworks from media psychology. This article briefly presents concepts related to media entertainment that have been elaborated and/or applied by media psychologists and that exhibit considerable overlaps with the explication of presence. Specifically, the concept of involvement (Vorderer, 1992), affective disposition theory (Zillmann, 1996), simulation theory (Oatley, 1994), and the psychological theory of play (Oerter, 1999) are introduced. For each framework, connection points to the theoretical conceptualization of presence are pointed out. The article illuminates new opportunities for interdisciplinary cooperation in advancing our understanding of presence.

1 Introduction

The history of research on presence is a remarkable story of successful interdisciplinary cooperation. The challenges of investigating new media environments and their effects on the audience—or, better, the users—attract engineers, communication researchers, psychologists, philosophers, designers, and experts from other related fields. Not surprisingly, perspectives on what exactly constitutes “the perceptual illusion of nonmediation” (Lombard & Ditton, 1997) vary among researchers from different disciplines. Moreover, the concept has been subdivided into different types (IJsselsteijn, Freeman, & de Ridder, 2001), namely spatial presence (the illusion of being present in a mediated space or room), social presence (the illusion of being present in a mediated space or room), and copresence (the illusion of being present in a mediated room together with a mediated person). Numerous bodies of theory have been applied to the concept(s) of presence, which has in turn allowed for new interdisciplinary connections, but also impeded theoretical clarifications of the construct. (See, for example, Lombard and Ditton, 1997, for a list of different approaches to presence.)

This article does not provide another review of the literature on the conceptualizations and definitions of presence (Draper, Kaber, & Usher, 1998; IJsselsteijn, de Ridder, Freeman, & Avons, 2000; Lombard & Ditton, 1997). Instead, we intend to contribute to the discussion and clarification of presence by expanding the repertoire of applicable theories even further. Among the fields of research that have so far not been mentioned sufficiently in the presence...
literature is a comparatively young branch of psychology: media psychology (Bryant & Roskos-Ewoldson, 1998; Giles, in press; Vorderer, 1993) is concerned with processes and effects of media reception. By employing psychological theories within empirical studies, media psychologists describe and explain phenomena such as media-related information processing; cognitive, affective, and behavioral effects of media usage; or motivational determinants of media exposure.

Virtual reality (VR) environments have so far only rarely been investigated by media psychologists. However, results and concepts from media psychology can easily be applied to new media, including VR environments, because new media feature similarities to “older” media on various dimensions. Also, in the past, many presence researchers have pointed out that presence experiences do not arise in VR environments only, but can be observed in other media settings as well. A prototypical example is the “book problem”: reading a book, which obviously lacks almost all sensorically immersive capabilities, can produce experiential states that are comparable to “being there” experiences. Such experiences arising from reading, watching television, playing computer games, or using other “old” media have been investigated by media psychologists. Apparently, there are good reasons to work on closer connections between research on presence and media psychology.

For this purpose, we will introduce several theories that have been suggested by media psychologists or have been applied to research issues addressed in media psychology. These theories relate to the experience of entertaining media. This domain of media psychology promises to be of special interest for presence researchers because, on a conceptual level, feeling presence is obviously closely connected to states of fascination, delight, enjoyment, and astonishment. Such states are objects of investigation in entertainment research (Bosshart & Macconi, 1998; Vorderer, 2001; Zillmann & Vorderer, 2000). Moreover, there are common interests on the application level because many VR environments serve entertainment purposes, such as simulator rides or interactive cinema systems (Vorderer, 2000). Therefore, psychological theories on media entertainment appear to be of major importance to presence research. Because these theories have been noticed by the presence community only marginally, we will briefly present concepts from four prominent theories and identify potential connections to presence research. Specifically, we will introduce involvement theory suggested by Vorderer (1992, 1993), affective disposition theory projected by Zillmann (1994, 1996), simulation theory advanced by Oatley (1994, 1999), and finally the theoretical framework of the psychology of play, which appears to be very interesting especially in the context of interactive entertainment (Klimmt, 2001; Vorderer, 2001). Conclusions and recommendations on future interdisciplinary research on presence are presented in the last section of this article.

2 Involvement

2.1 Explication

The phenomenon of audiences being “captured” by a medium is, of course, older than VR technology and the concept of presence. Media psychology has used the term involvement to describe this state of media recipients (cf. Vorderer, 1993). Based on conceptualizations from the psychology of literature (cf. Groeben & Vorderer, 1988), the sociology of culture (cf. Bourdieu, 1987), and from communication research (cf. McQuail, 1985; Liebes & Katz, 1986), Vorderer (1992) differentiates two levels of involvement and, accordingly, two modes of reception: a distant, analytical way of witnessing the events presented by the medium (low involvement) and, in contrast, a fascinated, emotionally and cognitively engaged way of enjoying the presentation (high involvement). People who consume a media product in the analytical mode of reception are conscious of the mediated nature of the experience. Embedded into a set of cultural norms and traditions (such as those regarding how to look at a piece of art), their gratification from reading, listening, or watching is not emotional enjoyment but a more distant and potentially more objective evaluation of performances (such as judgments of the creativity of a novel’s author, of the virtuosity of the conductor of an orchestra, or of the quality of the actors in a film). Analytical reception re-
quires expertise and substantial knowledge about the media content and particularly about the media form. In making such well-informed judgments, one’s own ability to evaluate performances becomes salient, and the experience to be an expert contributes to the enjoyment derived from exposure. From this point of view, too much excitation or any overwhelmingly emotional reaction to the media content is inappropriate for experts and thus has to be rejected by individuals who adopt the distant/analytical mode of reception.

In contrast, audiences who experience intensive feelings like suspense or fun—in other words, those who are emotionally and cognitively involved—do not keep any aesthetic distance to the media offering, but “melt” into it. Highly involved media users do not take notice of the mediated quality of their experience (Vorderer, 1992). Instead of analyzing the underlying message the director might want to communicate, the audience simply enjoys the story. Actors (and agents) are not perceived as performers to be rated, but as “real” people who can be watched and accompanied while they are living their life. Many intellectuals have regarded this involved mode of reception as inferior to the analytical mode and attributed it to poorly educated mass audiences and to specific types of media offerings that lack any sense of aesthetics and true art (kitsch). In contrast to this rather ideological and purely dichotomous perspective, media psychologists have investigated experiences of high involvement as a widespread empirical phenomenon (Bossart & Macconi, 1998)—for example in the context of reading (Andringa, 1996; van der Bolt & Tellegen, 1993) or watching television (cf. Liebes & Katz, 1986; Vorderer, 1993). In this context, states of high involvement are not considered to be accessible to certain individuals only or to be induced by special media products exclusively.

Vorderer’s (1992) distinction between the analytical and involved mode of reception does not expect media users to stay in one mode during the whole process of exposure. In fact, it is assumed that individuals’ level of involvement oscillates between the prototypical poles of analytical and involved reception. Variations in the degree of involvement can be caused by factors attached to the media content (for instance, boring elements or advertising spots) and factors that are not related to the media content (feeling hungry or a ringing doorbell). In sum, the level of involvement may vary between different media products, different individuals (inter-individually), and different situations of exposure (intra-individually). Although there are conceptualizations in personality psychology that identify a general predisposition to become involved with aesthetic experiences (“absorption” cf. Wild, Kuiken, & Schopflocher, 1995), media psychologists generally consider involvement a highly variable and unstable condition.

### 2.2 Involvement and Presence

Similarly with the notion of presence, there is no commonly accepted definition of involvement (Donnerstag, 1996). However, if one employs Vorderer’s understanding of involvement, a definitional overlap between the two concepts becomes visible. Both the state of presence and the experience of involvement include the perceptual focus on mediated information and the avoidance of stimuli that do not belong to the media offering, such as unrelated own cognitions or external cues that undermine the nonmediation experience. Ideally, involvement and presence describe states in which all perceptions, thoughts, and emotions are directed towards the media environment. For this reason, involvement could be conceptualized as one dimension of presence (cf. Witmer & Singer, 1998; Biocca, Burgoon, Harms, & Stoner, 2001) or presence could be modeled as a special case of involvement.

If one takes into account that both involvement (Calvert, 1994) and presence (Draper, et al., 1998; Schubert, Friedmann, & Regenbrecht, 2001) are obviously linked to attention processes, the integration of these concepts can be based on a strong theoretical foundation. In general, two types of attention processes have to be distinguished: automatic (or involuntary) attention and controlled, voluntarily directed attention. (For detailed reviews, see Underwood, 1993 and Styles, 1997.) Attention could therefore be considered as a conceptual bridge between involvement and presence. From this perspective, involvement would emphasize motivational aspects of the experience derived from the
reception of the media offering (such as enjoyment, fascination, absorption), because users who are in a state of high involvement are emotionally and cognitively occupied by the media content they are observing and thus want to continue the entertaining reception process. For example, people who watch an interesting and complex thriller on TV may feel a strong emotional activation and may think extensively about the possible progress of the plot. To learn about the subsequent events and the resolution of puzzles and conflicts, they would feel the strong wish to continue exposure and direct their (controlled) attention towards the media content (cf. Vorderer & Ritterfeld, in press). This way, high involvement would foster the nonmediated experience and make the users want to ignore the reality outside the media offering. In contrast, the notion of presence rather seems to cover perceptual facets such as spatial illusions and the confusion of virtuality and reality. The overwhelming sensory input of a VR environment, for example, may activate processes of automatic attention that lead to the perception of being spatially and/or socially present in the mediated environment, regardless of whether the users reject or consent to such an experience. This example is not intended to suggest that presence is always elicited by powerful media systems that capture the users’ senses. Instead, it supports the assumption that both perceptual and motivational processes contribute to the attentional behavior of media users and thus both influence the quality and degree of nonmediated experiences.

The brief consideration of connections between involvement, attention, and presence should be sufficient to justify the efforts of a more detailed integration in future research. This way, the concept of presence could be more closely related to its theoretical roots in psychology. As a result of such an integration, the question whether involvement should be considered as the more global concept that includes a special case named presence or as one dimension (or factor) of presence experiences could be answered. What is already obvious, however, is that the users’ wish to remain in an analytical mode of reception would conflict with the immersive capabilities of a VR environment in creating a sense of presence, whereas media users who are ready to experience high levels of involvement would probably feel disproportionately higher degrees of presence even in less immersive media environments. A media environment that is designed to elicit strong feelings of presence, then, should try to create the illusion of a nonmediated spatial environment or social entity and to get the users emotionally and cognitively involved in order to make them want to continue and intensify the experience.

3 Process Theories of Entertaining Media Reception

In addition to the concept of involvement, media psychologists have developed more-detailed and process-oriented theories that identify specific cognitive and affective components of information processing during the reception of media entertainment. Two theoretical frameworks that appear to be especially interesting for presence research are introduced: Zillmann’s affective disposition theory and Oatley’s simulation theory.

3.1 Affective Disposition Theory

3.1.1 Explication. The concept of involvement is useful to differentiate media users’ perspectives on content and form of media products and to describe differences in their attentional focus. However, it lacks explanatory power because it does not elaborate on the factors that lead to high (or low) involvement during exposure. Why do, for example, most people feel strong intensities of suspense and arousal when watching a movie or reading a thriller novel (Nell, 1988)? The factors that cause such states of high involvement have to be identified within the process of reception. Zillmann (1994, 1996) has advanced a theory of drama appreciation that is based on the audience’s perception of the characters displayed by the media. The assumptions of the so-called affective disposition theory (ADT) have been empirically tested and repeatedly confirmed. (See Zillmann, 1996 for an overview.) According to Zillmann, the process of drama reception can be analytically divided into seven steps. (See Figure 1.)
People who watch a movie or read a novel observe the behavior of the persons who are presented by the media (1). The actions taken by the characters are evaluated on a moral dimension (2). If the audience morally consents to the behavior of a character, they establish a positive affective disposition towards this character, that is, they begin to like her/him (3). Likeable characters are usually the heroes or “good guys.” In contrast, viewers or readers develop negative affects towards characters who are judged to behave in a morally unacceptable way, which is normally the case of villains or “bad guys.” Based on these affective dispositions, the audience takes a specific perspective on the progress of the story. In anticipating the ongoing events, viewers or readers hope for outcomes that the characters deserve; that is, they desire a positive outcome for the likeable characters (such as happiness) and a negative outcome for the resented characters (such as punishment). Complementarily to these hopes, viewers or readers fear that likeable characters receive a negative outcome and that the bad guys receive an undeserved positive outcome (4). The actual events of the story are evaluated against these hopes and fears: viewers or readers compare the presented outcomes to their anticipations and wishes (5). If the displayed results match with the moral expectations of the audience, which means there is a happy end for the “good guys” and/or a bad ending for the bad guys, positive emotions (euphoria) are the result (6), because the viewers or readers empathize with the characters (Zillmann, 1991). In the case of bad guys receiving their deserved bad outcome, a mechanism that is called counterempathy takes effect. Based on the moral justification of the bad outcome, the viewers or readers experience positive emotions from witnessing the actually negative outcome. If, in contrast, the displayed results do not fit to the hopes and fears of the viewers or readers related to the good guys and bad guys, negative feelings (dysphoria) will be experienced because of empathic disappointment or anger about the defeat of the good guys and/or the undeserved success of the bad guys. The latter case is again a form of counterempathy because negative emotions arise from witnessed positive outcomes. The emotions (that is, both positive and negative affective responses) that are elicited during this step of ADT’s process model can be considered the key part of the entertainment experience, for example, suspense. Finally, the outcome is evaluated morally, and the cyclic appreciation process is restarted (7).

ADT has proven to be a useful framework for the investigation of the reception of entertaining media.
addition, ADT has partially been applied to media products that are not necessarily intended to delight their audiences, such as news (Zillmann & Knobloch, 2001). In spite of the theory’s substantial explanatory power and the strong empirical evidence for its assumptions, Vorderer (2001, in press) has pointed out that ADT should not be regarded as a unified theory of entertainment because it does not sufficiently explain why individuals turn to—and to some extent obviously enjoy—sad entertainment offerings, such as melodrama (Oliver, 1993) or crime stories that do not lead to the morally appropriate outcomes (for example, some episodes from Law & Order) and because ADT assumes the audience to be passive witnesses of the ongoing events. Viewers or readers are expected to simply observe the actions of the characters and evaluate them without participating in the story or trying to influence the characters’ behavior. This expectation is certainly agreeable in the context of linear, noninteractive media such as novels or movies. Interactive media, however, require their users to take actions continuously (Vorderer, 2000). In videogames, for example, media users are not passive witnesses, but the most important agents that push the story forward (Grodal, 2000; Klimmt, 2001). For this reason, ADT cannot fully explain the enjoyment of using interactive entertainment.

3.1.2 ADT and Presence. Zillmann’s conceptualization of drama appreciation emphasizes the affective component of entertainment experiences, which could be regarded as one part or dimension of presence. Affective dispositions towards the social entities of a media offering are the main source of users’ emotional engagement. Therefore, ADT targets a mechanism that contributes to the formation of states of presence within media settings that are centered around individual characters, such as Hollywood movies. In the domain of presence research, applications that involve characters and events within a narrative framework, so-called interactive drama, appear to be most similar to conventional drama, which would suggest that ADT’s contribution to the explanation of dramatic presence be evaluated (Kelso, Weyrauch, & Bates, 1993). In interactive drama, users occupy the role of an active participant and not the role of a mere spectator. This role could make moral judgments and affective responses to the other characters of the system even more important to the users because they do not only influence their perspective on the story and their disposition towards the other social entities, but should also have an effect on their decisions about how to act within the narrative. For example, the negative emotions towards a bad guy would make a drama spectator feel counterempathy and even hate, but the user of an interactive drama might even want to turn such emotions into action and punish the bad guy for his morally inappropriate behavior. The processes assumed by ADT may be of major importance in interactive drama theory.

Moreover, ADT can explain phenomena related to Social Presence in general (Short, Williams, & Christie, 1976; Rice, 1993; Ijsselsteijn et al., 2000; Biocca et al., 2001), because it is based on the concept of empathy (Zillmann, 1991). Empathy theory can explain the emotional commitment of individuals to each other and the attachment of media users to media characters, including agents and avatars: if users of a VR environment do not develop empathic emotions towards the media characters, one could argue, they remain indifferent and thus do not experience a strong feeling of social presence. This does not imply, however, that empathic feelings towards media characters can arise only from moral judgments as ADT predicts. Other factors, such as humor and physical attractiveness (cf. Hoffner, 1996), may lead to similar affective reactions towards mediated social entities. In turn, Zillmann’s theory justifies the assumption that characters who can attract the users’ empathic emotions will produce high levels of (social) presence even if they are not ultra-realistic or lifelike agents (Parise, Kiesler, Sproull, & Waters, 1999). In terms of application, a funny or somewhat beautiful agent may be the system designer’s better choice compared to a boring and uninteresting high-fidelity avatar.

As mentioned previously, interactive media environments offer a role to the users that is completely different from noninteractive media, which impedes the application of ADT to interactive reception processes. Because interactivity is a key feature of most new media environments (Steuer, 1992; Vorderer, 2000), Zill-
mann’s conceptualization should not be regarded as a universal explanatory approach to presence experiences but rather another important cornerstone of the theoretical foundation of presence. To advance an integration between ADT and (social) presence theory promises to be fruitful, for Zillmann’s model could allow for a better understanding of the role of virtual characters in creating a sense of presence. Such an integration would not have to apply the cited process model (figure 1) to exposure to any kind of media products that may elicit feelings of presence because ADT has originally been introduced only as a theory of drama appreciation. Presence researchers should thus consider the similarities and differences between the media offering of interest and typical drama and subsequently decide which elements and assumptions of ADT may be applicable. For example, a VR system that features an anthropomorphized avatar as an online assistance system will not present actions that are morally evaluable. Affective reactions toward the avatar will therefore not occur because of moral judgments, but maybe because of the character’s performance. If the help offered by the avatar is not sufficient to a given user, she/he may emotionally respond with anger, which can cause the motivation to quit the reception process and to finish the presence experience. In contrast, an attractive and well-functioning help avatar may contribute positively to the presence experience. In this example, the affective reaction towards the system’s character(s) is an element of ADT that may be relevant to presence research, but the moral judgment processes implemented in Zillmann’s theory do not apply.

3.2 Simulation Theory

3.2.1 Explication. Another theoretical approach to the reception of narrative entertainment media is Oatley’s (1994, 1999) simulation theory (ST). Originally, Oatley provided a conceptualization of the process of reading fictional narratives, but his assumptions can easily be expanded to exposure to other media. Much like the concept of involvement (see Section 2), ST differentiates two ways of processing the information presented by the narrative. The external mode of reading is focused on elements of literary form and the intellectual interpretation of the author’s presentation of the world. The internal mode, in contrast, is defined by the “reader entering the world of the text” (Oatley, 1994, p. 57), which leads to emotional responses to the story. ST’s key assumption about the development of affective reactions is that the internal mode of reading fiction can be considered a mental simulation of the described environments, actions, and events. This simulation can be compared to a computer program that is executed by the emotional and cognitive routines of the readers: To (re-)construct the world of the story, readers access their own memories, thus creating an individual experience. According to ST, simulating a story world can elicit emotional responses in three different ways. First, sympathy is an affective experience similar to Zillmann’s concept of empathy, leading to emotional reactions as feeling with the characters. Second, the internal simulation can reactivate emotional states that the readers have experienced in the past. For example, a short story about a romantic relationship that is ending may be similar to an event that some readers have experienced years ago. Therefore, the emotional state that accompanied this prior incident is experienced again during the reception of the story. Oatley (1994) has coined the term memory emotions to describe this way that literature can induce affective responses. The third source of emotional reactions is identification with characters. Some narrative texts allow for taking the perspective of certain characters instead of simply observing them “from outside” as it is conceptualized in Zillmann’s ADT. By “looking into the mind of a character,” readers may internally simulate her/his feelings and experience these emotions themselves. This emotional identification has to be distinguished from empathetic reactions of feeling with a character whose inner emotions and thoughts cannot be observed directly (Zillmann, 1991). (See Cohen, 2001, for a discussion of the concept of identification.)

3.2.2 Simulation Theory and Presence. To conceptualize the perception of mediated information as internal simulation is not a new idea to presence research. Biocca (1997), for example, points out that day-
dreaming can be regarded a form of presence experiences and that dreams use what I call the mental simulator, the generator of mental imagery that makes of cognitive resources used in perception... But unlike states of presence in virtual and physical environments the mental spatial simulation is not based on incoming sensory stimulation but is mostly constructed from memory.

Similarly, ST argues that mental simulations do not exclude external information completely, but that mediated stimuli (such as the text of a novel) are cognitively reshaped and/or filled in by memories and imagery of the user in order to run the simulation. ST could thus serve as a contribution to a psychological foundation of presence because it can explain the formation of rich experiences of a mediated world without the requirement of highly realistic and immersive VR technology, by pointing at the relevance of internal processes of construction. Oatley’s theoretical framework might therefore be especially useful to solve the “book problem,” that is, the observation that states of presence can be elicited by reading a book, a medium that lacks almost all immersive capabilities. Originally, ST assumes only that reading (fictional) narrative can cause strong emotional responses (and thus a state of absorption, fascination, or maybe presence) by reactivating the feelings that readers experienced themselves in situations that were similar to the circumstances portrayed in the story. For presence research, however, this assumption of connections between the media content and the individual recipient’s own biography should be considered from a broader perspective that does not only focus on emotional responses or on the text exclusively. For example, people who have visited a famous cathedral and remember many details of its appearance may feel a strong sense of spatial presence if they just read a written description of the building, because they can enrich and complete their mental simulation by filling in the details that are not included in the text through memory information. In a similar manner, rough 3D computer models of real buildings may induce higher degrees of spatial presence in individuals who have been in the respective buildings before. Consequently, a lesson from ST for presence researchers may be that media offerings that do not include powerful sensory input can compensate for their low immersive potential by inspiring their audience to activate and retrieve related information from their memories.

4 The Psychological Theory of Play

4.1 Explication

Involvement, ADT, and ST are theories that have been developed to explain specific phenomena of media exposure, which may limit their applicability in the context of presence theory. Vorderer (2001) applied a more general theoretical framework to the explication and explanation of media entertainment that offers possibly more conceptual connection points to presence. Apparently, the activity of playing exhibits striking similarities to the use of entertainment fare. According to Oerter (1999) and Sutton-Smith (1997), play is a particular kind of action that is characterized by three major aspects:

1. It is intrinsically motivated and highly attractive.
2. It implies a change in perceived reality, as players construct an additional reality while they are playing.
3. It is frequently repeated.

Based on explanations given by Freud, Piaget, and Wygotski, Oerter (2000) describes children’s playing in more general terms as a form of coping with one’s own life, that is, an activity that helps children to compensate for their problems, desires, and socialization pressure. Looking more closely at the various forms of playing, it becomes clear that early games of make-believe express the children’s wish for control and power, and to overcome their inability to influence their environment, all of which help children to come to terms with their own identity. This perspective regards playing as a form of transforming reality in a way that serves children’s psychological needs.

Because presence is considered a mental state, theoretical concepts that are to be connected to it have to be
situated at the conceptual level of experience. Consequently, we have to ask, what does the rather broad conceptualization of play mean for the actual experience connected to the activity of playing? First of all, the experience of agency seems to be important. Players regard themselves as a driving force: in contrast to television viewers, for example, players actively influence the quality and direction of the ongoing events. The actions taken during play are closely connected to experiences of mastery and self-efficacy (Bandura, 1977, 1997). Play settings often allow for the nonambiguous detection of the effects of one’s own actions, such as in the moment of touching another child when playing tag. This experience of self-efficacy (which most often leads to victories or successes in competitive games) is apparently very enjoyable to many children and adults alike. Second, play often leads to the experience of a chain of continuous actions that has been conceptualized as flow (Csikszentmihalyi, 1991): consciousness and actions merge. Players accomplish their tasks almost automatically because they can choose the level of difficulty of the play’s tasks and match it to the level of their skills. Thus, players do not feel bored because the task is too easy or feel frightened because the task is too difficult. Third, the experience of playing often includes the illusion of reality. Players often fully occupy their role, thus constructing a parallel reality that persists for the duration of the game. This allows for vicarious experiences in domains that are mostly inaccessible in real life (being a fighter pilot, a sorcerer, or a cowboy), thus enabling the players to overcome feelings of powerlessness and expanding their repertoire of possible activities and (social) behaviors.

4.2 Play and Presence

In the context of presence research, the psychological theory of play seems to be especially useful in explaining the fascination of interactive entertainment, such as videogames. Because players can actively influence the course of events in the media content (Vorderer, 2000), users hold a certain “responsibility.” Success and failure are not caused by the media characters alone, but also by the users themselves (cf. Grodal, 2000). What makes interactive entertainment attractive, then, is a strong experience of self-efficacy and mastery: the users are in partial command of the events going on in the story; they receive immediate feedback to their actions and thus can see and evaluate the effects they produce. Interactivity can therefore not only enrich the spatial component of presence experiences (Steuer, 1992; Schubert, Friedmann, & Regenbrecht, 1999) but also increase the motivation to use a media setting because it makes exposure entertaining, or, more specifically, because it holds the potential to make the users feel successful, powerful, and contented with themselves. Such feelings of mastery may foster the users’ readiness to maintain their engagement in the actions within the media system and prevent tendencies to exit the exposure situation, which would support and/or preserve states of presence. Feelings of defeat and failure, on the other hand, may also be caused more frequently by interactive media systems because users cannot attribute insufficient outcomes of the actions within the media setting solely to the failure of other social entities (such as avatars) or technical problems but have to acknowledge their own errors instead. Such perceptions of one’s own mistakes and suboptimal performance may cause anger and frustration and thus could foster the motivation to finish the state of presence. As long as interactivity allows for experiences of control, mastery, and self-efficacy, however, it will intensify the pleasure of using the media product and thus increase the motivation to experience a strong sense of presence.

Besides the single moments of mastery experiences, interactive media may enable their users to enter states of flow. This experience of directing one’s full attention to one chain of action while ignoring all stimuli that are irrelevant to the actual task obviously overlaps with common conceptualizations of presence experiences (cf. Bystrom, Barfield, & Hendrix, 1999; Zahorik & Jenison, 1998). Therefore, it seems to be reasonable to discuss the relation between the concepts of flow and presence. In some cases, presence might be just the flow experience arising from concentrating on the tasks that are offered by an interactive VR environment. Alternatively, (spatial) presence could be modeled as an “add-on” experience resulting from the flow that media users
enter when exploring (or playing in) a VR system. These considerations do not imply, of course, that interactive media environments can induce states of presence only if flow experiences occur. However, it may be possible that limited immersive capabilities can be compensated for if users enter states of flow, which would trigger feelings of presence in spite of technical shortcomings.

The second aspect of Oerter’s definition of play, namely the change in perceived reality, may be of importance to presence researchers because it points at the role of the individual’s situational expectancies. Children who begin to replay an episode of Star Wars, for example, agree to accept that certain aspects of the real world can be modified or “switched off” for the duration of the game: the possession of light sabres and laser guns will be possible, and traveling between planets should be an everyday activity. By defining a situation as play, individuals thus establish a set of expectations that may differ from what should be expected in the real world. To induce high levels of presence, the manipulation of such expectancies before and during exposure may therefore be a promising strategy. If users expect to enter a world with certain rules and peculiarities and are prepared to consider the media use as a playful action, they might feel a strong sense of presence in spite of technical limitations and low immersive capabilities.

The third component of experience of play, the vicarious experience of new domains of life, is also closely connected to presence because VR systems and other media offerings are often intended to allow for journeys into inaccessible or distant environments. Such transportations to settings and events that are out of reach in reality are very appealing to children and adolescents because they enable them to expand their limited horizon of experience and possible activities by simulation. But many adults feel attracted to such opportunities to enter new territories, social settings, or activities, too. Their main motivation may be the need for diversion from all-day experience, which has been conceptualized as escapism by communication researchers (Katz & Foulkes, 1962; Henning & Vorderer, 2001). Therefore, media products that portray new and unusual environments may be more interesting to most individuals than simulations of all-day settings, which should increase their motivation to feel a sense of presence because it is attractive and fun to “be there.”

In sum, the psychological theory of play can help explain the great appeal and fascination that many users derive from using interactive and/or VR media, and in turn provide presence researchers with valuable hints about content factors that can make using or playing with the media fun, which should be considered an important determinant (or dimension) of presence experiences. To embed a media product in a “playful” context, a few cues may be sufficient. For example, a cover story and some rules may be introduced before exposure. This will affect the users’ expectancies about technical possibilities to act and rules of specific (spatial and/or social) behaviors within the media environment. Thereby, the users’ motivation to engage in possible actions and their readiness not to attend to technical limitations of the system could be increased, which would both support the activation and preservation of presence.

5 Conclusions and Perspectives for Future Interdisciplinary Presence Research

As media psychology is concerned with the information processing and experiences of individual media users, theories advanced or applied by media psychologists appear to be very useful for the further clarification and elaboration of presence. Much theoretical and empirical work on presence has addressed technological issues (e.g., Lombard, Reich, Grabe, Bracken, & Ditton, 2000; Biocca & Levy, 1995). However, it seems to be common sense among presence researchers that the quality and degree of presence experiences is not determined by technology alone but that “user variables” have to be considered in conceptual models of presence also. Theories from media psychology hold the potential to specify such user variables both in terms of stable user characteristics and processes of thinking and feeling during exposure. Some of the theoretical links that both presence researchers and media psychologists should
further investigate have been illuminated in this article. (See Figure 2.)

On the experiential level, many conceptual overlaps between (both spatial and social) presence and phenomena studied in media psychology—such as involvement, enjoyment, suspense, and flow—can be identified. These overlaps justify the further elaboration of theoretical links between presence research and media psychology. Moreover, some media attributes that have been found to affect states of (spatial and/or social) presence may also influence those phenomena. For example, characters appearing within a media environment may elicit social presence and, under the conditions formulated by affective disposition theory, induce feelings of suspense, thus establishing a “second route” of the formation of presence. Finally, media psychology may be helpful in identifying user variables that influence experiential states connected to presence or that affect presence in a direct way. Spatial memories, for example, may be mental resources that can be utilized to induce spatial presence. Memory emotions may foster involvement and enjoyment, thus supporting presence experiences indirectly under certain circumstances.

To demonstrate connections between presence research and media psychology, we have focused on theories that are related to the use of media entertainment because the experience of “delight” (Zillmann & Bryant, 1994), “joy” (Bosshart & Macconi, 1998), “fascination” (Klimmt, 2001), or “absorption” (Quarrick, 1989) are obviously very similar to, closely connected to, or even identical with the experience of presence. This does not mean that those theories can be applied to only media settings that are intended to entertain their users. For example, the experiences of self-efficacy or mastery and flow described in the psychological theory of play can also arise from using highly interactive working environments (cf. Csikszentmihalyi, 1991). In turn, media settings designed for working, learning, or other non-entertainment purposes may be very enjoyable to use. Specifically in the domain of media-based education, the motivating effects of entertaining elements have been found to have the capabilities to increase learning performance, which led to the development of “edutainment” concepts (Amory, Naicker, Vincent, & Adams, 1999; Mallon & Webb, 2000). A clear separation of entertaining and “serious” media settings will be obsolete soon, so theories of media entertainment should also be considered and applied to presence in the contexts of working, learning, or other media environments.

To put the outlined opportunities into practice, presence researchers should investigate the aforementioned concepts from media psychology in detail and try to assess their relation to (social and/or spatial) presence. This way, the understanding of presence will be enhanced, and the concepts that promise to be most valuable to presence research can be selected for further integration. Subsequent to integration on the theoretical level, the relevance of concepts from media psychology should be illuminated in empirical studies on determinants and effects of presence, in applied presence research as well as in system design. This way, integration and cooperation could be realized at multiple levels, which would allow the maximum advantage to be taken of the efforts both presence researchers and media psy-
chologists would have to invest into such interdisciplinary cooperation.

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**References**


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