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RESEARCH ARTICLE

Minimal ludic roleplay experiments: Hypertext fiction as experimental stimulus for studying identification with fictional characters

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ABSTRACT

Identification, defined broadly as the psychological process by which a person temporarily adopts the perspective, attributes, or emotional state of another, has received limited empirical attention across disciplines. While identity theory and social identity theory (SIT) have generated substantial bodies of research, identification with fictional characters remains underexplored, particularly through experimental methods. This paper first summarises the existing theoretical and empirical literature on identity and identification, spanning psychology, sociology, game studies, and the humanities, before presenting a new experimental paradigm developed over recent years that employs hypertext fiction (HF) story-games as controlled experimental stimulus. The rationale for this methodological approach is outlined, including its ecological validity, scalability, and capacity to manipulate specific narrative and character variables with precision. The paper then discusses the key design considerations that inform this approach, covering stimulus construction, participant sampling, dependent variable measurement, and ethical practice. It subsequently presents an integrated summary of findings from the series of experiments conducted using this method, addressing the effects of character richness, character morality, narrative outcome, participant gender, religious belief, agency, and mental health on self-reported identification. Practical applications of these findings to artistic creation and clinical assessment are considered. The paper concludes by proposing directions for future research and the development of a theoretical model capable of integrating the factors that influence identification.

Keywords: game; hypertext; identification; identity; research methods

The study of identity has occupied psychologists and sociologists since the earliest days of the discipline. James (1890) introduced the notion of multiple selves, proposing that a person contains not one but several identities operating in different social contexts. Building on this, Stryker (1980) defined an identity as an internalised positional designation corresponding to each role a person occupies in society. Burke and Stets (2009) extended this framework further, defining an identity as a set of meanings that define who one is, and organising identities into three broad categories: social roles, group memberships, and personal characteristics. Within this model, multiple identity agents coexist within a single individual, such as a professional role agent and a parental role agent, and much of everyday social interaction takes place between specific agents rather than between whole persons. Burke and Stets (2009) also articulated the broader ambition of identity theory, which is to explain the specific meanings individuals hold for their multiple identities, how those identities relate to one another, how they shape behaviour, thoughts, and emotions, and how they connect individuals to wider society.

Despite this theoretical richness, identities are difficult to study experimentally. The wide range of personal variation and the challenges of operationalising identity constructs have meant that identity theory has largely remained within the domain of sociology rather than psychology. An important exception is the experimental tradition that developed around group membership identities, known as social identity theory (SIT).

Social Identity Theory

The foundational paradigm within SIT is the minimal group experiment, originated by Tajfel (1970). In these studies, participants were assigned to groups on an arbitrary basis and asked to allocate points to other participants. Consistently,

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participants demonstrated favouritism towards members of their own group, even when they were fully aware that group assignment had been random. Tajfel (1970) interpreted this in-group bias as evidence that people define themselves partly through group membership, using social categories as cognitive tools for making sense of the social world and anchoring self-reference. He further argued that individuals do not generate their own categories independently but assimilate them from the surrounding culture, and that the need to maintain self-esteem introduces a systematic bias into these categorisations. Crisp (2004, as cited in Dixon, 2007) added that categorisation also serves to reduce cognitive load and, despite producing a less accurate model of the social world, remains generally adaptive.

The minimal group paradigm has not been without criticism. Mummendey and Schreiber (1984, as cited in Hayes, 2000) raised concerns about aspects of the experimental design, and broader debates have continued about the scope of what SIT can explain. Nevertheless, the tradition established an important proof of concept: it demonstrated that experimental methods can be applied to questions of identification, and that new identities can be spontaneously adopted within a controlled setting. The limitation of SIT as a framework for studying identification more broadly is that it confines itself to group membership identities. As Burke and Stets (2009) argued, identities can equally be grounded in social roles and personal characteristics, both of which fall outside the scope of the minimal group paradigm.

Identification

Identity and identification are related but conceptually distinct. If an identity is a set of meanings that define who one is, identification refers to the psychological process of adopting the perspective or attributes of another, whether a person, group, or fictional character, with whom one does not share that identity. The precise boundaries of this distinction may matter less than they initially appear, since the underlying mental processes may amount to the same thing: an investment in a particular identity, whether one's own or another's. Whether that investment involves the self or an external referent may be a difference of degree rather than kind, though this remains an open question.

Prior research on identification is scattered across disciplines and often limited in empirical rigour. Holt (1950) examined identification with a group, anticipating what SIT would later formalise as in-group identity. Freud (1923/2010) addressed identification with real persons and objects but did not extend this to fictional characters. The distinction between real and fictional targets of identification is itself less clear-cut than it might seem. Identifying with the public image of a celebrity, for instance, may not differ substantially from identifying with a fictional character, since in both cases the object of identification is a constructed representation rather than direct access to a real person. An analogous case can be made for identification with religious figures who are believed by adherents to exist, but who are not directly knowable in the way that an acquaintance is.

Research in the humanities has addressed identification more directly as a subject of inquiry. Oatley (1994) identified it as a central concern in both film studies and literary studies. Igartua (2010) found empirically that strong identification with film characters is associated with greater enjoyment, more extensive cognitive elaboration, stronger dramatic impact, and greater susceptibility to attitude change. In comics studies, McCloud (1993) proposed that shallowly drawn, iconic characters facilitate identification by leaving more space for the reader to project themselves onto the character. Cohen (2001) noted that despite the applied importance of identification in media production, rigorous scientific investigation had remained limited.

Game studies has engaged with identification from a somewhat different angle, focusing in particular on the relationship between players and the characters or avatars they control. Klimmt et al. (2009) defined character identification as occurring when a player self-perceives some of a character's attributes as temporarily part of themselves and proposed that this process can produce measurable alterations in everyday self-perception. Subsequent empirical work by Blake et al. (2012) appeared broadly consistent with this account, though methodological limitations mean that alternative explanations cannot be ruled out. Shaw (2011), drawing on qualitative interviews, found that greater control over a character's actions tends to deepen the sense of identification. A wider range of studies has examined identification with avatars specifically, including Martin (2005), Bessiere et al. (2007), Ducheneaut et al. (2009), Jorgensen (2009),

Kafai et al. (2007), Kromand (2007), Kujanpää et al. (2007), and Shaw (2011).

This body of work points to a genuine and practically significant phenomenon that has not yet been subjected to systematic experimental investigation across the full range of identity types. The SIT tradition demonstrates that experimental approaches to identification are viable, but its scope is confined to group identities. What is needed is a method capable of examining identification with fictional characters across a broader range of variables, including character features, narrative structure, and player characteristics. The following sections introduce and describe such a method.

Role-playing in games as an identity research method

The minimal group experiments that formed the foundation of SIT are, in structural terms, already game-like. Participants are assigned to teams, allocated resources, and asked to make decisions according to rules, which places them closer to a game framework than to most psychological paradigms (Hook, 2012). This observation opens a productive line of thinking: if game-like structures have already proven useful for studying group identity experimentally, other game formats may offer equally useful or richer possibilities for studying identification more broadly.

One category of particular relevance is the role-playing game (RPG), which exists across a wide range of formats and media, including tabletop pen-and-paper systems, live-action formats, and computer games. For the purposes of this paper, role-playing is understood as the activity of enacting a character role. The concept is not without definitional difficulties. Salen and Zimmerman (2003) noted that RPGs place pressure on conventional definitions of what constitutes a game, and the category is further complicated by the fact that some commercially marketed RPGs can be completed without any meaningful role-playing, while players can engage in role-playing within games not formally categorised as RPGs.

The connection between role-playing and identity theory is not merely analogical. The term role is already embedded in the language of identity research: McCall and Simmons (1978) used the phrase role identities to describe the character and role an individual devises for themselves as an occupant of a particular social position and proposed a hierarchical model of the self in which more personally significant identities occupy higher positions. The English word role itself derives from the physical roll of paper on which an actor's lines were written when cast in a theatrical production, meaning the etymology of the term is bound up with the enactment of character from the outset. The conceptual overlap between role-playing as a recreational activity and role as a unit of identity analysis is therefore not incidental but etymologically and theoretically grounded.

This convergence between game structures and identity research suggests that single-player RPGs, suitably adapted for experimental use, could serve as a controlled and ecologically valid stimulus for studying identification with fictional characters. The following section describes how this possibility has been developed into a replicable experimental methodology.

Minimal ludic roleplay experiment design

The methodological approach introduced here uses single-player text-based role-playing games as experimental stimulus, a format chosen to balance experimental control with ecological validity. Single-player games are preferred over multiplayer formats because they eliminate the confounding influence of participant-to-participant interaction, which would make it considerably harder to isolate the variables under investigation. The specific format adopted is hypertext fiction (HF), sometimes described informally as a “choose your own adventure” story, in which a reader-player reads a passage of text and then selects from a number of hyperlinked options that determine how the narrative proceeds (Aarseth, 1997). The hyperlink structure can be implemented either as numbered page references in a physical book or as clickable digital links in a web-based interface. HFs are frequently written in the second person, addressing the protagonist directly as “you”, which positions the reader-player as the agent of the narrative rather than an observer of it. Aarseth (1997) drew a useful distinction here, arguing that the reader of interactive fiction occupies the role of a player in a game-world, whereas the reader of linear text remains a spectator; the term reader-player is used throughout this paper to reflect that dual status.

The use of text rather than graphics serves several methodological purposes. It makes the stimulus consistent across different experimental conditions, reproducible across different devices, and removes a range of potential confounding

variables that graphical presentation would introduce, including the perceived attractiveness or ethnicity of a visually rendered protagonist. The format also has practical advantages in terms of production: creating an original text HF for experimental use is substantially more feasible than developing a graphical video game and allows researchers to make precise and controlled adjustments to the stimulus material between experimental conditions. For a broader discussion of digital games as experimental stimulus, see Järvelä et al. (2012). This approach is termed here a minimal ludic roleplay experiment, a label chosen to parallel Tajfel's (1970) concept of the minimal group experiment, in that it isolates the phenomenon of interest within the simplest game structure sufficient to produce it. Established commercial examples of the HF format include Depression Quest (Quinn, 2013) and the Fighting Fantasy series, which began with The Warlock of Firetop Mountain (Jackson & Livingstone, 1982). For a wider treatment of HF and interactive fiction as a literary and ludic form, see Montfort (2003).

Stimulus design

Each experiment in this tradition uses an original HF written specifically for that study, ensuring that participants have no prior exposure to the narrative or its characters. Original protagonist characters are created for the same reason, to avoid any pre-existing associations or opinions that might influence self-reported identification. This does not preclude setting the HF within a popular fictional universe if doing so would help attract a larger participant pool, provided the protagonist remains original. In all cases, the stimulus should avoid ethically challenging content unless such content is directly necessary for the research question being investigated.

The stimulus is delivered via a web browser and completed by participants on their own devices in their everyday environments. This approach produces a high level of ecological validity, since engaging with interactive fiction online is a familiar and routine activity for many people, and the experimental context therefore mirrors natural behaviour more closely than a laboratory setting would.

Upon completing the HF, participants are directed via a link to an online questionnaire through which they submit their data. Informed consent is obtained at this stage by participants completing and submitting the form; those who play the HF but choose not to complete the form do not contribute data, which preserves voluntary participation without requiring active withdrawal. The questionnaire includes items directly related to the experimental hypothesis as well as additional background questions that enable exploratory secondary analysis. Contact details are provided so that participants can withdraw their data following submission if they wish to do so.

Identification with the protagonist is measured through self-report on a Likert scale. To reduce the influence of question wording on responses, identification is assessed using two differently phrased items, and the mean of these two scores is taken as the dependent variable. Independent variables are determined by the specific hypothesis under investigation and may include group assignment, personal characteristics reported by the participant, or features of the stimulus version they were shown. Where the participant pool is sufficiently large, the experiment can be structured to test two distinct hypotheses simultaneously, which also makes it possible to examine interaction effects between variables.

Experimental design

The standard experimental format is a between-participants design in which each participant is randomly assigned by the system to one experimental condition and presented with the corresponding version of the HF. Because each participant encounters only one version of the stimulus, they are unlikely to identify the precise variable being manipulated, which reduces the risk of demand characteristics influencing self-reported identification. Group differences on the dependent variable are examined using appropriate significance testing, including independent samples t-tests or analysis of variance (ANOVA) depending on the number of conditions.

In some experiments, participants were asked to engage with two separate HFs and to complete identification measures for each. This functions as a built-in replication within a single study, strengthening the reliability of the findings, and the use of two stories may also serve to obscure the experimental hypothesis more effectively, since participants are less likely to identify the variable of interest when the design appears to involve a within-participant comparison across stories. Within-participant comparisons across the two stories are acknowledged to be less internally valid than between-participant comparisons due to the

difference in stimulus, but they can be conducted as secondary analyses where appropriate.

Sampling and limitations

The online recruitment model necessarily restricts the participant sample to those with internet access, those who are literate in the language in which the HF is written, those who encounter the study through the specific online spaces in which it is advertised, and those who are willing to engage with an HF story-game as part of a research study. These are genuine constraints on the generalisability of the findings and should be acknowledged when interpreting results.

Against this, the online format offers access to a participant pool that is substantially larger and more geographically diverse than would be achievable through laboratory recruitment. Data from experiments conducted within this tradition, including Hook (2019) and subsequent studies, indicate that participants are also diverse in terms of age and educational background, which partially offsets the self-selection bias inherent in the recruitment approach.

A further limitation is the reliance on self-reported identification. Objective measures of identification with a fictional character are difficult to operationalise, and no clearly superior alternative to self-report currently exists for this construct. The between-participants design provides a partial mitigation: since each participant sees only one version of the stimulus, they have no basis for comparison and are therefore unlikely to tailor their responses to what they perceive the study to be measuring.

Findings

This experimental methodology has been employed across a series of studies: Hook (2019), Hook and Morys-Carter (2020), Hook (2022a), Hook (2022b), and Hook (2023). The collective findings from these experiments permit a set of evidence-based statements about the factors that influence self-reported identification with fictional characters. These findings fall into three broad categories: features of the stimulus, features of the character, and features of the player.

Features of the stimulus

Agency increases identification

Hook (2022b) found that participants who were given greater control over a character's actions reported higher levels of identification with that character than those given fewer choices. Although no direct comparison between interactive and linear media was included in the experimental design, this finding implies that interactive formats may be inherently more effective at building identification than passive ones, a conclusion consistent with the qualitative findings of Shaw (2011). The practical implication is that identification is not simply a product of how a character is written but is also shaped by the structural relationship between the reader-player and the character.

Narrative outcome affects identification, with losing producing stronger identification than winning

Hook (2023) found that participants identified more strongly with a character who lost than with one who won, with the narrative outcome determined by the story independently of any choices the participant had made. One possible explanation is that identification is driven partly by perceived similarity, and that many participants identify with a losing character because they are themselves dissatisfied with aspects of their own status or circumstances. An alternative explanation is that losing is simply more dramatically engaging than winning, and that the effect reflects narrative interest rather than shared identity. No interaction effect between narrative outcome and character morality was detected, though it is worth noting that in literary terms a morally good character who loses corresponds to the structure of tragedy, a form that has historically commanded strong audience engagement.

Features of the character

Richly defined characters produce stronger identification than shallowly defined characters

Hook (2022a) found highly significant evidence, replicated across both between-participants and within-participant comparisons, that reader-players identify more strongly with characters who are described with a greater number of role identities than with the same character described more sparingly. The manipulation involved presenting one group with an opening briefing screen that attributed multiple role identities to the protagonist, while the other group received a more minimal description. This finding runs counter to a widespread assumption in the commercial video game industry, where protagonist characters are frequently kept deliberately bland on the premise that players will more readily project themselves onto an undefined character. It also contradicts McCloud's (1993) influential claim that shallow,

iconic characters facilitate identification in comics. The empirical evidence from this study suggests the opposite is true, at least in the HF format.

Women show an own-gender bias in identification; men do not

Hook (2019) found that female participants identified significantly more strongly with a female character than with a male character, while male participants showed no significant difference in identification across character genders. This asymmetry appears to represent a previously unreported gender difference in the mechanisms of identification. Several speculative explanations have been offered. One possibility is that gender constitutes a more salient identity for women than for men, making gender match between participant and character a more consequential variable. Another is that men categorise gender as a personal characteristic identity rather than a group identity, which, if the broader pattern of findings holds, would predict a weaker own-gender effect. A third possibility, drawing on evolutionary psychology, is that women are more inclined to perceive other women as in-group members, while men tend to form group identities around other shared characteristics such as team membership or occupation rather than gender per se.

Building on this, Hook (2022b) found in secondary analysis that male, female, and non-binary participants all identified at comparable levels with a character whose gender was left undefined, suggesting that gender-neutral protagonists are an effective strategy for maximising identification across a mixed audience. The same study also found that participants who selected "prefer not to say" in response to the gender question reported notably lower identification overall, though the interpretation of this finding remains unclear.

Religious identity does not produce an own-religion bias in identification

Hook and Morys-Carter (2020) investigated whether participants would identify more strongly with a character whose religious identity matched their own, comparing Christian and atheist participants playing either a Christian or a non-religious character. No evidence of an own-religion bias was found. If religion is treated as a personal characteristic identity rather than a group identity, this null finding is consistent with a broader emerging pattern in the data suggesting that personal characteristic identities may not function in the same way as group identities when it comes to driving identification. An alternative interpretation is that many participants who reported a religious affiliation did not identify strongly with it in practice, having inherited it rather than actively adopted it, which would weaken any own-religion effect. Secondary analysis produced a tentative finding that participants identifying as non-binary or preferring not to state their gender identified notably less with a Christian than a non-religious character, but the subset was too small for significance testing to be reliable.

Participants identify more strongly with morally good characters than with morally evil ones

Hook (2023) found higher identification with characters operating within an objectively good moral framework than with those operating within an objectively evil one. This finding received additional support from secondary analysis of Hook (2019), which used a different moral framing. The robustness of this effect across subjective morality settings remains to be established; it is possible that when moral frameworks are culturally relative rather than objectively defined within the story, participants either adopt the moral norms of the fictional setting or apply the moral standards of their own culture, and that the effect varies accordingly.

Features of the player

Severe depression reduces identification, but subclinical and moderate levels do not

Hook (2022b) found that participants reporting mild, moderate, or moderately severe depression showed no significant difference in identification compared to those reporting no depression, but that participants reporting severe depression identified significantly less strongly with the fictional character. This represents a previously unrecognised correlate of severe depression. The effect was significant only among participants who played the higher-agency version of the HF, in which six choices were available, and not among those who played the lower-agency version with three choices. One interpretation is that the lower-agency version produced identification levels already too attenuated for the depressive effect to register, which has implications for stimulus design: experimental materials must offer sufficient engagement to avoid floor effects that would obscure the phenomena under investigation.

Severe anxiety reduces identification, but subclinical and moderate levels do not

Hook (2022b) found a parallel pattern for anxiety. Mild and moderate anxiety had no significant effect on identification, while severe anxiety was associated with a meaningful reduction in self-reported identification with the fictional character. This constitutes a previously unrecognised correlate of severe anxiety. As with depression, the effect was significant only in the higher-agency condition, suggesting the same floor effect dynamic may be operating and reinforcing the importance of adequate stimulus engagement in future experimental designs.

Future directions

Future research using this method

The studies conducted to date represent an early but productive phase in the development of this research tradition. Several findings await direct replication, and interaction effects between variables identified across separate studies have not yet been examined within single experiments designed for that purpose. Beyond replication, a number of specific hypotheses suggest themselves as natural extensions of the current body of work.

One productive line of inquiry concerns the role of visual and multimedia elements. The existing experiments have deliberately used text-only stimuli to maximise experimental control, but it remains an open question whether the addition of static images, animated graphics, or video to an HF would strengthen identification with the character, and whether the magnitude of any such effect would vary with the type of visual element introduced. A related question is whether visual media more broadly, including graphical video games and linear film or video, produce systematically higher identification than text-based formats, and whether an HF produces stronger identification than a purely linear text narrative by virtue of its interactive structure alone. These comparisons would help to disentangle the contributions of interactivity and visual richness to identification, which the current method holds constant by design.

A further question concerns ceiling effects. The existing findings suggest that identification can be strengthened by a range of stimulus features, but it is not yet known whether these effects are additive up to some upper limit, beyond which further increases in character richness, agency, or other variables cease to produce gains. Establishing whether such a ceiling exists, and where it falls, would be important for both theoretical modelling and practical application.

The scope of the shared identity hypothesis also merits systematic investigation. The current findings suggest that group identities may drive identification more reliably than personal characteristic identities, with own-gender bias emerging clearly for women while own-religion bias failed to appear at all. A programme of studies examining a wider range of shared identities, including professional membership, national or ethnic identity, identification with specific health conditions, or dietary and lifestyle identities such as veganism, would help to establish which types of shared identity reliably influence identification and which do not. This would contribute substantially to the theoretical question of whether the group identity and personal characteristic identity distinction proposed by Burke and Stets (2009) maps onto differential effects in identification.

Beyond the research contexts in which this method was developed, it has already found application in undergraduate teaching. The author is aware through personal correspondence that the minimal ludic roleplay format has been adopted at a UK university as a vehicle for introducing students to experimental methods and associated statistical analysis, offering an engaging and accessible entry point into research design. This suggests the method has pedagogical value alongside its research applications, and that its reach within the academic community may extend beyond specialist researchers in identity and game studies.

Towards a theoretical model

The series of experiments conducted so far has produced a set of discrete empirical findings, but a fully integrated theoretical model of identification remains to be developed. Where individual studies have tested two hypotheses simultaneously, it has been possible to examine interaction effects between those variables, but the broader pattern of interactions across the full range of factors now identified has not yet been mapped. Developing such a model will require studies designed specifically to test competing theoretical accounts rather than simply to establish the direction of individual effects.

One tentative generalisation that appears to be emerging from the data is that the own-identity bias in identification may be specific to group identities and may not extend to personal

characteristic identities. The own-gender effect found for women is consistent with a group identity account, given that gender can function as a social category in the sense SIT describes. The absence of an own-religion effect is consistent with the interpretation that religious identity, at least as self-reported by participants in this sample, operates more as a personal characteristic than as a genuinely held group membership. If this generalisation holds up under further testing, it will represent a meaningful theoretical contribution to the understanding of how different identity types function in the context of identification and would suggest that SIT's account of group identity cannot be straightforwardly extended to other identity categories.

The findings from Hook (2022b) regarding the low-agency condition also point to a more complex dynamic involving diminishing returns or floor effects. Where identification is already weak due to low agency, the additional depressive or anxious effect becomes undetectable, suggesting that the factors influencing identification do not simply add together in a linear fashion. A theoretical model capable of capturing this will need to accommodate threshold effects and the possibility that some factors only operate within a certain range of baseline identification. Developing and testing such a model represents the most substantial theoretical challenge for this research tradition going forward.

Practical applications

The findings generated by this research tradition have direct implications for writers, game designers, and other creative practitioners whose work involves building identification between an audience and a fictional character. Based on the evidence to date, the following principles are supported.

Characters should be richly defined, with multiple role identities established clearly for the audience. The instinct in commercial game design to create deliberately vague or undefined protagonists on the assumption that players will project themselves more readily onto a blank slate is not supported by the evidence; the opposite appears to be true.

Where the intended audience is female or mixed in gender composition, a female protagonist or one whose gender is left undefined is likely to maximise identification. Where the audience is exclusively male, character gender does not appear to affect identification, and the choice can be made on other creative grounds.

Interactive formats that give the audience genuine agency over narrative outcomes are likely to produce stronger identification than passive formats and increasing the number and apparent consequence of choices available to the audience is likely to strengthen this effect further.

Characters who are morally good within the moral framework of their setting produce stronger identification than morally compromised or evil characters, at least where that moral framework is objectively defined. Practitioners working in morally ambiguous settings should be aware that this finding may not generalise straightforwardly to subjective moral contexts.

A character who loses, or who is positioned as a tragic figure, produces stronger identification than one who wins. In literary terms this is consistent with the long-standing emotional power of tragedy as a narrative form, and the finding offers some empirical grounding for what writers and dramatists have understood intuitively for centuries.

These recommendations are based on findings from HF story-games, and their applicability to other media has not been directly tested. In the absence of evidence to the contrary, however, it is reasonable to treat them as working principles across a broader range of creative contexts, with the expectation that future research will refine or qualify them as needed.

Beyond creative practice, the findings relating to depression and anxiety carry a different kind of practical implication. The discovery that severe depression and severe anxiety both reduce identification with fictional characters, while subclinical and moderate levels do not, suggests the possibility of developing an identification-based screening tool. A short HF task administered to a patient, followed by a brief self-report identification measure, could in principle provide a low-burden indicator of whether depression or anxiety has reached clinical severity, without requiring the patient to answer direct questions about their symptoms or distress. This would be a less intrusive and potentially less stigmatising approach to initial screening than conventional self-report symptom inventories. Further research would be needed to establish the sensitivity and specificity of such a tool before clinical application could be considered, but the conceptual basis for it now exists within the literature.

CONCLUSION

This paper has brought together two bodies of work that have not previously been integrated in a systematic way: the theoretical and empirical literature on identity and identification across psychology, sociology, game studies, and the humanities, and a developing experimental research tradition that uses hypertext fiction story-games as controlled stimulus for studying identification with fictional characters. In doing so, it has aimed to demonstrate both the coherence of this research programme and the cumulative weight of the evidence it has generated.

The review of prior literature established that identification is a phenomenon of genuine theoretical and practical significance that has received surprisingly limited empirical attention. Social identity theory demonstrated that experimental investigation of identification-related processes is viable but confined its scope to group membership identities. Research in the humanities and game studies pointed to the importance of identification in media engagement without providing the controlled experimental evidence needed to draw firm conclusions about its mechanisms. The minimal ludic roleplay experiment design was introduced as a response to this gap, offering a method that is replicable, scalable, ecologically valid, and capable of isolating specific variables in a way that qualitative and naturalistic approaches cannot.

The findings generated across five studies using this method have established a set of empirically grounded conclusions about the factors that influence identification. Character richness, character morality, narrative outcome, player agency, participant gender, and the severity of depression and anxiety have all been shown to affect self-reported identification in ways that are theoretically interpretable and practically applicable. The absence of an own-religion effect, alongside the presence of an own-gender effect for women but not men, has produced the beginning of a theoretically interesting pattern suggesting that group identities and personal characteristic identities may operate differently in the context of identification, a distinction that merits further investigation.

The practical applications of these findings span two domains. For creative practitioners, the evidence provides an empirical basis for decisions about character design, narrative structure, and medium that are currently made largely on intuition or convention. For clinicians, the relationship between severe depression or anxiety and reduced identification raises the possibility of a novel, low-burden screening approach that does not require patients to engage directly with symptom-focused questioning.

Much remains to be done. The interaction effects between variables identified in separate studies have not yet been mapped within a unified experimental framework, and a fully articulated theoretical model of identification remains a goal for future work rather than a current achievement. The scope of the findings is also still limited by the text-based, single-medium format of the stimulus used to date, and extending the method to incorporate visual elements, alternative media, and a wider range of shared identity variables will be necessary before the generalisability of the current conclusions can be properly assessed.

What the research tradition presented here has established, however, is that identification with fictional characters is an experimentally tractable phenomenon, that it is systematically influenced by identifiable features of the stimulus, the character, and the player, and that a replicable method now exists for investigating it further. The minimal ludic roleplay experiment offers a platform from which a genuinely cumulative science of identification can be built.

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REFERENCES

Aarseth, E. J. (1997). *Cybertext: Perspectives on ergodic literature*. Johns Hopkins University Press.

Bessiere, K., Seay, A., & Kiesler, S. (2007). The ideal self: Identity exploration in World of Warcraft. *CyberPsychology and Behavior, 10*(5), 530–535. https://doi.org/10.1089/cpb.2007.9994

Blake, C., Hefner, D., Roth, C., Klimmt, C., & Vorderer, P. (2012). Cognitive processes involved in video game identification. In M. Herrlich, R. Malaka, & M. Masuch (Eds.), *Entertainment computing: ICEC 2012* (Lecture Notes in Computer Science, Vol. 7522, pp. 70–78). Springer. https://doi.org/10.1007/978-3-642-33542-6_7

Burke, P. J., & Stets, J. E. (2009). *Identity theory*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195388275.001.0001

Cohen, J. (2001). Defining identification: A theoretical look at the identification of audiences with media characters. *Mass Communication and Society, 4*(3), 245–264. https://doi.org/10.1207/S15327825MCS0403_01

Ducheneaut, N., Wen, M. H., Yee, N., & Wadley, G. (2009). Body and mind: A study of avatar personalization in three virtual worlds. In *CHI '09: Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 1151–1160). ACM. https://doi.org/10.1145/1518701.1518877

Freud, S. (1961). The ego and the id. In J. Strachey (Ed. & Trans.), *The standard edition of the complete psychological works of Sigmund Freud* (Vol. 19, pp. 3–66). Hogarth Press. (Original work published 1923)

Hayes, N. (2000). *Foundations of psychology* (3rd ed.). Thomson Learning.

Holt, L. (1950). Identification: A crucial concept for sociology. *Bulletin of the Menninger Clinic, 14*(5), 164–173.

Hook, N. (2012). The games social scientists play. In E. Torner & W. White (Eds.), *Immersive gameplay: Essays on participatory media and role-playing*. McFarland & Co.

Hook, N. (2019). May the force of gender be with you: Identity, identification and "own-gender bias." In J. A. Barry, R. Kingerlee, M. Seager, & L. Sullivan (Eds.), *The Palgrave handbook of male psychology and mental health*. Palgrave Macmillan. https://doi.org/10.1007/978-3-030-04384-1_9

Hook, N. (2022a). Never forget what you are, for surely the world will not: The impact of the quantity of identities in identifying with fictional characters. *Psychreg Journal of Psychology*. https://doi.org/h2zq

Hook, N. (2022b). "In a dark place we find ourselves, and a little more knowledge comes our way": The impact of depression, anxiety, and agency on identifying with fictional characters. *Psychreg Journal of Psychology*. https://doi.org/h2zp

Hook, N. (2023). "There are many powers in the world, for good or for evil. Some are greater than I am.": The impact of morality and winning on identifying with fictional characters. *Psychreg Journal of Psychology*. https://doi.org/k7v7

Hook, N., & Morys-Carter, W. L. (2020). "Men say that he shall come again, and he shall win the holy cross": Gender differences in shared-religion bias in identifying with fictional characters. *Psychreg Journal of Psychology*. https://doi.org/fkn7

Igartua, J. J. (2010). Identification with characters and narrative persuasion through fictional feature films. *Communications, 35*(3), 347–373. https://doi.org/10.1515/comm.2010.019

Jackson, S., & Livingstone, I. (1982). *The warlock of Firetop Mountain*. Puffin Books.

James, W. (1890). *The principles of psychology* (Vols. 1–2). Henry Holt and Company. https://doi.org/10.1037/10538-000

Järvelä, S., Ekman, I., Kivikangas, M., & Ravaja, N. (2012). Digital games as experiment stimulus. In *DiGRA Nordic '12: Proceedings of 2012 International DiGRA Nordic Conference*. http://www.digra.org/digital-library/publications/digital-games-as-experiment-stimulus/

Jorgensen, K. (2009). "I'm overburdened!" An empirical study of the player, the avatar and the game world. In *DiGRA '09: Proceedings of the 2009 DiGRA International Conference: Breaking New Ground: Innovation in Games, Play, Practice and Theory*. http://www.digra.org/digital-library/publications/im-overburdened-an-empirical-study-of-the-player-the-avatar-and-the-gameworld/

Kafai, Y., Fields, D., & Cook, M. (2007). Your second selves: Resources, agency, and constraints in avatar designs and identity play in a tween virtual world. In *DiGRA '07: Proceedings of the 2007 DiGRA International Conference: Situated Play*. University of Tokyo. https://doi.org/10.26503/dl.v2007i1.356

Klimmt, C., Hefner, D., & Vorderer, P. (2009). The video game experience as "true" identification: A theory of enjoyable alterations of players' self-perception. *Communication Theory, 19*(4), 351–373. https://doi.org/10.1111/j.1468-2885.2009.01347.x

Kromand, D. (2007). Avatar categorization. In *DiGRA '07: Proceedings of the 2007 DiGRA International Conference: Situated Play*. http://www.digra.org/digital-library/publications/avatar-categorization/

Kujanpää, T., Manninen, T., & Vallius, L. (2007). What's my game character worth? The value components of MMOG characters. In *DiGRA '07: Proceedings of the 2007 DiGRA International Conference: Situated Play*. http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.190.1757

Martin, J. (2005). Virtually visual: The effects of visual technologies on online identification. In *DiGRA '05: Proceedings of the 2005 DiGRA International Conference: Changing Views: Worlds in Play*. https://doi.org/10.26503/dl.v2005i1.166

McCall, G. J., & Simmons, J. L. (1978). *Identities and interactions: An examination of human associations in everyday life* (Rev. ed.). Free Press.

McCloud, S. (1993). *Understanding comics: The invisible art*. Tundra Books.

Montfort, N. (2003). *Twisty little passages: An approach to interactive fiction*. MIT Press.

Oatley, K. (1994). A taxonomy of the emotions of literary response and a theory of identification in fictional narrative. *Poetics, 23*(1–2), 53–74.

Quinn, Z. (2013). *Depression quest* [Interactive fiction]. http://www.depressionquest.com/

Salen, K., & Zimmerman, E. (2003). *Rules of play: Game design fundamentals*. MIT Press.

Shaw, A. (2011). "He could be a bunny rabbit for all I care!" Identification with video game characters and arguments for diversity in representation. In *DiGRA '11: Proceedings of the 2011 DiGRA International Conference: Think Design Play*. http://dx.doi.org/10.5749/minnesota/9780816693153.003.0004

Stryker, S. (1980). *Symbolic interactionism: A social structural version*. Benjamin/Cummings.

Tajfel, H. (1970). Experiments in intergroup discrimination. *Scientific American, 223*(5), 96–103. https://doi.org/10.1038/scientificamerican1170-96