

Identification, involvement, immersion: experiential states during reading

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I would like to start this presentation by quoting Nell's closing remarks in his epilogue to „Lost in a Book“ (1988, p. 267)

„So we end as we began, secure in the book's fragile world: a little wiser, perhaps, but still surprised at how very easily we sink through soundless pages into clamorous dreams to lose ourselves in a book.“

We are certain that you are all familiar with that feeling so aptly described by Nell, with forgetting everything around us, with losing all sense of space and time and being transported into a different world. In the literature, this feeling has been discussed under the heading of, for instance, empathy, identification, or transportation. But reading is by no means the only activity where we experience this type of feeling. Some people forget the world around them when watching a movie, others do so when playing computer games, and snowboarders, musicians, surgeons have also reported a sense of losing themselves in their activities. Depending on the research tradition, this type of experience has, for instance, alternatively been termed ‚involvement‘ (in the context of audiovisual media), ‚presence‘ or ‚immersion‘ (when referring to virtual environments), or ‚flow‘ (in psychology). So far, however, little effort has been made to integrate these traditions. Little is known about whether these experiences are essentially similar, or whether there exist subtle differences, and about the dimensions potentially underlying these various experiential states.

In the following, we will describe our efforts at designing a questionnaire for assessing the different components of such experiential states. In this we have, to start with, limited ourselves to the experience of reading. A first study served to construct the questionnaire, i.e.

to select suitable items and to determine the internal reliability of the various scales. A second study was conducted for validation purposes.¹

Study I

Our first study was conducted with the purpose of generating a suitable questionnaire. To this end, we first looked at relevant research traditions and drew as much as possible upon already existing concepts and instruments. A further goal of this study was to determine the internal reliability of the scales that the questionnaire comprises.

A first relevant concept that we drew upon is that of *transportation* put forward by Richard Gerrig in 1993. In 2000 Green and Brock presented a unidimensional questionnaire designed to assess the various components of this construct. We used this instrument to generate items on the following dimensions (below you can see one sample item for each of the dimensions): focus of attention, immersion in a text, vividness, emotional commitment, and ending of reception.

'Transportation'

–*Focus of attention*

„While reading I noticed that I was thinking of something else.“

–*Immersion in a text*

„I forgot about the world around me while reading.“

–*Vividness*

„I had problems visualizing what I was reading about.“

–*Emotional Commitment*

„I felt touched by the text.“

–*Ending of reception*

„When I finished reading it felt like I had just returned from a long journey.“

¹ This research was supported by DFG grant no. SCHR 594/1 (Distinguishing between 'fact' and 'fiction': Schreier & Groeben). We thank the DFG for their support. Both studies were to a large extent conceptualized by the two research associates Erik Koch and Markus Appel, who have since left the research group. We are highly indebted to both of them for the results we will be presenting.

Our second theoretical starting point was the concept of *involvement*. Throughout the literature, this construct has first of all been used to refer to emotional involvement, which can in major respects be regarded as similar to transportation (and is thus already covered by the transportation scales).

Some researchers, such as Vorderer in 1992, have proposed an analytic mode of reception as an opposite mode of reception. In this analytic mode, the focus of the recipient is on formal aspects of the text, for instance on stylistic features.

Another meaning frequently associated with ‚involvement‘ is that of ‚cognitive involvement‘ where cognitive elaborations and inferences about the text are the dominant feature (Kim & Rubin, 1997). The degree to which recipient and product characteristics match, in other words the reader’s interest in the literary topic, constitutes another meaning in which ‚involvement‘ has sometimes been used (for an overview of the various definitions of involvement see Appel, Koch, Schreier, & Groeben, 2002).

A third concept we drew upon is ‚flow‘. ‚Flow‘ is, for instance, characterized by a feeling of joy while performing an action and by a sense of fluency (Czikszenmihalyi, 1975; see also Rheinberg, 1996). To cover these, we integrated scales for ‚pleasure‘ and ‚ease of cognitive access‘ into our questionnaire (see sample items below).

’Involvement’

–*Analytic mode*

„I noticed the language used in the text.“

–*Cognitive involvement*

„I kept on thinking about the text.“

–*Topic interest*

„I would like to read another text on the same topic.“

’Flow’

–*Pleasure*

„I enjoyed reading this text.“

–*Ease of cognitive access*

„I found the events easy to follow.“

For the remaining scales we drew upon research on *presence* with a focus on the new media and virtual environments, on the concept of *parasocial interaction*, referring to a quasi-relationship with a media character, and on *suspense*. We also included a scale ‚*identification*‘ that combines aspects of identification and empathy (see sample items below; cf. in detail Appel, Koch, Schreier, & Groeben, 2002).

’Presence: Being there’

„It felt as though I was actually in the world described by the text.“

’Parasocial interaction’

„At least once I felt the impulse to say something to the main protagonist.“

’Suspense’

„I was curious to find out what would happen next.“

’Identification’

„I felt sorry for the main protagonist.“

Altogether this amounts to 14 scales. For each scale, we generated a variable number of items, resulting in a total of 122 items. (Some of these were based on already existing items from other instruments, others were generated by us on a theoretical basis.)

48 subjects participated in this first study. In order to ensure the transsituational stability of the instrument, the participants read five texts each, three fiction and two non-fiction texts, presumed to vary in interest. Items were presented in random order together with a 6-point Likert-type scale. The participants were requested to rate their experiential states immediately following the reading of each of the five texts.

In order to test the unidimensionality of the scales and to determine the psychometrically ‚best‘ items, one factor analysis per scale was carried out (main components analysis followed by varimax rotation).

Table 1: Scales for assessing experiential states during reading: number of items per scale and reliability scores (Cronbach's alpha)

Scale	N items	Cronbach's alpha
1. Focus of attention	5	.94
2. Immersion	5	.91
3. Vividness	5	.87
4. Being there	5	.88
5. Ending of reception	4	.79
6. Suspense	5	.91
7. Emotional commitment	5	.91
8. Pleasure	5	.91
9. Ease of cognitive access	5	.87
10. Identification	10	.83
10.1 Admiration	5	.84
10.2 Similarity vs. Distance	3	.73
10.3 Pity	2	.77
11. Parasocial interaction	5	.81
12. Cognitive involvement	5	.83
13. Analytic mode	8	.78
13.1 Coherence / structure	4	.79
13.2 Language / style	2	.82
13.3 Perspective	2	.68
14. Topic interest	5	.92

Table 1 shows that factor analysis yielded a 1-factorial solution for 12 of the 14 scales. These scales can thus count as unidimensional. For the remaining scales, a 3-factor solution was accepted, resulting in a further subdivision of 'identification' and 'analytic mode'.

In order to select the most suitable items per scale, items loading on more than one factor were removed. Additional criteria included item difficulty and item discrimination. The second column shows the remaining number of items per scale as well as the internal reliability scores (Cronbach's alpha). With one exception, the scores are satisfactory or better (exception: analytic mode – perspective; but this subscale contains only two items).

Study II

Study II served three goals: We wanted to obtain additional data concerning the internal reliability of the scales; we wanted to test the validity of the scales; and a final goal was to explore the interrelations between the scales. In the following, we will focus on one of these, the validating of the scales.

In testing the validity of the questionnaire, we assumed that the reception experience would be influenced by text type and by the reception attitude – which we varied by presenting the participants with different reading instructions and tasks. We further assumed that the reception experience would also vary with certain personality traits such as need for cognition or absorption. We will focus here on the two types of variation which, being based upon an experimental approach, constitute the stronger test.

94 persons participated in the study. The procedure was the same as in Study I.

„Variation of text type“ was realized as a within-group factor, i.e. all participants read all texts. To achieve the desired variation, four texts were selected, two fiction- and two non-fiction type ones. One text in each group was chosen so as to present a high, the other so as to present a low involvement potential. The texts were presented to the participants in an interindividually balanced sequence.

Our first hypothesis was that the texts with a higher involvement potential would evoke higher scores on all scales, excepting the three subscales constituting the analytic mode. This hypothesis could indeed be confirmed: Scale means differed significantly in the expected direction between the two fictional and the two non-fictional texts (see table 2).

Our hypothesis concerning „analytic mode“ applies only to the fictional texts. Here we expected the experimental, potentially less involving text to induce higher scores. This hypothesis could also be confirmed: Again, mean scores across the entire scale differed significantly in the expected direction for the two texts (see table 2).

Table 2: Mean differences in experiential states during the reception of potentially low versus high involving texts (number of participants *N*, mean *M*, standard deviation *SD*, and significance *p1* and *p2* – *p1* indicating difference between text 1 and 2, and *p2* indicating difference between text 3 and 4; * *p* < .05; ** *p* < .01)

Scale	Fiction Text 1 (N=65)		Fiction Text 2 (N=65)		p1	Non-Fiction Text 3 (N=58)		Non-Fiction Text 4 (N=94)		p2
	M	SD	M	SD		M	SD	M	SD	
1. Focus of attention	4.96	1.14	3.26	1.43	**	4.97	1.17	4.12	1.34	**
2. Immersion	4.16	1.35	2.26	1.09	**	3.79	1.14	2.68	1.21	**
3. Vividness	5.09	0.86	2.86	1.30	**	4.86	0.81	4.04	1.26	**
4. Being there	4.25	1.45	2.22	1.20	**	3.64	1.36	2.47	1.36	**
5. Ending of reception	3.30	1.21	2.27	1.02	**	3.31	1.12	2.12	1.09	**
6. Suspense	4.84	1.22	2.34	1.12	**	4.51	1.01	3.04	1.34	**
7. Emotional commitment	3.71	1.33	2.64	1.22	**	4.46	1.17	2.67	1.20	**
8. Pleasure	4.80	1.39	1.99	1.16	**	3.89	1.20	2.98	1.51	**
9. Ease of cognitive access	5.15	0.97	2.01	0.93	**	4.91	0.97	4.09	1.47	**
10. Identification	3.49	0.88	2.48	0.93	**	3.99	1.06	2.36	0.82	**
10.1 Admiration	3.18	0.95	2.24	0.91	**	3.66	1.17	2.01	0.90	**
10.2 Similarity vs. Distance	4.43	1.19	2.61	1.35	**	4.20	1.16	2.98	1.14	**
10.3 Pity	2.85	1.47	2.92	1.43	**	4.50	1.62	2.29	1.34	**
11. Parasocial interaction	2.83	1.16	1.92	0.81	**	3.09	1.14	2.17	1.10	**
12. Cognitive involvement	3.41	1.02	2.91	1.16	**	4.13	0.92	2.99	1.15	**
13. Analytic mode	2.98	1.00	4.14	1.06	**	2.73	1.11	3.06	0.99	*
13.1 Coherence / structure	2.90	1.25	4.06	1.28	**	2.61	1.32	2.91	1.21	
13.2 Language / style	2.95	1.46	5.20	1.20	**	2.46	1.26	3.14	1.47	**
13.3 Perspective	3.15	1.31	3.25	1.59		3.23	1.47	3.28	1.45	
14. Topic interest	3.15	0.97	2.95	1.40		4.59	0.98	2.51	1.30	**

Variation of instructions was realized as a between-groups factor, i.e. participants were randomly assigned to one of the conditions ‚no instruction‘ or ‚instruction‘. Three different instructions were used. Participants were presented with the respective instruction prior to reading the last of the four texts.

With the first instruction, we introduced a secondary task: participants were requested to circle the letter ,g‘ whenever it occurred throughout the text. Our assumption was that this secondary task would absorb cognitive capacity and thus result in lower scores for: immersion, vividness, ending of reception, being there, and suspense. This hypothesis could be confirmed for vividness, and the results for ,immersion‘ were marginally significant. For the remaining scales, the secondary task had no effect on reading experience (see table 3).

Table 3: Mean differences resulting from the instruction to circle the letter ‘g’ and no such instruction (number of participants *N*, mean *M*, standard deviation *SD*, and significance *p*)

Scale	No instruction			Instruction to circle g’s			
	N	M	SD	N	M	SD	p
2. Immersion	65	4.16	1.35	29	3.77	1.21	.09
3. Vividness	65	5.09	0.86	29	4.70	1.00	.03
4. Being there	65	4.25	1.25	29	3.94	1.25	.16
5. Ending of reception	65	3.30	1.21	29	3.06	1.24	.13
6. Suspense	65	4.84	1.22	29	4.71	1.14	.31

With the second instruction, the participants were asked to approach the text from the stance of a literary critic. Our hypothesis was that participants reading as ,literary critics‘ would score higher on ,analytic mode‘. Unfortunately, a treatment check showed that most of the participants did not comply with the instruction and that therefore the variation failed.

A third instruction was aimed at the scales ,identification‘ and ,parasocial interaction‘. In the standard version of the questionnaire, these experiential states are assessed by letting participants focus on a protagonist of their choice and to respond with that protagonist in mind. With our third instruction, we in turn presented the participants with a protagonist – a minor, not very likeable character – and asked them to complete the questionnaire with that protagonist in mind. Our hypothesis was that concentration on this pre-determined protagonist would result in lower scores for ,identification‘ and ,parasocial interaction‘. A

comparison of means shows significantly lower scores (under the said instruction compared to the standard version of the questionnaire), however, for ,identification‘ only (see table 4).

Table 4: Mean differences resulting from a focus on the major versus minor character of the story (number of participants *N*, mean *M*, standard deviation *SD*, and significance *p*)

Scale		Focus on major character			Focus on minor character			p
		N	M	SD	N	M	SD	
10.	Overall Identification	49	4.30	0.72	35	2.09	0.67	<.01
10.1	Admiration	49	3.95	0.96	35	1.61	0.80	<.01
10.2	Similarity vs. Distance	49	4.43	0.94	35	2.99	1.04	<.01
10.3	Pity	49	4.97	1.15	35	1.96	1.18	<.01
11.	Parasocial Interaction	49	3.04	1.19	35	3.46	1.19	.11

Summary of results and outlook

Study I thus resulted in the construction of a multi-faceted questionnaire for assessing experiential states during reading. The final version of the questionnaire consists of 77 items that are distributed across 14 scales. The majority of these scales are unidimensional; only ,identification‘ and ,analytic mode‘ comprise three sub-scales each. Internal reliability scores for all scales are satisfactory or better, excepting only one subscale of ,analytic mode‘. This one subscale, however, is composed of only two items.

In Study II, validation of all scales on the basis of textual variation was successful, while other validation approaches (such as different instructions or correlation with selected traits) yielded mixed results.

While overall the instrument was thus shown to be both reliable and valid, we are nevertheless planning to conduct additional validation studies. Especially with a view to differential validation this will involve the application of the instrument to a wider variety of

texts, of recipients, and of reception situations. Another aspect that will be of particular interest to us concerns the transfer of the instrument to other media, raising the question to what extent and in what ways the reception experience concerning, for instance, movies on television, in the cinema, playing a computer game, etc. is similar to or different from the reading experience. Finally, experiential states have been shown to moderate persuasion effects of fictional texts, even though the results have not been entirely consistent across different studies. Experiential states might thus act as a ‚valve‘ in the process of literature entering life – life in the sense of our cognitions, our attitudes, our knowledge of the world. It is our hypothesis that different experiential states may well have a differential effect – a hypothesis, however, that remains to be put to the test.

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