LAGH: Towards a Social Interaction between 1st and 2nd Person Perspective on Bodily Play

**User Study 1**

* Questionnaire No.：
* Participant Name：
* Participant Age：
* Participant Gender：
* How many hours a week do you use a computer：
* How many hours a week do you play video games：
* Do you have normal hearing：
* Do you experience difficulty with motor functions：
* Do you have normal vision (20/20) either naturally or by the use of corrective contact lenses：

Here, we present LAGH, a collaborative interdependent VR game in which two players with different game perspectives and roles collaborate towards a common goal: successfully navigating one of the players in a maze to reach the exit. The game is thematically grounded in the world of "Alice's Adventures in Wonderland." One player (A) takes the role of Alice sitting on a rolling sphere and navigates the maze with a first person perspective through their movement. In the physical space this player moves right and left on top of a balance chair, and is able to move their in-game character right and left in the maze. The second player, the rabbit (R), has a third person bird-eye overview of the maze, and helps A navigate the maze through moving the game platform or maze forwards and back. In the physical world, this is mapped to right-left movements on another balance chair. Communication may happen between players to help each other to understand A's navigation needs. The user study aim to evaluate the game and social experience supported by LAGH. Each group of players will experience three different control sharing modes to assess whether different control allocations increase interaction or social interaction (customer satisfaction / perspective-taking).

Pre Experimental / International Personality Item Pool (IPIP) Questionnaire

|  |
| --- |
| Describe yourself as you generally are now. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Indicate for each statement whether it is 1. Very Inaccurate, 2. Moderately Inaccurate, 3. Neither Accurate Nor Inaccurate, 4. Moderately Accurate, or 5. Very Accurate as a description of you. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Agreeableness of IPIP | 1. Very Inaccurate | 2. Moderately Inaccurate | 3. Neither Accurate Nor Inaccurate | 4. Moderately Accurate | 5. Very Accurate |
| 01 | *Feel little concern for others* |  |  |  |  |  |
| 02 | Am interested in people |  |  |  |  |  |
| 03 | Sympathize with others' feelings |  |  |  |  |  |
| 04 | *Am not interested in other people's problems* |  |  |  |  |  |
| 05 | Have a soft heart |  |  |  |  |  |
| 06 | Feel others' emotions |  |  |  |  |  |
| 07 | Make people feel at ease |  |  |  |  |  |
| Note: These scales were developed in the following article: Goldberg, L. R. (1992). The development of markers for the Big-Five factor structure. *Psychological Assessment, 4,* p26-42. | | | | | | |

Inclusion of the Other in the Self Scale (IOS) Questionnaire 將他人納入自我量表

Images below represent you and your partner. Please describe how emotionally close to your partner do you feel now?

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| How emotionally close to your partner do you feel now? | | | | | | | |
|  | | | | | | | |
|  |  |  |  |  |  |  | |
| Note: These scales were developed in the following article: Simon Gachter, Chris Starmer, and Fabio Tufano. 2015. Measuring the closeness of relationships: A comprehensive evaluation of the ’inclusion of the other in the self’ scale. PLoS ONE 10, 6 (2015), e0129478. | | | | | | |

Bodily Game Role ：Alice / Bunny

Perspective / Gameplay：1○○3 / 1○2○ / 12○○ person perspectives

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| How emotionally close to your partner do you feel now? | | | | | | | |
|  | | | | | | | |
|  |  |  |  |  |  |  | |
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Game Experience Questionnaire (GEQ) 1

The social presence module, investigates psychological and behavioural involvement of the player with other social entities. Please indicate how you felt while playing the game for each of the items, on the following scale.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Social Presence of GEQ | 1. not at all | 2. slightly | 3. moderately | 4. fairly | 5. extremely |
| S1 | I empathized with the other |  |  |  |  |  |
| S2 | My actions depended on the other actions |  |  |  |  |  |
| S3 | The other's actions were dependent on my actions |  |  |  |  |  |
| S4 | I felt connected to the other |  |  |  |  |  |
| S5 | The other paid close attention to me |  |  |  |  |  |
| S6 | I paid close attention to the other |  |  |  |  |  |
| S8 | I found it enjoyable to be with the other |  |  |  |  |  |
| S9 | When I was happy, the other was happy |  |  |  |  |  |
| S10 | When the other was happy, I was happy |  |  |  |  |  |
| S13 | I admired the other |  |  |  |  |  |
| S14 | What the other did affected what I did |  |  |  |  |  |
| S15 | What I did affected what the other did |  |  |  |  |  |

Game Experience Questionnaire (GEQ) 2

It is the core part of the GEQ to assess game experience as scores on seven components: Immersion, Flow and Positive Affect. Please indicate how you felt while playing the game for each of the items, on the following scale.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No | Core Module of GEQ | 1. not at all | 2. slightly | 3. moderately | 4. fairly | 5. extremely |
| C1 | I felt content |  |  |  |  |  |
| C3 | I was interested in the game's story |  |  |  |  |  |
| C4 | I thought it was fun |  |  |  |  |  |
| C5 | I was fully occupied with the game |  |  |  |  |  |
| C6 | I felt happy |  |  |  |  |  |
| C12 | It was aesthetically pleasing |  |  |  |  |  |
| C13 | I forgot everything around me |  |  |  |  |  |
| C14 | I felt good |  |  |  |  |  |
| C18 | I felt imaginative |  |  |  |  |  |
| C19 | I felt that I could explore things |  |  |  |  |  |
| C20 | I enjoyed it |  |  |  |  |  |
| C25 | I lost track of time |  |  |  |  |  |
| C27 | I found it impressive |  |  |  |  |  |
| C28 | I was deeply concentrated in the game |  |  |  |  |  |
| C30 | It felt like a rich experience |  |  |  |  |  |
| C31 | I lost connection with the outside world |  |  |  |  |  |

Note: These scales were developed in the following article: Yvonne a W De Kort, Karolien Poels, and Wijnand Ijsselsteijn. 2007. Digital Games as Social Presence Technology: Development of the Social Presence in Gaming Questionnaire (SPGQ). Digital Games as Social Presence Technology \_ PRESENCE 2007 195203, p1-9.

Intrinsic Motivation Inventory (IMI) 1

The Intrinsic Motivation Inventory (IMI) is a multidimensional measurement device intended to assess participants' subjective experience related to a target activity in laboratory experiments. The instrument assesses participants' interest/enjoyment while performing a given activity. For each of the following statements, please indicate how true it is for you, using the following scale.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No | Interest/Enjoyment | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| I1 | I enjoyed doing this activity very much This activity was fun to do |  |  |  |  |  |  |  |
| I2 | *I thought this was a boring activity* |  |  |  |  |  |  |  |
| I3 | *This activity did not hold my attention at all* |  |  |  |  |  |  |  |
| I4 | I would describe this activity as very interesting. |  |  |  |  |  |  |  |
| I5 | I thought this activity was quite enjoyable |  |  |  |  |  |  |  |
| I6 | While I was doing this activity, I was thinking about how much I enjoyed it |  |  |  |  |  |  |  |

Intrinsic Motivation Inventory (IMI) 2

The instrument assesses participants' effort while performing a given activity. For each of the following statements, please indicate how true it is for you, using the following scale.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No | Effort/Importance | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| E1 | I put a lot of effort into this |  |  |  |  |  |  |  |
| E2 | *I didn’t try very hard to do well at this activity* |  |  |  |  |  |  |  |
| E3 | I tried very hard on this activity |  |  |  |  |  |  |  |
| E4 | It was important to me to do well at this task |  |  |  |  |  |  |  |
| E5 | *I didn’t put much energy into this* |  |  |  |  |  |  |  |

Intrinsic Motivation Inventory (IMI) 3

The instrument assesses participants' value/usefulness while performing a given activity. For each of the following statements, please indicate how true it is for you, using the following scale.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No | Value/Usefulness | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| V1 | I believe this activity could be of some value to me |  |  |  |  |  |  |  |
| V2 | I think that doing this activity is useful for perspective-taking(emotional sharing) |  |  |  |  |  |  |  |
| V3 | I think this is important to do because it can offer people to be perspective-taking(emotional sharing) |  |  |  |  |  |  |  |
| V4 | I would be willing to do this again because it has some value to me |  |  |  |  |  |  |  |
| V5 | I think doing this activity could help me to be perspective-taking(emotional sharing) |  |  |  |  |  |  |  |
| V6 | I believe doing this activity could be beneficial to me |  |  |  |  |  |  |  |
| V7 | I think this is an important activity |  |  |  |  |  |  |  |

Note: These scales were developed in the following article: Richard M Ryan, Valerie Mims, and Richard Koestner. 1983. Relation of reward contingency and interpersonal context to intrinsic motivation: A review and test using cognitive evaluation theory. Journal of personality and Social Psychology 45, 4 (1983), 736.

SELF-ASSESSMENT MANIKIN (SAM) 自我評估模型

Images below represent your psychological level stimulated by LAGH. Please describe how do you feel now?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| A player: Do you feel that LAGH stimulates your psychological level in emotional sharing?  R player: Do you feel that LAGH stimulates your psychological level in perspective-taking? | | | | | |
|  | | | | | |
|  |  |  |  |  | |
| Note: These scales were developed in the following article: Margaret M. Bradley and Peter J. Lang. 1994. Measuring emotion: the self-assessment manikin and the semantic differential. Journal of behavior therapy and experimental psychiatry 25, 1 (1994), 49–59. | | | | |

End of First Round for LAGH-----------------------------------------------------------------------------------------------