

## Supplementary Material

### 1 SUPPLEMENTARY DATA

#### CHINESE TRANSLATION OF ARTIFICIAL SOCIAL AGENT QUESTIONNAIRE INSTRUMENT

Note:

- [R] refers to reverse-scoring questionnaire item,
- [The agent] can be replaced with the ASA's name,
- [.. / ..], e.g. [I am / The user is], means to use either one, and
- Items labeled with \* are representative items.

Rating Scale:

- 7-point scale [-3, +3]
- -3 label: disagree /
- 0 label: neither agree nor disagree /
- 3 label: agree /

The questionnaire instrument is published under a CC-BY-4.0 license (<https://creativecommons.org/licenses/by/4.0/>).

#### 1 Agent's Believability/代理可信度

The extent to which a user believes that the artefact is a social agent./用户相信该人工制品是一个社会代理的程度。

##### 1.1 Human-Like Appearance/外观类人程度

The extent to which a user believes that the social agent appears like a human./用户认为社交代理看起来像人类的程度。

- (HLA1) [The agent]'s appearance is human/“代理”的外观和人类一样
- (HLA2) [The agent] has the appearance of a human/“代理”具有人类的外观\*
- (HLA3) [The agent] has a human-like outside/“代理”具有和人类相似的外观
- (HLA4) [The agent]'s appearance makes me think of a human/“代理”的外观让我联想到人类

##### 1.2 Human-Like Behaviour/行为类人程度

The extent to which a user believes that the social agent behaves like a human./用户认为社会代理的行为像人类的程度。

- (HLB1) A human would behave like [the agent]/人类会做出和“代理”一样的行为
- (HLB2) [The agent]'s manners are consistent with that of people/“代理”的举止与人一致
- (HLB3) [The agent] behavior makes me think of human behavior/“代理”的行为让我联想到人类
- (HLB4) [The agent] behaves like a real person/“代理”的行为像一个真人
- (HLB5) [The agent] has a human-like manner/“代理”具有类人的举止\*

### 1.3 Natural Appearance/外观自然程度

The extent to which a user believes that the social agent's appearance could exist in or be derived from nature./用户认为社交代理的外观可能存在于自然界或来自自然界的程度。

- (NA1) [The agent] appears like something that could exist in nature/[代理] 看着像自然界中可能存在的物体
- (NA2) [The agent] has a natural physique/ “代理” 具有自然的体形
- (NA3) [The agent]'s resemblance has an organic origin/ “代理” 的外观具有自然的起源
- (NA4) [The agent] seems natural from the outward appearance/ “代理” 从外观来看是自然的\*
- (NA5) How [the agent] is represented is realistic/ “代理” 的外观具有现实意义

### 1.4 Natural Behaviour/行为自然程度

The extent to which a user believes that the social agent's behaviour could exist in or be derived from nature./用户认为社交代理的行为可能存在于自然界或来自自然界的程度。

- (NB1) [The agent] is alive/ “代理” 是活着的
- (NB2) [The agent] acts naturally/ “代理” 行为自然
- (NB3) [The agent] reacts like a living organism/ “代理” 可以像生物一样做出反应 \*

### 1.5 Agent's Appearance Suitability/代理外观适合性

The extent to which the agent's appearance is suitable for its role./代理外观适合其角色的程度。

- (AAS1) [The agent]'s appearance is appropriate/ “代理” 的外观是合适的\*
- (AAS2) [The agent]'s physique is suitable for its role/ “代理” 的体格适合其角色
- (AAS3) [The agent]'s appearance was suitable/ “代理” 的外观适宜

## 2 Agent's Usability/代理可用性

The extent to which a user believes that using an agent will be free from effort (future process)./用户认为使用代理将不需要努力的程度（未来进程）。

- (AU1) [The agent] is easy to use/ “代理” 易于使用\*
- (AU2) Learning to work with [the agent] is easy/学习使用 “代理” 很容易
- (AU3) Learning how to communicate with [the agent] is quick/学会和 “代理” 交流是快捷的

## 3 Performance/表现

The extent to which a task was well performed (past performance)./一项任务完成得好的程度（过去表现）。

- (PF1) [The agent] does its task well/ “代理” 很好地完成了它的任务\*
- (PF2) [The agent] does not hinder [me / the user]/ “代理” 不妨碍我（或用户）
- (PF3) [I am / The user is] capable of succeeding with [the agent]/我（或用户）能够成功使用 “代理”

#### 4 Agent's Likeability/代理好感度

The agent's qualities that bring about a favourable regard./代理能带来良好评价的品质。

- (AL1) [The agent]'s appearance is pleasing/“代理”的外观令人满意  
 (AL2) I like [the agent]/我喜欢“代理” \*  
 (AL3) [R] I dislike [the agent]/我不喜欢“代理”  
 (AL4) [The agent] is cooperative/“代理”的表现很配合  
 (AL5) I want to hang out with [the agent]/我愿意与“代理”玩耍

#### 5 Agent's Sociability/代理社交性

The agent's quality or state of being sociable./代理的社交特质或状态。

- (AS1) [The agent] can easily mix socially/“代理”可以很容易参与社交\*  
 (AS2) It is easy to mingle with [the agent]/很容易与“代理”打成一片  
 (AS3) [The agent] interacts socially with [me / the user]/“代理”与我（或用户）进行社交互动

#### 6 Agent's Personality/代理个性

The combination of characteristics or qualities that form an individual's distinctive character./构成个体独特性格的特征或特质的组合。

##### 6.1 Agent's Personality Presence/代理个性临场感

To what extent the user believes that the agent has a personality./用户相信代理有个性的程度。

- (APP1) [The agent] has a distinctive character/“代理”具有独特的性格\*  
 (APP2) [R] [The agent] is characterless/“代理”是没有个性的  
 (APP3) [The agent] is an individual/“代理”是一个个体

##### 6.2 Agent's Personality Type/代理个性类型

The particular personality of the agent./代理的特殊个性。

#### 7 User Acceptance of the Agent/用户对代理接受程度

The willingness of the user to interact with the agent./用户与代理互动的意愿。

- (UAA1) [I / The user] will use [the agent] again in the future/我（或用户）将在未来再次使用“代理” \*  
 (UAA2) [I / The user] can see themselves using [the agent] in the future/我（或用户）可以看到自己将来会使用“代理”  
 (UAA3) [R] [I oppose / The user opposes] further interaction with [the agent]/我（或用户）反对与“代理”进一步互动

#### 8 Agent's Enjoyability/代理愉悦度

The extent to which a user finds interacting with the agent enjoyable./用户认为与代理互动的愉快程度。

(AE1) [R] [The agent] is boring/ “代理” 是令人厌倦的\*

(AE2) It is interesting to interact with [the agent]/和 “代理” 互动是有趣的

(AE3) [I enjoy / The user enjoys] interacting with [the agent]/我（或用户）喜欢和 “代理” 互动

(AE4) [R] [The agent] is unpleasant to deal with/ “代理” 不好相处

### 9 User's Engagement/用户参与度

The extent to which the user feels involved in the interaction with the agent./用户感觉参与到与代理互动中的程度。

(UE1) [I / The user] was concentrated during the interaction with [the agent]/我/用户在与 “代理” 互动中是注意力集中的

(UE2) The interaction captured [my / the user's] attention/交互吸引了我（或用户）的注意力\*

(UE3) [I / The user] was alert during the interaction with [the agent]/我（或用户）在与 “代理” 交互期间保持警觉

### 10 User's Trust/用户信任度

The extent to which a user believes in the reliability, truthfulness, and ability of the agent (for future interactions)./用户对代理可靠性、真实性和能力的相信程度（用于未来的互动）。

(UT1) [The agent] always gives good advice/[代理] 总是提供好的建议

(UT2) [The agent] acts truthfully/ “代理” 如实行事

(UT3) [I / The user] can rely on [the agent]/ “代理” 是可靠的\*

### 11 User-Agent Alliance/用户-代理联盟

The extent to which a beneficial association is formed./形成有益联合的程度。

(UAL1) [The agent] and [I / the user] have a strategic alliance/我（或用户）与 “代理” 形成战略联盟\*

(UAL2) Collaborating with [the agent] is like a joint venture/与 “代理” 合作就像合资

(UAL3) [The agent] joins the user for mutual benefit/ “代理” 加入用户可以互惠互利

(UAL4) [The agent] can collaborate in a productive way/用户与 “代理” 可以高效协作

(UAL5) [The agent] and [I / the user] are in sync with each other/ “代理” 和我（或用户）可以相互同步

(UAL6) [The agent] understands [me / the user]/ “代理” 理解我（或用户）

### 12 Agent's Attentiveness/代理专注度

The extent to which the user believes that the agent is aware of and has attention for the user./用户认为代理了解并关注用户的程度。

(AA1) [The agent] remains focused on [me / the user] throughout the interaction/ “代理” 在整个交互过程中始终关注我（或用户）

(AA2) [The agent] is attentive/ “代理” 是专注的\*

(AA3) [I / The user] receives [the agent]'s full attention throughout the interaction/在互动中我（或用户）获得了 “代理” 的全部关注

### 13 Agent's Coherence/代理连贯性

The extent to which the agent is perceived as being logical and consistent./代理被认为是符合逻辑且行为连贯的程度。

- (AC1) [R] [The agent]'s behavior does not make sense/“代理”的行为讲不通\*
- (AC2) [R] [The agent]'s behavior is irrational/“代理”的行为是不合逻辑的
- (AC3) [R] [The agent] is inconsistent/“代理”的行为不连贯
- (AC4) [R] [The agent] appears confused/“代理”的行为显得很混乱

### 14 Agent's Intentionality/代理意图性

The extent to which the agent is perceived as being deliberate and has deliberations./代理被认为是深思熟虑的且有思考过程的程度。

- (AI1) [The agent] acts intentionally/“代理”的行为是有意图的
- (AI2) [The agent] knows what it is doing/“代理”知道它在做什么
- (AI3) [R] [The agent] has no clue of what it is doing/“代理”不知道它在做什么\*
- (AI4) [The agent] can make its own decision/“代理”可以自己做决定

### 15 Attitude/态度

A favourable or unfavourable evaluation toward the interaction with the agent./对与代理交互的有利或不利的的评价。

- (AT1) [I see / The user sees] the interaction with [the agent] as something positive/我（或用户）认为与“代理”的交互是积极的\*
- (AT2) [I view / The user views] the interaction as something favorable/我（或用户）认为交互是有利的
- (AT3) [R] [I think / The user thinks] negatively of the interaction with [the agent]/我（或用户）对与“代理”的交互持负面看法

### 16 Social Presence/社会临场感

The degree to which the user perceives the presence of a social entity in the interaction./用户在互动中感知到社会实体临场感的程度。

- (SP1) [The agent] has a social presence/“代理”具有社会临场感
- (SP2) [The agent] is a social entity/“代理”是一个社会实体\*
- (SP3) [I have / The user has] the same social presence as [the agent]/我（或用户）具有与“代理”相同的社会临场感

### 17 Interaction Impact on Self-Image/互动对自我形象的影响

How the user believes others perceive the user because of the interaction with the agent./用户认为他人因（自己）与代理的互动而对用户有什么看法。

- (IIS1) [My / The user's] friends would recommend them to use [the agent]/我（或用户）的朋友会推荐他们使用“代理”

- (IIS2) Others would encourage [me / the user] to use [the agent]/其他人会鼓励我（或用户）使用 [代理]\*
- (IIS3) [The agent] makes [me / the user] look good/ “代理” 使我（或用户）看起来很好
- (IIS4) People would look favorably at [me / the user] because of [my / their] interaction with [the agent]/与 “代理” 的交互让人们对我（或用户）有好印象

## 18 Emotional Experience/情感体验

A self-contained phenomenal experience. They are subjective, evaluative, and independent of the sensations, thoughts, or images evoking them./一个独立的现象级体验。它们是主观的、评价性的，并且独立于唤起它们的感觉、思想或意象。

### 18.1 Agent's Emotional Intelligence Presence/代理情商临场感

To what extent the user believes that the agent has an emotional experience and can convey its emotions./用户相信代理有情感体验并能传达其情感的程度。

- (AEI1) [The agent] is emotional/ “代理” 是情绪化的
- (AEI2) [The agent] experiences emotions/ “代理” 可以体验情绪
- (AEI3) [R] [The agent] is emotionless/ “代理” 是没有情绪的\*
- (AEI4) [The agent] can express its feelings/ “代理” 可以表达它的情感
- (AEI5) [R] [The agent] cannot experience emotions/ “代理” 无法体验情绪

### 18.2 Agent's Emotional Intelligence Type/代理情商类型

The particular emotional state of the agent./代理的特定情绪状态。

### 18.3 User's Emotion Presence/用户情感临场感

To what extent the user believes that his/her emotional state is caused by the interaction or the agent./用户认为他/她的情绪状态是由互动或代理引起的程度。

- (UEP1) [The agent]'s attitude influences how [I feel / the user feels]/[代理] 的态度影响我（或用户）的感受
- (UEP2) [I am / The user is] influenced by [the agent]'s moods/我（或用户）受 “代理” 的情绪影响
- (UEP3) The emotions [I feel / the user feels] during the interaction are caused by [the agent]/我（或用户）在交互过程中感受到的情绪是由 “代理” 引起的\*
- (UEP4) [My / The user's] interaction with [the agent] gives them an emotional sensation/我（或用户）与 “代理” 的互动给他们一种情感感受

### 18.4 User's Emotion Type/用户情感类型

The particular emotional state of the user during or after the interaction with the agent./用户在与代理互动期间或之后的特定情绪状态。

## 19 User-Agent Interplay/用户—代理相互影响

The extent to which the user and the agent have an effect on each other./用户和代理对彼此的影响程度。

- 
- (UAI1) [My / The user's] emotions influence the mood of the interaction/我（或用户）的情绪会影响交互的氛围
- (UAI2) [The agent] reciprocates [my / the user's] actions/ “代理” 会回应我（或用户）的行为
- (UAI3) [The agent]'s and [my / the user's] behaviors are in direct response to each other's behavior/ “代理” 和我（或用户）的行为是对彼此行为的直接反应
- (UAI4) [The agent]'s and [my / the user's] emotions change to what [we / they] do to each other/ “代理” 和我（或用户）的情绪根据我们（或他们）对彼此的行为而改变\*