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A BROWSER-BASED *ADVERGAME* AS COMMUNICATION CATALYST: TYPES OF COMMUNICATION IN VIDEO GAMES

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ABSTRACT

Video games are a comprehensive, interactive media. Online games foster communication and extend the range of communication types considerably. We examine prevailing types of communication in video games using the browser-based *advergame Fliplife*. This game provides all a clear, delimited structure, an unpretentious user interface and the characteristics of a multiplayer online game. Thus Fliplife is an excellent frame to demonstrate the wide range of communication initiated in a video game. Among contained types of communication are verbal and non-verbal communications using graphics and actions/non-actions. Found communication typically serves controlling and coordination of the game play, however private discussions and social banter exist also besides demonstration of player status and community identification. In our work we draw on the basic definition of communication as conveying information from a sender to a recipient. We categorize the found types of communication according to an abstract model of communication derived from common definitions. The compiled enumeration of communication elements and possible manifestations represents a draft of categorization for communication in video games in general. Although it still needs extended validation, this enumeration demonstrates that video games provide frameworks which host and initiate a wide variety of communication. As a significant difference compared to other media, video games and their notion of interactivity allow players to communicate through action and to change roles of sender and receiver.

KEYWORDS

Communication in video games; non-verbal communication; communication by actions/non-actions; communication catalyst; communication model

INTRODUCTION

Rich communities of players have developed in the context of successful and complex multiplayer online games. The resulting game culture is based on the active communication of the participating parties (Gee, 2008; Steinkuehler, 2006). Although the commercial success of these games relies on this community, little is known about the games' communicational framework that foster these communities.

In this article we illustrate communication in video games using the case of Fliplife. We analyze the characteristics fostering communication in Fliplife, presenting prominent examples of communication-related game mechanics. These findings are mapped to a communication model, finally resulting in a taxonomy of communication types in multiplayer online games (MOGs).

Video games as communication catalysts

Video games facilitate new forms of communication, missing established types on the other hand. Real life's face-to-face communication between players is not possible during game play. Facial expressions or gestures cannot be easily transferred, even if players share the same room. As they have to observe the actual game-play they cannot look constantly at each other.

As MOGs, video games develop new virtual spaces as Third Places (Steinkuehler & Williams, 2006). And Third Places are tightly connected to versatile types of communication. Connecting the different players by similar interests and goals, games show how to immerse players apart from the actual experience of play. Players get bound to the game by its "culture" as Salen and Zimmerman (2003) describe the embedding context of a game. Or they get involved by the "Game" as Gee (2008) defines it. It is a process that depends on the communication, the shared experiences, goals and ideals of players. Without communication about achievements, strategies, interests, etc. this *culture* cannot develop.

Understanding the communication in games offers the opportunity to implement it purposefully during the game's design process; for improving play, customer loyalty, marketing goals or learning experiences. Despite these opportunities a structured and comprehensive understanding of communication in video games is missing.

Successful MOGs are based on mature and complex game mechanics. These game mechanics and the resulting communication and game culture develop and maintain an active community of players. Social Network Games (SNGs), as another form of MOGs, are usually embedded in existing communities but lack collaborative game mechanic to foster real communication besides considering fellow game players as mere resources (Söbke, 2014; Yee, 2014). Though communication of players is possible, it is usually limited to status messages instead of active and purposeful communication.

Fliplife is a SNG, designed with focus on collaborative play. This is a different approach than other SNGs pursue, that merely address collection and decoration as motivational aspects. Due to the puristic skin and the absence of such typical game mechanics Fliplife neglects that appeal. Instead its simple game mechanics foster collaboration and communication between players. Communication originates both from the need for success-oriented collaboration and the players' interest in fellow players or communication itself.

From our point of view these aspects elect Fliplife as a suitable research object on communication in video games. Brüß et al. (2014) found evidence that Fliplife can be considered as a virtual manifestation of a Third Place (Oldenburg, 1999; Söbke & Londong, 2015). Video games as virtual Third Places have been mentioned before (Steinkuehler & Williams, 2006). However the existence of this phenomenon especially in SNGs, which are much simpler to operate than "traditional" video games, has not been reported so far. To a certain degree an SNG as a Third Place is not a surprising characteristic, as communication prone media are considered to enable Third Places, too (Soukup, 2006). This leads to the question, in what ways a simplistic game such as Fliplife encourages opportunities for communication.

Therefore we analyze those characteristics in Fliplife, which foster communication, based on our gaming experiences in Fliplife from May 2011 to September 2014, augmented if needed by results of three online surveys we supervised (Brüß *et al.*, 2014; Müller *et al.*, 2012; Müller, 2012). We relate prominent examples of communication within the game to corresponding game mechanics. In our work we differentiate primary those types of communication which occur in the game directly. Various media outside of the game, which can be used for communication about the game are neglected: forums, blogs and social networks are only a few of them.

We map these findings to a model for communication in multiplayer online games, based on Lasswell's model of communication (Lasswell, 1948), the Shannon-Weaver model (Shannon, 1948) and findings from Siitonen's "Social Interactions in Multiplayer Online Communities" (2007).

The case of Fliplife

Fliplife is a browser-based SNG, first released in 2010 (and closed in 2014). By its venture capital backed developer it has been advertised as "an international [...] life simulation game platform in a real-life scenario" ("Crunchbase: Fliplife," 2011). This description characterizes the game strikingly: the player controls an avatar experiencing real-life events. Mainly work, spare-time activities and friendship are part of the avatar's life. In the working life the avatar takes part in *Projects*: The player has to register in a project and after a determined period of time a reward is offered which has to be picked up within a certain amount of time. Spare-time events consist of sport events, mini-games and parties. Relationships to other players have to be declared and maintained as they rely on common activities as participation in projects and spare-time events. An overall goal is to collect experience points (*XP*s) which determine the level of a player. In accordance with the typical SNG, Fliplife is (partly) financed by a Freemium pricing model. Other sources of income are fees of those companies which are presented in Fliplife.

The structure of the game is simple and spartan compared to other video games in general and even other SNGs in particular. It is reduced to a minimal set of components and game mechanics. As it is constructed using HTML5, there are almost no graphics and sound effects (SFX). Nevertheless there are some remarkable phenomena connected to this game. First players regularly solve complex problems and defer rewards to the future (Söbke, Bröker & Kornadt, 2012). Both behaviors are not commonly attributed to players of SNGs (Bogost, 2010). Related to these observations of emerging game play a further use of Fliplife has been circulated: A German trust (*Bayer AG*) has been said to offer job interviews based on their game play (Meyer, 2011). Such an approach to use Fliplife as a recruitment platform appears to be feasible, at least in theory (Söbke, Hadlich, *et al.*, 2012).

Fliplife in the light of an advergame

Originally Fliplife has been designed with the goal to provide a *storytelling platform* for companies (Grabmeier, 2012). Companies are an element in the working life of an

avatar: Each player has to join an employer with her avatar. An employer offers a *Career* path with typical career steps. In Fliplife each of these career steps requires particular actions of the players; mainly projects have to be completed. The projects are a means to transfer messages about the company to the player, i.e. a medium for storytelling. Among the real life companies which contributed career paths are trusts like Bayer, Daimler and Ernst & Young.

In a commonly used definition an *advergame* is defined as a game "where the game itself is used to deliver an advertiser's message" (Rohrl, 2009; Wallace & Robbins, 2006). According to this definition, Fliplife can be considered as such a game. It can be embedded in a wider purpose as public relations or marketing, specific forms of macro-level communication (Schmidt & Zurstiege, 2000: 182). Normally *advergames* are designed to transfer the message of one certain brand or company (Terlutter & Capella, 2013). Fliplife however provides a framework which allows conveying the stories of multiple companies in parallel.

(Müller, 2012) has investigated that framework in detail. She describes how the story — the messages to communicate — is integrated into Fliplife as a platform. Following her results, the story of a specific company is not available in Fliplife a priori by means of game design. Instead it has to be embedded into the predetermined game design. To accomplish that, the Fliplife framework offers various possibilities to provide extensions. These extension elements (graphical and textual) are used to represent the company. First a *Career* has to be defined. The career comprises of a fixed number of career steps — ranks and position — the player has to pass through. Textual descriptions of the company, its career and the career steps provide information about the company. The avatar is decorated with typical working clothes for each rank. Also the set of project types reveals information: each project type describes a common task within the company. Other extensible game elements to include company related information are *Tools* and *Materials*.

Company-specific content is integrated into Fliplife using the described set of extensions. As this game has been established as an *advergame*, the question of efficacy arises: do players realize those messages or are they just focused on game mechanics? Müller (2012) performed an online-survey and found evidence that the approach is (at least partly) working: Only 5% of participants never read the project names, 24% never read project descriptions (n=127). Furthermore project names could be identified correctly at a high rate as seen in the example in Table 1.

Career	Name of Project	Yes	No decision	No	Remark
Physician (n=51)	Remove your appendix	45	3	0	
	Clean your teeth	6	6	30	Project does not exist
	Exercise unreadable handwriting	45	2	1	

Table 1 Online survey: recognizing names of project

Additionally for some companies there is the need to answer questions as prerequisite for leveling up. This is the most obvious form of transferring knowledge. When there is the question "Since when is the E-Plus trust awarded as a top employer?" then the answer is 2005. However one important message of this question is "E-Plus is a top employer".

Examples of communication enhancing game design in Fliplife

Projects as designed conflicts

A *Project* is an elaborate metaphor for collaboration between players. There is a set of different project types for each career path. A project is defined by the number of working places (for 1 to 8 players), by its duration (10s to 72h) and by a time period to collect the project gain (3h to 24h). Taking part in a project requires just basic click actions of the player: when she registers for the project and when the reward is collected. If all players pick up their gain in time, all the project workers are further rewarded with another bonus. Furthermore the project counts as completed, which is relevant for ranking lists and career paths. This has an important implication: the success of a player depends on the reliability of his fellow workers. Several strategies to increase the success rate of projects have been observed. All of them include communication.

Working in (almost) closed groups is one of these approaches. It leads to communities where players know each other very well. In general those communities communicate extensively. This phenomenon is supported by the game element *Department*. A department is an opportunity for players to collaborate for a shared goal and develop an own branding. It holds a certain number of members (10 to 25), has a hierarchical structure and can build up so-called *skills*. Skills increase the possible size and efficiency of a department. We have observed that the introduction of departments into the game has increased communication between players. In early stages of the game there was only one game-wide chat, which was not commonly accepted by the players. It was partly overflowing and confusing because of the bulk of messages. Concluding from this experience, game design should enable the formation of smaller groups in order to create communication possibilities.

Another observation is that players remind other players to collect their reward: each project has its own project chat. New messages in this chat are delivered to a *message center*. There they are clearly indicated, accompanied by a short sound. If a player wants to remind other players to collect their reward, she issues a short entry in the project chat and all fellow workers get a hint to collect their reward. In this way the urge to succeed leads to communication.

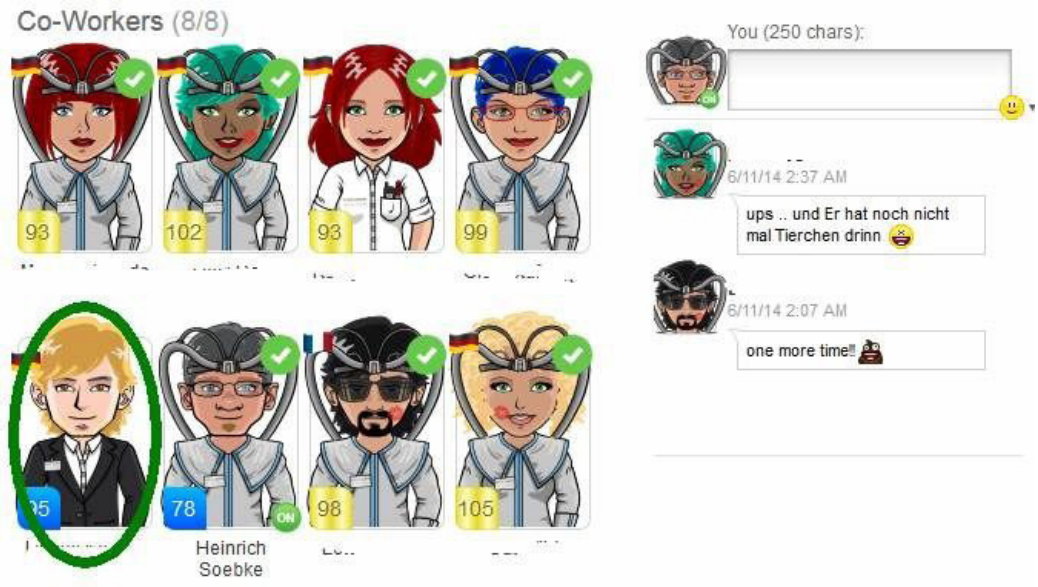

Figure 1. Lost Bonus: sanctioning comments

There is an escalation of reminding other players: when a project has failed, some players sanction failing team members**.** They utter their disappointment in the project chat (see Figure 1). This semi-public accusation puts pressure on failing players, who may try to be more reliable in future. This is another example, how game design creates conflicts. Those conflicts are made obvious to the group by communication.

An alternative to taking these conflicts is to avoid them; this approach is connected to communication also: a project is filled up player by player. After the last empty player slot in a project has been occupied, the project starts. Non-filled projects can be inspected; an important piece of information is the success rate of a player, i.e. the percentage of projects the player has completed successfully compared to all projects she took part in. In this way low-performing players can be identified. For each project type there is only one current publicly staffing project. If such a waiting, not yet started project is populated by a player with a low success rate, other players are reluctant to join this project. They expect a bad probability of success for this project. Here happens communication by a non-action: The project does not fill up at all or fills up very slowly. In extreme cases other players try to urge the low-performer to leave the project by comments in the project chat.

An even further stage of the described avoiding strategy is the proactive management of such projects. This happens when a player encourages other apparently (or known) reliable players to join a project – again through textual communication. But there are also other facets of actively assuring reliability to other players. An avatar is decorated with a mark, when the player is online. If a player, who has joined a short-term project, is not online, this may be interpreted by other willing-to-join players as a bad omen. They estimate that the project will fail and do not join the project. However the player, who is offline, might have used the option *Autocollect*. This option has to be bought using the hard (Kelly, 2010) in-game-currency (called *Flips* and buyable with real money) and frees the player from the obligation to collect the reward in time. Therefore

the bonus of the project is not at risk by a potential non-action of the offline player. Unfortunately the usage of this option is not visible for other players. For this reason players, who have chosen *Autocollect*, often indicate this by a project chat comment entry. In German the jargon term is "AA" ("Autoabholung").

Each of the described strategies of collaboration is connected to a certain kind of communication. As a consequence a player needs to communicate in order to increase her success in the game. The game element *Project* is an example for a designed conflict, which creates a latent demand for communication.

Bonus projects as incubators for bartering

The bonus of a project can be increased by the usage of boosters. In Fliplife they are called *Material* and *Tool*. They increase the bonus in a linear way, i.e. the more materials are used, the higher the bonus of the project is. They are part of the reward of a successful project. So each piece of material represents one completed project. For the production of a huge number of materials there are "farming sessions": usually in the evening, when players enjoy their spare-time, they meet in the game in their departments and complete together short (i.e. 5 min) multiplayer projects to produce material. Within these sessions players have to join projects and collect the rewards. They need to stay at the keyboard almost continuously to join projects efficiently. As these actions fill only a small part of the available time, there is time left for textual communication. This can be observed as a common behavior of a significant part of the players.

The terms *Material* and *Tool* are closely connected to the term *Bonus Project*. This metaphor for game success on an epic scale influences the game play of almost every long-time player. Basic game mechanics, as they are offered explicitly by the game design, are simple, as the example *Project* in the previous section demonstrates. However, over time the habit of the *Bonus Project* has emerged as a player defined goal. This is a project which uses a huge number of materials. As a result the gain of *XPs* and *Coins* becomes tremendous in comparison to a normal project. Just to exemplify the magnitude: we participated in a project with a 6000 times bigger reward than usually, resulting from over 20000 *Materials* and appropriate *Tools* (see Figure 2). 20000 *Materials* is equivalent to more or less 20000 finished projects. This is a huge effort the players have provided and which is at stake: if only one participant does not collect her reward in time, the bonus will be denied. Such a project requires reliable participants. As described in the previous section, it increases the conflict potential enormously.

An additional effect is the occurrence of material barter. As already described, a *Material* is one of the rewards of a project. There are different types of *Materials*. A *Material* is issued regardless of the career of the player but career specific projects need specific materials. That is, a great part of the rewarded material is not directly usable for the player, who pursues one dedicated career. A workaround is to barter not usable material. Other players are in need of this type of material and could in turn offer material they cannot use. The process of bartering requires communication: it consists of identifying

appropriate players, browsing their storage and finally negotiating a deal with them. Altogether, the *Material* metaphor is a further element of game design which leads players to spend a huge effort on bartering those items. This is accompanied again by communication: functional communication in the case of bartering and predominantly voluntary communication in the case of material farming. As a further result the emergent game play trait of *Bonus Projects* arises.

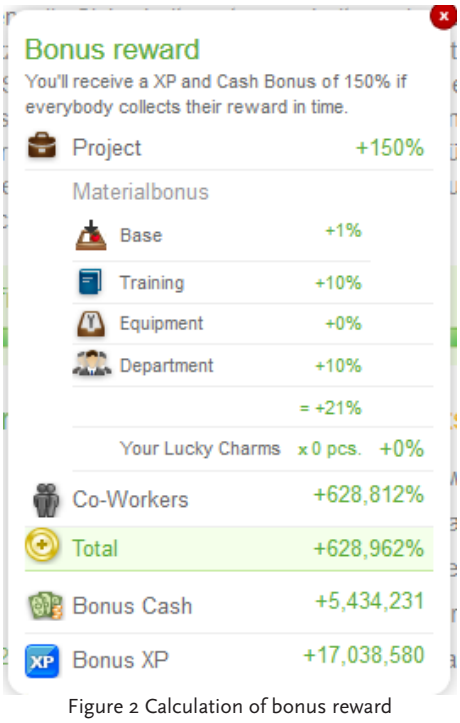

Figure 2 Calculation of bonus reward

The demand for Energy: communicative resource-gathering

Joining a project requires the renewable resource *Energy*. During farming sessions energy depletes faster than it is regenerated. For this reason players have to farm energy. This is done in spare-time events. *Parties* are a popular means of generating energy. As in real life one player has to initiate the party and invite other players. Each player has to accept the invitation. The aim of a party is to generate a certain turnover. Each player can invite the other participants for a drink. If too many drinks are bought simultaneously the spirit becomes exuberant and the party fails. So players have to use a collaborative strategy to buy drinks continuously at a low, but steady rate. It requires communication: in earlier times of the game the party guests were divided into three groups. After that the party host directed these groups to buy drinks. Each group had a period of time for buying drinks. Recently another habit emerged: the host spends all the rounds. Summarizing, the game mechanic of a party is an originator of communication using different media and habits.

A more realistic model of Friendship

Friendship is an essential element in SNGs, mostly it works on a mutual base: a player has to request friendship and the other player has to confirm the proposal. This is the way it works in Fliplife, too. Furthermore Fliplife uses levels of friendship. The level depends on the grade of common actions. Common actions are e.g. participation in the same projects and in the same parties. The level decreases when there has not been a common activity for the last 30 days. Dependent on the level of friendship of the participants in a project a social bonus is issued. It is an additional source of XPs especially in the case of material farming (cf. Sec. *Bonus projects as incubators for bartering*). In consequence we have observed that the implemented model of Friendship lets players strive to establish Friendship. It becomes a goal of the game and therefore fosters social bonding, social interactions and finally communication.

This model of Friendship is one design element, which lead to formation of communities in Fliplife. The foundation of an established community enables further forms of communication: in early 2012 the game developer changed some rules of game mechanics in Fliplife. A lot of players did not agree. For this reason they initiated a campaign to make clear their disapproval of those new rules. Each player could participate in the campaign by dying her hair purple (Männl, 2012). In this way the single player communicates with her fellow players and the community of players sends a message to the game designer.

Melting theory and practice: a formal view of Fliplife

How communication is enabled: the medium

Any communication process uses a medium. In Fliplife various media are prevalent. Most dominant medium is *text***.** Textual communication is enabled in the game at various locations: a chat tool is available for the game itself, each project, each party and each department. A message board allows asynchronous communication on player-level and department level. Additionally personal messages can be sent from player to player. Textual communication is extended by emoticons. They are offered especially for chat contributions and are a form of *graphical* communication. A subtype of the medium graphics is the player's *avatar***.** It is a 2D picture. Its customization in Fliplife is sophisticated; the avatar editor is structured similar to identikit picture software. Additionally it allows selection of outfits for various occasions of life. Another element of customization is a textual message – a slogan on a player's profile page. Also the name of the player has become a form of medium: In the early times of the game it was common to use the real life name. This was fostered by Facebook authorization. Later on names have been chosen creatively. Thus they are a kind of medium (see Figure 3).

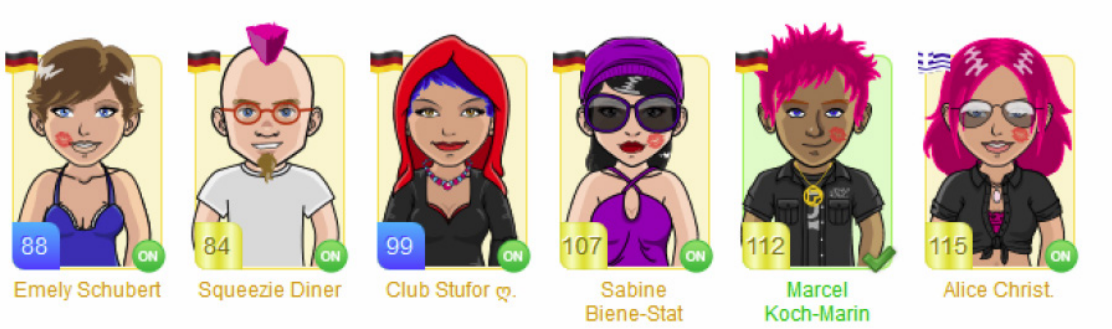

Figure 3. Party guests showing adequate outfits

The player's *status* is a kind of medium. Status is expressed through text or graphics. Players, who are paying for a "Premium" status, are decorated with a yellow background color. The level of a player is displayed with the avatar (see Figure 3).

Actions can be considered as a (non-verbal) medium. Friendship in Fliplife is an example: the size of the bonus in a project reveals information about the quantity of common activities in the past (cf. Sec. *A more realistic model of Friendship*). Also non-actions may transfer information from sender to receiver. An example is avoiding a project together with a low-success-rate-player (cf. Sec. *Projects as designed conflicts*). An issue of non-actions is that they may not be clearly recognizable for the receiver.

A further example of action as medium is the project type dependent highscore list. Each project type displays a list of the 3 players that have used the most pieces of material in these projects. In short projects the usage of material is almost irrelevant in terms of reward generation. However, if a player wants to see her name in the highscore list, she puts a highscore-beating number of materials in such a project. Some players even choose a special number (e.g. 777 or 1000) of materials. With the result that the highscore list not only shows their name, but also this special number of materials. There is also a highscore list for donations to the department. Donations are necessary for developing the capabilities (*Skills*) of a department. It is a designed latent conflict for players. They have to decide about the allocation of resources between the community of the department and their own immediate interest. The highscore list communicates the results of their decision (and the probably taken actions) to their fellow players. Another popular (sequence of) action is completing all offered careers. Each completed career is indicated by a special cup on the player's status page. Obvious becomes the pattern of transforming actions into messages in a department's activity log. Here most actions (Who has invited whom into the department? Who has joined the department? Who has made which donation? etc.) are automatically converted into a textual message.

The *game* itself is a medium. It offers a choice of game mechanics and aesthetics, which can be considered as a message of the game developer to the player. Vice versa the acceptance of the game itself and certain game mechanics send messages from the player to the game designer.

Some types of media are not provided in Fliplife due to the game genre. The virtual world of Fliplife is a 2D website. So there is no opportunity to use spatial information in

Fliplife and the animation of graphics is limited, too. Furthermore vocal communication is not supported by the game. There are only a few elements of audio design: a small set of simple sound effects is implemented, e.g. an incoming message is announced by a beep.

Communication processes can be categorized by the direction of information flow. An attribute of the medium is, if it restricted to unidirectional communication (information transferred only from sender to receiver) or allows bidirectional communication (sender and receiver change roles during communication). A great part of communication in Fliplife is unidirectional: Most of the displayed status information belongs to this category. The slogan on a player's profile belongs to the category of unidirectional communication. A special case is shown in Figure 4: Here information is generated by two senders: the player has taken the action which has led to a status and thereafter the game designer categorizes the numbers. So the verdict "Socializer" has two sources.

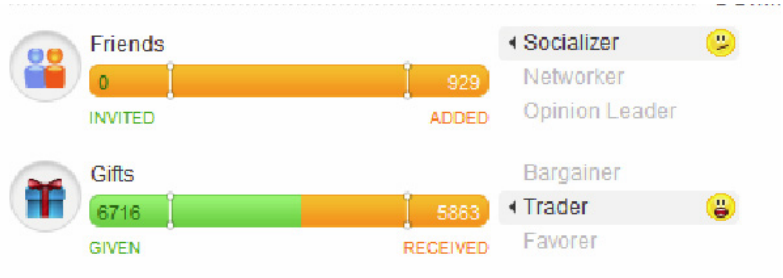

Figure 4. Categorized status

Friendship in Fliplife (cf. Sec. *A more realistic model of Friendship*) demonstrates bidirectional communication between two players. There is a variant of this type of communication called "Blew-A-Kiss". This action puts a kiss mark on the avatar of the receiver. It is publicly visible and the receiver is able to remove it, if this was not desired. So it is bidirectional already at this stage – no action has a meaning. In a further scenario roles can change: The "kissed" player can kiss the kissing player for his part. Such an interaction has impact on the friendship level of both players.

Who communicates? About Senders and Receivers

Sender and Receiver are important elements of the communication model. From the given examples it becomes obvious that different parties are involved in communication in the game: *Players* constitute a first role. They are involved in most of the types of communication in a game. Players in MOGs often constitute smaller *groups of players* for the sake of following a shared goal. In Sec. *Projects as designed conflicts* it is pointed out that high-cohesive groups exist in Fliplife. They often use departments as an organizational unit. This leads to an intense communication within the group. Additionally a group communicates status information to other groups through ranking lists. Besides these examples the collectivity of all players can be considered as a specific, large group of players.

The *game designer* has created the game and its game mechanics. She communicates through the game as a sender. For example she chooses the information which is

displayed on the profile page or in ranking list. Such information can lead players, e.g. in the case of competition. In this way the choice of displayed information influences game play. Another example in Fliplife is the *Daily Login Bonus*: The player gets each consecutive day he visits the game a higher bonus. The player as the receiver of this message can consider this as an invitation to log in each day. At the same time the game designer takes the role of a receiver, when there is the possibility to monitor the game play. Results from game play monitoring inform the game designer about the acceptance of offered game mechanics. By choosing an action a player sends a message to the designer. This information probably can be used to adjust the game mechanics — as it has happened in Fliplife almost continuously.

In any case the game play occupies the *game support***.** So this role communicates with players as it is responsible for community management and operating the game. A prominent example is the common action of player protesting against a change of game rules (cf. Sec. *A more realistic model of Friendship*). In turn the game support may forward this message sent by a major group of players to the game designer. The action of deleting one's account as a further example can be considered as a message from a single player to the game support. It may probably be an indicator for the attractiveness of the game, if it is done by a great part of players.

The role of a *content provider* needs a game and software design that allows adding new content to the game. In the case of Fliplife this is a career path. Companies may take this role and communicate through their career paths with players. The attractiveness of such a content could be measured by the number of players who choose it - a message sent from player to content provider. In general many other games are aware of the role content provider as they can be extended (or modified), too, e.g. by levels or so-called mods.

The purpose – why messages are sent

Brüß et al. (2014) asked players about the purpose of chat communication in Fliplife. Table 2 shows that there are two general categories of communication purpose.

Purpose	Percentage
Organization of projects	47%
Material Barter	60%
Support (passive/active)	45%
Other concerns of Fliplife	28%
Personal Issues	24%
Professional Issues	14%
Sparetime Activities	26%
Other	8%

Table 2. Purpose of chat communication in Fliplife (n=313, multiple responses allowed)

On the one hand there is game related communication to improve the results in the game. One example of such result-oriented orientation is the need of coordination

for bonus projects (cf. Sec. *Bonus projects as incubators for bartering*): the procedure has to be communicated to all participants, the starting time has to be determined together, participants have to be recruited etc. Another communication-prone need derives from bonus projects: material, necessary for improving the gain of such a bonus project has to be collected. As described in the material barter example (Sec. *Bonus projects as incubators for bartering*), this is a source for communication using the media *Status* (when the other player's storage is browsed), *Text* (for a textual request to initiate negotiations) and *Action* (when the material is exchanged).

On the other hand, almost one fourth of the players communicate about private issues. 37% of participants declare that personal friendships have developed and almost 10% have met other Fliplife players in real life.

The codec: how exactly a message is sent

Encoder and Decoder are used to condense a message. Another expression for this phenomenon is *Jargon* (Siitonen, 2007). The sender uses an abbreviation to shorten the message and to reduce the effort to create the message. If the receiver knows about the special meaning of the abbreviation, she is able to decode the message. This process works regardless of the media, but it needs specific decoding knowledge. Decoder and Encoder belong together (*codec*) and are specific to the media. In Sec. *Projects as designed conflicts* an example for the medium *text* is mentioned: the enabled option *Autocollect* is indicated by a comment "AA" in the project chat. Furthermore there exist special projects which are initiated for storing *Energy* and *Material*. To prevent other players from joining these projects and therefore accidentally starting them, there is a comment "Lager" (German for "Storage"). A further example for the medium *graphics* are emoticons. Fliplife supports them by means of a selection box (see Figure 5). This selection already includes an encoding/decoding facility: the tooltip for each icon shows a textual description.

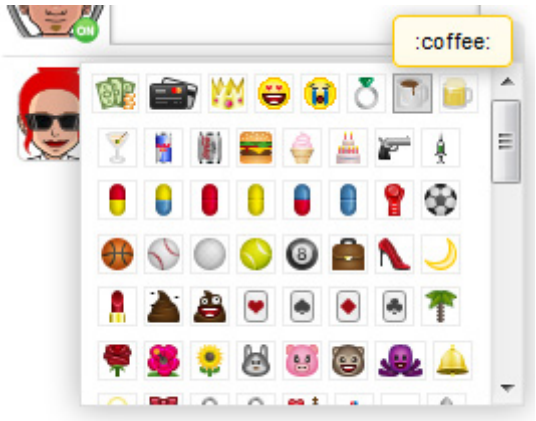

Figure 5. Chat pictures selection box

An additional manifestation of conveying a condensed message is a career specific avatar decoration. Figure 6 shows an easily recognizable decoration.

Figure 6. Avatar: career path "E-Plus"

A *Bonus Project* is partly a jargon expression for a set of actions. If this term is mentioned, the receiver can translate it into the necessary actions. Remarkable is that there are some dialects of this jargon term: Over time different recipes to carry out a *Bonus Project* have been developed. From the "local" context of the *Department* the correct set of actions becomes clear.

Related work: building foundations

At a first glance we came to the assumption that Fliplife fosters — despite of its simplicity — an almost complete range of communication peculiarities, which can be observed in video games in general. In order to prove this observation we initially have created a theoretical foundation that provides a frame for conceivable forms of communication in the context of this work.

Transferring information from a sender to a receiver is a very abstract, common and simple description for the term communication. Based on this description a variety of communication models has been developed. Well-known is Lasswell's model of communication (Lasswell Formula, Lasswell, 1948). It is summarized by the question "Who Says What In Which Channel To Whom With What Effect?". Elements of this model are *Sender* (or communicator, "Who"), *Message* ("Says What"), *Medium* ("In What Channel"), *Receiver* ("To Whom") and *Effect* ("With What Effect"). Shannon (1948) introduced the Shannon-Weaver model with reoccurring terms: *Sender*, *Message*, *Receiver* and *Medium*. The applicability of this model is seen as limited for non-technical communication processes as it covers the area of physical communication (Schmidt & Zurstiege, 2000). However the common terms can be valued as a further indication to use them in a possibly broader context of communication.

Lasswell's model has been subject to discussions. So Braddock (1958) added the element *Purpose* to the model. This element seems useful for our work, the analysis of communication in Fliplife. Summarizing up we use in a rough model the elements Sender, Receiver, Message, Medium and Purpose (see Figure 1).

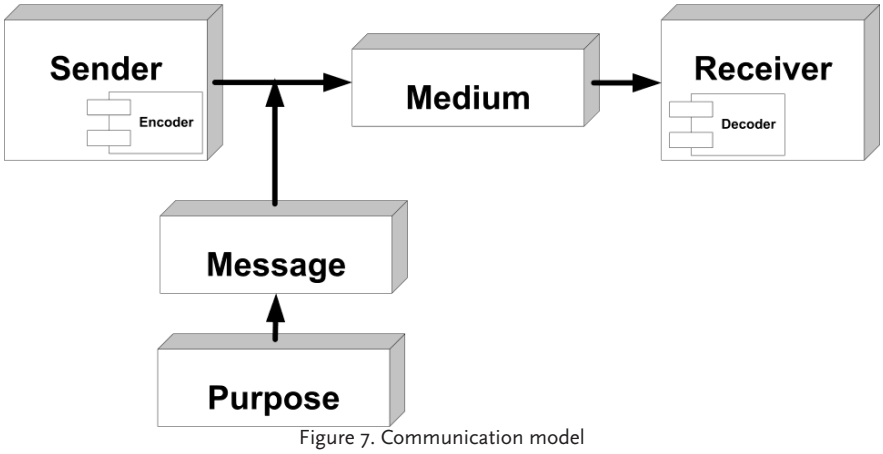

Figure 7. Communication model

Besides finding a general model of communication, its specific relation to video games has to be clarified. In this context a number of considerations contribute meaningful. So is communication an essential part in Lave & Wenger, (1991) postulation of situated learning. Although often a considerably great part of communication takes place outside of the game, mostly there is also a significant amount of communication in the game between players. Another example stems from Bartle's taxonomy of players (1996): One of the types he identified, is the *Socializer*. This kind of player draws a great bunch of his motivation to play from socializing with others. But also the other types of the taxonomy indicate, that games are related to communication in general. The investigations of the *Explorer* type can be seen as a sort of communication with the game developer. A player of the type *Killer* may use verbal and non-verbal communication to dominate fellow players. An *Achiever* sends a message to other players by his game stats with all the achievements — if the game developer allows a public display of the status. Furthermore as already discussed, specific video games can function as virtual Third Places. Third Places however are tightly connected to versatile types of communication. A further look at such types of communication would be helpful in terms of providing a taxonomy of communication in video games. In this context Siitonen (2007) gives in his work about social interactions around the play of multiplayer online games an overview about the predominant types of communication. Communication through text is supported by almost every game. Vocal communication is often enabled by additional software and hardware. Its use depends on the game specific culture. Nonverbal communication and avatars is a collective term for using other media than text and voice in the game to send messages in general. A well-known example is the design of one's avatar. We suggest completed actions as a another kind of communication: Often the consequences of actions are publicly visible, e.g. in the profile page of the player (player stats). Siitonen also mentions *Jargon* in his enumeration of communication. Commonly jargon can be defined as "game specific expressions" which "might include abbreviations" (Siitonen, 2007: 69). They contribute to a denser communication. In the Shannon-Weaver model it refers to the function of *Transmitter* and *Receiver*, which code and decode the message (In

Figure 7 we added the elements *Encoder* and *Decoder*). In general, jargon can be observed regardless of the medium.

Another kind of communication takes place between player and game designer through game play (Jordan, 2011). A game's design offers choices. The way a player uses or does not use those choices can be seen as a message from player to game designer. If players never complete a certain task, it's a hint for the designer to scrutinize the reasons for this behavior. This observation leads to a broader definition of communication as the perceivable result of actions or non-actions. This definition includes *Sender*, *Receiver*, *Medium*, *Message* and *Purpose*, but makes no assumptions about those elements. It allows describing additional forms of communications.

There are further aspects of video game induced communication. First, as argued before, they add new forms of communication. But at the same time they also miss some types of communication. Partially the lack of non-verbal communication can be mitigated by the expressive design of characters, a result from technical progress and research (Tanenbaum, El-Nasr, & Nixon, 2014).

Another trait of communication in video games is the increased number of involved parties. Whereas a verbal communication typically includes two persons, in video games a widened spectrum of roles communicates. Basically there can be found player-to-player communication. However there are other actors as Game Designer, Game Support and Content Providers. All these parties communicate with each other, which leads to multilayered communication. Of course some of these communication paths can be considered as more relevant: communication between players and game design as communicator are insightful for game research and game design.

Summary

Fliplife is a SNG. However it is designed with a focus on collaborative play. This is a different approach than other SNGs pursue, that merely address collection and decoration as motivational aspects. Due to the absence of such game mechanics and its puristic skin Fliplife neglects this appeal. Instead its simple game mechanics foster collaboration and communication between players. Communication originates both from the need for success-oriented collaboration and the players' interest in fellow players or communication itself. From our point of view these aspects elect Fliplife as a suitable research object on communication in video games.

We have found a great pool of examples for communication. These findings include that Fliplife can be seen as a successful example of player-to-player communication. This is underlined by its function as a virtual Third Place, too. Communication in Fliplife is spurred outside of its scope as *advergame*. However it leads to cohesive groups and therefore retains players in the game. This allows companies as content providers (and therefore having the role of senders) to reach their audience. In general game mechanics create conflicts and thus the need of communication to resolve these conflicts. In this context Fliplife can be described as a successful application of game design that targets at providing a frame to be filled by players. Salen & Zimmerman (2003: 168) describe this as

> "The goal of successful game design is meaningful play, but play is something that emerges from the functioning of the rules. As a game designer, you can never directly design play. You can only design the rules that give rise to it. Game designers create experience, but only indirectly."

Beside player-to-player communication we could identify additional types of communication involving game designer, game support and groups of players. Video games deny certain kinds of communication, but they also allow new kinds of communication. We value actions (or non-actions) as a kind of medium for non-verbal (or non-textual) communication.

As a main contribution this work first documents and categorizes the vast amount of communication which happens even in a simple MOG. Communication in games is not a matter of technological effort to create (almost realistic) virtual worlds, but a matter of game design. Therefore we consider in a second step our work as a help to provide games with both the need for communication and opportunities to communicate.

We have used an - in our context - appropriate model of communication. However it has not yet the entitlement to be an all-embracing model of communication in video games. Our findings are surely limited by the selection of the game. Furthermore it has been impacted by our specific point of view affiliated more to the area of video games than to the great field of communication. Therefore future work may include a more detailed perspective regarding communication theory in general.

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