DEBRIEFING DEPENDS ON PURPOSE

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Inhoud

1 A simple classification model for debriefing simulation games[1]

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Abstract

Debriefing is an important phase in using simulation games. Participants are invited to make a connection between experiences gained from playing the game and experiences in real life situations. Thus, debriefing is the phase meant to encourage learning from the simulation game. While design and practice of debriefing sessions should be aligned to this aim, it is necessary to distinguish different forms or modes of learning. Our central argument is that the shape of debriefing will have to meet the learning objectives being pursued in a concrete simulation game. We propose a general classification of learning objectives that allows a distinction to be made between types of use of simulation games. In each of the four types distinguished, the debriefing serves different purposes for which specific requirements can be formulated.

Keywords

assessment; debriefing; facilitation; learning objectives; participant learning research; simulation games; training; transfer.

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2 Introduction

Participants in a simulation game[31] can learn in many ways from that simulation game. Broadly speaking, all the activities involved in preparing a simulation game or participating in it may help to better understand the real life situation the simulation game refers to. It is very instructive to design a simulation game, to facilitate it, report about it, observe it, and perhaps most important, to participate in it. The learning processes relating to participation in a simulation game may vary in pervasiveness, and the insights obtained may diverge between participants. Not all participants will be equally able to reflect on the experiences acquired during the game, draw conclusions, and apply these to a 'real life' situation. Sometimes little face value resemblance exists between the simulation game and the reference system (the real life situation). Participants may not be used to compare different situations in terms of underlying mechanisms, which may preclude transfer of experiences. Even more important is that, as a rule, participants have a limited picture of what happened; while playing, usually they observe only those parts of the simulation game their position allows them to. From a learning perspective, then, it is useful to revisit the scene with all participants after 'playing' has stopped, to compare different pictures and to encourage participants to make a joint analysis of what happened. When this analysis is being made, the limitations of any single perspective become visible. Such a revisiting session, that we consider a part of a simulation game, is generally referred to as 'debriefing.'

The importance of debriefing is widely acknowledged. Simulation & Gaming's 1992 special issue on debriefing opened with the observation that "Debriefing is perhaps the most important part of a simulation /game, and yet it tends to be the most neglected, if not in practice, at least in the literature" (Crookall, 1992:141).

It is understandable that debriefing is viewed as important, considering the objective of many simulation games to contribute to participants' knowledge and skills. Surprising, then, is the small number of studies available. Research tends to concentrate on the cooling down function of debriefing, and few attempts have been made to explore how debriefing may contribute to learning processes. Notably, the special issue of Simulation & Gaming included a number of studies (Lederman, 1992; Thiagarajan, 1992; Petranek et al., 1992; Steinwachs, 1992), but these left

[3] In this article we use the term simulation games to refer to the class of tools, in which gaming techniques are used to simulate a situation; participating in this simulation game will help participants to learn about the real situation.

important issues to be addressed. Examples of these issues are group dynamic and pragmatic aspects of debriefing, retention and transfer, the role of participants' diversity (in terms of aptitude, cognitive style, position in the simulation, position in real life), or the results of different debriefing methods. In addition, the studies mentioned have not been taken up by others.

Rather than examining the above issues in detail, the present article will highlight, once again, the learning prospects of debriefing in simulation games, which includes the question of transfer. We will argue that the design of a debriefing session should be tailored to the learning objectives to apply, and to participant characteristics. A classification model is presented that shows the connection between simulation games' objectives and debriefing method to be used. We will sketch the purpose and process of debriefing in each of the situations distinguished, and discuss how a debriefing session is to be designed accordingly. But first, we will briefly sketch the historical derivation of the concept of debriefing. As will appear, participant learning is not the only conceivable objective of debriefing, and it was not even the first to arise.

3 The origins of debriefing

The literature on debriefing tends to stress 'desensitizing' and 'dehoaxing' (e.g. Holmes, 1976) rather than learning and transfer of experiences. The origins of the term debriefing may explain this emphasis. Lederman (1992) gives three historical denotations:

- military campaigns and other critical incidents: ex-prisoners, hostages, victims
- psychological studies involving deceptions of subjects (respondents)
- educational settings (or experience based learning).

In the context of military campaigns and critical incidents, a first denotation of debriefing is that participants (or victims) report about the situation experienced, to provide others with information. As a side effect, more or less, debriefing in this sense may help a participants or victim to cope with trauma.

This coping element is central in the context of psychological experiments that involved the deception of subjects. Here, as a second denotation, debriefing means that information is provided to those who went through the experience rather than to collect information from them. The nature and purpose of deception is explained to participants in the experiment, and the attempt is made to take away anxiety inflicted by the experiment or by a participant's behavior in the experiment. This coincides with the code for psychologists towards their clients, issued by the American Psychological Association in 1973 (Perry & Abramson, 1980):

- provide full clarification of the nature of the study and remove any misconception that may have arisen during the experiment
- where undesirable outcomes are anticipated, detect and remove or correct these consequences, including, where relevant, long-term after-effects.

Neither military campaign debriefing or psychological experiment debriefing aims at learning from experience by the person being debriefed, except in the sense of 'learning to cope' (Everly et al, 2000). It is possible and even likely that learning in the more general sense of 'understanding' will occur as a result of experiencing a traumatic event or a deception-based experiment, but again this must be considered a side effect. If such learning by the person being debriefed occurs, it is not because debriefing in these cases was focusing on it. Debriefing in the context of experience based learning, in contrast, does focus on participant learning. According to this third denotation, debriefing aims at "using the information generated during the experimental activity to facilitate learning for those who have been through the process" (Lederman, 1992:147).

Simulation games often have a clear learning objective and, moreover, trauma and deception are largely absent in simulation games. Therefore, insights stemming from experience-based learning can be taken as a starting point for the discussion of debriefing in simulation games in the following sections. In the present section we will consider two elements of military campaign or psychological (deception) experiment debriefing that may also be taken into account in participant learning oriented debriefing.

Firstly, experiences in a simulation game may upset participants, even when this was not meant to be the case. If that occurs, desensitizing is necessary. It can even be argued that some form of desensitizing is always necessary. Participants in a simulation game are supposed to enter a new situation; they are not asked to play a role but to act as the person they are, bringing in their views and beliefs. Arousal of emotions, then, is likely to occur. In addition, any participant will experience pressure created by other participants or by rules and interventions imposed by the game design.

Whatever the simulation game's objectives, a cooling down session may help participants to 'return to normal' and it may serve to detect and remove or correct possible undesirable outcomes, in line with the APA guidelines. If a simulation game is meant to be an instrument for participant learning, this cooling down session is not only necessary from an ethical point of view. It is also important because learning, taken as reflecting upon experiences gained (Lederman, 1992), requires that a participant is able to take some distance from these experiences.

Secondly, from the discussions of debriefing in the military campaign and the psychological experiment context it can be gathered that debriefing may involve more than learning by those being debriefed. When focusing on debriefing in an educational setting, it must be acknowledged that the main objective of some simulation games is to inform others than those who participated. This recognition may have implications for the way a debriefing session is designed.

4 A model for debriefing: what should be learned and by whom?

Any simulation game aims at some form of learning, and debriefing can be considered the phase in which the simulation game's learning objectives are made manifest. Participants are asked to explore possible connections between experiences they had while playing the game and experiences in real life situations. In short, debriefing focuses on what participants may have learned from 'playing the game': it should facilitate an understanding of processes to evolve and events to occur, and it should consider how this understanding relates to the learning objectives as defined beforehand (Lederman, 1992). Lederman's formulation directs attention to two issues that need further examination. One concerns the relation between 'learning during the simulation game' and 'learning from the simulation game', which refers to different kinds of learning. The second concerns the categories of participants who may learn from the simulation game, including the question what the members of each category are supposed to learn.

With respect to the behaviors or performances of participants in a simulation game, we may distinguish between objectives that are well-defined and specified beforehand, and objectives that are 'emergent'. Objectives specified in advance will often entail criteria (or targets) to be met by participants in the course of 'playing' a simulation game. Before the start of the game it is already known which learning outcomes are to be achieved. In a debriefing session, then, it is examined how closely participants' performance has approached the target, and what needs to be done to bridge the gap between performance and target. In many management games, for example, such clear objectives can be found. In such games – whether knowledge increase or team performance is measured, or rated by experts – objectives are set in advance, usually, and criteria are available for performance assessment (e.g. Wolfe & Chanin, 1993; Garrat, 1995),

Such predefined objectives and criteria are not always present. Some simulation games have objectives that cannot be translated into precisely defined targets or criteria, for instance simulation games aiming at experimentation with leadership styles. While observing the implications of

different leadership styles, participants will experience what style they like best under certain conditions – which can be viewed as a form of learning. In such a case, it is very difficult to specify measurable criteria that have to be met, and therefore, to evaluate performances in the simulation game against well-defined criteria. Instead, participants may reiterate their behaviors, attitudes, and choices made in the simulation game, followed by an exploration of how these behaviors, attitudes, and choices may relate to 'real life' situations.

We will refer to simulations games in which objectives and criteria are present in advance as simulation games with closed objectives; simulations games in which such objectives and criteria are not present in advance are referred to as simulation games with open objectives. Or briefly: open and closed simulation games (similar to Getzels and Cszikszentmihalyi's use of the words 'open' and 'closed', see Unsworth, 2001). Note that in the present article the words 'open' and 'closed' do not refer to the design of the simulation.

As to the categories of participants who may learn from the simulation game, the discussion of debriefing in military campaigns and psychological experiments can be recalled. In both cases, it was argued, debriefing is not primarily aiming at learning by those being debriefed. In the case of simulation games, the argument can be extended. Now, it is not some particular military superior or psychologist who has to be informed. Instead, learning by a range of non-participating persons is possible, for instance colleagues, managers, policy designers, researchers. Often, a simulation meant to provide such 'external' persons with new insights, will require a debriefing session, since views and information conveyed by participants may be necessary to understand events and processes that occurred in the simulation game. In such cases, the debriefing session will have to be designed accordingly, to contribute to these external persons' learning rather than to learning by participants themselves.

In summary, it can be argued that any kind of simulation, whatever its objectives, needs to be concluded by a form of debriefing to help participants leaving their role and leaving the simulation game in a sound way, i.e. 'cooling down' and, if necessary, desensitizing. Whether a more comprehensive form of debriefing is necessary, and what form it should take, depends on the question who should learn from the simulation, and on the question whether well defined behavioral criteria and targets are present.

Combining these two questions produces a chart representing four application categories of simulation games, as shown in Table 1.

Each of the four cells in table 1 represents different purposes a simulation game may have to serve. Accordingly, the requirements to be met in the debriefing session will differ between cells.

Before discussing these requirements we may ask whether the dichotomies underlying the table are 'real' or rather the extremes of a continuous scale. The question is important as it implies the possibility that various requirements have to be reconciled in a particular debriefing session. But even if we are not dealing with 'real dichotomies', the table may enable us to unravel forms and aspects of debriefing. That naming each of the cells is rather easy (which is what we claim) is a further reason to combine the above two questions – who has to learn, and is it clear in advance what should be learned. It provides a useful starting point for a differentiating approach of debriefing, that is to say an approach according to which different situations are treated differently.

		Performance criteria defined in advance?	
		yes closed simulation	no open simulation
Who has to learn from the simulation game?	participants	**training / education**	**development / exploration**
	others	**assessment**	**research**

Table 1 Applications of simulation games

5 Debriefing in the case of training, assessment, exploration, and research

Thus far we referred to debriefing as the final phase of a simulation game: the phase in which participants' behaviors during the game are examined and evaluated, and in which the relation between simulation game and real life is explored. However, 'intermediate' debriefing is also possible. Many simulation games consist of several playing rounds, and in-between these rounds participants may receive remarks (comments, suggestions) from other participants, or from the facilitator. These remarks can be considered a form of debriefing. In our discussion of debriefing in each of the four cells, we will examine both intermediate and final debriefing.

5.1 Training / education

Simulation games are widely used for training or education (see Lane, 1995). Participants are brought into an artificial environment that resembles a specific real life situation, so that they may acquire knowledge and skills pertaining to some real life situation. *Specific* knowledge and *specific* skills are to be acquired and, as a rule, it is known in advance what knowledge and skills should be acquired. Thus it is possible to set criteria for the acquisition of knowledge and skills, and it is possible to observe whether participants reach the required level of knowledge and skills. An account system might be used to support this type of observation. Such a system may rate behaviors (e.g. in terms of tokens or score points) according to a predefined rating procedure. In the final debriefing session a concluding assessment can be made, perhaps also relying on a test to determine if learning objectives have been achieved.

The final debriefing session thus focuses on participants' performances in the simulation game, so the simulation game's 'internal' objectives are of key importance. In addition, the debriefing session can be used, if necessary, to help participants connect the knowledge and skills developed in the simulation game to the corresponding real life situation.

Intermediate debriefing can be used to show participants the gap between actual performance and target, and to give suggestions or even guidelines that may help to bridge this gap in subsequent rounds. This may be done by identifying mistakes or by discussing alternative courses of action.

5.2 Assessment

A simulation game can also be used for informing others than participants about behaviors and performances in a particular setting. If a predetermined model or set of criteria is used for measuring and evaluating behaviors or performances (closed simulation game), we will speak of assessment. Assessments are very frequently made, often in the context of job performance prediction (e.g. selection, promotion, development planning, or decision making regarding employee training, see Spychalski et al, 1997). A job simulation exercise allowing individuals to demonstrate their abilities in situations that are important on the job is considered an advantageous, perhaps even obligatory element of an assessment procedure (Joiner, 2000). But whatever the assessment method used, it will have to be based on a thorough job analysis (Bobrow & Leonards, 1997). If a simulation game is used for job performance prediction (often referred to as 'exercise'), the performance of a participant is compared to some ideal model that may include decision-making, administrative, and interpersonal skills necessary for effective management and leadership (Thornton & Morris 2001).

Thus a simulation game used for the purpose of assessment will have to support learning by others than the participants. It is not necessary that participants themselves are able to see the connection between performances in the simulation game and (expected) performance in real life situations (unless that ability is considered a source of additional information for the assessor). Accordingly, debriefing does not aim at learning by participants, although such learning may occur as a side effect. It is the debriefer/assessor who will form an opinion about an individual participant's functioning, comparing the observed performance (sometimes supplemented with information from other sources) with a model of desired behavior. If this comparison can be made on the basis of an account system, observations or other means to register behavior, a final debriefing is not necessary, unless cooling down and desensitizing are considered necessary.

Assessments are often, but not necessarily individualized and job-related. Organizational structures and plans can be assessed as well, and individual assessments may be conducted in other than employment relations, for instance in a medical or an educational context.

5.3 Exploration / development

Exploratory uses of simulation games differ in at least two respects from assessments. Firstly, participant learning is aimed at, and secondly, a model or operational criteria for judging performance is absent. More than that, in the case of exploration it is not even clear in advance what should be learned from participating in a simulation game. Of course, learning objectives will be present, but these will tend to be general.

Exploratory simulations may help participants to accustom to a new type of situation, to try alternative ways of behavior, to test a strategy or course of action that was thought of in advance, or to develop forms of cooperation, conflict management or policy development. Thus, the simulation game provides a setting in which exploration and experimentation can take place. Ideas about how participants should act are absent, and so are criteria concerning a 'best course of action'. Instead, participants are invited to use the opportunities provided by the simulation game, find out what they can do given the boundaries and conditions that are set, and even change these conditions if necessary.

In the case of an exploratory simulation game, the debriefing facilitator cannot claim that s/he knows how to proceed, or even that there is a single best way to proceed. Participants themselves may decide on a course of action and develop performance criteria (individually or collectively) while participating in the simulation game. The debriefing session should support this process: assisting participants in making an analysis of events and processes in the simulation game, of their own contributions to these processes, and helping them to draw conclusions (in line with a participant's own value system) that may be relevant for future real life situations.

Since no predefined frame for judging or testing performances exists, debriefing in the case of an exploratory simulation game is highly demanding, but also, considered the help participants may need, highly important. Fortunately, much of the literature on simulation game debriefing can be found in this category. Less fortunate is that this literature tends to concentrate on introspection: "The debriefing session, like the experiential activity, is learner based; it is discovery learning in which participants are provided with incentives to examine and analyze their inner thoughts and reflections" (Lederman, 1992: 154).

This focus on introspection is undesirable. It directs attention away from the fact that much can be learned, individually and collectively, from joint reconstruction and analysis of what happened in the simulation game. Note that individual participants in a simulation game cannot but develop a fragmented picture of events and processes. This may be due to selective perception or 'perceptual readiness' (Dearborn & Simon, 1958). But also to the fact that events in a simulation game may occur simultaneously; this implies that it is impossible, for any participant, to be always 'where the action is'.

In a debriefing session participants learn about perceptions made by other participants, so that they may gain a more complete picture of the simulation game. As a result, their ability to see and understand possible effects of their own actions may increase. If the effort to analyze and explain developments in the simulation is made collectively, an even more comprehensive understanding may be accomplished - even if no consensus is reached.

If the focus is on collective learning, a joint reconstruction and analysis is imperative, since problems within or between groups or organizations always are interactive in nature. They are the result of interaction (cooperation, conflict, misunderstanding, etc.) between different persons. Therefore, if learning from the simulation game is aimed at (whether or not the performance is considered successful), it must be analyzed how this interaction evolved. In such a joint debriefing all participants need to be present, and contribute to the analysis.

An exploratory simulation game may be conducted with the intention to find one or more acceptable paths, related to performance in a real life situation. It is not known beforehand which path will be chosen, or what criteria are to be used for making a choice. Therefore, the perspectives and interpretations of all participants have to be taken into account. A difficulty, then, is that these perspectives and interpretations may differ strongly, even after the simulation game is over (an aspect that deserves particular attention if (some of the) participants will also meet another outside the simulation game).

Debriefing in-between rounds will often focus on options for action, including the consequences of these options. In an exploratory simulation game, participants are not told how far away they are from a 'good solution'; instead, they are asked to go over their choices carefully, and they are

challenged and encouraged for the rounds to come. Just as in the final debriefing, the values for the different solutions are generated by the participants themselves.

5.4 Research

Simulation games can be used for a variety of research objectives (Bolk, 1989; Vissers et al, 1995). Processes and events in the simulation game, or participants' perceptions of these, are registered, and used to address issues pertaining to the realm of research. Mastik (2002) refers to this usage of simulations games as responsive simulation.

Whether simulation game participants learn something is of secondary importance. Debriefing may be necessary for cooling down and desensitizing purposes, and perhaps to inform participants afterwards about research questions and hypotheses. Next to such ethical considerations, a practical reason to inform participants can be protection of the instrument 'simulation game', a reason also mentioned in relation to psychological experiments. In particular, participants are often asked 'not to discuss the experiment with others' (Lederman, 1992). But debriefing sessions may also serve as an additional source of information, for instance about participants' views concerning the naturalness of their behaviors in the simulation game. Participants' views may also be used to check or validate observations and interpretations made by the researcher, or simply because the research is focused on debriefing or group interaction processes (Van der Meer, 1983: 127-128).

When a simulation game is conducted for the purpose of research, intermediate debriefing may not be suitable, since debriefing-related discussion in-between rounds may influence participants' behaviors. The issue of formulating valid conclusions from the simulation game is of utmost importance in this context (Vissers, et al., 2001). But, on the other hand, it is also possible that a researcher is especially interested in the effects of (some particular type of) feedback on behaviors in the simulation game, or in the considerations that guide participant's current behaviors. In those cases the intermediate debriefing is a part of the research setting.

In the context of research, there is no need to ask participants, in the final debriefing or in intermediate debriefings, to connect experiences in the simulation game to some real life situation. Debriefing is related to research objectives, and the flow of information has only one direction: from the simulation game and from participants to the researcher.

6 Issues in designing a debriefing session

In the previous section we described the nature and purpose of debriefing in four typical applications of simulation games, indicating that the orientation of debriefing will differ between these applications. It is beyond the scope of this article to translate the options discerned into specific debriefing approaches. In the present section, we will only present some considerations for designing a debriefing approach.

6.1 Debriefing and transfer of knowledge and skills

In a debriefing session, events and experiences in the simulation game serve as a starting point for structured interaction between participants and the debriefing facilitator. Often, such a session will also involve an exchange of experiences among participants, without interference by the debriefing facilitator.

When participant learning is aimed at (see table 1), debriefing is the phase in which participants are encouraged to establish a link between developments in the simulation game and developments in the real life situation. However, transfer of experiences from simulation games to real life situations is hardly discussed in the literature on debriefing (for some exceptions, see Percival, et.al, 1993).

Empirical studies on the transfer of experiences would be very relevant to simulation games aiming at training, and even more relevant to exploratory simulation games. In the latter case transfer is highly intricate because learning relates to complex processes whereas no clear performance criteria to rely on exist.

6.2 Debriefing and the simulation game's design

During the design phase of the simulation game, many decisions are taken with respect to the design of the simulation game, that directly influence the way the debriefing should be carried out. An example of such a decision is the pace of the simulation game. If the actions and events in the game follow each other in a quick tempo and participants have to react immediately to these actions and events, there will be hardly an occasion during the playing rounds to reflect upon their decisions and the consequences. The fewer opportunities participants have to reflect upon actions and give feedback to each other during the simulation game, the more opportunities there should be during debriefing to reflect upon the choices during the game, before the link to the reference system can be made.

Another example concerns the abstraction of the simulation game. If a simulation game has a more metaphoric character (i.e. the scenario of the game is based upon a metaphor rather that that it is a copy of the real life situation it represents), the requirements for debriefing will be different. In such a simulation game participants possibly need more help to translate the metaphoric system to the reference system. When, on the other hand, the relation between simulation and real life setting is more tangible, debriefing should rather emphasize detached analysis that may prevent participants from jumping to premature generalizations.

6.3 The debriefing should be adjusted to participants

Participant groups differ in the ability to analyze experiences and reflect upon them. This may relate to individual characteristics or to composition or culture of the group. For example, if participants know each other in advance (e.g. because they are members of the same organization), interaction may be more open or more restricted, depending on the group culture, than in a group of individuals who did not know each other before. In the case of restricted interaction and limited capacities to analyze and reflect, the debriefing session may have to be focussed on supporting these capacities. In existing groups, moreover, the course of events during the simulations is more determined, probably, by the fact that participants know each other and/or that they will have to work together after the simulation game. In the debriefing session, these factors may have to be emphasized (in addition to possible needs for desensitizing).

If, on the other hand, the group of participants consists of separate individuals who will not meet or cooperate outside the simulation game, another issue presents itself. In this case participants will not be able to support each other in the real life situation in which the experience and knowledge acquired during the simulation game are applied. New knowledge and skills may drain away faster, and debriefing should therefore concentrate on retention of knowledge and skills. (If participants continue as a group, debriefing may focus on the way they can support each other in applying the acquired knowledge and skills in the real life situation.)

6.4 Individual and collective learning

In the literature on debriefing, learning is almost invariably described as a process taking place within individuals. If a simulation game aims at learning by individual participants, and if participants do not know each other, this view on learning may suffice. However, in an existing group of participants, issues of distributed cognitions (Salomon, 1993), collective learning (Miner & Anderson, 1999), or organizational learning (Senge, 1990) may present themselves. Some examples of concrete simulation games' objectives representing this cluster of issues are: Encouraging mutual understanding, dealing with interpersonal conflict, improving communication, creating a ‘shared

vision', teambuilding, joint problem solving and decision making, assessment and testing of procedures. Such objectives (often to be found in the realm of exploratory simulation games) require that the debriefing is focusing on group-level phenomena, rather than individual knowledge and skills.

6.5 The debriefing facilitator's knowledge of the simulation game

A debriefing facilitator must have a thorough understanding of the objectives and the characteristics of a simulation game. If not, s/he will only be able to go into the 'visible' aspects of participants' behaviors, and overlook issues that participants did not raise even although the simulation game was meant to offer them the opportunity. Thus, the debriefing facilitator should be well-informed about details of the simulation game: about what happened during the actual simulation game, and about details of the design process. However, a balance between firsthand insight and detachment has to be found. On the one hand, a debriefing facilitator must be able to adopt a detached position, not being involved in the events in the simulation game and certainly not being viewed by participants as someone who has taken side. On the other hand, if the debriefing facilitator also acted as a facilitator in the playing stage of the simulation game, s/he may have been able to make concrete observations which allow issues to be raised that are not brought up by participants themselves. Such observations should not determine the course of the debriefing session – if only because it is significant when participants' observations diverge from observations made by a debriefing facilitator. But observations made from a detached position may be a valuable addition to participant's own views and inferences.

Another option is that the debriefing facilitator did not perform any role in the playing stage of the simulation game. S/he then relies on general knowledge (and perhaps on observations made in earlier 'runs' of the simulation game) to assist participants in the process of analysis, reflection, and translation of experiences gained to real life situations. In this case, the debriefing is likely to be rather general and abstract, for it is more difficult now to discuss specific experiences of participants or concrete events that did take place. Important to note is that this way to proceed will give participants the impression that their behaviors were highly predictable. This is why a not-previously-involved debriefing facilitator may be acceptable in the case of training/education oriented simulation games, but not in the case of exploratory simulation games.

6.6 Participants' perceptions of the relation between simulation game and real life

The debriefing process tries to help participants to transfer the experiences of the simulation to real life situations. For this process to be successful, it is required that participants are able to see (or make) a connection between the simulation game and the real life situation(s) the simulation game refers to. Some simple questions may suffice already to help participants start to make this connection:

1. What are major events and processes observed while participating, and do they resemble real life events and processes?
2. Does this observed resemblance offer cues for action in real life, considered the course of processes in the simulation game?
3. Are these cues doable, desirable, and practical, in view of differences between simulation game and real life and in view of reactions in real life to be expected?

Participants who are able to answer such questions will often differ considerably in the connections they see (or make) between simulation game and real life. This might be the result of different general perspectives used, different positions in the simulation game, and/or different positions and affiliations in real life. Considering the likeliness of different connections seen/made, it may be useful to address this subject in the debriefing session. This is not to say that participants have to arrive at similar views on the connection between simulation game and real life situations. But a discussion of this subject seems useful for the debriefing process itself, and it may clarify the use of a simulation game to participants (showing that many organizational issues cannot be treated as an optimization problem).

6.7 The process of debriefing: stepwise or cyclical?

While debriefing is sometimes described as a stepwise process (Lederman, 1992; Thiagarajan, 1992), a more cyclical, iterative procedure may better suit the objectives of a debriefing session. Often, a debriefing session starts with an attempt to make an inventory of "facts" (what happened, how did it happen), followed by analysis (why did it happen). The analysis, however, may give rise to a revision of the inventory of facts, which may generate new questions for analysis, and so forth. Each new cycle of analysis may amend or even refute earlier explanations. The more open the simulation game (and the more open the debriefing), the more likely it is that early accounts will have to be reconsidered. Therefore, descriptions of stepwise debriefing may be taken as sources of themes and questions, rather than guidelines for the debriefing session's schedule.

7 Conclusion

The relevance of debriefing in a simulation game is beyond doubt. However, little is known about ways to design and conduct a debriefing session. Theory on the process of debriefing is scarce (and mainly derived from contributions originating outside the domain of simulation games). Empirical research on debriefing approaches and their effects is virtually absent. The present article seeks to contribute, however modestly, to theory and research on which planning, designing, and conducting debriefing sessions in simulation games could be based. We proposed a simple scheme to classify simulation games according to their objectives, arguing that each category poses specific requirements for debriefing. Distinguishing between simulation games and, by implication, between debriefing objectives, may create opportunities for systematical research of debriefing-related issues. We mention issues like simulation game design, ways of facilitation, diversity of participants, group processes, types of learning, transfer. In addition, we presented a number of issues connected to the debriefing process. Our discussion showed that many questions remain to be answered (we put ourselves in the comfortable position of just raising the questions). But it also showed that research on debriefing does not have to be built from scratch: specific domains of research may offer valuable insights, like organizational learning, experiential learning and group communication.

8 Literature

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Debriefing depends on purpose
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