Grounded Theory in Games Research: Making the Case and Exploring the Options

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ABSTRACT

Grounded Theory Methodology (GTM) is a powerful way to develop theories in domains where there are obvious opportunities to contribute in the form of carefully developed descriptive or explanatory conceptual theories. Reasonably nascent areas of academia, such as Game Studies, stand to particularly benefit from the development of new theoretical accounts.

Yet, despite its proven utility in a wide range of fields and its history of rigorous methodological debate, many researchers are wary of using GTM. Conversely, many claim use of GTM but do not present an understanding of GTM's rich tradition and how this may impact their results and conclusions.

This paper seeks to provide an overview of GTM, its main variants, and how they can be effectively used in research. We examine how GTM has been used in the field of games research and argue that GTM rightly be regarded a highly relevant method here.

Keywords

Grounded Theory, methodology, empirical methods, induction, abduction, Constructivism, qualitative.

INTRODUCTION

Grounded Theory (after Glaser and Strauss 1967) as a research methodology has gained a degree of penetration in the overlapping fields of games research and game studies. However, 'Grounded Theory' as a label does not represent a single monolithic set of methods, and the fragmented way it can be interpreted and deployed may cause confusion and controversy (Glaser 1992).

Previous accounts of GTM's utility in games research have outlined many of the advantages that it offers the games researcher and some of the key criticisms (e.g. Hook 2015), but they do not explore the philosophical differences between major schools of

Proceedings of 1st International Joint Conference of DiGRA and FDG

practice within GTM, nor how making a choice to favour one form of GTM over another can have major effects on the research outcome. Instead, they tend to treat GTM as a more-or-less single, agreed set of methodologies and principles; glossing over nearly 50 years of heated academic debate in the process. This paper sets out the case for future authors to seriously consider including clear indication of what variant/interpretation of GTM was employed in their research. Readers, reviewers and editors might then be able to more accurately evaluate the merits of their results, as it is the end products which fundamentally differ the most between the interpretations, at least in published accounts.

There is little literature within Games Studies that both unambiguously states the use of GTM as a research method and then uses it, making it difficult to prepare a conventional literature review. Indeed, the lack of rigorous and transparent use of GTM within Games Studies is one of the motivations for writing this paper. Detailed exposition of the various schools of GTM, along with the various debates and discussions that have resulted from their evolution, is well beyond the scope of this paper. For further information we encourage the reader to consult sources referenced in this paper, although they may want to begin with a practical introuctory source such as Bryant (2013),.

This paper will consist of two complementary parts:

Firstly, an overview of the major variants of the Grounded Theory Methodology (GTM) and how the implementations differ in terms of the opportunities they represent for the study of games and players. We will not engage in the debate around the merits of the different interpretations of the methodology directly, but rather present the differences openly so that games researchers can feel more confident in the evaluation of work which employs GTM, we hope that this will also leave the reader with a deeper understanding of which approach will prove the most appropriate in their own research.

Secondly an examination of examples where GTM has been employed in the study of digital games and play, the resulting theories and models created in these efforts, and what these implementations might tell us about the processes employed.

We argue that GTM is a powerful and useful group of methodologies. As an exploratory group of methods, GTM has much to offer a nascent field such as Game Studies/Games Research, where many foundational questions still lack answers with clear consensus and many areas lack theories and frameworks with which to engage, test or build upon We also show why it is important to disclose which variant is adopted during a project as well as the details of how you engage with that variant of GTM.

It is hoped that GTM and its variants are demystified in such a way that researchers will recognize it for the powerful and useful tool that it is, and that the mere mention of the methodology in research presentations at certain conferences will no longer result in the sharp intake of breath often heard in wary audiences when the name is mentioned; a reaction we feel likely born from misinterpretation.

GTM OVERVIEW

The term 'Grounded Theory' was coined by Barney Glaser and Anselm Strauss (*The Discovery of Grounded Theory: Strategies for Qualitative Research* 1967) to describe the integrated set of methods which they employed in their prior study of palliative healthcare (Glaser and Strauss 1965). They produced it at a time when they felt that verificational, quantitative, empirical methodologies were dominant in the Social

Sciences over exploratory, qualitative methodologies (1967, 1–18). Moreover it was argued that the extant qualitative methodologies tended to rely on a somewhat restrictive set of 'grand' theoretical, synthetic traditions (e.g. Marxist analysis or psychoanalytic analysis) which were not always appropriate or useful (1967, 10–12). The intention at the time was to give a degree of empiricism and transparent rigour to the production of qualitative theoretical results, without feeling the need to fully yield to prevailing positivist values at the time.

Initially the primary method was referred to as 'constant comparison' (Glaser and Strauss 1967), but progressive developments yielded a full research methodology setting out strategies spanning methods for literature review, data collection, data analysis, theory production, and 'writing up' of results. Constant comparison's main aim is to identify conceptual themes or categories within data relating to a substantive domain of study, such that those concepts can be employed in the production of a novel theory about the primary concern within that domain. A set of clear and transparent methods were devised to lend rigour and transparency to the process of theory generation. In subsequent iterations, the act of constant comparison (see below) has remained a key and essential practice within GTM.

Subsequent development of these tools have led to much debate and the evolution of three broad schools of thought regarding the implementation of GTM which are each introduced in sections below.

The three variants employ a variety of methods, but all include the following:

- *Theoretical sampling*: The act of iteratively seeking data which will challenge, enrich, or reinforce the concepts being developed or produced, according to the theoretical ideas currently being produced.
- *Coding*: The practice of inspecting and comparing the data to produce conceptual ideas. All variants of GTM employ 'open coding', which pertains to looking at the data set broadly for any concepts therein, and 'selective coding', where one is inspecting the data for novel information about at least one specific concept of interest.
- *Memoing*: The production of theoretical ideas about the nature of the codes being produced and the data being collected. Eventually these memos will form the basis of an emerging theory.
- *Saturation*: The point at which, no matter what data is collected from the domain no new theoretical concepts are forthcoming and the existing concepts are not being challenged.
- *Simultaneous data collection and analysis*: The parallel and iterative processes of collection and analysis of data. Unlike conventional research thinking (where data is collected and then analysed), grounded theory encourages instant analysis of any data collected - which informs further data collection. In this sense, rather than the data posing a question and analysis providing an answer, during GTM collection and analysis of the data are deeply entwined in an on-going conversation from which a theory evolves.

There are differences between the way the variants of GTM place emphasis on these methods and functions, which will be summarized later in this paper, but the methods in this list are common to each.

Strauss

The birth of GTM is commonly associated with the publication of *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Glaser and Strauss 1967), yet both had published several papers together and independently before that, which put forward a similar research methodology (e.g. Glaser 1965; and Glaser and Strauss 1965). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Strauss and Corbin 1990) essentially summarized this prior work in the constant comparative method and grounded theory methodology, and presented it as a relatively easy to digest and accessible guidebook on GTM. The readability and availability of the various editions of this work (initially authored by Strauss and Corbin, but since Anselm Strauss's death in 1996, subsequent editions have been updated by Juliet Corbin alone) has placed this guide at the forefront of many researcher's initial attempts to use GTM. Glaser is highly critical of his co-originator's interpretation of the methodology (Glaser 1992) and as such we can say that Strauss and Corbin's version is a distinct kind of GTM: Straussian Grounded Theory Methodology (S-GTM). S-GTM advocates the early identification of a research question and presents a number of conceptual questions the researcher might ask of the data in order to ensure that the researcher gains a relatively complete, somewhat verifiable model of the social processes employed by domain actors.

Glaser

Glaser's criticism of S-GTM (Glaser 1992) initially appears to be quite fundamental, focusing on the very nature of how the process should be 'grounded', and what the theoretical outcomes should represent. Glaser's *Classic Grounded Theory Methodology* (abbreviated here G-GTM to differentiate it from Constructivist GTM discussed below) is quite radical. He states that the process should be as inductive as possible, and as such the researcher should initially avoid literature with direct relevance to the domain of interest, avoid setting out a research question too early, and avoid using rigid practices or methods to code raw data. Importantly, G-GTM is not intended to be a methodology exclusive to Sociology or a specific tradition within qualitative research, but a general purpose methodology for the production of theory in any substantive domain (Holton 2008).

Glaser does not contend that a constant comparative coding strategy could ever yield an objective and definitive set of codes (Glaser 1978) from which to build theory, whereas Strauss and Corbin emphasize 'complete', accurate, and verifiable coding strategies (Strauss and Corbin 1990, 188) based on pre-existing research questions as a set of methods that are fully compatible with GTM (Strauss and Corbin 1990, 48–56). However, Glaser claims that Strauss isn't presenting a GT methodology at all, but rather a sophisticated set of tools for Qualitative Data Analysis (QDA) (Glaser 1992). This distinction between GTM and QDA, made by Glaser, raises deep epistemological questions of what we consider a 'research methodology' or a 'theory' to be. Glaser regards these questions to be fundamental to the practice of GTM. Readers may well feel that pondering these questions while *doing* research is as much an unnecessary distraction as if a chemist employing an hypothico-deductive methodology were to excessively worry about whether Karl Popper were right or not before designing an experiment to test an hypothesis.

The end goal in G-GTM is the 'discovery' (rather than production) of a conceptual hypothesis relating to the primary independent variable present in the domain being studied (Glaser 1978). To this end Glaser advocates early conceptual abstraction, and criticizes S-GTM (and other similar variants by extension) for being overly concerned with accurate and detailed description, and model building. For Glaser the process of

conceptual coding rests on the 'sensitivities' of the researcher and should lead almost immediately to conceptual theorization about the domain rather than ‘objective’ model building within the domain data (which also means, by Glaser’s reckoning, that merely categorising codes is not enough to constitute a theory). How these 'sensitivities' can be said to apply within an allegedly 'objectivist' and, ostensibly, inductive discovery of a theory is an ongoing point of debate (e.g. Kelle 2005).

Charmaz/Constructivist

Glaser's insistence on the possibility of or even necessity for the inductive creation of generalized, abstract, conceptual (but still substantive) theory from substantive domain data, has drawn substantial criticism, notably from Kathy Charmaz (e.g. Charmaz 2000). Charmaz attempts to deal with the criticism that GTM is blindly objective or positivist and states that knowledge is neither produced out of nothing, nor discovered; instead the researcher co-creates meaning within the domain they are studying. Methods and results, therefore, should not only reflect the stories of the actors concerned but also be mindful of the values and stories the researcher brings to interpretation of that data. This third variant is known as Constructivist Grounded Theory (C-GTM) (Charmaz 2006). Similar to Strauss, Charmaz does not advocate strategies for isolating the researcher from pre-existing theory, as Glaser does (Glaser 1978), but rather proposes that a researcher use their knowledge of possible relationships between the actors in the research process to develop conceptually rich narratives which are important to both researcher and subjects. Also similar to Strauss she prefers detailed analysis of carefully recorded interactions between the researcher and their respondents to accurately represent the interactive research process. She rejects the idea that one is seeking conceptual distance from the data, which Glaser stresses, and prefers results which are multifaceted and narrative rather than as a singular hypothesis (a la. Glaser) or detailed conceptual model (a la. Stauss).

It is worth mentioning that Glaser sees the advent of C-GTM as unnecessary (Glaser 2002, Bryant 2003). In keeping with Glaser’s dictum of ‘all is data’, the views and values of the researcher are simply another kind of data to be analyzed, rather than a variable which acts on or affects the data. Whilst Glaser sees any concern with accuracy or verifiability as being unnecessarily restrictive, others see G-GTM’s failure to fully address the role the researcher and their background plays in collection and interpretation of data as too great to ignore.

Summary of the differences between the variants

Table 1 presents an impression of the differences one might discern between the three variants - some of which can be quite subtle. Those readers with experience in Grounded Theory will hopefully recognize that this table is not definitive, but rather is presented to illustrate how we understand the relative differences between the variants, rather than as a vehicle to categorically demonstrate absolute differences.

	G-GTM	S-GTM	C-GTM
Data emphasis	**"All is data" -** likely **field notes** of interviews, observations, and other sources	**Accurate** – Likely **transcribed** accounts of interviews and field notes of observations	**Accurate** – likely **transcribed** interviews and reflections of researcher
Open coding emphasis	**Abstraction. Discovery** of **conceptual relationships** between data	***Emphasis of analysis***. **Labeling** data with **concepts**	**Construction** of **conceptual categories** within data
Other coding strategies	**Selective** coding on candidate core concept(s)	**Selective** on a **set of cores**. **Axial** as **interim sorting** and relating open codes	Emphasis of analysis. **Focused** reiterative coding on **major categories**. ***Axial*** to flesh out **key categories**.
Status of memos	***Emphasis of analysis.*** **Continuous** capture of the researcher's **theoretical ideas**	**Interleaved** supportive capture of the **research process and categories**	**Continuous** supportive capture of **research process** *and* **theoretical ideas**
Rationalization and integration strategies	**Sorting memos** around a saturated **core category**	Repeated **axial coding** to elicit a **saturated model**. **Selective** coding on the main **story line**.	Potential **axial coding.** Memo **sorting** around **key concepts**
Status of substantive literature	**Post-saturation** framing and **integration**	**Preceding definition of research question** and opportunity	**Continuous sensitization** of the researcher to theoretical opportunities within the data
Status of broad theoretical literature	**Sensitizes** researcher but may also **bias**	**Sensitizes** researcher	Presents **opportunities for analysis**
Likely result	Publication about *a* **specific core theoretical concept**	A 'complete' **model of a social process**	An account of the social structures and relationships of the participants organized around **constructed categories or concepts.**
Main quality concerns	Concept ***fit to domain.*** Workability. Relevance. Modifiability. "Is this concept useful for explaining the patterns we see in the domain?"	**Model fit to data.** Verifiability. Completeness "Is this conceptual model objectively accurate and correct?	**Concepts fit to data.** Faithful to participant narratives "Do the concepts/models convey what people have said and feel?

Table 1: Summary of the differences between the three major variants of GTM

It seems to us that the most critical difference can be summarized as:

- G-GTM seeks a theory in the form of a hypothesis concerning the *one* key variable in the system which has the most effect.
- S-GTM more often attempts to construct a theory likely to be a model of how the *numerous* variables in the system interact.
- C-GTM most likely produces a theoretical output which sits between the other two types while also explicitly appending observations about the imputed, implicit thoughts, hidden narratives, and *contexts* of the individual actors including the researcher where necessary.

For example a study of a particular gameplay phenomenon via G-GTM might yield a simple hypothesis in the form of a catchy verb phrase backed up by examples and other concepts developed along the way; an S-GTM product might yield a set of concepts and descriptions of how they interact in the form of a model, backed up by transcribed examples; while C-GTM might yield a set of conceptual descriptions with an emphasis on the concerns of the domain actors, backed up by transcripts, personal narratives, and explorations of the possible meaning of those concepts. This variability in the conception of 'theory' has lead some commentators to take issue with the idea that GTM produces theory at all (Thomas and James 2006). We feel that such criticisms depend upon which variant of GTM is being discussed, what one feels a theory should amount to, as well as one's understanding of the imputed epistemology proposed by the three main variants of the methodology. That said there is room within the methodology to account for a number of different perspectives.

A research project with the following criteria could potentially benefit from the use of GTM:

- empiricism is more important that criticism (that is generalized results can be clearly linked to real-world data without necessary recourse to existing concepts)
- statistical verification is unimportant (at least for the present study)
- numerical models are not required.

That the three GTM variants appear to disagree on supposedly fundamental issues of concern in research practice is not to say that these approaches are all utterly irreconcilable, and it is our opinion that the primary difference between them can be reduced to what kind of result one is expecting from the process.

One key difference between the variants is that G-GTM strives for one single theoretical category that ties all the codes and categories together. In contrast S-GTM and C-GTM recognize that there will more likely be several major themes and categories needed to give an account for what is happening within the domain of study

Glaser regards these differences as so important that any variant which proposes data accuracy or verification over conceptualization, and any clear promotion of researcher sensitivities or biases over the inductive construction of theory from domain data, is deemed by him to be a remodeling of the methodology to the point that such new versions are no longer GTM, but rather a form of Qualitative Data Analysis which appropriates the jargon of GTM (Glaser 1992; Glaser 2009; Glaser 2002). It has been pointed out that the Constructivist challenge raised by Charmaz is never addressed

directly by Glaser (Bryant 2003). The philosophical challenge to pure induction is long standing and most modern thinkers recognize that knowledge cannot be formed inductively from data. It must therefore, in some respect, be constructed by the researcher's engagement with the data they collect. At the very least it seems that many researchers assume that the process is an abductive (Charmaz 2006) interplay between the researcher's 'sensitivities' rather than purely an inductive, mechanistic, 'discovery' of the theoretical 'truth' by a tabula rasa researcher. That said, Glaser discusses at length the role of sensitivities within his vision of the methodology (Glaser 1978) and suggests that clearly identified and expressed researcher biases are yet more data to be analyzed (Glaser 2002). This suggests that the methodology according to Glaser is not pure positivist objectivism, and in some ways is more likely to constitute an argument against the more verificationist approach of Strauss (Glaser 1992). It is interesting that Glaser refuses to address the possibility that the process of the creation of Grounded Theory is the abductive construction of theory fit to the ongoing collection of domain data.

What does this mean for Games Research?

We might suggest that GTM could be seen as being useful in three ways for games research:

1. As a set of methods from which to draw from in order to approach our own concerns and research questions.
2. As a universal methodological framework helping us structure exploratory suitable projects from beginning to end.
3. A powerful means by which new categories and theoretical concepts can be developed with clear fit and relevance to a nascent field of study.

We argue that these approaches, while similar to purely critical, deductive approaches to theory construction, offer potentially greater transparency by seeking to employ rigorous empirical methods. It is this rigorous engagement with the data which is the ‘grounding’. Use of a methodology gives the researcher purpose and guidance, and eventual readers a little more confidence, that the result is not just someone's gut feeling nor simply the mapping of an existing theory onto a new phenomenon. That said, Grounded Theory is not unique in this regard (e.g. B. Bowers and Schatzman 2009), but rather represents one rigorous methodology with a tradition, and a degree of adoption in many fields; to the extent that there is extensive (if competing) guidance on how one might employ it. If a researcher isn't already skilled in another tradition of theory creation, or is unsure if viable results can be obtained using other methods of analysis on their chosen area of inquiry, a variant of GTM may be a good fit.

GTM IMPLEMENTATIONS IN GAMES RESEARCH

In this section we will leave behind the descriptions of the different variants of the methodology and look at some work which has employed the variants of GTM.

It must be remembered that GTM is domain agnostic and is a dynamic and flexible approach that adapts to the data obtained from the domain of study.

In presenting the following examples we hope to show the utility and penetration of the methodology and core methods, and showcase some interesting work. Hopefully this overview will give the reader a degree of confidence in GTM, and remove some of the apparent reticence to discuss it openly in research reports and presentations. We hope to show some of the variability in the method and the scope of its applicability to different domains.

Generic or unstated

It is not uncommon to read reports of work which employed GTM, but which sidestep almost 50 years of methodological debate by only referencing Glaser and Strauss's (1967) original treatment. That is not to say that such work is ignorant of these methodological developments, but rather may be avoiding overtly picking a 'side' in the debate to focus on their theoretical outcomes. We sympathize in part with this move, but equally find ourselves frustrated, as such reports leave no way to determine if such studies used the methodology wholly or in part and as such have limited handle on how to critically interpret the results.

An example S-GTM study

As suggested earlier in this paper, S-GTM via the Strauss and Corbin text has served to guide many researchers. The following example is one where the core 1990 text is cited prominently and where the features of the methodology and the reported results are as one might expect from an S-GTM programme.

Another prominent example of an employment of S-GTM is the immersion model developed by Brown and Cairns (2004). A model which has at the time of writing, according to Google Scholar, been cited over 550 times- supporting the notion that GTM can produce excellent and useful results with good fit to the domain and relevance for engaged audiences.

Fabricatore et al.'s model of playability

In 2002 Fabricatore, Nussbaum and Rosas' published a report detailing a grounded investigation which asked the question, "What do players want in videogames?" (Fabricatore, Nussbaum, and Rosas 2002). That is they set out to uncover which factors contributed to players' engagements with video games.

This report clearly details a programme implementing an interpretation of S-GTM, as evidenced by the methodology texts cited, by the reported details of the processes employed, as well as by the results presented. They also delimit the research question and scope of the research in advance - choosing to focus on the most popular genre of games (action games), and focusing their efforts on 'functional' factors (control and usability) rather than 'ambiance' (atmosphere and emotion) factors. They also state their intention to create a descriptive model of the concerns of players.

The results presented are also what one might expect from an S-GTM approach, detailing as it does a dense conceptual model which accounts for the 'entities', 'scenarios', and 'goals' involved in a play experience as a detailed, multifaceted model with broad coverage. We might expect this result to be of use to designers of action video games when considering effective control and display approaches.

A feature to the 2002 report is the comprehensive way in which the authors describe the process they employed. From this comprehensive description we can see what Fabricatore et al set out to do and that they achieved good results. Thus we are not left attempting to evaluate their results on G-GTM or C-GTM grounds.

An example G-GTM study

There appear to be very few attempted implementations of G-GTM within game studies to date. Perhaps the Glasarian strictures regarding the research context (no substantive literature review, no preformed research question, no interim discussion of results), which

are often in direct conflict with formal research programmes, force GTM adopters to look elsewhere. Perhaps the Constructivist challenge raised by Charmaz has meant that Glaser's classic Grounded Theory has fallen out of favour.

Salisbury's Net Cultural Worth hypothesis

Salisbury's (2013) PhD research report includes a whole chapter relating the struggles of attempting to implement GTM (similar to to the reports of Furniss, Blandford, and Curzon 2011; or Evans 2013), and within this report he explains how he came to attempt an application of G-GTM in the study of people playing videogames. He began by trying to apply S-GTM, but struggled with the nature of S-GTM's theoretical product as well as the coding strategies found in S-GTM. As such he reframed the project after a few fully transcribed interviews and made a switch to a more Glaserian approach. The initial start, however brief, makes it difficult to characterize this work as purely G-GTM. That said the methods employed once the switch were made (rejection of an overt research question, comparative open coding, selective coding, and seeking a single core category) could be said to be quite Glasarian. However, there was still work which was S-GTM in nature before this, including a substantive literature review, which might have influenced the direction of the research (which could be said to work against a purely G-GTM perspective).

The resulting theory, of players' engagements with games being a process of finding the personally felt cultural worth in the net value of the various prescient features of a gameplay offering, isn't really the snappy, short phrase which G-GTM programmes often produce, but could still be characterized as an attempt to resolve the principle problem or concern in the domain in the form of an integrated 'core' construct.

This result (a 'core' concept supported by a set of further concepts and data) is highly generalized, based as it is on an unbounded exploration of game players (and game rejecters) reports of their experiences and desires. Yet it has utility in framing questions at a more fine-grained nature regarding the relationships between engagement, identity and value. From a C-GTM perspective the result is light on participant narrative, and from a S-GTM perspective peripheral, supporting concepts are not covered exhaustively.

An example C-GTM study

The modern view of epistemology - which suggests that knowledge is more likely to be *constructed* by researchers interacting with their domain than *discovered* in the world by impartial researchers, has had much influence on the way many people consider the social sciences as an endeavor. Charmaz's criticisms of G-GTM have resonated with many and take a somewhat 'Constructivist turn' towards the employment of GTM.

The following example is one where the researchers explicitly state that they have followed much of the advice given by Charmaz (2006), and as such we will classify it as an implementation of C-GTM.

Bowers' exploration of videogames as a supplement to identity for former athletes.

Bowers (2011) approaches a specific question pertaining to the identities of former elite collegiate athletes, and how videogames appear to supplement these identities from a Sport Management perspective. He does employ some advice on coding approaches from Glaser (1978) but with an explicit Constructivist bent, and the approach he reports is structured primarily around C-GTM.

In this instance the approach is clearly not G-GTM, in that Bowers' appears to specify his theoretical areas of interest before the first part of the data is collected. Following through his Constructivist approach he then reports his explorations of these areas of interests through a series of 'intensive interviews' with retired college athletes.

Results are in a form one might broadly expect from a C-GTM approach. Three broad phases of increasing abstraction connect the former athletes' identities with a need for competition. Rich with the conversational narratives of the participants, Bowers' report gives a compelling account of how former athletes might use games as an alternative to elite sport in the maintenance of their identities as competition-minded people.

Borrows methods from GT methodology

A number of studies invoke GTM while expressly not employing GTM as an integrated methodology, but rather as a source of discreet methods (e.g. Zagal et al. 2005; and Shaw 2012). Often this takes the form of iteratively visiting data to produce comparative, conceptual, categorical codes. Systematic coding in this way is a powerful technique, most probably popularized in the modern era by the effective use of iterative and comparative coding in GTM. Simply employing such coding strategies obviously doesn't qualify a study as a GTM study, and those cited don't make that claim, however we quickly get a sense of what work was done in these studies, due to that powerful association.

Summary of examples

The above examples hint at the range of GTM interpretations found even within the study of games, players, and gameplay. Each of these approaches has served to frame and guide research for a disparate community of researchers engaged in a number of different research problems. If authors are clear regarding their influences and if we understand the differences between the different GTM approaches, we can quickly ascertain which processes were likely to have been employed, and how to evaluate the expected results.

It must be stressed that these are just a few places where GTM has been employed in games research or game studies, and there is an unbounded space of possibility for other applications within the domain of games. Anyone considering GTM as a research methodology is encouraged to pick the substantive area of interest and start collecting data. In some instances, a specific domain might not even be apparent or necessary, rather being made apparent via the process of constant comparison. A researcher may stumble upon something which seems interesting, but what is interesting about it starts out as undefined. An interesting gameplay context, game type, community of players, piece of hardware, production team organisation, production methodology, player demographic, or whatever might spark the initiation of a GTM research programme with respect to games. There might be an established aspect of games or gaming which a researcher would like to account for theoretically, but where the researcher feels there isn't any particular apposite theoretical account, and there is no confidence that theories imported from psychology, philosophy, sociology, cultural studies, game studies etc. are appropriate to the phenomenon at hand.

DISCUSSION

What 'qualifies' as Grounded Theory?

Not every variant of GTM will be suitable for all projects. The difficulty of implementing the open-ended approach of Glaser, and the more realistic recognition of the pressures

found in research projects accepted by Strauss, Corbin, and Charmaz (such as the need to specify a research question/line of inquiry in order to obtain funding) can be viewed as an appeal to what seems most appropriate for the research project at hand.

It is easy to get bogged down in over-thinking the precise purpose and epistemological underpinnings of the research programme but spending too long deciding which methodology to pursue, and whether one is 'doing it right', saps time and energy from actually 'doing it'. That said, making decisions transparent, and stating where one has made compromises, will allow the researcher to freely and honestly make those choices without fear of being criticized for not doing 'true' grounded theory. More often than not, the researcher needs to interpret and utilize GTM in the manner most appropriate to the project, with the resources available. Letting your audience know what variant/interpretation was chosen helps to reassure methodologically-minded readers of how the results were arrived at (how there were 'grounded', if you will), and how they might be appropriately evaluated.

How much methodological detail should we report?

Perhaps one reason GTM is sometimes viewed with a degree of skepticism is that the methodology is occasionally invoked in reports without qualification. This leaves a reader uncertain as to how to interpret the results contained in such reports. As stated above, one primary difference between the variants of GTM is the different emphases in the results from each. Assuming that it would be inappropriate to reproduce a full explication and rationale for the methodology in general, what is the minimum explanation required to guide the reader in interpreting the results? On the one hand, simply stating a tradition (G-GTM, S-GTM, C-GTM etc.) gives us an indication of method, but there is sufficient variance in interpretation within each of these traditions that we are likely to need more information to get a real sense of the methodology. On the other hand, a detailed narrative of the methodology employed could detract from the presentation of the theoretical result, which should speak for itself. There is a 'happy medium' to be found – the researcher can make it clear how they have adapted the methods of GTM to the project at hand, but not at the expense of a detailed and thorough discussion of their findings.

Another reason we would advocate for retaining a brief summary of the approach taken is so it may act as an exemplar for other users. Seeing how others have interpreted the methodology and what such an interpretation might yield is of great value. It also allows those with greater methodological expertise a way to evaluate the rigour of the research. It has been suggested that becoming fully competent in employing GTM may take around a year and a half of training and practice (Glaser 1998). Learning to code, memo, sample, collect data, and so on are each complex practices - and combining them into a full GTM takes great effort.

Concluding Thoughts

There is great variety to be found within the variants of GTM. One could be aiming to discover or construct any of the theoretical outcomes be they hypotheses, models, or narratives. One could arrive at these results via a process that one understands as inductive or abductive in nature. One could have employed axial coding, focused coding or any other specific method. Thus it is important to mention the methodology used and that authors consider giving some detail of the variant and interpretation employed. Describing methodology doesn't necessitate becoming embroiled in the methodological debate which continues around GTM.

We encourage reviewers and editors to recognize that Grounded Theory is a valuable methodology with a 50-year heritage and multiple accepted traditions within. Evaluating GTM reports on the merits of the reported implementations within these traditions, rather than invoking inter-tradition battles or importing concerns from other methodologies, is essential if we want to encourage work of the highest quality.

The amount of GTM research is constantly growing within Games Research. We shouldn't discourage it, but nurture it.

BIBLIOGRAPHY

Bowers, Barbara, and Leonard Schatzman. 2009. "Dimensional Analysis." In *Developing Grounded Theory: The Second Generation*. Walnut Creek: Left Coast Press.

Bowers, Matthew. 2011. "Playing Video Games as a Supplement to Identity: Insights on Former College Athlete Transitions." *Journal of Issues in Intercollegiate Athletics* 4: 289–308.

Brown, Emily, and Paul Cairns. 2004. "A Grounded Investigation of Game Immersion." In *CHI '04 Extended Abstracts on Human Factors in Computing Systems*, 1297–1300. Vienna, Austria: ACM.

Bryant, Antony. 2003. "A Constructive/ist Response to Glaser. About Barney G. Glaser: Constructivist Grounded Theory? Published in FQS 3(3)." *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research; Vol 4, No 1 (2003): Qualitative Methods in Various Disciplines IV: Sport Sciences*. http://www.qualitative-research.net/index.php/fqs/article/view/757.

Charmaz, Kathy. 2000. "Grounded Theory Methodology: Objectivist and Constructivist Qualitative Methods." In *Handbook of Qualitative Research*, edited by N.K. Denzin and Y. Lincoln, 2nd ed., 509–35. Thousand Oaks, Calif.: Sage Publications.

Charmaz, Kathy. 2006. *Constructing Grounded Theory: A Practical Guide through Qualitative Analysis*. Introducing Qualitative Methods Series. SAGE Publications. https://books.google.co.uk/books?id=l4lgzHLy28gC.

Evans, Gary L. 2013. "A Novice Researcher's First Walk Through the Maze of Grounded Theory: Rationalization for Classical Grounded Theory." *Grounded Theory Review* 12 (1). http://groundedtheoryreview.com/category/volume-12/issue-1-june-2013/.

Fabricatore, Carlo, Miguel Nussbaum, and Ricardo Rosas. 2002. "Playability in Action Videogames: A Qualitative Design Model." *Human-Computer Interaction* 17 (4): 311–68. doi:10.1207/S15327051HCI1704_1.

Furniss, Dominic, Ann Blandford, and Paul Curzon. 2011. "Confessions from a Grounded Theory PhD: Experiences and Lessons Learnt." In , 113. ACM Press. doi:10.1145/1978942.1978960.

Glaser, Barney. 1965. "The Constant Comparative Method of Qualitative Analysis." *Social Problems* 12 (4): 436–45.

Glaser, Barney. 1978. *Theoretical Sensitivity*. Mill Valley, Calif.: Soc. Pr.

Glaser, Barney. 1992. *Basics of Grounded Theory Analysis.* [S.l.]: Sociology Press.

Glaser, Barney. 1998. *Doing Grounded Theory : Issues and Discussions*. Mill Valley, CA: Sociology Press.

Glaser, Barney. 2002. "Constructivist Grounded Theory?" *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research; Vol 3, No 3 (2002):*

Subjectivity and Reflexivity in Qualitative Research I. http://www.qualitative-research.net/index.php/fqs/article/view/825.

Glaser, Barney. 2009. *Jargonizing: Using the Grounded Theory Vocabulary*. Mill Valley, CA: Sociology Press.

Glaser, Barney, and Anselm Strauss. 1965. "Discovery of Substantive Theory: A Basic Strategy Underlying Qualitative Research." *American Behavioral Scientist* 8 (6): 5–12. doi:10.1177/000276426500800602.

Glaser, Barney, and Anselm Strauss. 1967. *Discovery of Grounded Theory*. Sociology Press, Mill Valley, CA.

Holton, Judith. 2008. "Grounded Theory a a General Research Method." *Grounded Theory Review* 7 (2). http://groundedtheoryreview.com/2008/06/30/grounded-theory-as-a-general-research-methodology/.

Hook, Nathan. 2015. "Grounded Theory." In *Game Research Methods*, edited by Petri Lankoski and Staffan Björk, 309–20. Pittsburgh, PA, USA: ETC Press. http://dl.acm.org/citation.cfm?id=2812774.2812797.

Kelle, Udo. 2005. "'Emergence' vs. 'Forcing' of Empirical Data? A Crucial Problem of 'Grounded Theory' Reconsidered." *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research; Vol 6, No 2 (2005): Qualitative Inquiry: Research, Archiving, and Reuse*, May. http://www.qualitative-research.net/index.php/fqs/article/view/467/1000.

Salisbury, John H. 2013. "Playing with Value: Player Engagements with Videogames as a Negotiation of Net Cultural Worth." London: Middlesex university.

Shaw, A. 2012. "Do You Identify as a Gamer? Gender, Race, Sexuality, and Gamer Identity." *New Media & Society* 14 (1): 28–44. doi:10.1177/1461444811410394.

Strauss, Anselm L., and Juliet M. Corbin. 1990. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. Thousand Oaks, Calif.: Sage Publications.

Thomas, Gary, and David James. 2006. "Reinventing Grounded Theory: Some Questions about Theory, Ground and Discovery." *British Educational Research Journal* 32 (6): 767–95. doi:10.1080/01411920600989412.

Urquhart, Cathy. 2013. *Grounded Theory for Qualitative Research: A Practical Guide*. Los Angeles, Calif. ; London: SAGE.

Zagal, José, Michael Mateas, Clara Fernández-Vara Clara, Clara Hochhalter, and Nolan Lichti. 2005. "Towards an Ontological Language for Game Analysis." In *DiGRA '05 - Proceedings of the 2005 DiGRA International Conference: Changing Views: Worlds in Play*.