Fanny Barnabé iD

The Transformative Power of Speedrun

Deconstruction and Recodification of *Pokémon* Games' Communicative Structures

Introduction

This chapter proposes to study the video game practice of speedrun, which consists of going through a game from beginning to end as fast as possible and documenting the performance through a video recording. Specifically, I focus on speedruns of *Pokémon* games, in order to determine how this form of "transformative play"[1] (Salen and Zimmerman 2004, 41) reinvents a given fictional universe and how it alters the messages of the works it uses.

To do this, I will use the perspective of rhetoric and try to formalize what the "rhetorical figures" of speedrun can be. According to Bonhomme, figures are defined by the "salience" effects they produce in a particular discursive context: "figurative constructions manifest themselves through markings that detach them from their discursive framework"[2] (Bonhomme 2014, 31). In addition, far from being mere ornaments, figures perform different communication functions (expressiveness, performance, meta-communication, etc.). Based on this definition, I will try to identify the "salient" features in the speedrun videos and the communicative functions that they exercise, focusing in particular on the relationship they build between the original games and the derivative works produced by speedrunners. What is left of *Pokémon* games in speedruns? How does the speedrun work relate to its original support? How does speedrun redefine the boundaries of games and play?

---

1 "Transformative play is a special case of play that occurs when the free movement of play alters the more rigid structure in which it takes shape" (Salen and Zimmerman 2004, 305).

2 My translation of: « les constructions figurales se manifestent par des marquages qui les détachent de leur cadre de discours ».

Following an introduction that resituates the particularities of speedrun as a playful and creative practice, I will detail the rhetorical figures observed in two speedrun videos of *Pokémon* games. These form two main categories, defined by their functions: the figures of deconstruction (resemantization, anti-model play, exposure, deconstruction of auctoriality) and the figures of formalization (analogy, codification, over-compliance). Through the examination of these figures, we will see that speedrun invites us to reconsider the boundaries of the concepts of *game* and of *work*. On the one hand, the rules formalized by speedrunners and the different media they mobilize in their practice have the effect of extending the playing field beyond the strict boundaries of the game and of constructing what I call a "game apparatus". On the other hand, speedrun is particular in that it is both an athletic and a creative performance. However, the speedrun "product" is not limited to the video recording (which serves as a trace and proof of the performance): it also creates an abstract (and collective) score or script, of which each performance is an actualization and a renegotiation.

Deconstruction of the game's structure and codification of a new game apparatus

Despite its status as a gaming practice, speedrun is a form of performance that does not quite "play the game". It differs from other competitive uses of video games (such as e-sport or scoring), which are executed within the system of rules provided by the game. Unlike these, speedrun regularly moves away from the "model play"[3] constructed by the ludic work: speedrunners not only exploit games that offer speed challenges (such as racing games), but apply their activity to all types of video game titles. In this context, the speed objective takes precedence over other aspects of the gameplay: it is no longer a question of unlocking the entire content, of getting a high score, or beating an adversary, but rather of going through the game as quick as possible. Stops, detours, or side quests are forbidden in these performances, so the videos do not reflect

---

[3] The notion of "model play" is an adaptation of the concept of "model reader" developed by Eco (1985). It designates a representation produced by the text of the competence that is expected of the reader; a representation of the success conditions "that need to be satisfied for a text's potential content to be fully actualized" (my translation of: « qui doivent être satisfaites pour qu'un texte soit pleinement actualisé dans son contenu potentiel », Eco 1985, 77).

make the initial game disappear: on the contrary, the video allows us to read this original (its model play, its level design, its fictional universe) through the deforming filter of speedrun.

Several degrees of deviation: Presentation of the two videos

Contrary to what the above introductory remarks may suggest, it should be noted that speedrun is not a uniform genre of performances: there is a great diversity of sub-categories, defined according to the different constraints that players self-impose. These distinctions are summarized by Scully-Blaker (2014) in an opposition between two major categories: "finesse runs" and "deconstructive runs". The first designates efficient courses "in which the narrative architecture of the gamespace is largely left intact," while the second are performances employing glitches in order to pass most of the game and abruptly reconfigure its structure.

To account for this variety, the rest of this paper will analyse two videos, each belonging to one of these categories but both dealing with the *Pokémon* licence: a glitchless run broadcast live (representative of the "finesse runs") and a pre-recorded video with a heavy use of glitches (as a case of "deconstructive run"). Through their analysis, I will show that, beyond their formal differences, these two performances produce a set of similar figures, symptomatic of the double movement of deconstruction and codification peculiar to speedrun and definitive of its rhetoric. This analysis will also show the extent to which and by what means speedrun reconfigures the meanings of games – in this case, that of *Pokémon.* For the sake of clarity, before exposing the figures that emerge from these two works, I will first describe their development and main specificities.

Pokémon Snap 100% finished in 23:40 minutes: Speedrun as live performance

The first video is a speedrun of the Japanese version of the Nintendo 64 game *Pokémon Snap*, which was realized in a live-stream by the speedrunner Drogie.[10] The video holds[11] the third place in the world record for the "100%"

---

10 *Speedrun.com.* "Pokémon Snap – 100% – N64 in 23m 40s by Drogie". http://www.speedrun.com/run/wzpko2vy, accessed on 19 December 2020.

11 As of 10 December 2020.

Fanny Barnabé

Pokémon Green finished in less than five minutes: A radical deconstruction

The second video is a run of *Pokémon Green*, which is completed in just over four minutes using important glitches, so that the game's internal timer only counts 00:03 seconds. The performance is published on *Speed Demos Archive*, which – this time – takes into account the record displayed by the internal timer.[12]

The use of "uber-large-skip glitches" takes this speedrun far away from the *Pokémon Snap* video presented above. The beginning of the video is relatively respectful of *Pokémon Green*'s model play: the avatar meets Professor Oak, who gives him his first Pokémon; he then confronts his rival (and loses the fight), then travels to the game's second village, where he receives a package for Professor Oak. In order to continue the adventure, the player is then expected to return to the protagonist's home village to deliver the package.

During this first phase of the performance, the video remains readable as a gameplay capture: the movements and choices made by the player are consistent with the coherence of *Pokémon Green*. A few salient features are certainly noticeable: for example, at the beginning of the game, the speedrunner renames the protagonist and his rival with a single Japanese letter (the first one in the syllabary: ア, "A") in order to save time later in the display of the dialogues. This choice is salient from a semantic point of view, since it is not really a character's name and does not even differentiate between the two rivals. Likewise, the fluidity of the avatar's movements (who always opts for the optimal trajectory to get from one place to another) and the absence of pause or hesitation also present a strong visual discrepancy: they produce an effect of automatism, which contradicts the contingency proper to the playing activity (Malaby 2007, 106) and rather recalls the regulated nature of choreography. Lastly, the speed at which the player scrolls through the dialogues denies any possibility of reading them.

Nevertheless, it is especially in the last minute (from 03:30 onwards) that the video concentrates the most numerous rhetorical figures. The speedrunner exploits a glitch that is specific to the early Japanese versions of *Pokémon*, known as the *Dokokashira Door Glitch*. It is based on the game's functionality, which allows a player to change the location of items in the inventory and the order of the Pokémon in the player's team. A programming error makes it possible to select an item in the inventory, to exit the menu, and then, during the next Pokémon battle that is triggered, to exchange that item with a creature

12 *Speed Demos Archive*. "Pokémon Green". http://speeddemosarchive.com/Pokemon Green.html, accessed on 19 December 2020.

ures of speedrun in two categories, according to the main function they serve: dismantling the game coherence, or codifying the speedrun apparatus.

Figures of Deconstruction

Resemantization

The first recurring figure contributing to the decomposition of the game's structure involves both the morphology of the game (because it modifies its "lexicon", i.e. characters, objects, places...) and its semantics (because it consists of attributing new meanings and functions to these different units, without changing their signifier). I therefore simply call this process: *resemantization.*

This formal mechanism is a direct consequence of the new layer of rules applied by speedrunners and leads to a rereading of the game elements through this filter. The addition of a different interpretative context transforms the mechanical function of the games' lexical units (in other words: it transforms the mechanical part of the "ludemes", Hansen 2019[16]), which has an effect on the meanings and representations they convey. For example, in the speedrun of *Pokémon Green*, the use of the *Dokokashira Door Glitch* results in a resemantization of the game's environments: the houses' doors no longer function as doors, but as "teleportation portals" granting access to virtually any level; walls or trees are no longer physical obstacles, since the glitch occasionally allows the avatar to walk over them as if they were non-existent. In the same way, levels no longer represent only geographical areas organized following a linear and thematic logic (Pallet Town leads to Route 1, which leads to Viridian City, then to Route 2, then to Viridian Forest, etc.), but appear as values that can be controlled and loaded by players in any order they wish. In this context, roads thus lose their role as guidelines, since speedrunners no longer make their way through the game environments, but through its code.

In the speedrun of *Pokémon Snap*, the imperative of speed leads to other forms of resemantization. For instance, one can see the speedrunner ostensibly leaning over the controller and hammering the keys to scroll through the dialogue at full speed. In the video, the narrative or informative function of

---

16 The ludeme is the minimal functional unit of a game, which is "manifested as the combination of a grapheme (a graphic unit), of a sound, [...] and of mechanical properties or mechanemes" (Hansen 2019, 51). My translation of: « qui se manifeste ainsi comme la combinaison d'un graphème (une unité graphique), d'un son, [...] et de propriétés mécaniques ou mécanèmes ».

Anti-Model Play

The mechanisms involved in the resemantization sometimes simultaneously serve another deconstructive function: *anti-model play*. Speedrun videos regularly contain salient actions that contradict the model play, reconfigure the level design, or make the gameplay falter. These figures are not specific to speedrun and are present in all forms of play, provided that play is always a transformative activity (Salen 2011, 4). Nevertheless, they are salient in that the speedrunner's actions brutally contradict or elude an instruction given or valued by the game. In other words, these actions do not make the speedrun a "deviant" form of play, but they mark the production by generating an *effect of deviation*: the video contains an internal contradiction (the game asks the player to do something and the speedrunner does not comply), which contributes to identifying it as a *détournement*.[17]

I have already mentioned, for example, that the absence of pauses in speedrunners' movements distinguishes speedrun videos per se from other types of gameplay capture. Speedrun performances, in fact, do not show the difficulty of the game, its rhythm, the player's hesitations, the frustrations, or successes.

---

[17] It is important to emphasize here that I do not consider *détournement* or remix practices as a deviation from the norm of play, but as a marked actualization of the ordinary play (see Barnabé 2019, 11 for a detailed presentation of the concept of video game détournement).

does have several small differences. It is also features the absolute best coding in any game ever. No bugs to exploit here. Not a [single] one."[20]

The irony comes, of course, from the contradiction between the assertion of the absence of bugs and their radical exploitation in the video. However, the humoristic tone allows the author to gently mock the clumsy programming, while, at the same time, highlighting the importance of these mistakes for his practice. The figure plays here the role of junction operator between several paradigms, several value systems (in this case: that of the model play, where glitches are annoying, and that of *détournement*, where they are desirable opportunities).

Exhibition of the creation processes and exposition of the game system

Speedrun, like any form of *détournement*, is not only a form of play, it is also a discourse about play. Through their performances, speedrunners say something about the playing activity and about the works they take over. As such, speedrun has a revealing function: it uncovers the possibilities embedded in the original game – *exposure*, which is another mechanism of its deconstruction.

It is rare that speedrun videos are not accompanied by an extensive escort speech (either in the form of an oral commentary embedded in the performance or in a paratext accompanying the video), in which the speedrunners explain all the details of their performance: the motivations that drove them; the difficulties they encountered; the strategies they adopted; the glitches they took advantage of; and the people who assisted them. In these comments, they often give explanations about the intimate logic of the game, proceeding with a kind of reverse engineering. The paratext of *Pokémon Green*'s speedrun is an example of this:

> First, the run starts before the game even boots up. The ingame timer starts when you appear in your room, as long as you don't have a save file on the cart. If you do, the timer starts earlier, which is undesirable in such a tight time constraint. Therefore, you must delete your save before beginning.[21]

In the speedrun of *Pokémon Snap*, this analytical dimension is even present within the video, as the speedrunner realizes his performance while commenting on it live. The addition of this reflexive layer is salient in relation to the context of enunciation of the game: players are not expected to explain

---

20 Ibid.

21 Ibid.

verbally all their actions during a game. The presence of comments (internal to the video or paratextual) therefore gives the activity a meta-communicative dimension.

In addition to uncovering the inner functioning of the game, these meta-discourses also reveal the inner workings of the speedruns themselves, by constantly exhibiting the creation processes of the videos. In *Pokémon Green*'s speedrun, this *mise en abyme* is achieved through the systematic explanation of the strategies employed and the glitches exploited. It also involves revealing the production conditions of the video and the meticulous inventory of the material used by the speedrunner. In the paratextual commentary, the author points out, for instance, that he plays version 1.1 of the Game Boy game, whose Japanese title is *Pocket Monsters Midori*; but also that he plays it with a Game Boy Player,[22] using a Game Boy Advance SP console as a controller, and that he does not resort to save file corruption, but uses "large skip glitches."[23] In the speedrun of *Pokémon Snap*, the apparatus is even more revealing, since the frame of the video contains a representation of a Nintendo 64 controller on which the viewer can observe, in real time, the keys that are pressed by the speedrunner.

Through the presence of this *meta-discursive framework* (the controller and the player's video capture), all the components of the experience are exhibited simultaneously and on the same plane (reminiscent of Azuma's notion of hyperflatness[24]): the game; the play; and the act of creation – since the production of the speedrun itself becomes the object of the spectacle.

Deconstructing auctoriality: Speedrun as dialogical performance

Simultaneously a playful feat and a creative act leading to an observable production (the video), the practice of speedrun is a performance both in the athletic sense of the term and in the cultural, interpretative sense (the player must find new solutions to the problems encountered and represent them in a video worthy of interest). The creative dimension of the practice is manifested, in particular, in the tendency of authors to use certain techniques with the

---

22 An accessory for the GameCube console that allows Game Boy games to be displayed on the television.

23 *Speed Demos Archive*. "Pokémon Green". http://speeddemosarchive.com/Pokemon Green.html, accessed on 19 December 2020.

24 "The hyperflat world, represented by the computer screen, is flat and at the same timelines up what exists beyond it in a parallel layer" (Azuma 2009, 102).

of finishing."[30] These mechanisms make the speedrun video appear less a finite object with a fixed form and more a work in progress, a step in an ongoing process: as an illustration, *Pokémon Snap*'s speedrunner has barely finished his run when he is already announcing his next performances (25:14).

In short, the inclusion of the playing activity in a dialogic dynamic and the dilution of the author's figure do not really contribute to making the speedrun appear as an autonomous work, but rather re-inscribe the video in a playful register. The deconstruction of the original game's aesthetics in these videos also heads in this direction. However, as we will see below, other formal mechanisms, by contrast, contribute to formalizing the speedrun as a work that exists outside of the speedrunner's playing performance.

Figures of formalization

Analogy

I previously emphasized that speedrun is not without an impact on the game it diverts, since it superimposes another layer of rules and objectives onto it. I should add that, by defining its own ludic apparatus, speedrunning also necessarily defines a new model play. If the videos regularly produce deviation effects from the model play of the original game (by short-circuiting its level design or ignoring its gameplay, for example), they tend, on the contrary, to merge completely into the second model play. Indeed, the optimization specific to the practice induces the standardization of trajectories, techniques, and courses used by the players, since the objective is to get as close as possible to an ideal performance. Thus, through their play, speedrunners do not just produce a video or a spectacular performance, they also write a *score*, a script, a model run that each of their performances will try to reproduce, but from which they will always be separated by a few execution errors. In other words, the work produced through speedrun is not limited to the video, since it is only a step, an attempt to perform the model play.[31]

---

30 Ibid.

31 Without totally assimilating with them, this point brings speedrun closer to the performance arts, or Goodman's "allographic arts" (where a score allows the work to be performed an infinite number of times and each manifestation retains the status of original), as opposed to the "autographic arts," where the material support of the work makes sense and invites us to distinguish the original work from its reproductions, as in the case of painting (Goodman 1990, 147–148).

Fanny Barnabé

literally unbeatable. Even the hyper-optimized TAS gets 0:03, so expect this run to stand for eternity."[34]

The speedrun of *Pokémon Snap* formalizes the model play that it tries to approach through its frame. Indeed, the frame of the video contains a table showing, for each stage of the speedrun, the time to beat (that of the world record) as well as the relationship between the latter and the current performance. In Figure 8, for example, we see that the run is 1.62 seconds behind the ideal time at the Tunnel, but 1.61 seconds ahead of the time at the River. This comparison in the speedrun's "interface" opens the video to intertextuality and functions as a constant reminder of the existence of a shared script behind the individual performance. Moreover, it is interesting to note that the division of the different stages of the race does not really correspond to the original division of the game into levels: rather, it represents the route that speedrunners have established as the most efficient (the first title, "Apples," does not refer to a level, but rather to the route that leads to the apples, etc.). This division and the naming of each stage of the run graphically signal, in the video, both the rupture of the game's model play (whose levels are reconfigured) and the existence of a secondary model play whose main prescription – time – is constantly repeated.

The speedrunner's spoken comments double the analogy with the model play, because he regularly reaffirms that his performance is still in the wake of the world record, which he follows scrupulously: "I still have a world-record pace" (13:47), "we're ahead of a world record by... six seconds for undo" (14:44) "seven seconds ahead... no ten seconds actually. Ten seconds ahead of world record" (18:33),[35] etc.

Codification

Far from being only deconstructive, speedrun performances are also subject to an important *codification*. Firstly, the format of the videos is characterized by a strong uniformity, generally imposed by the reference site around which the community is organized. On *Speed Demos Archive*, for instance, videos cannot have been edited and they begin with a launch image containing the game time, the author's references, and the reference to the host site. Besides, as we

---

34 *Speed Demos Archive.* "Pokémon Green". http://speeddemosarchive.com/Pokemon Green.html, accessed on 19 December 2020.

35 *Speedrun.com.* "Pokémon Snap – 100% – N64 in 23m 40s by Drogie". http://www.speedrun.com/run/wzpko2vy, accessed on 19 December 2020.

274

establishment of these definitions for each video game title.[36] All these formalization processes are an integral part of speedrun as a creative activity: the planning of a model play; the standardization of play performance and the production of a shared code constitute a framework that contributes to giving speedrun the status of *détournement.*

Over-compliance

Finally, the definition of a model play specific to speedrun and the codification of trajectories and techniques make the videos salient because they *over-comply* with these models. The unusual precision of certain movements (the avatar's movements in the speedrun of *Pokémon Green*, for example, which anticipate obstacles and always follow the shortest path) and their mechanical optimization (such as when the speedrunner of *Pokémon Snap*, at 16:00, throws a ball at one Pokémon, but does not even take the time to look at the result of his action, because he is already completing the next task in his program) depart from the game as an exploratory, variable, and subjective activity because of their smoothness and perfection. While such optimized gestures appear regularly in competitive gaming practices (or in what Roth has described as the "analytical" posture sometimes adopted by players to satisfy the requirements of game systems, Roth 2017, 75), they characterize speedrun by their omnipresence: optimized trajectories or actions do not simply emerge occasionally, constituting a moment of intensity, as they would in other forms of play, but constitute a norm in these videos, an isotopy.

    In short, speedrun differs from play because it has the effect of suppressing the low-intensity moments of videogame activity: moments of waiting, searching, trial-and-error or less commitment disappear from videos, whereas they represent the main part of daily play experiences (see Boutet, Colón de Carvajal, Ter Minassian and Triclot 2014).

Conclusion: Artwork, game and apparatus

By analysing two very different runs of *Pokémon* games, a number of rhetorical figures of speedrun as transformative play were identified. These analyses showed that speedrun is a highly ambiguous creative activity: it mixes process-

---

Fanny Barnabé

ORCID®

Fanny Barnabé   iD   https://orcid.org/0000−0002-1840−042X

References

Azuma, Hiroki. 2009. *Otaku: Japan's Database Animals*. Translated by E. Abel Jonathan and Shion Kono. Minneapolis, MN: University of Minnesota Press.

Barnabé, Fanny. 2016. "Le *speedrun*. Pratique compétitive, ludique ou créative ? Trajectoire d'un détournement de jeu vidéo institué en nouveau *game*," *Interfaces Numériques*, 5 (3), 441–459. https://www.unilim.fr/interfaces-numeriques/3113, accessed on 19 December 2020.

Barnabé, Fanny. 2017. "Rhétorique du détournement vidéoludique. Le cas de *Pokémon*,"– Ph.D. dissertation, University of Liège. https://orbi.uliege.be/handle/2268/210764, accessed on 19 December 2020.

Barnabé, Fanny. 2019. "Video Game Détournement: Playing Across Media." In *DiGRA '19: Proceedings of the 2019 DiGRA International Conference: Game, Play and the Emerging Ludo-Mix*. Online. http://www.digra.org/digital-library/publications/video-game-detournement-playing-across-media/, accessed on 19 December 2020.

Bonhomme, Marc. 2014 [2005]. *Pragmatique des figures du discours*. Paris: Honoré Champion.

Boutet, Manuel, Colón de Carvajal, Isabel, Ter Minassian, Hovig and Mathieu Triclot. 2014. "Au-delà du virtuel. Interactions sociales et spatiales dans et autour d'un univers vidéoludique," *MEI : Médiation et information*, 37, 103–116. https://halshs.archives-ouvertes.fr/halshs-00851446/file/Ter_minassian_et_alii_A_paraA_tre_dans_MEI_37_.pdf, accessed on 19 December 2020.

Bulbapedia, the community-driven Pokémon encyclopedia. "Dokokashira door glitch". https://bulbapedia.bulbagarden.net/wiki/Dokokashira_door_glitch, accessed on 19 December 2020.

Després, Aurore. 2016. "Penser l'archive audiovisuelle pour la recherche en danse. Le Fonds d'Archives Numériques Audiovisuelles FANA Danse contemporaine," *Recherches en danse*, 5. http://danse.revues.org/1307, accessed on 19 December 2020.

Dupont, Nathalie, and Éric Trudel, eds. 2012. "*Tout peut servir.*" *Pratiques et enjeux du détournement dans le discours littéraire des XXe et XXIe siècles*. Québec: Presses de l'Université du Québec.

Eco, Umberto. 1985 [1979].. Translated by Myriem Bouzaher. Paris: Librairie Générale Française.

Frissen, Valerie, Lammes, Sybille, De Lange, Michiel, De Mul, Jos, and Joost Raessens, eds. 2015. *Playful Identities. The Ludification of Digital Media Cultures*. Amsterdam: Amsterdam University Press.

Genette, Gérard. 1972. *Figures III*. Paris: Seuil.

Genette, Gérard. 1982. *Palimpsestes. La littérature au second degré*. Paris: Seuil.

Genvo, Sébastien. 2011. "Penser les phénomènes de 'ludicisation' du numérique. Pour une théorie de la jouabilité," *Revue des sciences sociales*, 45, 68–77. http://www.ludologique.com/publis/Ludicisation_Genvo_S.pdf, accessed on 19 December 2020.

Speedrun.com. "Pokémon Snap – 100% – N64 in 23m 40s by Drogie". http://www.speedrun.com/run/wzpko2vy, accessed on 19 December 2020.
SpeedRunsLive. "Frequently Asked Questions". https://www.speedrunslive.com/faq/, accessed on 19 December 2020.

Comment By Taeko Edaki

This is a meaningful paper that clarifies the peculiarity of speedrun. It is interesting that the rules that the creator gives to the player are changed by the player and the community. Research into speedrun is also considered a significant area of study with respect to clarifying the process of community formation. Games that are not necessarily new or hit titles are played in speedrun. Despite being a community that requires difficult gameplay, many people with different characteristics are interacting online. Moreover, Real-Time Attack (RTA) festivals are held all over the world and RTA in Japan continues to expand every year. I hope that research into this field will be conducted from various perspectives, not merely from a game research perspective.

Comment By Melanie Fritsch

In her chapter, Fanny Barnabé offers an in-depth discussion of the game-cultural practice of speedrunning. Speedrunners play in an optimized way; optimized here means that they finish either a full game or part of it (e.g. one level) as quickly as possible by exploiting every opportunity the game system offers them in order to speed up. Barnabé describes this as a form of meta-gaming that is constructed according to the rules negotiated in and with the community.

The chapter is thought-provoking on many levels, though I found the discussion of speedrunning as a creative act and thinking about speedruns as a socially negotiated form of game-cultural performance particularly intriguing. This sparked a question about whether we can describe such gameplaying in a similar vein to Christopher Small's (1998) description of the act of music-making with the term "musicking," i.e. as a social practice whose rules are constantly (re-)negotiated within a community of participants. In this regard, participants can be the performers (players, speedrunners) themselves, but also anyone else participating in setting the stage for gameplay performances (e.g. by providing the material) as well as evaluating them through online discussions and comments.