

# The Ethics of Play and Participation in a Tween Virtual World: Cheating Practices and Perspectives in the Whyville Community

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**ABSTRACT:** Much attention has been paid to young people's increased participation in digital publics and its potential impact on their development and learning. However, few studies have examined the ethics in online play and their interactions as a critical aspect in the development of youth digital culture. In this paper we turn to the issue of cheating, a widely accepted practice in many online communities, including Whyville.net, a virtual world with over 5.5 million registered players ages 8-16. Our analyses focused on culturally-relevant examples such as player-written articles on cheating and player-produced YouTube cheating videos associated with Whyville from 2000 to 2016. The findings reveal how cultural concepts like cheating are embedded and transformed in the context of youth digital interactions, productions, and reflections. In the discussion, we address implications of these findings for engaging youth with ethics in online gaming communities.

**Keywords:** cheating, virtual worlds, cognitive process, ethics, social networking sites, digital media

## 1. Introduction

During the last two decades, extensive research has focused on understanding the increased participation with and impact of digital media on youth development and learning (boyd, 2014; Lenhart, Purcell, Smith & Zickuhr, 2010; Steeves, 2014). One goal has been to capture the various levels of participation ranging from different forms of media consumption such as browsing and social networking to youth providing content, and even programming applications (Davies & Gardner, 2013; Ito et al, 2013). This increased presence of digital media has also inspired researchers to examine their educational potential towards developmental ends. Here research has focused on understanding game playing (Gee, 2003; Squire, 2011), social media use (Greenhow, 2010), and DIY media production (Kafai & Burke, 2014; Knobel & Lankshear, 2011) to name but a few of the contexts in which much of youths' cognitive, social and moral development takes place. Youths' digital media consumption and production has become a significant force in their lives as "intellectual development has always been interwoven with cultural progress" (p. xi, 1988, Damon).

An aspect that has received little attention concerns ethical and moral dimensions of youth digital interactions (James, Davis, Flores, Francis, Pettingill, Rundle, & Gardner, 2009). How young people interact with each other and what they contribute—offline and online—are critical dimensions in their cognitive, social and moral development (Turiel, 2008). One example that can illustrate ethical dimensions of development in digital publics is cheating which is defined by actions that violate social norms and rules established by players or developers of the community. Cheating in games and virtual worlds can take various forms such as copying cheat codes promoted in player magazines, using shortcuts to advance in game play, or scamming players of their virtual funds (Consalvo, 2007). On one hand, taking these types of shortcuts is

often seen as socially unacceptable or shortchanging other players, especially when children are playing competitively or collaboratively with each other. On the other hand, game companies often promote cheat codes in their magazines, making the use of cheats a socially acceptable way to work through tough parts in a game or to find secrets hidden by the designers. Thus the study of cheating in games and virtual worlds presents culturally-relevant scenarios that developmental scholars should include in their examination of children's contemporary moral and ethical infractions.

In this paper, we examine cheating from a socio-cultural perspective (Consalvo, 2007) in the context of children's play and production in virtual worlds that have become some of the most popular online communities for children, tweens and adolescents. Participation in virtual worlds can reach hundreds of millions players (Grimes & Fields, 2012). In our case, we focus on a virtual world called Whyville (whyville.net), with over 5.5 million registered players, primarily ages 8-16. Whyville has numerous spaces, including areas for playing science games, public forums for sharing opinions, and public spaces where players hang out and interact with each other (Kafai & Fields, 2013). To capture the diversity of how the community of players thinks about and engages with cheating, we selected two contexts within and outside of the virtual world: (a) player-written articles that illuminate how Whyvillians, the citizens of Whyville, contest different practices of cheating and how cheating affects the virtual world as a whole, and (b) player-produced YouTube videos associated with Whyville, describing typologies for both the cheats and channels in terms of quality and quantity of instructive content and media skills. We see these two contexts as illustrative of how ethics are defined or "constructed" by how the participants debate what is right or wrong. By examining public writings and media productions over a fifteen-year time period, we capture not only continuity but also changes in youth cultural cheating practices. In the discussion, we address implications of these findings as cultural artifacts of the virtual world community and as guides for designing informal online learning activities.

## **2. Background**

### **2.1. Understanding Cheating in Digital Publics**

Cheating practices and their associated cheat sites are immensely popular corollaries to many virtual worlds, gaming communities, and social networks across all ages (Consalvo, 2007; Consalvo & Vazquez, 2014; Dumitrica, 2011). Most commercial games have large fan communities that sprout numerous fan sites, among them cheat sites where players post explanations of how to complete various games, hints for how things work, and even discovered or manufactured (i.e., hacks) shortcuts through games (Salen & Zimmerman, 2004). In addition, many companies that would presumably have the most interest in keeping cheats away from players often sponsor official guides that provide hints or outright answers for game completion, as well as forums for players to post their own solutions or strategies (Consalvo, 2007). Further complicating the situation is that the gaming industry's stance is much less lenient in regard to other transgressive player behaviors such as copying software or selling avatar parts (Taylor, 2002).

The cultures of cheating, or transgressions, are defined not only by designs and rules of games imposed by the industry but also by the players themselves. There is, however, great variety

among individual players what counts as cheating, what the repercussions are, and how and when one should use cheats (Stevens, Satwicz, & McCarthy, 2007). While there is no a clear definition of cheating, the most “purist” players define it as “anything other than a solo effort in completing a game,” (Consalvo, 2007, p. 88) or playing as a hypothetical “standard player” who plays the game as intended by designers (Salen & Zimmerman, 2004, p. 269, see also Glas, 2013, p. 89). However, many designers create games with “easter eggs,” hidden cheats or surprises intended for players to discover through non-traditional forms of play, for instance a special object available only through failing a particular level of a game. Purist players’ views of cheating can be in conflict with the designer’s intentions as well as with other players’ ideas on what counts as cheating and when it is acceptable.

Thus cheating offers a promising context to discuss youth development of ethics from a sociocultural perspective, in particular as younger players enter online communities in growing numbers and are becoming part of the digital publics (Dumitrica, 2011; Hamlen & Blumberg, 2015). The boundaries of what is legitimate, and what is not, are moving targets and are redefined by both individual players and community actions. Consalvo’s (2007) definition of gaming capital as “a currency that by necessity is dynamic—changing over time, and across types of players and games” (p. 4) provides a promising socio-cultural lens through which to understand these different dimensions of ethical development. Expanding on Bourdieu’s (1986) concept of social capital, Consalvo captured the dual complexity of cheating as it unfolds in gaming communities. Here players’ cheating is a part of developing gaming capital, demonstrating knowledge of games that is potentially valuable to others and can demonstrate membership in the community. From this perspective cheating is not necessarily considered problematic towards others. Such a perspective recognizes the situational or cultural nature of ethics in online communities and takes into account the complex, at times contradictory nature of how problematic actions are perceived among and acted upon by different stakeholders.

## **2.2. Studying Cheating in Online Youth Culture of Whyville**

In examining the ethics of children and youth in digital publics, different approaches have been proposed to capture children’s and youths’ capacities to think and reason morally in situations and to study how thinking changes over the course of their development. Most prominent are psychological perspectives that distinguish between individualistic, moral, and ethical “ways of thinking” when focusing on the impact of others (Piaget, 1932; Kohlberg, 1981; Damon, 1990; Turiel, 1983; 2008). In this framing, individualistic thinking primarily focuses on examining negative consequences to oneself whereas moral thinking includes a focus on other people who youth might consider when making decisions. (Piaget, 1932; Kohlberg, 1981). But developmental studies of ethical ways of thinking also need to take into account the networked, public nature of the Internet that requires considerations of the larger community (Flores & James, 2013). Players in the digital publics have different audiences, ranging in how immediate and intimate they are, including friends, family members, and others of varying levels of acquaintance, including complete strangers. Thus the extension of research on moral and ethical reasoning into digital publics can provide much needed insight into sociocultural aspects of ethical development as norms and values are negotiated in overlapping and shifting social worlds.

With this framing of cheating as a sociocultural concept and practice, we not only examined players' thinking on cheating but also their actual cheating within one virtual world called Whyville.net. This is a distinct departure from most developmental research on morality and ethics that often uses hypothetical scenarios in which young people are presented with problematic situations such as copyright infringements or bullying, and then asked to make judgments and to justify their decisions (Burnam & Kafai, 2001). Another approach has been to interview young people about their perspectives on the digital publics, focusing on the problematic situations and interactions that youth experience online (Flores & James, 2013). Rather than relying on individual judgments or perspectives, our approach was to capture how the community-at-large engaged with cheating in public discussions and productions.

This study builds on substantial earlier research where we examined various social and cultural aspects of tween online life in Whyville (Kafai & Fields, 2013), including cheating. We identified two promising sources of players' views of cheating: player-written news articles in the Whyville periodical, *The Whyville Times*, and player-produced cheat sites. Both sources served as online archives in which players debated and defined cheating practices. In the research conducted between 2000-2006, we located hundreds of articles that Whyville players wrote about their experiences and many cheatsites developed by players (Fields & Kafai, 2010), thus presenting a rich source of information how the community at large thought about these issues. For instance, many players debated 'scamming,' a popular cheating practice in which players asked others to reveal their passwords, only to find out later that the other player had used this knowledge to clean out their banking accounts. The use of such cheating practices requires not only a functional understanding of how funds can be transferred between players but also a psychological understanding of how to manipulate players to reveal personal information in expectation of higher return rates. We also observed how a group of teens collaborated on developing a cheat revealing that players had a good grasp on the economics of the site by offering an attractive reward for the development of a cheat. Furthermore, we examined the content of cheat sites that players had developed outside of Whyville.net providing others with shortcuts and insights on how to navigate life in Whyville. Here cheat designers often showcased their understanding of science by providing written and visual explanations to help others succeed in playing the games.

This research provided first insights into the cultures and practices of cheating on a tween site in which participants embraced a range of viewpoints on cheating, from acceptance to rejection. From a cultural-developmental perspective, morality and ethics are not givens but are constantly negotiated as youth come to understand the at times conflicting norms and values in their communities. We thus wondered whether the perspectives on cheating we observed in commentaries and media productions between 2000-2006 would still be present during 2007-2016. Such extended examinations of children's online cultures are rare but could provide with critical insights into how cultural concepts like cheating are embedded in and transformed in the context of youth digital interactions, productions, and reflections.

### **3. Methods**

For our current investigation of cheating in Whyville, we drew from two sources: player-written news articles posted in *The Whyville Times* and player-produced videos posted on the Internet. These sources built on our prior research on cheating in Whyville, but updated cheat sites to

videos, as those were more common in the more recent time period 2007-2016 (Fields & Kafai, 2010; Kafai & Fields, 2013). To find updated articles, a team member (third author) searched in the archive of Whyville’s weekly, player-written newspaper, *The Whyville Times*, by using the *Whyville Times*’ search tool with the words “cheat,” “cheats,” “cheater,” and “cheating,” including variations of “hack” and “scam” as well. The search covered the time period between 2007-2016, and identified 181 articles that discussed cheating in Whyville. These articles were used to evaluate the discussions surrounding cheating and to understand how some citizens feel the impact of cheating in Whyville. Note, that articles for *The Whyville Times* are submitted by Whyvillians and selected for publication by the paper’s editor, an employee of Numedeon Inc., the company that owns Whyville. So while published articles represent a wide variety of opinions on most subjects, as the discussions below will demonstrate, we cannot assume that the articles selected for publication are fully representative of Whyvillians’ views because we do not know all the selection criteria that influenced the editorial review of what gets published.

In our previous research on Whyville cheating we also studied cheat sites: websites created by Whyvillians where they described and illustrated cheats. Since our previous research, websites for cheats have fallen out of style and have been replaced with videos posted on YouTube. So as a second part of our investigation, in Fall 2016 we entered the following search terms in YouTube: “whyville cheats,” “whyville hacks,” “whyville scams,” “whyville how to,” “whyville tutorials,” “whyville secrets,” and “whyville walkthrough.” We conducted searches on a Google Chrome incognito window to avoid search history biases, and found hundreds of results. We sampled a subset of these videos, gathering 157 in total, and developed a typology to organize our findings. We created classification systems to evaluate the instructive quality of our samples (from minimal guidance to thorough instruction), as well as the media quality of the posted videos (from camera recordings to sophisticated digital edits). In addition to our broad search of YouTube videos, we focused on a particularly prolific channel which produced multiple walkthrough explanations of Whyville games as well as a video advertisement for a comprehensive cheat site created by the same YouTube user.

#### **4. Findings**

In the first section of our findings, we focus on the discussions surrounding cheating within the Whyville community followed by examining the range of Whyville cheat videos that have been produced and posted on YouTube.

##### **4.1.1 Discussions of Cheating within Whyville Times**

Cheating has been a widely debated and deeply discussed issue in the Whyville community for more than two decades. For some, *The Whyville Times* offers a context to experiment with transgressive behavior; for others, it presents a platform to articulate moral positions and engage with peers. In our earlier work we identified discussions of cheating in Whyville in more than 100 articles written between 2000-2006 (see Fields & Kafai, 2010). Evident from the 181 articles published between 2007 and 2016, cheating remains a relevant and controversial topic. These articles lend insight into the rich and complex views held by many Whyvillians related to cheating not just in the virtual world of Whyville but also in real life contexts (see Table 1).

**Table 1. Categorization of Cheating in *The Whyville Times* between 2005-2016.**

<b>Whyville Times articles about</b>	<b>2000-2005</b>	<b>2006-2016</b>
Salary Raising	30%	3%
Ballot Stuffing/Whyville Elections	30%	20%
Smart Car Racing	20%	3%
Relationships	10%	14%
Scamming/Hacked	10%	48%
Other	10%	32%

Notably, the percentage of articles about scamming was five times higher in our latest search than it was ten years ago (more on this below). As shown in Table 2, an analysis of the topics covered in these articles revealed that nearly half (47%) of the articles were written about scamming. About half of these articles were written primarily from the perspective of Whyvillians who were victims of cheating, hacking, or scamming (9%) or who were warning against particular scams (15%). As an example, one author interviewed Whyvillians about their friends on the site (Monet1616, 2010). One interviewee described how a friend helped after a hacking incident: “he’s a great friend. When I got hacked, he called Whyville himself and got my account back.” In another example, a few Whyvillians created a fake scam situation on the South Beach in order to investigate how people would react (Xion2, 2011). They play-acted a traditional scam. One Whyvillian tried to join them (!) while another quietly warned the undercover victim. Both of these scenarios (the friendship example and undercover investigation) show a sense of citizen collaboration on Whyville.

We are not sure why there was such a proportionate increase in articles about scamming in the Whyville Times. It could be that Whyvillians were more aware of such scams or more outspoken in speaking out against them. In particular, the articles from victims and from those warning against scams suggest a more activist orientation on Whyville: a citizen-based approach to combat the transgressive practices. Another reason may simply be that there were fewer articles about raising one’s salary from science games (30% of the earlier study; 3% of the current study). Participation in salary-raising science games may have waned as so many other games and means of earning a salary were introduced on Whyville from 2007-2016. Regardless of the reasoning, the conversation about cheating in Whyville clearly shifted from more content-focused cheats (science games) to social cheats (scams), though both are related to currency in Whyville.

**Table 2. Subcategories of Scamming/Hacking and New categories from 2016 search.**

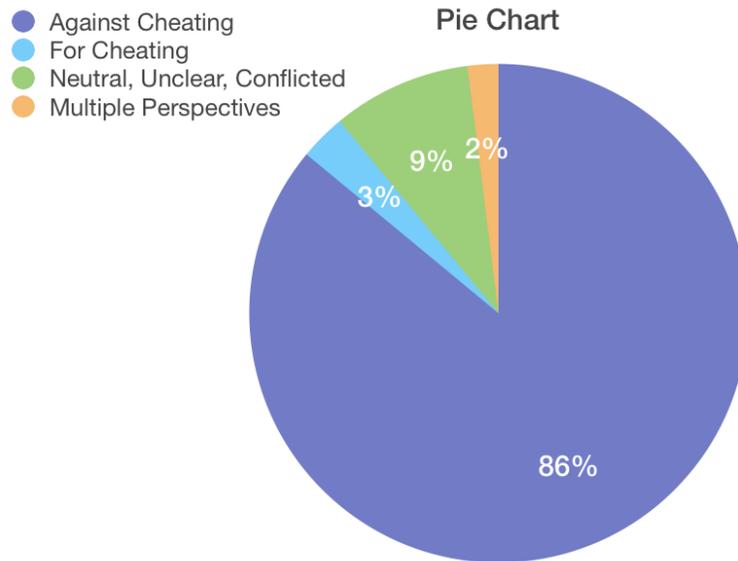
<b>Subcategories of Hacking/Scamming and Other Cheating (2016)</b>		
<b>Hacking/Scamming</b>	Campaign Related	10%

	General	13%
	Warning/Tips/Advice	15%
	Was Hacked + Hacker's Perspective	9%
<b>Other Types of Cheating</b>	Games Outside Whyville	3%
	Hacking Computers	5%
	Other	6%
	Real Academic Cheating	6%
	General Whyville Life, Games, and Contests	12%

There were similar levels of discussion about cheating in relationships (i.e., dating two people at once: in person and virtual), in 2006 (10%) and in 2016 (14%), as well as a marked decrease in articles addressing particular categories that were popular in 2006, such as Ballot Stuffing/Cheating in WV Elections and Smart Car Racing. In addition, new topics emerged in our 2016 search, including game reviews for external games (3%), cyber security and hacking networks (5%), cheating in real academic situations (5%), cheating in assorted Whyville contexts—such as trivia or puzzles published in *The Whyville Times*, the multiplayer game Simon Says, and Whyville beauty pageants and contests—(13%), and other articles that vaguely discussed cheating (6%). Articles in *The Whyville Times* show an intimate look about things that Whyvillians care about. They often include personal stories about experiences with various forms of cheating, though the perspectives range considerably as we show below.

#### 4.1.2 Perspectives on Cheating in Player-Written Articles

The articles in the 2007-2016 search showed a variety of perspectives on cheating (see Figure 1). Most articles in the more recent search (86%) were against cheating, as one author reflects, “A true Whyvillian never cheats, a true Whyvillian never hacks” (Cohenlm, 2008). These articles conveyed solidly held viewpoints that discussed cheating in a negative light. Only a few articles (3%) expressed positive views toward cheating, as in the case of guest writer SkUmBaG68’s unapologetic boasting about password stealing: “Do you know the easiest way to get clams in Whyville? I’ll bet you don’t know. I’ll bet you can’t even guess. Crime pays, baby” (2006).



**Figure 1.** Pie chart showing distribution of view on cheating in 2006-2016 search.

A small number of articles (9%) expressed neutral, unclear, or conflicting viewpoints. A number of these articles featured first person accounts and confessional testimonies of self-proclaimed cheaters. These articles revealed a variety of motivations and incentives, including the thrill of cheating, perfectionism, gaining advantages, mirroring other cheaters, maintaining high performances, and efficiency. In addition to the variety of explanations offered for cheating practices, there were various tones within the first person accounts, ranging from smug to conflicted and remorseful. Three particular examples offer insights as case studies. In her article “Hacking Secrets Revealed,” Whyville reporter aSiLaSeLf conducted an interview with a hacker, who explained a number of his strategies (2006). When asked how many accounts he had hacked, the hacker responded, “Seventy-eight, I’ve counted” and reflected on one particular hacking experience, “It was great!” While aSiLaSeLf included her own admonitions and warnings, the hacker’s tone remained positive toward his cheating practices, and he demonstrated no remorse.

In contrast with this positive tone, the author of “Confessions of a Cheater,” IKnewIt2, presented a more nuanced position (2010), framing her piece as helping “to get people to realize what cheating is, not to argue about [it]” (2010). Using the pronoun “we,” IKnewIt2 revealed her assumption that most of her peers cheat: “Cheating is something that we probably do once in our life. We copy an answer off of a test, or break rules to win; there are countless ways to cheat.” She justified her behavior by arguing that cheating is a necessary practice to keep pace with other cheaters and requires genuine effort. Her tone remained conflicted, but she ultimately placed responsibility for her actions on a perceived community of cheaters. Interestingly, despite her stance toward cheating, IKnewIt2 used quotations and cited her sources, demonstrating that fairness and attribution were important values to her. As a final point of comparison, an anonymous author wrote an article in 2011, also titled “Confessions of a Cheater.” In this article, the author conveyed a sense of guilt, providing a personal history of cheating incidents and ultimately concluding, “Don’t be like me. Don’t cheat. It’s never worth it.” Taken together, these

three first-person accounts show an array of experiences associated with those who identify as cheaters.

Finally, a small number of articles (2%) featured multiple perspectives from various Whyvillians, like holiday50's interview regarding cheating practices in Whyville's online games. In "Simon Says: No Cheating!" holiday50 expresses her own views and frustrations, reporting that "cheating is morally and willfully wrong" (2008). In addition to her own opinions however, holiday50 reached out to her peers, and they shared a range of views, such as, "I cheat all the time!! I cheat because, well, I lose. They say cheaters never win but I win all the time after I cheat" (HOTBOI764), and "Yes I have cheated before, but usually it's because I get frustrated because everyone else cheats and I want to play" (koopz1). Thus while the dominant position shared by many Whyvillians was against cheating, there were a range of expressions and experiences featured within *The Whyville Times*.

#### **4.2.1 Cheating in YouTube Videos**

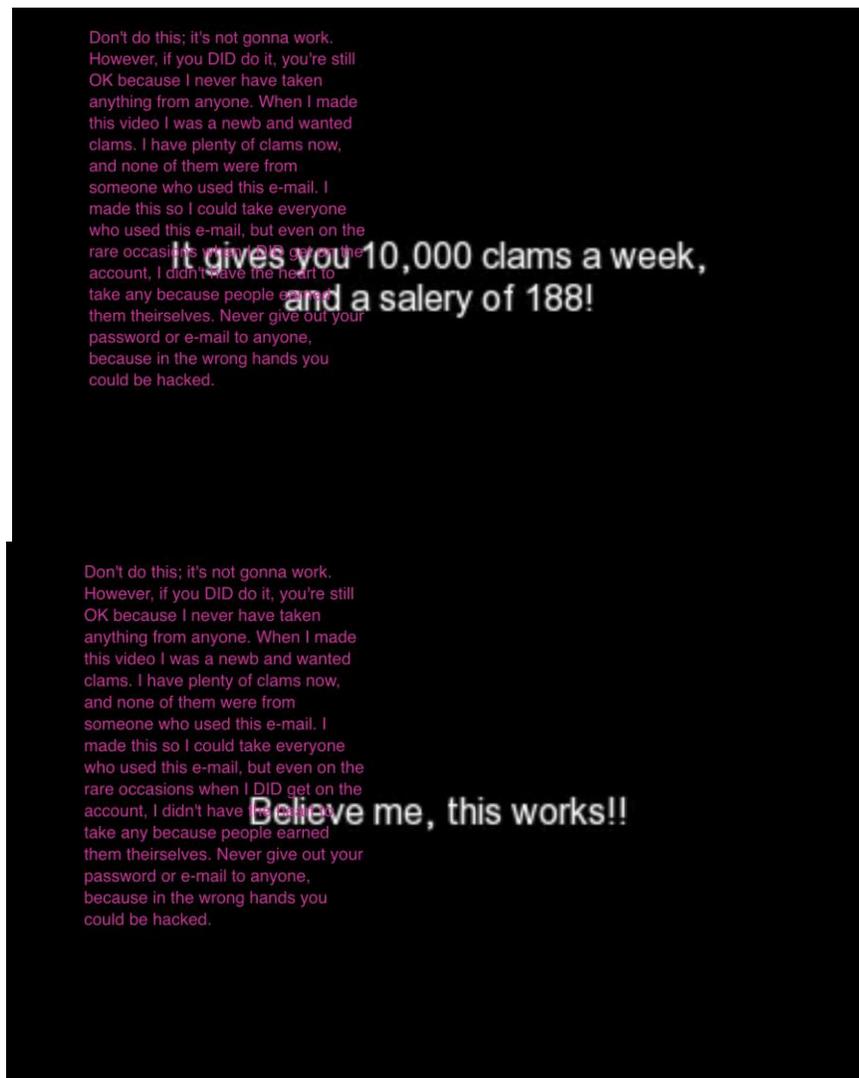
The player-posted videos on YouTube reflect a now common gaming practice of producing and consuming walkthroughs and other game-related content that is situated outside of the virtual world Whyville. Sites like YouTube provide an accessible format and platform for players to upload and disseminate their videos, without having to invest in the design and upkeep needed for a website. The content of our sampled YouTube videos could be categorized as Design Tutorials (50%), followed by Instructional Walkthroughs (26%), and Scams and Advertisements (24%). Design tutorials obviously represent the bulk of posted videos through which Whyville players can learn how to arrange clothing and face parts for their avatars in order create a unique and expressive look or design the very face parts. While these practices are not directly related to cheating, they represent an important part of Whyville culture, in which popular looks can boost players' standing within the community, and thus might lead players to venture outside of Whyville to seek out videos as resources. Instructional walkthroughs follow a common type of cheat in giving step-by-step directions for how to proceed through a game or a challenge. These could involve ways to play some of Whyville's science games or how to get through particular puzzles, available to players who might be seeking out help when they get stuck or cannot figure something out.

A large number of YouTube videos involved the recurring theme of scams (24%), in particular inviting unsuspecting Whyvillians to share their account names and passwords under the false pretense of gaining more clams (Whyvillian currency). While most of these videos were simple in nature, inviting unsuspecting players to fall for a trap, in one particularly dramatic example, YouTube user WhyvilleCheats posted a video called "WHYVILLE CLAM CHEAT!!" Viewers were encouraged to change their Whyville account email to whyville.clam.generator@live.com with the promise of "10,000 clams a week, and a salary [sic] of 188!" In an apparent change of heart, WhyvilleCheats retroactively added a comment to the video, advising viewers not to fall for the very scam that had been promoted (see Fig. 2). WhyvilleCheats' warning read:

"Don't do this; it's not gonna work. However, if you DID do it, you're still OK because I never have taken anything from anyone. When I made this video I was a newb and wanted clams. I have plenty of clams now, and none of them were from someone who

used this e-mail...Never give out your password or e-mail to anyone, because in the wrong hands you could be hacked.”

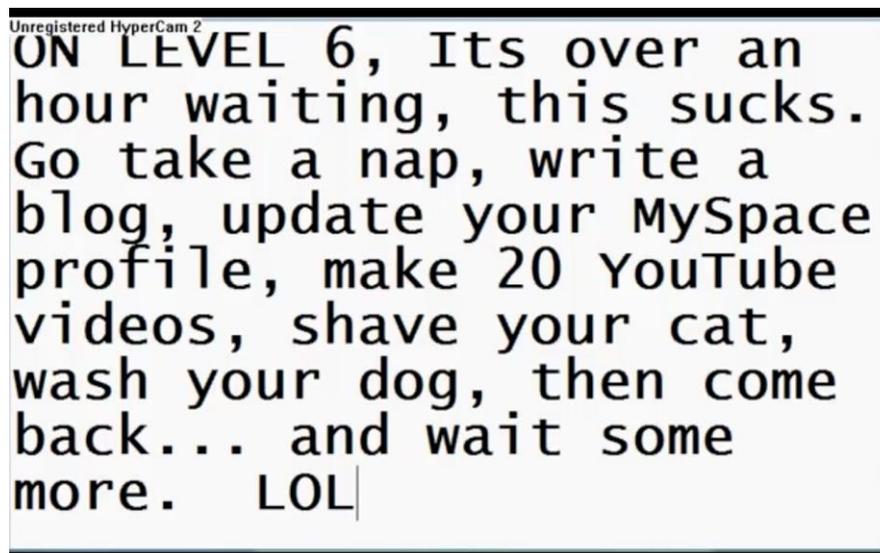
Despite this display of contrition, WhyvilleCheats’ video received mostly negative feedback in YouTube’s like-to-dislike ratio (1:10). Among the few commenters for the video, a number were critical toward the scam, including one who posted “Lol do u think we r dumb no one do this.” Interestingly, the fact that WhyvilleCheats decided not to remove the video has left the topic quite open for debate, once again situating cheating on Whyville as a pertinent topic of discussion for many Whyvillians.



**Figure 2.** Whyville scam on YouTube with retroactively added advisory (WhyvilleCheats, 2009).

#### 4.2.1 Perspectives of Cheating in Player-Produced YouTube Videos

While individual videos can be identified via keyword searches, YouTube also offers the option of setting up channels where players can present collections of videos. We investigated in more detail a channel of “Whyville Hints” which between January 2, 2008 and February 3, 2008 produced seven videos with walkthroughs, an advertisement for a cheat site (no longer active), and the audio recording of a song with a background image from Whyville. Walkthroughs are one form of cheats (Salen & Zimmerman, 2004) in which a player records online play with commentary that provides strategic advice and entertaining reflections. For example, Whyville Hints’ video tutorial for the WASA Rocket game on Whyville provided introductory text, as well as helpful instructions throughout the walkthrough. On level six of the WASA Rocket Game, Whyville Hints offered especially amusing commentary, voicing frustration toward the gameplay feature that requires players to wait close to an hour in order to advance to the next level (see Figure 3). Upon completion of the tutorial, Whyville Hints offered a final sarcastic remark, “Oh, that was sooo worth it, wasn’t it??” As demonstrated through this channel, YouTube videos offer a glimpse into Whyvillian life and creative expression.



**Figure 3.** Instructive tutorial includes humorous reflections about frustrating gameplay (WhyvilleHints, 2008).

Beyond the content of the videos themselves, Whyville Hints’ channel offers a number of other features to study. Whyville Hints had 16 subscribers, with each videos we analyzed sporting between roughly 800 and 24,000 views. The reception of Whyville Hints’ videos was mostly positive, with the six videos included in our research revealing more likes than dislikes. The comment section associated with each video functioned as another compelling point of analysis as well. As a site of discourse beyond Whyville’s chat restrictions, Whyvillians expressed their appreciation, derision, and questions through their YouTube accounts. Sometimes Whyvillians just sought out more information. For example, in response to Whyville Hints’ Zero Gravity walkthrough, one YouTube user asked, “How do we get there?” (2008). While the walkthrough itself provided useful information for game-specific content, some users sought more assistance to contextualize the information within the vast world of Whyville itself.

The comment section then served as an investigative channel to learn more about the game. In addition to content directly related to the posted videos, the comments also revealed broader discussions related to fair play, media choices for particular videos, and the general Whyville community. In response to the advertisement for Whyville Hints' cheat site, one YouTube user posted,

“People have been ‘cheating’ by getting tips from other players since the first games were introduced on Whyville. A true cheat would be a hack into a game and get points/clams without having to DO anything. The Whyville cheats are just walkthroughs, you still have to do all the work.” (see Fig. 10) (2008).

This argument about what counts as a cheat (Salen and Zimmerman, 2004) consider both hacks and walkthroughs on their typology of cheats) bears a striking resemblance to the discussions that were published in *The Whyville Times*, demonstrating that opportunities to reflect on the ethics of cheating exist in many contexts for Whyvillians.

## **5. Discussion**

Our analysis of cheating focused on a topic that by its very nature targets moral and ethical development of youth in digital publics. In the following sections, we discuss in which ways cheating impacts youth development, both the positive but also the problematic sides.

### **5.1 Positive Aspects of Cheating in Virtual Worlds**

We see the public discussions of cheating within and outside of Whyville as a positive feature for youth development because they introduce young players to the complexities of moral judgment. From the large number of writings in *The Whyville Times* and postings of videos and comments on *YouTube*, we gathered that cheating is not a secret; the controversies of cheating are openly discussed with many different viewpoints in the community. Our updated research looked more closely at youths' various perspectives of cheating, including changes in individual viewpoints (from cheating to regretting cheating) in confessional style writings and even in changes in scam-soliciting videos, the latter showing direct evidence of change (from scam to anti-scam) with a conscious decision to keep the conversation going by not deleting and hiding the damning video. Several articles also showed citizen activism in attempts to protect people from and support people after scams, demonstrating in-the-moment moral actions against cheating. All of these findings show that the moral and ethical thinking about cheating in Whyville continues to develop and be negotiated within community in that vast digital public.

Aside from being right or wrong, the players' posts and discussions about cheating also revisited its controversial nature in the gaming communities at large. We noted before how different stakeholders can hold vastly distinct positions on cheating, from game companies that promote and condone cheating to players who differ on when cheating is acceptable. Knowing about good cheats as a player might just constitute what Consalvo (2007) had in mind when she coined the term “gaming capital.” Indeed there are circumstances when specific knowledge on Whyville, such as teleporting (the only rite of passage to chat rooms such as Jupiter, Mars, or Saturn), is solely passed on through word of mouth (Fields & Kafai, 2009) or on cheat sites. In such cases having access to walkthrough hints would avail a new player of rich knowledge on how to navigate Whyville, constituting a type of game capital not easily found on Whyville without

someone's help. As in many other games, knowing shortcuts represents some form of insider knowledge and thus positions users and designers of cheats as legitimate participants of the Whyville community.

The presence of this large number of discussions and videos about cheating supports our argument that cheating is not just an individual act but also a community activity: it is negotiated at various levels of interpersonal relationships, from friends to strangers to the full digital public. In previous research on young people's perspectives on ethics in digital life, Flores and James (2012) found that individualistic perspectives concerned with just the participant were most prominent in their justifications, while ethical perspectives considering effects on the larger community were far less present. While Whyvillians provided both individualistic- and community-related perspectives in their articles, videos, and comment discussions, they notably did all of this in the community realm by virtue of being in fully public settings. As writers and commentators discussed how what they saw or did related to them, the public venues turned their personal judgments and reasonings into a shared community activity.

We contend that it is this very public nature of discussing the complexities of cheating—as bystander or participant—which can support youth players in coming to understand the norms and practices around cheating within their community. For those developmental researchers coming from a cognitive perspective, such public discussions can provide a context for individual players to challenge and revise their ethical judgements. For those developmental researchers coming from a socio-cultural perspective, these public discussions make transparent to players the socially negotiated and often complex nature of norms and allow players to become participants in the very same negotiations by contributing writings or comments. We realize that Whyville is a unique platform with its educational focus and supports provided, thus not be representative of many other commercial sites which are more restrictive in limiting the sharing of player comments productions (Grimes & Fields, 2018).

## **5.2 Problematic Aspects of Cheating Practices**

But we also need to address problematic aspects of cheating. While walkthroughs and hints might constitute relatively benign forms of cheating, the scams discussed in many articles and featured in nearly a fourth of the videos analyzed are obviously more problematic as they deprive players of their accumulated resources, even if they are virtual ones with no extrinsic monetary value. While the salary and clams are virtual, the pain of loss is real as we found out in observing one player's reaction in a prior study one player's reaction in a prior study (see Kafai & Fields, 2013). In fact, we were able to identify the moment when the twelve-year-old girl, Zoe, became a victim of scamming, how the very next day she turned into a scammer herself, then suddenly stopped two weeks later. Yet in our past work, Zoe's experience was hidden in the vast depths of data archives. In this current work we see examples where people like Zoe publicized their shift away from scamming in order to help others avoid similar scams.

It is here where the comparative nature of our analysis reveals troubling findings across a 15-year time span. We observed changes, for instance in the decrease of writings on cheating in science games and an increase in discussions about scamming, providing evidence that discussions and designs are sensitive to shifting norms and practices in and outside of the Whyville community. We can only speculate about possible ramifications in absence of any data

from individual targeted participants (other than the case of Zoe). This reported increase of scamming to gain access to virtual currency suggests that cheating is directed more towards individual users rather than the company which provides the science games. It indeed could be a troubling finding as it suggests that the interactions in this virtual community have changed, perhaps impacted by related increase in cyberbullying in youth social media use (Rideout & Robb, 2018). However, we have to tread with caution in this interpretation as we don't know to which extent the reported number of instances is reflective of the actual number of scamming instances. Furthermore, such reports could also be an indicator that young players have become more aware of the issue of scamming and thus report on it. Nonetheless, this high presence of scams in Whyville demonstrate the need to work with children and youth to help them understand how their actions in virtual spaces affect others as well as how to respond to people who may lie and cheat in ways that could harm them. Yet the conversation about scams also shows that Whyvillians themselves have started to take up this role, to be citizen activists and journalists, even changing their own behaviors as examples of what is right and wrong.

## 6. Conclusions

Whyvillians have given educators, families, and designers a starting point to build on for deeper discussion and practice. Digital publics, in particular virtual worlds like Whyville, may indeed provide unique opportunities to engage children and youth in thinking about ethical issues. Because of its nuances, cheating creates not only educationally rich but also psychologically problematic experiences for children and youth. It is a complex territory which children and youth need to learn to navigate in their play, in which rules are negotiated by players, often situated within the designs of powerful media companies, and where technology itself can shape and be shaped to provide educational and community supports for safe play (Grimes & Fields, 2012; Kafai & Searle, 2011).

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