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Your Second Selves

Player-Designed Avatars

**Yasmin B. Kafai,[1] Deborah A. Fields[2] and
Melissa S. Cook[2]**

Abstract

Avatars in online games and worlds are seen as players' key representations in interactions with each other. In this article, we investigate the avatar design and identity play within a large-scale tween virtual world called Whyville.net, with more than 1.5 million registered players of ages 8−16. One unique feature of Whyville is the players' ability to customize their avatars with various face parts and accessories, all designed and sold by other players in Whyville. Our findings report on the expressive resources available for avatar construction, individual tween players' choices and rationales in creating their avatars, and online postings about avatar design in the community at large. With the growing interest in player-generated content for online worlds such as Second Life, our discussion will address the role of avatars in identity play and self-representation as well as the social issues that arise within the game world.

Keywords

avatars, identity, participatory culture, situated play

Introduction

More than 20 years ago, Sherry Turkle (1984) wrote the influential book, *The Second Self: Computers and the Human Spirit*, that introduced the idea that

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computers were not just tools for work but also for exploration of oneself. In her
follow-up publication, *Life on the Screen: Identity in the Age of the Internet* (1995),
she expanded these investigations to include the new genre of the online game worlds
that created opportunities for players to assume a different identity such as adopting a
fictive name or assuming a different gender (Berman & Bruckman, 2001; Taylor,
1999). Today, players create their online representations, called avatars, in the form
of graphical designs that take on more and more realistic detail. These avatars are not
ephemeral and spurious creations: players spend considerable time selecting and
customizing them and then interacting with others online (Yee, 2006).

In contrast to most massive multiplayer online games where creating one's avatar
involves choosing from a menu of choices (race, profession, and gender) that the
designers created, in virtual worlds, such as Second Life, players are mostly
responsible for designing their own avatars and parts. This design feature has received
considerable media attention, perhaps because the possibility of being able to create a
virtual identity distinct from the one in real life touches upon core themes of human cul-
ture (Boellstorff, 2008). For young people, in particular, the development of identity
plays an important role as they decide which groups they identify with, what kind of
persons they wish to be within these groups, and what is required to become welcome
members (Larson, 2000; Lloyd & Duveen, 1992). Being online has become an increas-
ingly important part of their social life where they initiate and develop relationships
(Buckingham, 2007; Pew, 2005; Tapscott, 2008). Yet we know little about how tweens
negotiate their representation in virtual worlds as they transition from childhood into
adolescence. Most previous research has examined traditional playgrounds (Goodwin,
2006; Opie & Opie, 1985; Thorne, 1993). In this article, we want to turn our attention to
avatar design in virtual worlds as the new identity playground for tweens.

We have chosen to investigate the idea of virtual worlds as identity playgrounds
within the context of a large-scale tween virtual world, called Whyville.net. In
Whyville, all players have the ability to customize their avatars with various
two-dimensional face parts and accessories, all drawn and sold by other players
on Whyville. Most of the limitations posed by the menu-selection tools in commer-
cial games are not present. Hence, avatar design features in Whyville offer an unpre-
cedented opportunity to examine how tween players design and discuss their
representations while situated within a particular virtual world. Given broad choices
in creating avatars, how do tween players respond, and how do they conceptualize
their online visual representations in relation to themselves? In addition, how are
these representations situated in the larger social context of the virtual world? These
questions framed our research on the available resources for avatar design, players'
rationales in designing avatars, and constraints imposed by the community.

Background

As Donath (1999) observed "identity plays a key role in virtual communities"
(p. 27) because it is essential in communication and in the evaluation of interactions.

Early research concentrated on textual signifiers such as signatures and nicknames while recent research has focused on the graphical avatars and the functionality of specific design features for players, such as the uses of imaginary versus realistic representations, the levels of consciousness or purpose with which players express identities in their avatars, and the role of the medium (such as instant messenger vs. Internet relay chat) in influencing self-disclosure (Kang & Yang, 2006; Miller & Arnold, 2001; Schroeder, 2002; Schroeder & Axelsson, 2006). These aspects do have an impact on how players are perceived by others given that in virtual communities certain facial and auditory cues of real-life interactions are missing. In the context of commercial games, players are provided with menus of choices for selecting avatar types and for customizing clothing, hair, and other features of their appearance. Even here, Taylor (2003) illustrated how organizational, technical, and economic factors as well as values about immersion, identity, and legitimacy determine ways in which game designers structure virtual environments and the content available to players. In multiplayer games, players also choose avatars in relation to the roles they plan to play and thus customization of avatars often serves the purposes of communicating status and abilities to others within the overall game objectives (Gee, 2003).

By contrast, in virtual worlds the avatar types and customizations are designed by the players themselves rather than by professional designers employed by game companies. Because there are no assigned roles or races, players have a choice to create avatars that resemble who they are in real life in many aspects, and research in adult Second Life has indeed confirmed that many players choose to do so (Boellstorff, 2008). However, players are also free to create somebody radically different from themselves, not just in looks but also in behavior (Taylor, 2006). For this reason, players' ability to create avatars as representations of self online is closely linked to the concept of identity. These aspects of avatars make them particularly attractive for tweens as they transition from childhood into adolescence.

Avatar design can therefore allow tween players to explore different looks and to engage in anticipatory behavior of someone older or of different gender. This aspect of avatar design has a more playful quality than what Turkle (1984, 1995) observed in her studies of adults using their online experiences to examine alternative aspects of their identity—their second self. Indeed, we would argue that tween players are not in search of *the* second self but are experimenting *with* second selves—hence the title of our article. The idea of creating and exploring multiple selves is grounded in notions of identity that move away from conceptualizing a core or stable identity—as is posited in many classic psychological theories (Erickson, 1968). Instead, we draw from theorists who refer to the multiple identities or worlds someone inhabits (Holland, Lachicotte, Skinner, & Cain, 2001). Multiple identities are not just a part of adults' lives, but also children's lives, and such identities are arguably even a more salient issue for tweens to adopt and grow into. Hence we suggest the term identity playground to situate tweens' efforts at creating online identities.

Avatars designed by tween players might offer a particularly promising window into understanding how participants in these worlds (as designers and players) think about their representations of self in virtual life—to adapt the title of Goffman's famous treatise (1959). Goffman described how people negotiate and validate identities in face-to-face encounters and establish ways to evaluate the meaning of these encounters. He proposed to think about everyday life as a stage in which we perform ''face-work'' (1974) that may be defined as ''the positive social value a person effectively claims for himself by the line others assume he has taken during a particular contact.'' Virtual worlds like Whyville can be thought of as a stage where the tweens represent themselves and perform via their avatar creations. In our context, we would like to suggest the notion of an identity playground rather than that of a stage given the age and developmental agenda of our participants. The adoption of ''face-work'' in the context of avatar creation highlights the interplay between individual agency, i.e., what the player intends to accomplish, and social structures, i.e., the constraints imposed by community expectations that impact the representation of oneself.

For our study, we propose to examine three different aspects—resources, constraints, and agency—that situate the representations of self in avatar design on Whyville. As a starting point, we want to consider the ''expressiveness'' of the individual player (Goffman, 1974). The number and variety of face parts available to create one's avatar provide a good indicator of the expressive resources at hand for players to represent themselves with their avatars in Whyville. We also wanted to examine how individual agency comes into play by interviewing tween players about the choices and reasoning they used in creating avatars. Finally, we needed to understand how social constraints imposed by the community interacted with individual agency in avatar creation. As Goffman argued, ''if an encounter or undertaking is to be sustained as a viable system of organization ... then these variations must be held within certain bounds and nicely counterbalanced by corresponding modifications in some of the other rules and understandings'' (1974, p. 224). While there are many places where we could observe such rules or constraints, we decided to focus on a public forum and repository in which players discussed and created fashion guides about the adequacy of looks.

Methods

We used several data collection and analyses to understand how resources, agency, and constraints framed tweens' avatar constructions in Whyville: an analysis of the available avatar parts created by players; an online survey of participants' avatar activities; interviews with a group of tween players about their choices and rationales in creating their avatars; and the postings in an online newspaper, called *The Whyville Times*, about topics relating to avatar designs. To discover the full scope of expressive resources available for avatar design on Whyville, we selected a day, September 20, 2006, to visit Akbar's Face Mall and assess the variety and types

of parts for sale. We used the pull-down menus built into the Akbar's search tool to record the total number of parts for sale on that day (presented in the opening screen of Akbar's) and the number of parts for sale in each of Akbar's categories. Further, we also engaged in our own face part design to better understand the primary tool used to draw face parts. In addition, we each logged hundreds of hours on Whyville: shopping, trading, assembling, and even selling our own face parts.

We also included findings from an online survey that focused on different aspects of Whyville life and Whyvillians' interests in technology and science. Our sample counted over 438 Whyville players who were recruited via public announcements on the web site and provided assent and parental consent. The sample is representative of Whyville's gender (like Whyville's population, 68% of our participants are female) and age distribution (12.3 years median). Our online respondents were mostly in middle school level ranging between 10 and 14 years old. The surveys (split into three parts) were administered online and each participant received clams (Whyville's currency) for completing them. For this analysis, we selected mostly multiple-choice items that asked about players' general preferences for a range of Whyville activities such as avatar design, importance of salary and clams, and interaction with others.

To understand players' agency in avatar creation and their individual reasons for choosing certain looks, we conducted a series of individual and group interviews with tweens between the ages 9 and 12, who had spend between 3 and 6 months in Whyville in an after school club or a classroom. We started the interview with questions like, "How is your avatar like you and/or not like you?" "How often do you change your avatar?" and engaged in conversations about their avatars based on these questions. We transcribed interviews from 35 participants and analyzed them for the reasons why youth created their avatars the way that they did, listing every reason they gave and then grouping them into themes. Since some had more than one reason for making a particular look or changed their looks periodically, the themes are not mutually exclusive. Thus for 35 youth, we listed 44 reasons for creating a particular look and grouped those into four major themes, with two to four subthemes each. While one of the authors did the primary coding and grouping, themes were checked, revised, and rechecked by the other authors.

Finally, the primary means for studying the community constraints was combing through Whyville's weekly citizen-run newspaper, *The Whyville Times*, which is written (though not edited) by players, for articles pertaining to how the community perceived avatar creation. We used word searches to find relevant articles ("face parts," "avatar," "Akbar," and "fashion") and grouped the articles by theme, analyzing them for the impact they had on the social meaning of avatars. Searching the newspaper had inevitable limits for understanding community discussion on Whyville as a whole because one of the game designers performs the role of editor, and obviously not every article written by players made it into the weekly newspaper. Still, studying the formally written articles by players allowed for a systematic search, and turned up a number of different perspectives that form part of the social background of avatar design on Whyville.

Figure 1. Valentine's Day Beauty Contest in Whyville. Copyright with Numedeon, Inc.

Resources, Agency and Constraints in Avatar Design

Whyville.net is a large scale virtual world with over 1.5 million registered players (at the time of our study), which encourages youth ages 8−16 to play casual science games to earn a virtual salary (in "clams") which youth can then spend on buying and designing parts for their avatars (virtual characters), buying projectiles to throw at other players, or purchasing other goods. The general consensus among Whyvillians (the citizens of the virtual community of Whyville) is that earning a good salary and thus procuring a large number of clams to spend on face parts or other goods is essential for fully participating in the Whyville community (Kafai & Giang, 2008). Social interactions with others are the highlight for most Whyvillians and consist primarily of y-mailing (the Whyville version of e-mail) and chatting on the site where players are visible to each other on the screen as floating faces (see Figure 1). Players consider appearance to be important in Whyville for making friends and flirting with members of the opposite sex (Kafai, 2008). In other words, looking "good" is a way of demonstrating social status, and makes it more likely that people will talk to you. Beauty contests are frequent—both as formal Whyville-sponsored contests at special events like Valentine's Day (see Figure 1) and as spontaneous player-initiated contests with offers of clams for whoever looks best according to the initiator's opinion.

Resources for Avatar Design: Shopping, Assembling, Designing, and Selling

Since looks in Whyville are very important and often demonstrate relative experience in the world, the unadorned smiley faces of "newbies" (new players) stand out
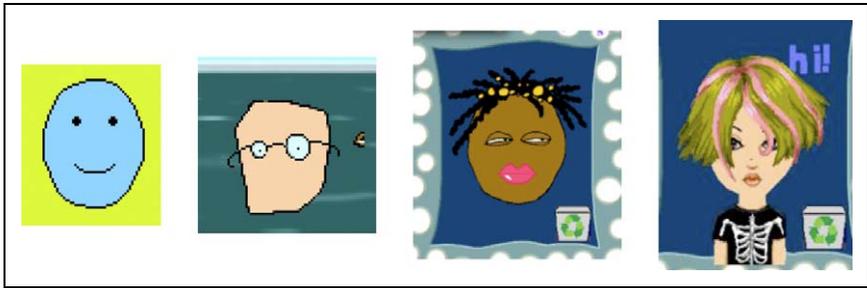
Figure 2. Progression of one author's face from newbie to "normal." Copyright with Numedeon, Inc.

(see Figures 1 and 2). One of the first tasks newcomers take on is creating a face. The first try at a face is usually not too attractive since new players have no clams and have to make do with donated parts gathered at Grandma's, the online charity in Whyville. This place is particularly popular with newcomers to Whyville, whose avatars are unadorned but also acts as a site of giving back. Over 91% of participants said that they had given face parts to Grandma's and they do so on a regular basis: 55% said they donate about once a month, 19% did so at least once a week, if not daily. The most prominent reason for giving is self-interest: 50% stated that they did so because they had too many face parts and wanted to be rid of extras, while about 15% felt motivated to do so because they wanted to help others and knew from past experience what it is like to look like a newbie. Few members (6%) stated they had not given to Grandma's.

Once a player starts to collect a salary, their spending money can be used on face parts designed by other players. These parts, sold at Akbar's Face Mall, are generally much more nuanced and carefully designed than parts available at Grandma's, as is visible in the contrasting faces that represent the progression of one of the authors in assembling her face (see Figure 2). Overall, face-work on Whyville can include three different elements, which we describe below: shopping for a face, assembling a face, and designing and selling face parts. By describing in some detail how to design avatars, we hope to convey the complexity of this activity and why it takes newcomers days, weeks, and months to learn to create a "good look."

Shopping for an avatar face. Shopping for a face means going beyond Grandma's donated "newbie" parts and presents Whyvillians with a rich opportunity for customization. As of September 20, 2006, there were over 30,000 face parts for sale at Akbar's Face Mall, including 1,679 player-owned stores that sold an average of 18 parts per store. To sort through this daunting number of choices, shoppers search for parts by name (for example by "santa" when looking for a Santa hat), browse stores by name (showing an affinity for a particular designer), or select a category

Figure 3. Categories of face parts for sale at Akbar's.

of parts from a pull-down menu. On this menu, there are 54 categories of parts. These are classified into nine major groups: face, hair, clothes, jewelry, makeup, pets, sports, food, and misc. Of these, face (10%), clothes (12%), sports (32%), and hair (32%) make up the majority of parts (see Figure 3). As Whyvillians ourselves, we can attest to the importance of good hair!

Within the major groupings, there are a large variety of face parts available. Each major group contains smaller categories of parts, and within each of these categories there are sometimes thousands of parts. For instance, the "face" group includes heads, mouths, noses, eyes, ears, and eyebrows, with mouths and eyes making up more than two thirds of the total face parts. A closer look at the available heads shows that they fall into roughly three categories, blank heads for face building, novelty heads (such as Halloween masks, animal heads, etc.), and the so-called "newbie heads," which seem to be marketed to new members as a one-stop shopping, a way to quickly get rid of your newbie smiley face and blend in before you are ready to customize your look (see Figures 4 and 5).

Assembling an avatar. After buying the desired face parts from Akbar's Face Mall, one goes on to assemble one's face, or "Pick Your Nose," as it is called in Whyville. There are cultural norms about the placement and layering of parts (be sure to put on your hair before your body or the hair will cover it up—as in the second picture from the left of Figure 6). For one of the authors' avatars shown below, getting the height of the eyes just right was challenging—too high and the hair covers them up too much, too low, and the face looks smashed together. Several steps in the development of a "look" are shown below. From left to right, the eyes are layered on the head; followed by nose and hair; addition of mouth, adjustment of the hair and layering the body on top of the hair; adding a necklace and beret, and finally changing the body and adding snowflakes as decoration on the beret (for a snazzy winter look).
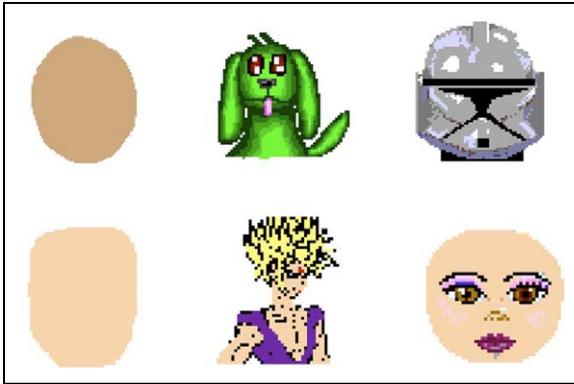
Figure 4. Assortment of heads available at Akbar's. Copyright with Numedeon, Inc.

Figure 5. Other various parts at Akbar's: Hair, skateboard, eyes, body, necklace, and beard. Copyright with Numedeon, Inc.

Designing and Selling Avatar Parts. Designing face parts on Whyville can be a difficult process, but many Whyvillians have apparently had great success designing and then selling their face parts. In the upper left of Figure 7 the initial choices are laid out for the artist including palette size and the category label for the part. All face part production costs clams, and the larger the face part, the more clams it will cost (in Figure 7 one of the authors attempted a head at the 200 × 200 pixel size, which cost her 100 clams to design and 20 additional clams each time she produced a part for sale). Once the category, name, and pixel size have been decided, the drawing area is revealed. The color palette is on the right and the four drawing "brushes" are on the far left—each is a square of different size (see upper right picture in Figure 7). The picture in the middle left shows a first attempt to outline a head with the largest brush in a dark brown color, shown as an X on the fourth palette down in the lower right of that rectangular assortment of colors. The "Preview" option allows designers to compare the face part with their current face (lower left). Finally,

Figure 6. Composing an avatar. Copyright with Numedeon, Inc.

when the design is done, players must confirm that they have met all qualifications for face design on Whyville on a checklist (lower right) and submit it for approval to City Hall. Once approved the face part is added to Akbar's face mall and potentially a player's individual or cooperative store. Over 70% of our online respondents stated that they had sold face parts at Akbar's, which also means that they had designed them. It is fair to assume that a major portion of Whyvillians' income is generated through the design and sale of face parts.

Another way of selling face parts is by going to the Trading Post, which allows the trading of parts. Quite a number of Whyvillians visit 1 of the 50 trading rooms. Each trading room has two chairs and a trading cupboard with three cubicles where a player can post items for trade. Traders can display up to three items for trade or purchase, and click a sign once an agreement has been reached between the two parties. Other visitors often observe the ongoing trades while hanging out in room, commenting on items in the display, or chatting up other visitors. Over 27% of our respondents felt that they could get a better deal in the trading room than at Akbar's and 31% felt that there was a better selection of merchandise. As one can imagine, it can be tricky yet exciting to learn the nuances of bargaining in Whyville; elsewhere we describe how one girl built up her expertise over a period of months at the Trading Post, making it a core activity in Whyville (Fields & Kafai, in press).
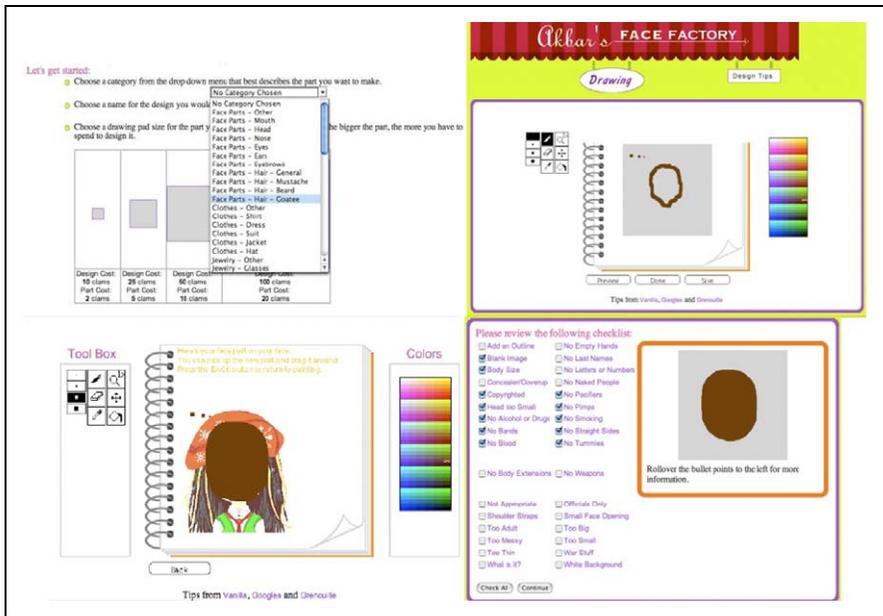
Figure 7. Designing face parts: Initial choices, drawing palette, preview, and checklist for approval. Copyright with Numedeon, Inc.

Agency in Avatar Design

One of the first questions we asked tweens in their interviews was whether their avatar was like them, and how or how not. In almost every case the tween said no, though they qualified their answer when pressed. Consider the way Kelly responded to this question:

> Interviewer: How does your face look like you?
> Kelly: I have brown hair and I have a nose and –
> Interviewer: And how's it different?
> Kelly: I don't have a bear head and my hair is a lot longer and I don't wear those
> shirts.

Kelly's answer of the obvious, "I don't have a bear head," demonstrates the falsity of our question. While we as researchers had assumed that constructing a look would usually involve intentional and explicit physical rendering of oneself (though that might sometimes give way to fantasy play),[0] Kelly firmly shut down this assumption. The corpus of interviews reveals a mix of broader self-representation, aesthetic production, and functionality as motives for creating particular avatars.

Why this look?. Overall, there were four main reasons that tweens gave for making their avatars the way they did: the pure aesthetics of a look (10 tweens), to embody

some aspect of their "real" selves (21), to align oneself with or against a popular trend (7), and for a functional reason like disguise (6). As we discuss below, these motivations illustrate some of the tensions within avatar construction, particularly between making an avatar for one's own pleasure versus the recognition of others.

The first reason for designing avatars a particular way was for the pure aesthetics of the look. For instance, some of the tweens would experiment with different themes to design their avatar, in part as a challenge: "I try to pick themes and sometimes they are dorky I think, but I just try to have fun and change it." Others simply made a look that they thought was good: "because I liked it that way." And others seemed to rise to an artistic level of design, looking for matching parts or patterns: "I just wanted all of this black and on the background I wanted to see more patterns." Seeing avatar design as an aesthetic project illustrates some of the fun and artistry of this activity. It is enjoyable to make something neat looking, regardless of whether others think it is cool or whether it represents oneself other than demonstrating one's creative taste.

Yet most tweens also made their avatar in some way like themselves. Sometimes this was in relation to their physical appearance (a chin, eyes, skin color, hair length), personal likes ("we both like to wear necklaces") or personality (changing colors like a girl's "spontaneous" personality). Other times tweens used their avatars to show affiliation with something or someone that the tweens liked, such as a video game character, relative, hobby, or nationality. For instance, one boy created his avatar because, "I like Dragon Ball Z and he looks like someone from Dragon Ball Z," while another layered a Canadian flag over a popular hat "because that is where my mother was born and I lived there for two years and that hat was really popular." We know that these displays of affinity sometimes led to friendships on Whyville—conversations would start based on observations of shared interest in something displayed on a player's avatar. Players would also use avatars to play out a desire for something they could not have in real life either because it was not allowed ("I want to get a haircut like that but my mom won't let me") or because it was impossible without major plastic surgery ("pretty lips"). Choosing which personal characteristics to embody, decorating avatars with video game characters or flags, and playing out personal desires all show the way that avatar design in Whyville is like an identity playground, experimenting with what aspects of oneself to show or not show, and what fantasy elements one might bring in.

Of course, while the first two reasons demonstrate the tweens' personal tastes in designing avatars, the third reason, aligning with or against a popular Whyville fashion trend, illustrates how the virtual world pushed back on avatar design. As one boy expressed it, "I've been buying a lot of animated parts, yeah, that's pretty much it, cause animated parts are like the cool thing on Whyville I guess." Or as another tween explained, "We were taking people's looks." Though one tween purposefully built his look to go against fashion, these quotes demonstrate some of the cultural pressure to "fit in," which we delve into further in the section concerning articles in *The Whyville Times*.

In contrast to all of the above motivations, some tweens focused on functionality rather than appearance. Several tweens chose to change their looks often, so that they could be disguised and "terrorize" other Whyvillians, or sneak up on other people to eavesdrop or throw projectiles (a common pastime in Whyville). As one girl described:

> I sort change often and people would not recognize me because I sneak into people's conversations – sometimes they say like, "Who are you!?" Sometimes and then I say like, "blah blah blah", and sometimes I say the truth that I am from the 4th grade class or something.

By changing her look frequently, she could appear as a stranger to her friends on Whyville, sneaking into their conversations and then surprising them with her "real" identity. This too relates to the idea of an identity playground, changing one's looks, deceiving one's friends, and seeing how they react. It also ties into some of the motivations for creating multiple avatars.

Creating multiple selves. It is a common practice on Whyville to have more than one account. Although most tweens reported changing their look frequently (if not daily, then weekly or biweekly), having another avatar goes beyond than just changing one's look: it is an entirely different player account with a different name. This mainly allows tweens to earn more clams because they can build up the salary on their second (or third, fourth, fifth, and even tenth) account and send those clams back to their primary account, making them very rich indeed. However, alternative accounts can have other functions such as disguising oneself from one's friends or experimenting with gender, as in the case of one sixth-grade girl named Bev. As she puts it, "[My second account] is a boy! And it's called cuteguy and I just made it for more clams, but sometimes when I am bored I hang out in that account." Hanging out in a different account (particularly one with a different gender) while bored hints at more identity play—experiencing how people react to a different appearance. After all, the sites and activities on Whyville are all the same, but playing through a different avatar can allow for a different experience of the virtual world.

This experiencing Whyville with a different avatar illustrates why in some cases multiple avatars are recognized as legitimate citizens in their own right (though they are not condoned for money-making purposes). For instance, in the regular senator elections on Whyville, stuffing the ballot (creating multiple avatars for the sole purpose of casting a vote) is considered immoral by most citizens and critiqued in *The Whyville Times* (see also Fields & Kafai, 2010). However, the founders of Whyville, as well as some citizens, believe that if multiple avatars created by the same person are involved in Whyville and not just used as additional wage earners, they should be given the rights of normal citizens. As the adult editor of *The Whyville Times* expressed in response to an article on ballot stuffing: "if you do use your additional accounts on a regular basis—if they're 'alive,' real citizens of Whyville – those

accounts probably should have a right to vote too, don't you think?" (Wildfire, 2004).

## Community Constraints in Avatar Design

Our searches through the archives of *The Whyville Times* demonstrate that avatars, looks, and fashion are important topics of discussion in Whyville. First, Whyville writers used the phrase "face parts" quite frequently. In fact, we found it in no fewer than 587 articles over the past 7 years, roughly equal to two articles per week. Second, the Whyville community discusses fashion and looks habitually. In our search under the word "fashion," we found 294 articles that mentioned the term. Reading through a random sample of these showed that at least 75% of these directly pertain to Whyville fashion (i.e., avatars), not including other articles we found about looks on Whyville.

So what do Whyvillians have to say about avatars, looks, and fashion on Whyville? First, they openly share opinions about how to look good, where to shop, and how *not* to dress. For instance, layering eyebrows on top of hair rather than underneath is apparently uncouth to some. In addition, many authors shared tips about designing face parts and getting those designs approved for sale (going through the red tape). Some also criticized Akbar's for excluding their designs, delaying approval, or posing constraints on what was allowed (e.g., no below waist features on bodies).

Yet not all Whyvillians are consumed by what looks good or the logistics of making and selling parts. There were quite a number of authors concerned with using face parts for a cause, encouraging originality instead of popularity, confronting discrimination against the less good-looking of the community, and even crying for equal racial representation (literally "color"). Because looks are so important on Whyville, it is not surprising that when citizens have a cause to fight for (such as saving the town of Whyville), they would support it sartorially in much the same way fashion is used for social and political action in real life (think of all the T-shirts that advertise various causes). In addition, there were many writers who confronted those who made fun of others for unusual looks. Challenging pressures to look a certain way, one anonymous author said:

> (T)o meet a person with the courage to stand out and express him or her self with face parts is very rare to find these days .... Have variety in your appearance! Take advantage of life and the choice of so many face parts! (Unknown Author, 2002)

This discrimination largely falls along class lines as newbies have less money to buy face parts. Further, several authors broached the issue of race in Whyville in the guise of a lack of non-peach colored heads and bodies. The activism surrounding racial representation on Whyville initially led to a change in newbie head color from peach to blue, as well as an increased number of various shades of tan, brown, olive,
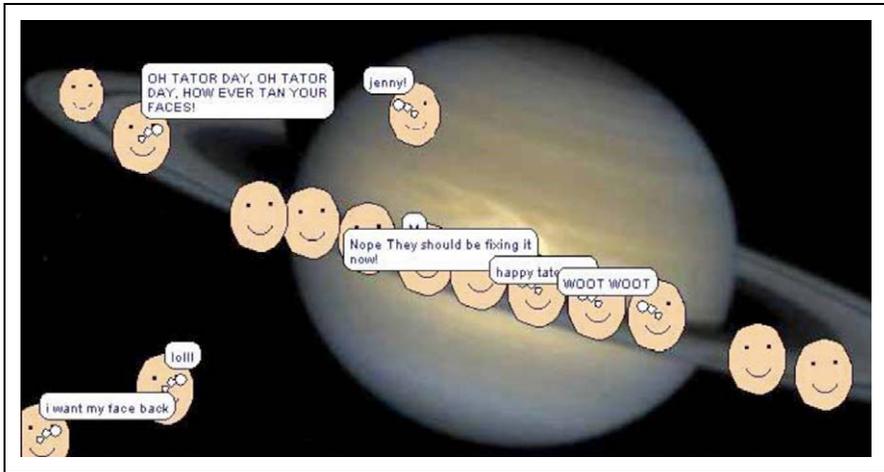
Figure 8. Whyvillians celebrate Tator Day. Copyright with Numedeon, Inc.

and yellow heads and bodies (for a more in-depth analysis, see Kafai, Cook, & Fields, 2010). More recently Whyville provided new citizens with more options for their first look—six choices each for heads (of various realistic skin tones), noses, hair, bodies, eyes, and mouths.

A computer glitch becomes a community event. The division and search for unity on Whyville reached its pinnacle in the citizens' interpretations of a computer glitch that came to be known as Tator Day. The history of Tator Day is an interesting one. Newbies (new players) on Whyville were given smiley faces when they start, and were often called the derogatory nickname "tator," probably because the faces look like pale, oblong potatoes. Starting in January 2005, occasional glitches in the server that stored face parts caused all faces on Whyville to resort back to the newbie, or tator, face. This came to be known and written about as "Tator Day." While it was accidental on the designers' part, many Whyvillians began to celebrate Tator Day as an equalizing event, where the rich and poor, popular and unpopular, and newbies and oldies were no longer distinguishable. As one Whyvillian wrote in *The Whyville Times*:

Even though this day may not have been intentional or sent by the City Workers, even though it may have been just a computer glitch, I still grasp it as a day of acceptance, for many people. This day may just slightly bridge the gaps between all the stereotypes in Whyville. (Sweden, 2005)

In fact while some complained about losing their face parts for a day, many Whyvillians enjoyed Tator Day as a community event, collaboratively posing for pictures (see Figure 8), playing practical jokes (telling people who just logged on that they were the only ones who had newbie faces and they had lost all their face parts), and generally greeting each other with "Happy Tator Day."

Discussion

Our article title referenced Sherry Turkle's seminal publication *The Second Self* (1984) and examined various aspects in tweens' avatar creation as representations of selves in Whyville. We put forward the notion of second selves because it became apparent in our investigation that tweens venture out in multiple guises. The abundance of expressive resources, the large number of postings in the community forum about their experiences, and players' own multiple rationales speak of the relevancy of creating second selves. Like others before, we assumed a developmental need for tweens to create these online representations, but we are also cognizant that life online provides room for multiple and flexible representations. Virtual worlds are uniquely suited for identity play because they provide such a rich variety of self-representational resources.

Yet within Whyville, we also see that some of the resources, such as the face-part construction tool, are complex and require much practice before a player can pull them off with skill. This means that some aspects of the identity playground are differentially available depending on players' skill and status within the game itself. In the interviews, we observed a wide variety of agencies and creative roles embraced by tweens. In addition, tweens played with the rules of the community itself (by creating multiple accounts) to expand their own creative scope (and to make more clams). The subset of citizens who voiced an active critique of the community's typical relationship with face parts demonstrated tweens' abilities to not only participate in community practices around self-representation but to critically reshape those practices. It is clear from the exhortations to "have variety in your appearance" in the *Whyville Times* and from some community members' glee about the leveling effect of Tator Day that players were conscious of a social pressure constraining avatar construction. These pressures may parallel the very real social constraints tweens sense in face-to-face peer assessments of their appearance, dress, and manner in their real lives.

There are various ways to interpret what we heard tweens discussing about their avatars. Scholars like Turkle have argued that participation in online activities should be considered as a sort of identity workshop for players (Schroeder & Axelsson, 2006). Such attributions would assume a conscious effort on behalf of players to examine aspects of who they are. We think a better fit is the notion of an identity playground that can serve multiple purposes—such as those listed by our interviewees. While gender play or swapping is perhaps one of the more prominently discussed aspects of online life (Berman & Bruckman, 2001), changes in Whyville can be more subtle—adding different accessories or mood elements that provide signals to others moving beyond looks. If we apply our notion of an identity playground to interpreting these nuanced changes, we can imagine how places like Whyville support a fluid notion of virtual identity, changing things little by little, experimenting with various looks (and even race and gender), playing with representations of one's real self or a fantasy character, using various affinities to build different

friendships, even using appearance for social activism. To encompass these many influences in creating a visual online identity, Leander and Frank (2006) suggest the idea of ''lamination.'' The idea of lamination allows us to describe the way that multiple motivations can coexist, revealing ''the traces of social, cultural, and personal resources, and continu[ing] to recognize tensions and contradictions among these resources'' (p. 187). This describes identity play in Whyville rather well—there is aesthetic pleasure in creating a good look, personal motivation to represent oneself in some way, pressure from the social environment (which also provides many resources for avatar design), and functional goals like disguise or surprise.

Although we have used many kinds of data for our analyses of avatar designs in Whyville, there are limitations to our interpretation. Notably, the interviews were conducted after 3 months in Whyville, rather than periodically through the life of the tweens' avatars. Interviews and surveys rely entirely on self-report and thus capture tween's ideas and preferences at this particular point in time. We also did not capture the avatar designs created by Whyville players and nor charted them as they may have changed over time. Studying avatar development over time would give us a different lens on the experience and its relevance to tween players. In additional research, we examined minute by minute of one girl's learning to participate in Whyville over 6 months and identified some of the tensions and challenges of creating a ''good'' avatar on Whyville (Fields & Kafai, in press). Moreover, we have some evidence that tweens' publicly stated reasons for avatar design conflict with their online activity (seen in tracking and chat data) in Whyville, when they think no one from their real life is looking.

Further research is needed to examine how individuals use the broad resources of this environment to play and experiment with appearances, even to the point of transgressing situated social boundaries, including flirting, cross-dressing, and supposed anonymity (see also Kafai, Fields, & Giang, 2009; Kafai, Fields, & Searle, in press; Searle & Kafai, 2009). In designing their avatars, players create and negotiate representations of themselves in online spaces that have become the new digital public (Boyd, 2008). Our responsibility is to make virtual worlds developmentally appropriate playgrounds that support tweens' transition from childhood into adolescence.

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Bios

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Deborah. A. Fields has an MS from the University of Wisconsin-Madison's School of Education and is a doctoral candidate at the Graduate School of Education & Information Sciences at the University of California, Los Angeles. With extensive experience working in areas of informal education, her research focuses on learning across spaces, peer-to-peer learning & teaching, and play. These interests have guided her studies in virtual worlds, science, and math in both formal and informal contexts. Currently, she is studying two sixth graders intersecting identities from different social spaces in their lives. Her recent work has been published in the *International Journal of Computer Supported Collaborative Learning,* the *International Journal of Science Education,* and *On Horizon.*

Melissa Cook is a doctoral student at the UCLA Graduate School of Education & Information Studies, where she focuses on how kids learn to participate in science discourses and begin to identify with science. It was this combined interest in science education and identity construction that led her to Whyville.