

MULTI-USER DUNGEONS/ DOMAINS (MUDs)

Multi-user dungeons/dimensions/domains (MUDs) are a text-based form of multiplayer online computer game. MUDs combine elements of *Dungeons and Dragons*-style role-playing games with Internet-based chat. Although somewhat overshadowed in recent years by the profusion of graphical video games, MUDs still maintain a following among children and adolescents and are notable for emphasizing social interaction and imagination in computer game play.

OVERVIEW AND HISTORY OF MUDS

MUD originally stood for multi-user dungeon, and most early MUDs were essentially computer versions of the popular high school dice-based role-playing game *Dungeons and Dragons* from the 1970s. Both types of games immersed players in a Tolkien-esque fantasy world of the imagination. The first Multi-User Dungeon was programmed by Essex University students Roy Trubshaw and Richard Bartle in the late 1970s. Building on the foundation of earlier single-player text-based computer games, they created a virtual space in which a user logs on, creates or opens a character, and then reads descriptions of places, objects, and others in the fantasy world. To interact, the player types words or commands. As a typical fantasy MUD game progresses, players work together to fight monsters and find treasure, thereby advancing their characters and gaining more experience and power. After its creation, the fantasy adventure-style MUD dominated for the next 10 years.

Following fantasy MUDs, other types began to appear, such as science fiction adventure-themed MUDs and MUDs with the adventure component completely removed. This latter type of MUD, called *TinyMUD* by creator James Aspnes in 1989, stressed social interaction over combat and gave users the power to extend the virtual world of the MUD using a simple programming language.

Numerous MUDs currently exist, with a wide variety of themes popular with children and teens. As of September 2005, the portal website, MUD Connector.com, lists more than 1,800 different MUDs, including ones based on specific fictional universes (e.g., *Harry Potter*, *Star Wars*), MUDs based on general fictional themes (e.g., horror, superheroes), religious MUDs,

historical MUDs, educational MUDs, and purely social MUDs.

CHILDREN, ADOLESCENTS, AND MUDS

Pioneering MUD scholar Sherry Turkle suggests that it is not uncommon for children as young as 8 and 9 to play MUDs, featuring grade school favorites such as *Barbie*. Indeed, an examination of the MUDs listed on MUD Connector.com reveals a number of MUDs focused on fictional universes popular with children and especially adolescents. In addition, related forms of adolescent computer games are now taking place on Web message boards (e.g., "play-by-post gaming"). Few studies have focused specifically on this young segment of the user population, but a notable exception is the work of Amy Bruckman, who began a social MUD for children called MOOSE Crossing in the mid-1990s.

MOOSE Crossing was created to allow children age 13 and under to construct virtual worlds in a supportive community environment. Kids who enter this MUD can create virtual objects such as magic carpets and imaginary pets and build virtual rooms and cities, using a basic programming language. Visitors to MOOSE Crossing may also interact with other users from around the world. Bruckman's work on the effects of MOOSE Crossing suggests that this type of MUD teaches children creative writing, computer programming skills, and a constructionist approach to community building, in addition to being more intellectually engaging than graphical media.

MUDS AND IDENTITY EXPLORATION

Several authors have looked at the use of MUDs for identity exploration. Because they are faceless, anonymous realities, MUDs provide many users with a stage on which to construct and role-play different personas, including the opposite sex. Bruckman suggests this type of MUD play causes users to notice and reflect on gender issues in basic human interaction. MUD identity exploration can also have therapeutic effects, such as when introverts play extroverted characters or teens with family difficulties attempt to play from the perspective of a troublesome family member. Work by Turkle suggests that MUD role-playing often has the positive outcome of helping users work through issues of personal identity.

RELATIONSHIP DEVELOPMENT THROUGH MUDS

The use of MUDs for building interpersonal relationships has also received some scholarly attention. Sonja Utz examined friendship development in MUDs and found that 77% of a sample of 103 MUD users reported having relationships with others online. In addition, participants who were low in skepticism toward computer-mediated communication (CMC) and who used paralinguistic features of MUDs to express feelings and emotions were more likely to develop friendships.

ADDICTION TO MUDS

There are also potential negative consequences of MUD play, the most prevalent of which may be addiction. Psychological addiction to the Internet and electronic games has been documented, and this phenomenon may be strongest among adolescents involved with social virtual worlds such as MUDs. Some MUD users interviewed by Turkle reported playing 10 to 12 hours per day and even in excess of 80 hours per week. Playing this frequently could negatively impact school achievement and more.

THE FUTURE OF MUDS

What will MUDs look like in the future? Most likely, the same as now, even though the mainstream of the computer industry continues to emphasize technological advancements. Some MUDs have incorporated basic graphics, but the essence of these experiences lies in text-based interaction. Popular new graphical social games such as the Massively Multiplayer Online Role-Playing Game (MMORPG), which have roots in the MUD, exist now to bring player-rich visual experiences, but MUDs still have advantages over these more advanced games. MUDs remain free, at a time when many multiplayer gaming worlds have a monthly fee. MUDs also enjoy many of the benefits that print media have over graphical and moving image media. As a result, they should continue to provide children and adolescents with rich sustenance for the mind and imagination for many years to come.

—Paul Skalski

See also Electronic Games, Addiction to; Internet Use, Addiction to; Internet Use, Social; Online Relationships

FURTHER READINGS

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MUSIC, GROUP IDENTITY AND

Around the age of 8, children begin developing an increasing sense of independence and enter a period of transition from parental guidance to self-determination. The transition involves a shift away from a family-centered existence toward one that favors peer affiliations. This move toward independence is evident in adolescents' increasing control of their media choices and changes in their media exposure. For example, by the age of 15, adolescents appear to decrease their exposure to television while increasing their exposure to music through radio, CDs, and MP3s. Music, particularly popular music, has the potential to be a defining characteristic for the formation of interactive peer groups. In fact, the amount of music listening has been directly associated with the amount of time a youth spends among friends as opposed to family. Furthermore, one of the remarkable aspects of the role of music preference in adolescents' selective association with peers is that it can inspire connections that are independent from notable social barriers such as class.

Adolescents' music-related expression has been likened to a badge of distinction or conformity. Those who display associations with music such as hard rock or rap may do so to set themselves apart from the norm, whereas those expressing connections to mainstream pop music may be displaying signs of conformity to the norm. Either way, the displays of music preference can be relevant sources of information for adolescents to use in the process of selective