

GAMING THE SYSTEM: A Numismatic Primer for Video Games

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Introduction

Coins and video games share a short, complex history beginning with the first mass-produced coin-operated arcade game, *Computer Space* (Nutting Associates), in 1971 (fig. 1). Atari's *Pong* debuted a year later (fig. 2), ushering in a new generation of diversions at bars and pubs, and later became a fixture in arcades worldwide. The humble US quarter—or its proxy token—was the key to unlocking minutes (sometimes seconds) of fun for millions of people.

It wasn't until video game consoles (e.g., Atari 2600, Intellivision, Nintendo Entertainment System, etc.) became common in homes in the 1980s that coins changed from being the medium of exchange with which to play games to being used as currency within games. This leap inadvertently created a new subfield of numismatics, which is only just beginning to be explored.

It is the study of the material culture of the immaterial. While video games of the 1980s such as *Mario Bros.* (1983) used clumsily rendered gold coins as tender that could be exchanged for points and prizes (fig. 3), contemporary games such as *World of Warcraft* use dozens of modes of currency including coins, tokens, chits, and other payment media (fig. 4), creating a robust in-game economy while simultaneously creating the modern phenomenon of “gold-farming,” where items collected and sold within the video game are exchanged for real-world money.

Numismatics no longer needs to confine itself to the currency of real-world civilizations and cultures past and present. Its rigorous methods can now be applied to the history and use of currency in virtual worlds, in

discovering and collecting within these games—often to extraordinary collector values for rare items—and later to the minting of commemorative medals in the real world to celebrate the launch of new video games, and to the creation of real-world reproduction coins of those used in the games themselves. The lines between the virtual and real are blurred, leaving numismatists with ample material for study.

As of this writing, no one has taken a systematic approach to the study of currency in video games of any type or time period, from side-scrollers of the '80s (where players move their character from right to left in a “flat” world) to role-playing games (RPGs) of the '90s to massively multiplayer online role-playing games (MMOs) of the '00s and after (other than fans creating wiki pages cataloguing coins and other currency as finds). How is gaming currency used, by whom, for what purpose, and how was it acquired, and from where? Is the currency purely functional, or is there history, too? As the subdiscipline of video game numismatics grows, numismatists of the virtual world should consider the following for individual games and series, as well as all video games taken as a whole:

- For currency found in-game, document its material of composition (e.g., gold, crystal, paper, etc.), findspot or location of a “drop,” (i.e., what opponents leave behind after they are dispatched by a player), place of production (i.e., mint or town), denomination, era (“old” vs. “new” coins), image/design, if the currency is to be used as such, or if it is treated in a game as an artifact.
- Create a history of currency used in game series (e.g., *Elder Scrolls*), exploring how the currency changes

Fig. 1: Computer Space (Nutting Associates, 1971) was the first widely distributed coin-operated arcade game.



from game to game within the series.

- Create a master list of all coins employed in all games including images, context, and function.
- Record “drops” of currency as well as types and amounts retrieved from looted corpses (and from successful pickpocketing attempts in games that allow/encourage that behavior). Use this information to learn about cross-cultural trade and inter-city (and/or regional) commerce.
- For coins with busts on them, research the history of the person/deity depicted. For those with symbols/iconography, report on their use and interpretation. Look for mint stamps. Translate inscriptions. For historical games, compare how the coins are depicted to those from the real world.
- Ask whether the coins that are found in-game can be used archaeologically (e.g., for establishing a secure date for something).
- Are there in-game non-player characters who are depicted either as coin collectors or numismatists? How are they portrayed in a game?
- Are there numismatic achievements (player accomplishments) that are deliberately part of a game?
- How often does currency appear in a funerary context in a game, and in what other contexts can currency be found? What purpose(s) might the currency have in such contexts?

To begin these numismatic explorations of the material culture of virtual spaces, one must begin at the beginning with the first virtually minted coins.

The Mario Universe

It all started with a pair of Italian plumbers—Mario and Luigi—fictional brothers created by Nintendo, one of the corporate video game giants of the 1980s (fig. 5). In 1983’s *Mario Bros.*, generic yellow coins appeared from the ends of pipes after defeating enemies (fig. 6). Players then chased these rolling coins, converting them into points on the way to high scores. Rare, these coins could not be used to purchase anything and contained no visual embellishment. *Super Mario Bros.* followed in 1985 and offered an additional bonus for coin collectors: for every 100 coins gathered, the player earned an extra life and the ability to continue playing.

The *Mario* series contains over 50 games and spin-offs published over the past 30 years, and as the games

advanced in complexity and scope, new coins and economics were introduced. In 2014, the range of coins across all *Mario* games includes these types: yellow, red, blue, purple, “?”, dragon, star, frog, ace, advance, moon, green, and Mario (fig. 7). The coins vary in rarity, some being available only in hidden rooms or levels, and have variable uses. For example, frog coins in *Super Mario RPG* (1996) can be used only with amphibian characters who accept these as payment for rare items in the game (fig. 8). *New Super Mario Bros.* (2006) contains hidden star coins—over 200 in the set in the game—that unlock secret levels when a player completes the collection. In *New Super Mario Bros.* (2006), star coins are collectibles that when discovered add 1,000 points to a player’s score (fig. 9).

Because the *Mario* games are played worldwide, the universal coins do not contain legends, nor are there traditional obverses and reverses. Instead, the coins are often stamped on one or both sides with simple iconography—most often a star, but occasionally with a slot, a question mark, or a frog, dragon or moon. Ace and advance coins are stamped with an “A”, however. All of these games capitalized on the player’s desire to collect coins as an end-goal to mastering levels of game-play throughout the series, and to reward those most diligent collectors who went out of their way to find all of the hidden coins. *Mario*’s mechanism to encourage play was simple and addictive, and was often the first video game played by a person new to gaming consoles, handhelds, and other platforms (e.g., Wii).

Case Study in Video Game Numismatics: The Elder Scrolls Universe

Although the *Mario* universe embraced coins and coin collecting as an integral part of game-play, it ignored (perhaps consciously) other numismatic elements employed by other games throughout the ’90s and later. One is faced with the questions of whether a player is interested in the design and history of a coin found in a video game, and if a game’s designers are invested enough in the details of creating a world that even the smallest objects—usually coins—are painstakingly rendered within a digital environment.

One of the world’s most popular role-playing game series (RPGs)—think of playing a character in a Renaissance Faire to get an idea of how RPGs work—is the *Elder Scrolls*. The *Elder Scrolls* game universe was created by Bethesda Softworks beginning with the release of *Arena* (1994), then *Daggerfall* (1996), *Morrowind* (2002), *Oblivion* (2006), *Skyrim* (2011), before passing the torch to Zenimax Online for the MMO *Elder Scrolls Online* (2014), with a number of expansion packs released in the spaces between development of numbered titles. All



Fig. 3: Successful adventures in the Mario Bros. game (Nintendo, 1983) rewarded players with coins (circled).



Fig. 4: Currency tab in World of Warcraft (Blizzard Entertainment) showing many types of currency used in the game.

Fig. 2: The Pong (Atari, 1972) coin-operated arcade game followed on the heels of Computer Space and remains Atari’s best-selling game cabinet.

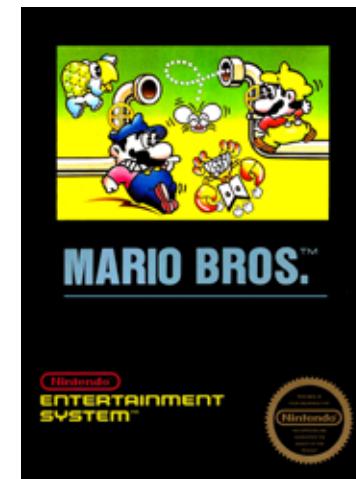


Fig. 5: Cover of the original version of the Mario Bros. game released by Nintendo in 1983.

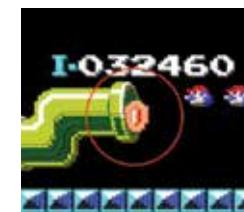


Fig. 6: Coins rendered in 8-bit computer graphics were blocky and featured rough texturing, identifiable as coins by shape and color.

Fig. 7: Red coin
(Super Mario Sunshine, Nintendo)



Fig. 8: Frog coin
(Super Mario RPG, Nintendo)



Fig. 9: Star coin
(New Super Mario Bros. 2, Nintendo)



Fig. 10: Obverse of a Septim coin from
Elder Scrolls V: Skyrim (Bethesda Softworks,
2013).



Fig. 11: Reverse of a Septim.



Fig. 12: Obverse of a Canadian
dollar coin, affectionately called a
“loonie”.



Fig. 13: Moon sugar crystals
were used as an alternate form
of currency in Elder Scrolls IV:
Oblivion (Bethesda Softworks,
2006).



of the games take place in the fictional land of Tamriel with its nine regions united (at times contentiously) under the flag of the Septim (aka Third) Empire: Skyrim, High Rock, Hammerfell, Summerset Isle, Valenwood, Elsweys, Black Marsh, Morrowind, and Cyrodiil.

In the lore of the game world, the first emperor of that Third Empire is Tiber Septim, a Dragonborn, who upon his death was deified as the god Talos, one of the Nine Divines. As in the real world where the busts of political figures often grace currency, so it is with the coin of the realm, the Septim (fig. 10). The bust of the emperor faces right, sporting a goatee and medium-length hair. The bust is set atop a starburst flanked roughly to the left and right with a diamond lozenge set on a circular band separating the field from a crenellated border. A motto runs top and bottom in all caps: “The Empire is Law” and “The Law is Sacred”.

The reverse of the Septim shows the stylized dragon familiar to visitors of Tamriel (fig. 11). It is the Seal of Akatosh, the symbol placed over a starburst surrounded by a circular border and crenellated edge. A single diamond lozenge is at the top of the circle. The seal is flanked left and right with another inscription: “Praise be, Akatosh” and “All the Divines”. The dragon symbol gives Septims their nickname: “Drakes.” Compare this to the Canadian dollar coin with the loon, affectionately called “loonies” (fig. 12).

The Septim is literally the coin of the realm. It has the appearance of either gold or electrum, but is considered to be gold in Tamriel. Its value is of one gold piece. Absent from these coins is the mint stamp or mark of manufacture. For a world as large as Tamriel, there are no mints to be found, not even in each region’s capital cities. The coins are theoretically limitless, and they weigh nothing in a player’s inventory, not taking up space in the adventurer’s pack (or that of his/her carl [i.e., valet]). There are no other denominations of currency, and change cannot be made. Despite the intersection of multiple cultures from regions, at least one of which joined the Empire by treaty (Morrowind), the Septim rules as currency.

Septims are found throughout the Empire, and are acquired by the player as a reward for completing a quest. Players can also loot corpses for varying amounts of gold, and have the ability to pickpocket. Septims can often be found in coin purses and loose on furniture in homes and hideouts as well as in tombs. It is curious that coins bearing the image of Tiber Septim can also be found in Nordic Tombs and on Draugr (undead, entombed warriors in Skyrim), both of which predate the Empire’s foundation.



Fig. 14: The rare Dwemer coin came in two sizes, one for collecting, and one for using as an alternative currency to the Septim in Oblivion.



Fig. 15: In Elder Scrolls III: Morrowind (Bethesda Softworks, 2002), player’s on-hand cash was displayed next to the obverse of a Septim featuring the bust of the emperor Tiber Septim.

As mentioned above, there are no mints, but there are a scant handful of treasuries scattered throughout the games: Markarth, Redoran, and Hlaalu. The gold used to mint the coins apparently comes from the hundreds of mines scattered throughout Tamriel, but play-through demonstrates that none of these are explicitly dedicated to the mining of gold for Imperial coinage. The mines merely serve as spaces in which to have adventures and complete quests, and have nothing to do with the in-world economy or the creation of coinage to fuel the engines of the Empire itself.

For such a vast world as Tamriel, the author would have expected a diversity of currency. On further exploration, there are actually two other forms outside of the Septim: moon sugar and Dwemer coins.

In figure 13 is an image of moon sugar crystals taken from *Morrowind* (fig. 13). Moon sugar makes its first appearance in *Elder Scrolls III*, and is the ingredient from which the illegal drug *skooma* is made. In the impossibly vast world of *Morrowind*, 24 samples of moon sugar can be recovered from various locations (by looting boxes and barrels) and non-player characters (NPCs): Sarys Ancestral Tomb, Addamasartus, Yasamsi, Zanabi, Unexplored Shipwreck, Panat, and as rewards for completing the quests “Blades Trainer” and “Inner Beauty”. Moon sugar is the underground currency of bandits, and in later games by some members of the Khajiit race. Players who acquire moon sugar may opt to use it as an ingredient for alchemy, in which it has the following properties: Fortify Speed, Dispel, Drain Attribute, Drain Luck. Players may also sell moon sugar for Septims. Moon sugar in and of itself cannot be used directly to purchase goods.

The other non-Septim currency found in the *Elder Scrolls* universe is the Dwemer coin (fig. 14). Found ex-



Fig. 16: Because of graphics constraints in earlier games such as *Morrowind*, coins were displayed only as round gold-pieces without any other distinguishing characteristics.

clusively in *Morrowind*, the Dwemer coin can be found in only one of the 15,000 places that can be explored in the game: Ald Sotha, a Daedric shrine for the Daedric Prince Mehrunes Dagon, located northeast of Vivec City within the region of the Ascadian Isles, once the Home of House Sotha.

The coin appears to be of silver, and only the obverse is rendered in the game and sports a “Celtic” knot pattern inside a double-ring, dotted border. The coin, unlike the Septim, does have a weight of 0.05 [no unit of measure is given in the game] in a player’s inventory. It cannot be used in the game as currency, but can be kept as a curiosity or vended for gold. There are two denominations of Dwemer coins, one valued at 50 gold, and the other at 125 gold. Nothing more is known of these coins, and little is known of the Dwemer race that created them long before the Third Empire.

As described in the *Elder Scrolls* Wiki, the Dwemer were “an advanced race and civilization, and were far ahead of other races and civilizations. They were well known for their revolutionary developments, skills and achievements in technology, engineering, crafting methods, metalwork, stonework, architecture, city-planning, science, mathematics, magic, and the academic arts.” The Dwemer disappeared in 1E 700 (i.e., the 700th year of the First Empire) without explanation, leaving behind the remains of their technology and also scant examples of their currency.

It remains to be seen if the new *Elder Scrolls Online* continues the tradition of a single-currency realm, or if other coins (either as real money or as artifacts) will appear. Compared to earlier games in the series, one will be curious to see how the appearance of these Septims change from game to game. In *Oblivion*, players don’t really see coins at all, and instead add numeric gold to

inventory, which is flagged with a Septim icon, a stylized version of the bust on the coin so well rendered in *Skyrim* (fig. 15).

Going further back to *Elder Scrolls II: Daggerfall*, the graphics were such that gold coins could only be rendered in yellow and brown bits, usually in piles of loot (fig. 16). With *Skyrim*, and now with *Elder Scrolls Online*, the photorealistic graphics make showing detailed designs easy, which in turn drives the need for graphic design when it comes to even the most everyday thing found in the gaming world: money. For such an omnipresent object, it's exceedingly rare for gamers to take screen captures of the currency they find, but for those who play *Skyrim* and *ESO*, they are rewarded with something so well realized that the coins have jumped from the games and into real-world production.

Several Septims are currently on auction at eBay going for nearly US\$40, most from the collector's edition of *Oblivion* (fig. 17). With sweetroll recipes and *Skyrim* helmets being crafted in the real world, it is no surprise that Septims have also followed suit and arguably command their own value in a strange kind of real/virtual currency exchange.

Virtual Coins and Medals in the Real World

Fan- and publisher-created coins from the *Elder Scrolls* games are not exceptional. Several other publishers of games have also created real-world, physical representations of coins, and have even gone so far as to mint highly collectible medals to commemorate the launch of new video game titles. Returning to the *Mario* series of games, Nintendo minted and released medals celebrating the release of *Super Mario Galaxy* in 2007 (fig. 18). This is not the only example. Ubisoft struck a silver release-day medal for *Assassin's Creed III* (2012) (fig. 19), and one year later created a collectible pre-release coin for *Assassin's Creed IV* that was gold in color and featured the game's logo on the obverse, and a Spanish cross as found on 18th-century escudos on the reverse (fig. 20).

The attention to detail placed on coins and other currency in contemporary video games makes it both desirable and also lucrative to create real-world reproductions. For example, *BioShock Infinite* (2K Games, 2013), set in an alternate version of the United States in 1912, uses the "Silver Eagle" as the game's currency (fig. 21). The obverse contains the scroll, sword, and key, three symbols associated with Thomas Jefferson, George Washington, and Benjamin Franklin respectively, all of whom feature in the game in surprising ways. The coin's reverse shows the Monument Island Tower of the angel Legend carrying each of these symbols, with the legend "Columbia" at the top and "1900" at the bottom.

Earlier games in the *BioShock* series (2007 and 2010) featured paper currency: the Rapture Dollar (fig. 22). These notes featured the face of Andrew Ryan, fictitious leader of the underwater dystopian city of Rapture. *BioShock* is perhaps the first video game to feature back-story on its currency: the "Rapture Bank Crash" occurred in an alternate reality in 1959 as another civil war erupted in the United States, and the currency became almost valueless. Players of the game, however, can scavenge these dollars from cash registers, off of the ground, in safes, handbags, trashcans, and off of corpses. Both Silver Eagles and Rapture Dollars can be used by players in the games to purchase food, drinks, and other restorative items. Real-world versions of both currencies are also available for purchase by collectors online who want to have physical mementos from their favorite games (fig. 23). The same can be said of other wildly popular (i.e., played by millions of people) games such as *World of Warcraft* (Blizzard Entertainment), (fig. 24) *Dragon Age* (BioWare), *Destiny* (bungie), and others.

Non-Coin Currency in Video Games

Numismatics studies currencies of all types and is not restricted to coins and paper money. Modern video games reward those who wish to go beyond traditional coins in search of exotic economies and trade. In the hugely popular, global MMO *World of Warcraft* (2004–present), typical gold, silver, and copper coins abound. This generic "loot" can be used at vendors throughout the gigantic, open world to buy everything from potions to armor to mechanical chickens. This traditional currency is also used at in-game auctions to bid on rare and unique gear as well as ingredients for crafting all manner of wearables and consumables (fig. 25). These auctions actually drive a complex, fluctuating economy that mirrors real-world markets where values rise and fall based on supply, demand, and virtual-world events.

World of Warcraft also features special coins within the game, given as random awards/ collectibles for fishing in fountains in cities such as Dalaran (fig. 26). There is even a "counterfeit coin" that players can use to dupe other players for fun (fig. 27). All of these coins are kept in players' inventories, and in banks in capital cities. Some rare coins such as the "Corpse Tongue Coin" (fig. 28) are earned as rewards for completing quests or for victory over exceptionally strong opponents (i.e., "bosses"). These coins are considered to be "trinkets" or talismans, and are imbued with magical or protective powers that improve a player's statistics.

Outside of typical and rare coins, *World of Warcraft* was one of the first massive video games to feature alternate currencies that are earned and spent in various contexts. Players can be awarded seals for completing spe-



Fig. 17: Obverse of a Septim based on the coins found in *Skyrim*, recreated for sale and trade in the real world.

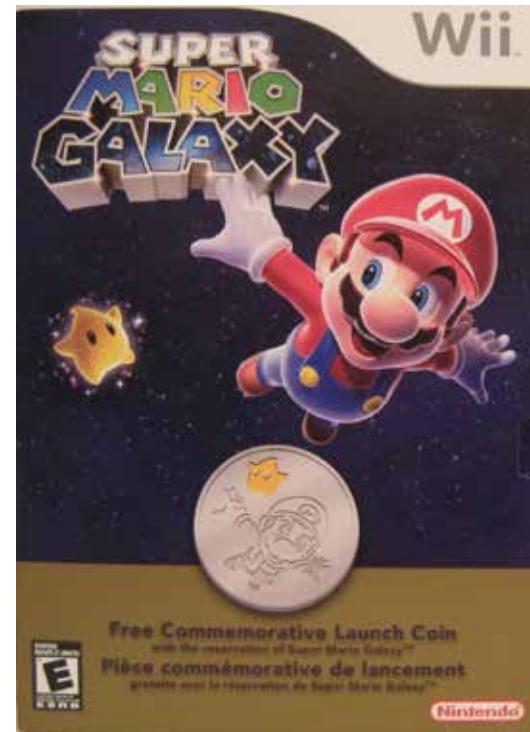


Fig. 18: Special copies of *Super Mario Galaxy* (Nintendo, 2007) shipped with commemorative medals for the game's release.



Fig. 19: Ubisoft minted medals to commemorate the release of its *Assassin's Creed III* (2012) title.



Fig. 20: Ubisoft also minted commemorative medals for the launch of *Assassin's Creed IV: Black Flag* (2013).



Fig. 21: Silver Eagle dollars are the only currency available for use in *BioShock Infinite* (2K Games, 2013) and feature highly detailed iconography and legends.



Fig. 22: *BioShock I* and *II* (2K Games, 2007 and 2010 respectively) feature the Ryan Dollar (aka Rapture Dollar) for use in the underwater utopia.



Fig. 26: Gold coin reward found by randomly fishing in the fountain in the city of Dalaran, World of Warcraft.



Fig. 27: Counterfeit coin, World of Warcraft.



Fig. 28: Corpse Tongue coin, World of Warcraft.

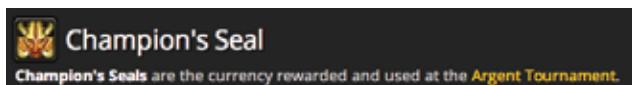


Fig. 29: Champion's seal, World of Warcraft.

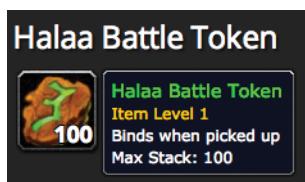


Fig. 30: Halaq Battle token, World of Warcraft.

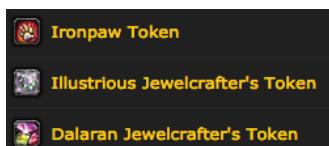


Fig. 31: Three tokens that can be used as currency in World of Warcraft.

players can report spammers, robot-players who are created randomly in order to advertise where others can buy gold in exchange for cash. Even with the reporting system in place and actively used, transactions continue to be made in this video game black market.

Conclusions: Video Games, Numismatics, and the Culture of Looting

It only takes a moment for one to realize the size and scope of numismatics within the virtual spaces of video games. While the game-currency might seem far-removed from the day-to-day collecting and study of “real” coins by specialists and hobbyists, for players the coins sought in these games are as real, as valuable, and as historically important as an Athenian tetradrachm. Virtual currency and trade affects virtual (and even real-world) markets. In later games, currency is decorated and imbued with lore, a back-story for the game that often takes on a life of its own through developer and fan communities.

As players of these games where we collect coins for hoarding and for spending, we all become numismatists—or at least coin collectors—unintentionally. This happens by way of “achievements,” special honor points awarded by contemporary games for completing long-term (or strange, sometimes silly) goals, often without the player knowing that s/he is completing them. Many of these games have at least one coin-themed achievement. *Dragon's Dogma: Dark Arisen* (Capcom, 2012) has a “Coin Collector” achievement for players finding 10,000,000 in gold pieces. *The Smurfs 2* (Ubisoft, 2013) also has a “Coin Collector” achievement for players collecting 50 Smurf coins. “Collector: Mogu Coins” is a *World of Warcraft: Mists of Pandaria* (Blizzard Entertainment, 2013) achievement for players restoring 20 Mogu coins as part of their work within the Archaeology skill (yes, *World of Warcraft* features archaeology as a profession for players to pursue in the game).

In video games as in the real world, coins are portable wealth, and in some games actually become portable antiquities. In games such as *Skyrim* and *World of Warcraft*, these coins are looted from in-game temples, archaeological sites, shrines, and sacred spaces. The coins are found on long-buried corpses, in grave offerings, and in chests of treasure left for the dead to use in the afterlife. The historical video game term for obtaining money and goods from the dead and from sites is “looting”.

In video games, as soon as coins and other artifacts are “looted” by players, they lose all context and are often soon sold at auction or given to other players of groups of players called “guilds” to hoard in the bank,



Fig. 32: The five major types of currency used in *Destiny* (Bungie, 2014) are Glimmer, Vanguard Marks, Crucible Marks, Strange Coins, and Motes of Light.



Fig. 33: *Assassin's Creed V: Unity* (Ubisoft, 2014) features “livres” as regular currency and even created a special symbol for it.



Fig. 35: *Rome: Total War 2* (The Creative Assembly, 2013) is perhaps unique in being the only game to feature a numismatist character.



Fig. 34: Chinese sweatshop with “gold farmers” (David Winton Bell Gallery).

or to save and even display at a player's virtual house (or houses) in the game. This activity sadly reflects the current practice of the trade in illicit antiquities, but is not an exact mirror. In these games, the gold is infinite, albeit distributed to millions of players over time as rewards for in-game activities.

And those special artifacts looted by players on quests in temples? The game replaces them for the next player to find, loot, and ultimately sell or trade. One wishes that were true of the real world as well. While there are achievements for looting in games—as in *The Elder Scrolls Online*—some games are now offering players the challenge of protecting artifacts from looting. *Destiny* is one of the first to reward players for stopping the looting of sacred spaces. The reward? Currency.

As the subfield of video game numismatics matures, its practitioners need to seriously consider how to apply current numismatic methods against digital currency. For the time being there can be no die studies until game designers begin to introduce the concepts of mints. But studying coins, currency, and economics in gaming environments can offer the numismatist a sandbox in

which to play with data, and to try things one wouldn't dare with real-world currency. One can explore the morality of collecting and the resulting joy in finding a unique coin after months or even years of exploration and trade with other players. The collecting bug underlies the deep desire to understand, at its root, the culture which produced the coins. For video games, there will always be two cultures: the one who developed the game, and the culture created by the developer who minted the coin for use in that city, region, or world. Both merit study, and for the former, many of the game developers and their designers are still alive to answer questions.

Will players ever get to play the part of a numismatist, or a master of the mint, or something similar in future games? Time will tell. For the meantime, there is at least one non-player character (NPC) who is identified as the Numismatist (fig. 35), belonging to the Sagartia Household in *Rome: Total War II* (The Creative Assembly, 2013). With the slogan, “Coins remind lesser men of their proper loyalties,” the Numismatist reduces the cost of performing all actions by all characters by 5%, and also reduces corruption by 5%. Every household—real or virtual—should have one.