= 4X =

4X is a genre of strategy @-@ based video and board games in which players control an empire and " eXplore , eXpand , eXploit , and eXterminate " . The term was first coined by Alan Emrich in his September 1993 preview of Master of Orion for Computer Gaming World . Since then , others have adopted the term to describe games of similar scope and design .

4X computer games are noted for their deep , complex gameplay . Emphasis is placed upon economic and technological development , as well as a range of non @-@ military routes to supremacy . Games can take a long time to complete since the amount of micromanagement needed to sustain an empire increases as the empire grows . 4X games are sometimes criticized for becoming tedious for these reasons , and several games have attempted to address these concerns by limiting micromanagement , with varying degrees of success .

The earliest 4X games borrowed ideas from board games and 1970s text @-@ based computer games . The first 4X computer games were turn @-@ based , but real @-@ time 4X games are not uncommon . Many 4X computer games were published in the mid @-@ 1990s , but were later outsold by other types of strategy games . Sid Meier 's Civilization is an important example from this formative era , and popularized the level of detail that later became a staple of the genre . In the new millennium , several 4X releases have become critically and commercially successful .

In the board (and card) game domain , 4X is less of a distinct genre , in part because of the practical constraints of components and playing time . The Civilization board game that gave rise to Sid Meier 's Civilization computer game , for instance , has no exploration and no extermination . Unless extermination is targeted at non @-@ player entities , it tends to be either nearly impossible (because of play balance mechanisms , since player elimination is usually considered an undesirable feature) or certainly unachievable (because victory conditions are triggered before extermination can be completed) in board games .

= = Definition = =

The term " 4X " originates from a 1993 preview of Master of Orion in Computer Gaming World by Alan Emrich , in which he rated the game " XXXX " as a pun on the XXX rating for pornography . The four Xs were an abbreviation for " EXplore , EXpand , EXploit and EXterminate " . Other game commentators adopted the " 4X " label to describe a game genre with specific gameplay conventions :

Explore means players send scouts across a map to reveal surrounding territories .

Expand means players claim new territory by creating new settlements , or sometimes by extending the influence of existing settlements .

Exploit means players gather and use resources in areas they control , and improve the efficiency of that usage .

Exterminate means attacking and eliminating rival players . Since in some games all territory is eventually claimed , eliminating a rival 's presence may be the only way to achieve further expansion .

These four elements of gameplay have been described as the four phases of a 4X computer game session . These phases often overlap with each other and vary in length depending on the game design . For example , the Space Empires series and Galactic Civilizations II : Dark Avatar have a long expansion phase , because players must make large investments in research to explore and expand into every area .

= = = Difficulties in definition = = =

While many computer strategy games arguably contain a similar " explore , expand , exploit , exterminate " cycle , game journalists , developers and enthusiasts generally apply " 4X " to a more specific class of games , and contrast 4X games with other strategy games such as Command & Conquer . Hence , writers have tried to show how 4X games are defined by more than just having

each of the four Xs . Computer gaming sites have stated that 4X games are distinguished by their greater complexity and scale , and their intricate use of diplomacy beyond the standard " friend or foe " seen in other strategy games . Reviewers have also stated that 4X games feature a range of diplomatic options , and that they are well known for their large detailed empires and complex gameplay . In particular , 4X games offer detailed control over an empire 's economy , while other computer strategy games simplify this in favor of combat @-@ focused gameplay .

= = Game design = =

4X computer games are a subgenre of strategy games , and include both turn @-@ based and real @-@ time strategy titles . The gameplay involves building an empire , which takes place in a setting such as Earth , a fantasy world , or in space . Each player takes control of a different civilization or race with unique characteristics and strengths . Most 4X games represent these racial differences with a collection of economic and military bonuses .

= = = Research and technology = = =

4X games typically feature a technology tree , which represents a series of advancements that players can unlock to gain new units , buildings , and other capabilities . Technology trees in 4X games are typically larger than in other strategy games , featuring a larger selection of choices . Empires must generate research resources and invest them in new technology . In 4X games , the main prerequisite for researching an advanced technology is knowledge of earlier technology . This is in contrast to non @-@ 4X real @-@ time strategy games , where technological progress is achieved by building structures that grant access to more advanced structures and units .
Research is important in 4X games because technological progress is an engine for conquest . Battles are often won by superior military technology or greater numbers , with battle tactics playing a smaller part . In contrast , military upgrades in non @-@ 4X games are sometimes small enough that technologically basic units remain important throughout the game .

= = = Combat = = =

Combat is an important part of 4X gameplay , because 4X games allow a player to win by exterminating all rival players , or by conquering a threshold amount of the game 's universe . Some 4X games , such as Galactic Civilizations , resolve battles automatically , whenever two units from warring sides meet . This is in contrast to other 4X games , such as Master of Orion , that allow players to manage battles on a tactical battle screen . Even in 4X games with more detailed control over battles , victory is usually determined by superior numbers and technology , with battle tactics playing a smaller part . 4X games differ from other combat @-@ focused strategy games by putting more emphasis on research and economics . Researching new technology will grant access to new combat units . Some 4X games even allow players to research different unit components . This is more typical of space 4X games , where players may assemble a ship from a variety of engines , shields , and weaponry .

= = = Peaceful competition = = =

4X games allow rival players to engage in diplomacy . While some strategy games may offer shared victory and team play , diplomatic relations tend to be restricted to a binary choice between an ally or enemy . 4X games often allow more complex diplomatic relations between competitors who are not on the same team . Aside from making allies and enemies , players are also able to trade resources and information with rivals .
In addition to victory through conquest , 4X games often offer peaceful victory conditions or goals that involve no extermination of rival players (although war may be still be a necessary by @-@ product of reaching said goal) . For example , a 4X game may offer victory to a player who achieves

a certain score or the highest score after a certain number of turns . Many 4X games award victory to the first player to master an advanced technology , accumulate a large amount of culture , or complete an awe @-@ inspiring achievement . Several 4X games award " diplomatic victory " to anyone who can win an election decided by their rival players , or maintain peace for a specified number of turns . Galactic Civilizations has the diplomatic victory , which involves having at alliances with at least 4 factions and no other faction be out of your alliance , there are two ways to accomplish this , ally with all factions , or ally with the minimum number of factions then destroy the rest .

Complexity

4X games are known for their complex gameplay and strategic depth . Gameplay usually takes priority over elaborate graphics . Whereas other strategy games focus on combat , 4X games also offer more detailed control over diplomacy , economics , and research ; creating opportunities for diverse strategies . This also challenges the player to manage several strategies simultaneously , and plan for long @-@ term objectives .
To experience a detailed model of a large empire , 4X games are designed with a complex set of game rules . For example , the player 's productivity may be limited by pollution . Players may need to balance a budget , such as managing debt , or paying down maintenance costs . 4X games often model political challenges such as civil disorder , or a senate that can oust the player 's political party or force them to make peace .
Such complexity requires players to manage a larger amount of information than other strategy games . Game designers often organize empire management into different interface screens and modes , such as a separate screen for diplomacy , managing individual settlements , and managing battle tactics . Sometimes systems are intricate enough to resemble a minigame . This is in contrast to most real @-@ time strategy games . Dune II , which arguably established the conventions for the real @-@ time strategy genre , was fundamentally designed to be a " flat interface " , with no additional screens .

Gameplay

Since 4X games involve managing a large , detailed empire , game sessions usually last longer than other strategy games . Game sessions may require several hours of play @-@ time , which can be particularly problematic for multiplayer matches . For example , a small @-@ scale game in Sins of a Solar Empire can last for over 12 hours . However , fans of the genre often expect and embrace these long game sessions ; Emrich wrote that " when the various parts are properly designed , other X 's seem to follow . Words like EXcite , EXperiment and EXcuses (to one 's significant others) " . Turn @-@ based 4X games typically divide these sessions into hundreds of turns of gameplay .
Because of repetitive actions and long @-@ playing times , 4X games have been criticized for excessive micromanagement . In early stages of a game this is usually not a problem , but later in a game directing an empire 's numerous settlements can demand several minutes to play a single turn . This increases playing @-@ times , which are a particular burden in multiplayer games . 4X games began to offer AI governors that automate the micromanagement of a colony 's build orders , but players criticized these governors for making poor decisions . In response , developers have tried other approaches to reduce micromanagement , and some approaches have been more well received than others . Commentators generally agree that Galactic Civilizations succeeds , which GamingNexus.com attributes to the game 's use of programmable governors . Sins of a Solar Empire was designed to reduce the incentives for micromanagement , and reviewers found that the game 's interface made empire management more elegant . On the other hand , Master of Orion III reduced micromanagement by limiting complete player control over their empire .

History

= = = Origin = = =

Early 4X games were influenced by board games and text @-@ based computer games from the 1970s . Andromeda Conquest and Reach for the Stars were published in 1983 , and are now seen retrospectively as 4X games . Although Andromeda Conquest was only a simple game of empire expansion , Reach for the Stars introduced the relationship between economic growth , technological progress , and conquest .

Prior to Sid Meier , Robert T. Smith created the precursor of all 4X strategy video games : Armada 2525 (followed up by a version with enhanced graphics : Armada 2525 Deluxe) . However , due to the financial problems of the publishing company Interstel Corporation , Armada 2525 never got enough marketing and attention from gamers . Future 4X space strategy games such as Master of Orion would go on to adopt the gameplay and concepts found in Armada 2525 .

Armada 2526 , the spiritual successor to Armada 2525 was released by Ntronium Games in 2009 , 19 years after the original Armada 2525 was released in 1990 .

In 1991 , Sid Meier released Civilization and popularized the level of detail that has become a staple of the genre . Sid Meier 's Civilization was influenced by board games such as Risk and the Avalon Hill board game also called Civilization . A notable similarity between the Civilization computer game and board game is the importance of diplomacy and technological advancement . Sid Meier 's Civilization was also influenced by personal computer games such as the city management game SimCity and the wargame Empire . Civilization became widely successful and influenced many 4X games to come .

In 1991 , two highly influential space games were released . VGA Planets was released for the PC , while Spaceward Ho ! was released on the Macintosh . Although 4X space games were ultimately more influenced by the complexity of VGA Planets , Spaceward Ho ! earned praise for its relatively simple yet challenging game design . Spaceward Ho ! is notable for its similarity to the 1993 game Master of Orion , with its simple yet deep gameplay . Master of Orion also drew upon earlier 4X games such as Reach for the Stars , and is considered a classic game that set a new standard for the genre . In a preview of Master of Orion , Emrich coined the term " XXXX " to describe the emerging genre . Eventually , the " 4X " label was adopted by the game industry , and is now applied to several earlier game releases .

= = = Peak = = =

Following the success of Civilization and Master of Orion , other developers began releasing their own 4X games . In 1994 , Stardock launched its first version of the Galactic Civilizations series for OS / 2 , and the long @-@ standing Space Empires series began as shareware . Ascendancy and Stars ! were released in 1995 , and both continued the genre 's emphasis on strategic depth and empire management . Meanwhile , the Civilization and Master of Orion franchises expanded their market with versions for the Macintosh . Sid Meier 's team also produced Colonization in 1994 and Civilization II in 1996 , while Simtex released Master of Orion in 1993 , Master of Magic in 1994 and Master of Orion II in 1996 .

By the late 1990s , real @-@ time strategy games began outselling turn @-@ based games . As they surged in popularity , major 4X developers fell into difficulties . Sid Meier 's Firaxis Games released Sid Meier 's Alpha Centauri in 1999 to critical acclaim , but the game fell short of commercial expectations . Civilization III encountered development problems followed by a rushed release in 2001 . Despite the excitement over Master of Orion III , its release in 2003 was met with criticism for its lack of player control , poor interface , and weak AI . Game publishers eventually became risk @-@ averse to financing the development of 4X games .

= = = Real Time Hybrid 4X = = =

Eventually real @-@ time 4X games were released , such as Imperium Galactica in 1997 , Starships Unlimited in 2001 , and Sword of the Stars in 2006 , featuring a combination of turn @-@ based strategy and real @-@ time tactical combat . The blend of 4X and real @-@ time strategy gameplay led Ironclad Games to market their 2008 release Sins of a Solar Empire as a " RT4X " game . This combination of features earned the game a mention as one of the top games from 2008 , including GameSpot 's award for best strategy game , and IGN 's award for best PC game .

Cross @-@ fertilization between board games and video games continued . For example , some aspects of Master of Orion III were drawn from the first edition of the board game Twilight Imperium . Even Sins of a Solar Empire was inspired by the idea of adapting the board game Buck Rogers Battle for the 25th Century into a real @-@ time video game . Going in the opposite direction , Eagle Games made a board game adaptation of Sid Meier 's Civilization in 2002 , completely different from the board game that had inspired the computer game in the first place .

= = = Recent history = = =

In 2003 , Stardock released a remake of Galactic Civilizations , which was praised by reviewers who saw the game as a replacement for the Master of Orion series . In 2004 the Creative Assembly released the critically acclaimed Rome : Total War , which has spawned many sequels . Civilization IV was released at the end of 2005 and was considered the PC game of the year according to several reviewers , including GameSpot and GameSpy . It is now considered one of the greatest computer games in history , having been ranked the second @-@ best PC game of all time by IGN . By 2008 , the Civilization series had sold over eight million copies , followed the release of Civilization Revolution for game consoles soon after and Civilization V in 2010 . Meanwhile , Stardock released Galactic Civilizations II , which was considered the sixth @-@ best PC game of 2006 by GameSpy . Additionally , French developer Amplitude Studios released both Endless Space and Endless Legend . These successes have led Stardock 's Brad Wardell to assert that 4X games have excellent growth potential , particularly among less hardcore players . This is in addition to the loyal base of 4X gamers who have supported free software releases such as Freeciv , FreeCol , Freeorion , Golden Age of Civilizations . , and C @-@ evo .