



## From Wargaming to Peacegaming: Digital Simulations with Peacekeeper Roles Needed

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### ABSTRACT

Militaries around the world have benefited from computerized games. Many recruits have been attracted to the military through military-style video games. After recruitment, games and simulations provide an important means of soldier training, including before actual deployments. However, electronic games are lacking for UN peace operations. The multidimensionality of peacekeeping has yet to be simulated in serious games to complement the many games that too often depict a binary battlefield of blue-team versus red-team (or, often in public games, good versus evil). Not only could soldiers benefit from nuanced and ambitious peace-related games, so too could civilian peacekeepers, and the public at large. Peacekeeping gaming should not be merely at the tactical level; the operational and strategic levels can be gamed as well. The decision-making in future peacekeeping simulations could help instruct conflict-resolution and critical thinking skills. The paper posits that such digital games could be an important tool for current and future peacekeepers, both military and civilian. Commercial games could also help educate the public on UN peacekeeping. The paper suggests that the United Nations partner with some member states and perhaps the video game industry to provide in-depth training simulations that mirror the challenges and complexities of modern peace operations.

**KEYWORDS** Digital games; peace operations; simulation; training; United Nations

### Introduction

War is exciting, peace is not; or so thinks the entertainment industry. Since their inception, video games have focused heavily on war, conflict and the defeat of simulated enemies. The satisfaction of the gamer seems to be in achieving victory over opposing ‘evil’ and often ugly forces by shooting or destroying others. This can immerse gamers in fanciful scenarios of fighting zombies, invading aliens or other exotic scenarios. Few games attempt to mimic the realities of modern conflict, in which battlefield victories rarely solve underlying human problems. Also, the parties in modern conflicts usually show many shades of grey. Furthermore, wars often end with peace

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agreements, power sharing, and assistance from peacekeepers. Organizations like the United Nations have supplied personnel to help create and maintain peace in over 70 conflict areas for over 70 years. So, it would be natural to offer an opportunity to professionals and the public to take on challenging and realistic gaming roles focused on peacekeeping and conflict resolution.

Being a peacekeeper can be as challenging as being a warfighter, at least intellectually if not on the ground. It is harder to convince conflicting parties to lay down their weapons than to simply take a side, shoot the enemy, and minimize the moral, legal and practical consequences. Peacekeepers in the real world have to save lives and alleviate human suffering through a myriad of tasks: providing security, overseeing ceasefires and peace agreements, fostering reconciliation, disarming combatants, clearing mines, enforcing sanctions, providing aid and, since the turn of the century, directly protecting civilians. Much can be done by civilian and uniformed peacekeepers to mediate between conflicting parties and foster peace processes, provide humanitarian assistance, and a myriad of other tasks. Peacekeeping may also necessitate that UN military forces, as a last resort, fire their weapons against wrong-doers as part of peace enforcement within a peace operation.

New peacekeeping games could include roles for warfighters and armed conflicting parties. The converse is also true: peacekeeping roles could be introduced into some already existing warfighting games. Players could choose the role of the peacekeeper and see if they can have an impact on the result, possibly a ceasefire and maybe a peace agreement – like in real life, perhaps after fatigue sets in among warfighters. Though some fighting-players would not want the game to end early with peace, the results could illustrate the difficulties, methods and benefits of keeping the peace. Casualty counts should go down rather than up when peace prevails. This could offer a realistic take on the role of the peacekeeper, with the damaging consequences of warfighting also demonstrated, albeit only virtually.<sup>1</sup> More importantly, gaming can be a vital adjunct to education and training on peacekeeping.<sup>2</sup>

Several audiences would benefit from the introduction of digital peacekeeping games:

- (1) Current and future peacekeepers, including military and police personnel, and civilians in the field;
- (2) Those involved (e.g. at UN headquarters and national capitals) in decisions on peacekeeping deployment and supporting them from outside the mission, including political actors;

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<sup>1</sup>Dorn and Webb, "Gaming Peace: A Call for Peacekeeper Roles."

<sup>2</sup>Brynen, "Teaching about Peace Operations." Brynen also maintains the website "PAXsims" devoted to "peace, conflict, humanitarian, and development simulations and serious games for education, training, and policy analysis." See: Brynen, "PAXsims."

- (3) The general public, which needs to gain more awareness about the activities and challenges of peacekeepers on the ground.

New types of digital games could also assist academics, journalists and others to explore and analyze new approaches to conflict resolution.

To begin, it is necessary to review the diverse array of digital gaming types and methods suitable for peacekeeping gaming. This is followed by a search for any currently available digital games in the commercial or military sphere that feature peacekeeping. If none are found, what about games on UN conflict prevention, or the resolution of armed conflict more generally? Lessons can be identified from any such games and from strategy games more generally. Military exercises can also provide considerable insights and examples for future games on UN peace operations. Some potential scenarios for peacekeeping games are then explored, as are the UN responsibilities for innovative training. Finally, the possibilities for advanced forms of game development and virtual reality are discussed.

### Game Options: Conceptual Framework

A wide variety of digital gaming types could be applied to peacekeeping, including turn-based games (modelled after traditional games like chess), and real-time games (with a controllable avatar, as popularized in many modern video games). These can also range from the tactical to the operational to the strategic levels of decision-making. In real-time strategy games, multiple units can be selected to perform different tasks at the same time, or the player can simply control one character at a time. The situation on the ground can be provided through a sky view that looks down from above. Alternatively, first or third-person perspectives can provide 3-D views directed by the player, as popularized by first- or third-person shooter (FPS/TPS) games where the player 'sees' the video world through the eyes of the avatar (first person) or from near the avatar (third person).

Turn-based games are sometime more amenable to learning at the operational and strategic levels, where are FPS/TPS games are generally more useful at the tactical level. However, this is not a hard-and-fast rule and hybrid forms can also be developed. Some turned-based strategy games more easily allow for diplomatic measures to be taken, such as the *Total War* series where in one aspect players negotiate with other factions on truces, alliances and trade agreements. On the other hand, real-time games (i.e. FPS/TPS) allow for a player to be immersed in an 'open world' environment through an avatar to explore physical space and interact in a semi-realistic fashion with other characters, both playable and non-playable. Digital games allow for both single or multiplayer options, and can incorporate various levels of skill, strategy and chance. So, the range of potential game

types is wide. And new design methods, explored later, have become available to create and develop cutting-edge games.

In serious games, player actions could be measured on how well the player has caused the conflict actors to ease tensions and how the player is able to provide protection to the civilian population. The goal is to establish a sustainable peace, built on a democratic foundation with measures for justice and development. So, for a new peacekeeping genre, there are many possible game types. But are any peacekeeping games already available?

## Precedents on the Open Market

Since there are, at least, a few movies on peacekeeping<sup>3</sup> – of course, far fewer than war films,<sup>4</sup> there was some hope for the discovery of some video games on peacekeeping. But a search of publicly available video games found none that featured peacekeeping on the ground as the main focus or even as a background theme. Somewhat humorously, an online search yielded a few games with the name ‘peacekeepers’ in the title, but none entailed actual peacekeeping.

The game *PeaceKeeper* presents a science fiction scenario:

Bring your spaceships home! But be careful, the peace in the galaxy is not stable! One ship on the wrong planet could *start a war*. You can call diplomats to reduce the tension in the galaxy or if you are stressed simply slow down the time.<sup>5</sup>

Similarly, *Peacekeeper Trench Defence* has a warfighting goal, despite its name:

Fight epic battles, slay endless waves of enemy hordes, and restore the peace! You’re the Peacekeeper, one of the world’s toughest elite soldiers. A relentless

<sup>3</sup>Films on peacekeeping are, unfortunately, quite rare and low profile, in stark contrast to the ubiquity and popularity of war movies. There are only a few movies that feature the actions of peacekeepers in the field: *Shake Hands with the Devil* (2007) about the heroic efforts of Canadian General Roméo Dallaire’s in Rwanda (not to be confused with the documentary of the same name that covers General Dallaire’s actual return to Rwanda in 2004); *Peacekeepers* (1997) about Canadian peacekeepers in Croatia; *The Siege of Jadotville* (2016) about an Irish unit repelling an attack in the Congo in 1961. Other movies focus more on the failures and weaknesses of peacekeepers: *Hotel Rwanda* (2004) where the UN is shown to be of little use in repelling attacks on the hotel and civilians in the country; *No Man’s Land* (2001) about Serb, Bosniak and UN soldiers of ill-will; *Black Hawk Down* (2001) about US forces, loosely connected to the UN operation in Somalia, in combat with a Somali warlord (though, in reality, saved at the end by UN peacekeepers); *The Whistleblower* (2010) about a US police officer, working as a UN peacekeeper in Bosnia and Herzegovina in 1999, who discovers a sex trafficking ring with NATO/UN officials turning a blind eye.

<sup>4</sup>Movies on war are much more plentiful on war-fighting than peacekeeping. The Internet Movie Database (IMDb.com) counted almost 200,000 titles focused on war out of almost 4 million titles (author search, May 2017). Digging deeper, 13 of the IMDb’s top 100 movies are war movies (13%), 29 out of the top 250 (12%) and 81 out of the top 1,000 (8%). While 81 out of the 1,000 highest rated movies on IMDb focus on war, only two have UN peacekeeping as a background theme (#252. *Hotel Rwanda* and #431. *No Man’s Land*).

<sup>5</sup>Bitflake Studios, *PeaceKeeper*.

onslaught of enemy troops is invading your land. It's up to you to restore the peace, and what better way to do that than with your huge arsenal of guns?!<sup>6</sup>

The lexicon of peacekeeping is used inappropriately in some games to make the players think that their characters (avatars) are justified in fighting the 'good war.' This is the case in the popular game *Arma 3*, where the avatar is nominally a NATO peacekeeper on a fictitious Mediterranean island, but the main action is armed combat, with no options for negotiation or actual peacekeeping.<sup>7</sup>

We can conclude that peacekeeping in the real-world sense is currently absent from the video game industry.

What about gaming roles for the United Nations, the largest deployer of peacekeepers? The United Nations has occasionally been mentioned or used for roles in some video games, but its representation is usually quite different from what it is in reality. Yet again, it is usually used to provide justification for the game's fighting action and to persuade the player that their path is the right one.

The United Nations building and concept is featured in some games. In Maxis' *SimCity 3000*,<sup>8</sup> the UN building can be built as a landmark. The Civilization Committee in *Grand Theft Auto IV*<sup>9</sup> is a parody of the United Nations and has a headquarters identical to the UN's. *Tom Clancy's The Division*,<sup>10</sup> about the aftermath of a pandemic in New York City, features the UN Headquarters. And in *Killer7*,<sup>11</sup> part of the story revolves around a terrorist group called the Heaven Smiles that tries to trigger a war between Japan and the United States, with the United Nations serving as a forum where their diplomats clash. But the game itself has nothing to do with diplomacy or peacekeeping. In science-fiction games, the United Nations figures even more prominently but they do not provide models for real-world UN peacekeepers.<sup>12</sup>

While no commercial video game has been found to centre on peacekeeping or even the UN role in conflict prevention, there are a number of games

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<sup>6</sup>Spil Games, *Peacekeeper - Trench Defense*. Also A10.com, *The Peacekeeper*.

<sup>7</sup>Bohemia Interactive, *Arma 3*.

<sup>8</sup>Maxis, *SimCity 3000*.

<sup>9</sup>Rockstar North, *Grand Theft Auto IV*.

<sup>10</sup>Massive Entertainment, *Tom Clancy's The Division*.

<sup>11</sup>Grasshopper Manufacture and Capcom Production Studio 4, *Killer7*.

<sup>12</sup>In the science-fiction inspired turn-based strategy video game, *Alpha Centauri*, the Unity exploration mission was started by the "eUN," and they are one of the factions that emerges shortly before Planetfall in the form of the "Peacekeepers." In *Overwatch*, the "UN" forms the eponymous international team of heroes to combat a robot uprising. The Global Defense Initiative in the *Command & Conquer* series is a branch of the United Nations. The Chimera, one of the three playable factions in the real-time strategy game *Act of Aggression*, is a covert multinational task force formed by the "UN." A large part of the *Deus Ex* series revolves around the "United Nations Anti-Terrorist Coalition," phonetically pronounced UNATCO for short. In *Surveillance Kanshisha*, the "UN" establishes a counter-terrorist unit called Shadow Sword in order to safeguard the Earth-Mars space travel route and the people using it from a mysterious terrorist group called Neo-Kleit.

that deal with peace and conflict resolution more generally. For example, *This War of Mine*<sup>13</sup> is a rare example of a survival game, set in conditions very similar to the Siege of Sarajevo. It follows the trials and tribulations of a small group of unrelated civilians who try to survive the civil war. The player thus needs to guide each civilian towards resources and to help them manage these resources in order to survive together. The game offers non-violent gameplay and sheds light on the people that peacekeepers might save or aid (as was the case in reality in Sarajevo in 1993–95). In fact, the British charity ‘War Child’ partnered with the game developer in a fundraising campaign in 2015, which by 2018 had raised some half-million dollars.<sup>14</sup> This game could point the way for future games focused on peacekeepers who help displaced people.

In *Peacemaker*,<sup>15</sup> the player chooses to be either the Israeli prime minister or the Palestinian president. The objective is then to ‘resolve’ the Israeli-Palestinian conflict through political decisions and actions, such as speeches or the management of settlements. By design, the only way to win this game is to implement a two-state compromise. Though most gamers do not like to be forced into a specific direction, this is an example of how a game may improve a player’s diplomacy skills. A crucial study of this game demonstrated that third party players (American and Turkish) had their preconceived notions swayed during the course of the game.<sup>16</sup> It could also be one model or inspiration for future games focusing on the negotiation and mediation aspects of peacekeeping. Many non-electronic simulations of peace negotiations have been developed, mostly for class-room settings.<sup>17</sup>

While there are no general peacekeeping electronic games commercially available, there have been a few initiatives in specialized areas. The Romeo Dallaire Child Soldier Initiative asked university students in 2016 to create a training tool for soldiers or peacekeepers in Somalia who might have to deal with child soldiers.<sup>18</sup> The game features artwork done by local Somali artists. The idea was that players must diffuse the situation and not anger the child soldier who might otherwise resort to violence. The creators state that the game could be reworked for any conflict zone that involves child soldiers. This would mean at least altering the dialogue text and artwork to represent the conflict zone in question. Unfortunately, the video game was not publicized or made available, though a card game has been developed.

Another niche game deals directly with female peacekeepers. It is being developed by sociologists, psychologists and computer scientists at Trinity

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<sup>13</sup>11 bit studios, *This War of Mine*.

<sup>14</sup>11 bit studios, *What Would You Do with 500k Dollars?*; GamingLyfe, “11 Bit Studios.”

<sup>15</sup>Impact Games, *PeaceMaker*.

<sup>16</sup>Cuhadar and Kampf, “Learning about Conflict .”

<sup>17</sup>See, for example: Public International Law & Policy Group, “Lawyering Peace Lab.”

<sup>18</sup>Jones, “Dalhousie-Designed Video Game .”

College Dublin and the Gaming for Peace (GAP) project.<sup>19</sup> This 2-D game aims to improve the cooperation (soft) skills of peacekeepers, including communication, cultural sensitivity and gender awareness. The main character chooses various options in how to interact with colleagues and highlights the sensitivities that need to exist in any multinational and multi-gender deployments.

Another niche game that could serve as inspiration is called the *Stabilization Operations in Highly Religious Societies*.<sup>20</sup> It has been used as a training tool, though not yet in electronic format. It mirrors the efforts of Western forces in Afghanistan. While forces in Afghanistan were on a counter-insurgency and counter-terrorism mission, the stabilization functions were similar to those in peace operations. The game sets out the civil–military interaction between the military and non-government humanitarian groups with the goal of providing adequate humanitarian assistance for the population. This is done by focusing on various sectors that need to be improved, from sewage facilities to police and governance to health and agriculture. It is essentially a game based on the experiences of Provincial Reconstruction Teams and involves three main actors: NATO, the Government of the Islamic Republic of Afghanistan and the ‘World Church United,’ which is the game’s version of faith-based NGOs. This game is more useful for counter-insurgency operations and is not offered as an electronic training tool but it does provide some useful ideas for role-playing in a group simulation.

The United States Institute of Peace offers classroom simulation guides for teachers to help students understand situations that are current and relevant, including the Israel-Palestinian conflict, and Nepalese governance and corruption. It also has older simulations, most of which are now archived, that deal with the Paris Peace Talks in 1972–73, the Cambodian Peace settlement, and conflicts in Columbia, Ethiopia-Eritrea, Kashmir, Northern Ireland, and Sri Lanka. UN peacekeepers are not specifically played, though they may be part of the background in a few of these classroom simulations.<sup>21</sup>

To supplement these niche games, what is needed is wider or all-encompassing digital games, whether played on video consoles or computers, that aim to improve how peacekeepers react to the evolving challenges in the field. This would make an attractive opportunity for the United Nations to partner with the video game industry to create such a training resource, as well as a means to educate the broader public about peace operations.

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<sup>19</sup>Holohan, “Transformative Training in Soft Skills for Peacekeepers.” See also: Edwards, “‘Visual Novel’ Game to Be Used to Train International Peacekeepers.” Gaming for Peace was awarded a two million Euro grant from the European Commission’s Horizon 2020 program. There are 14 additional partners in this project, including the Finnish and Polish militaries and the Irish video game company Haunted Planet.

<sup>20</sup>Mason and Patterson, “War Gaming Peace Operations.”

<sup>21</sup>United States Institute of Peace, “Simulations.”

## Learning from Games on Strategy and Conflict Resolution

Despite the lack of current peacekeeping games, future ones could borrow useful styles from some sub-genres of existing wargames, especially those that steer away from arcade-type shooting games. Like any well-designed game, the player should be able to make choices and meet challenges, with success being rewarded. Peacekeeping gaming should involve developing a strategy to resolve conflicts, allocate resources, and coordinate team members, with nondeterministic outcomes.

The tactical sub-genre of the warfare genre does not exclude action and direct confrontation but the players may choose more stealthily or diplomatic strategies to avoid casualties. The focus is on the use of tactics, the coordination of forces, and teamwork in order to lead operations and fulfil objectives. Unlike typical war games like the *Call of Duty*<sup>22</sup> and *Medal of Honor*<sup>23</sup> series, where the player must charge head-on into the field and shoot all enemies with a variety of weapons, tactical games require more thinking skills and knowledge of the strengths and weaknesses of the team members and resources at the player's disposal. The sub-genre spans across a variety of gameplay styles, namely: first- or third-person tactical shooters, such as *Tom Clancy's Ghost Recon*,<sup>24</sup> where the player must coordinate team members and avoid casualties among their ranks; tactical turn-based games, like *Advance Wars*,<sup>25</sup> in which players take turns to move avatars and/or pieces (e.g. equipment) to defeat enemy forces (chess, for example, is a classical tactical turn-based board game); and real-time strategy (RTS) games, like *Age of Empires*,<sup>26</sup> where players manage resources and groups

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<sup>22</sup>Infinity Ward, Treyarch, and Sledgehammer Games, *Call of Duty*.

<sup>23</sup>DreamWorks Interactive and Electronic Arts, *Medal of Honor*.

<sup>24</sup>Red Storm Entertainment, Ubisoft Paris, and Ubisoft Milan, *Tom Clancy's Ghost Recon*. The *Tom Clancy's Ghost Recon* series is a shooter game series that focuses on the completion of tactical missions through teamwork. The player is in control of a number of troops simultaneously but directly controls the behaviour of only one avatar (person) at a time. The player may order other troops to specific locations and to take specific actions. The player must coordinate troops in order to effectively and efficiently complete a mission while minimizing casualties among their ranks. This gameplay concept would translate well into a peacekeeping game, as peacekeeping follows the same principle minus the violence involved in neutralizing an enemy.

<sup>25</sup>Intelligent Systems, *Advance Wars*. This series is a tactical turn-based game series where the player is in control of troops from a "god perspective," a top-down perspective where you control the behavior of multiple avatars or elements on a map. The player may or may not be represented by an avatar but always controls the movement of all avatars like pieces on a chess board. The player must therefore take into consideration the strengths and weaknesses of the troops in order to optimize the chances of defeating an enemy by placing resources in the most strategic manner. Such game is a closer simulation to the experience of a strategist that does not fight on the frontline, but rather gives orders from the safety of an office.

<sup>26</sup>Ensemble Studios, *Age of Empires*. This series is a real-time strategy game series that enables the player to manage resources in real-time, with a top-down "god perspective." In a similar fashion to tactical turn-based games, the player should find optimal strategies in order to minimize losses and maximize gains, and send troops when and where victory is more likely than defeat. The key difference here is that the player may feel a higher level of stress, as the action is happening in real time and they need to keep informed of all that is going on to make informed decisions.

that evolve in real time, from a third-person perspective. Peacekeeping games may borrow ideas from these genres for both gameplay and storyline, including how to incorporate elements of suspense, progress and decision-making. They also model how wanton violence can reduce the chances of success.

Other game types have less to offer because of their themes but they are still worthy of a brief review. Stealth espionage games focus on strategy to avoid direct confrontation, and aim to resolve a conflict through the isolation and neutralization of a threat. This may require some level of violence – notably the assassination of key figures – but sometimes the player may reach the end of the game without killing anyone and still make their way from one objective to another. One example is *Metal Gear Solid*,<sup>27</sup> where a veteran spy in a sci-fi dystopia must find ways to sabotage plans of conspiracy and destruction. Despite the strange scenario, the game could be considered as the first step toward a niche that focuses on non-violent conflict resolution, as it criticizes current trends in warfare and encourages the player to resolve a conflict with minimal casualties. However, following the critical acclaim and commercial success of this game series, the later entries in the series are more action and conflict-oriented. One step forward, one step back.

Another strategic war-game sub-genre focuses on the strategic placement of units onto a territory in order to outplay rivals. Notable examples include the board games *Risk*<sup>28</sup> and *Stratego*.<sup>29</sup> A few games focus on diplomacy compared to other sub-genres, in particular, virtual remakes of some tactical board games. The most deliberate example of this is the adequately named *Diplomacy*<sup>30</sup> board game, which also became a videogame series,<sup>31</sup> where trust and rational calculations play an important role, as in real politics. In the movement phase, each player moves land and/or sea units, and chooses a set of rules that determine whether they would make war or peace.<sup>32</sup> Such a

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<sup>27</sup>Konami, *Metal Gear*. The main character of most *Metal Gear Solid* games, Solid Snake, is a veteran spy in a sci-fi dystopia who has been trying to stop a conspiracy for a decade, and is now riding with mercenaries to the frontline of a battle. The story-driven goal of this game series is to deal with an immediate threat before moving on to the next one. Avoiding direct confrontation is the preferred option since violence could mean the death of the player's avatar. The play must gain an understanding of the problem at-hand and sabotage any plans of conspiracy and destruction. One entry in the series, *Metal Gear Solid 4: Guns of the Patriots* has Solid Snake working under the umbrella of the United Nations in a world where private military companies have become more powerful than national forces, and where machines are used to fight human rebels and mercenaries, and where technology is used to enhance the capacities of soldiers beyond.

<sup>28</sup>Hasbro and Winning Moves Games, *Risk*.

<sup>29</sup>Jumbo Games, *Stratego*.

<sup>30</sup>Calhamer et al., *Diplomacy*.

<sup>31</sup>See: "Paradox Interactive."

<sup>32</sup>Calhamer et al., *Diplomacy*. was originally a tactical turn-based negotiation board game in which each player represents one of seven nations. For every turn, there are two phases: negotiation and movement. In the negotiation phase, each player conveys information to the others. Negotiations between two players may be private or public, and there is no obligation to respect engagements, nor is there a mechanism to enforce them. In other words, this is a game where trust and rational calculations play an important role, as in real politics. In the movement phase, each player moves units (troops or fleets), and chooses a set of rules that determine whether they would make peace or war.

game is more akin to decision-making at the governmental and diplomatic levels, but the gameplay style may be used to design a game that would improve the diplomacy skills of UN peacekeeping mission leaders.

A potentially useful turn-based strategy genre is the *Total War* series, a series of computer games set from the times of the Roman Empire to Napoleon to the fantasy setting of the *Warhammer* universe. In these games, the objective is to conquer the known world. In doing so, the player has to create alliances, trade agreements and decide when to launch a war against another country and when to sue for peace through diplomacy.<sup>33</sup> However, in the gameplay dynamics, suing for peace is still tantamount to bribery and the player cannot negotiate peace for anyone but themselves, including their allies. The diplomacy/warfighting dynamic could be developed to introduce peacekeeping and conflict resolution elements into the game, with players managing multiple relationships with different factions while benefiting from cooperative players. Even more valuable would be the introduction of specific peacekeeping roles into the game, allowing for new players, both civilian and military.

### Learning from Military Exercises

Most military forces conduct exercises with their units before deploying them on peace operations. Several countries host permanent peacekeeping training centres that conduct exercises that include other nations as well. One of the most advanced multinational exercises in peace operations and crisis response is Exercise Viking, sponsored by the Swedish Armed Forces International Centre (SWEDINT) annually since 1999. It allows players in multiple countries to exercise on the same scenarios in the fictitious conflict-ridden country Bogaland. While not carried out as a first-person shooter or as video game, it is a computer-assisted exercise, with a common operational picture in graphic format, and a chat function. The control element in Sweden publishes a fictitious daily newspaper and coordinates responses among the international actors in real time. The actors, in multiple locations in the world, communicate via computer and make common plans to respond to the exercise injects.<sup>34</sup> This exercise challenges participants with wide-ranging scenarios and also develops their communication skills, as they are coming from different countries and often speak different languages, as is the case in real peace operations.

Militaries have shown that digital games can complement the traditional exercises that militaries often conduct live (in person, and in situ). Conference (table-top or command post) exercises frequently use computer-assisted

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<sup>33</sup>Creative Assembly and Feral Interactive, *Total War*.

<sup>34</sup>Försvarsmakten, "Welcome to Viking 18." For a detailed blog covering this exercise see: Försvarsmakten, "Viking 18 Blog."

communications for injects and instruction-giving. Beyond that, e-games offer the military and the public new and more convenient ways to individually hone critical thinking skills and learn about various types of deployment on a personal level. Table-top games rarely offer the immediate rewards or consequences that e-games can provide. Digital games can also be run at the player's own time and location without requiring travel to take part in distant exercises. Moreover, e-games can provide training for individuals that is unimpeded, or tainted, by a group activity, though it can also include that. Digital games can be run in a multiplayer fashion that could involve individuals sitting in different parts of the globe. This can bring more cohesion and familiarity between peacekeepers from different nations before deployment, even when soldiers are separated by a great distance. Then, when soldiers meet on deployment in a conflict zone, they are more familiar with each other due to their online training experience with the envisioned mission problems. Finally, e-games can immerse the player in photorealistic environments, which is not possible in a board game or on the exercise table.

Advanced militaries make use of some very sophisticated and realistic digital training environments, like Virtual Battle Space (e.g. *VBS4*), designed for war-fighting.<sup>35</sup> These could be modified for use as peacekeeping games. And many military command-post exercises could also be modified for peacekeeping.<sup>36</sup> Though different from the platforms used in the civilian marketplace, military platforms could serve as inspiration for the development of an e-game involving civilian and police roles as well as military ones in peacekeeping.<sup>37</sup> The well-developed military simulations could help future games be more realistic, including in the conflict environments in which UN peace missions operate.

## Scenarios

Currently, the United Nations does not provide e-games or computer-simulated environments for the training of its peacekeepers, though it does have table-top exercises using real-life scenarios taken from existing missions.<sup>38</sup>

<sup>35</sup>Bohemia Interactive Simulations, *VBS3* or *VBS4*. The popular (public) version is the *Arma* series.

<sup>36</sup>The Canadian Forces command and staff exercises sometimes include a modification of the US Army's Decisive Action Training Environment (DATE) and sometimes use the "Zoran Sea" theme that is common in NATO exercises. For the UK model/exercise, see: Body and Marston, "The Peace Support Operations Model: Origins, Development, Philosophy and Use."

<sup>37</sup>Military platforms and software are usually not shared nor made available for public use, though some aspects may be made available to the United Nations. Commercial platforms that have already been used to develop conflict-related games and simulations include: "Fablusi" or "ICONS." Furthermore, there are thousands of programs with features that can serve as inspiration. A number of game development platforms are available as well, such as: "Unity," "Unreal," or "Crytek."

<sup>38</sup>United Nations training exercises are usually done within a fictitious country called "Carana." For POC, the exercise is scenario-based. See for example, United Nations Peacekeeping Resource Hub, "UN CPOC for Military Units."

The United Nations is actively developing realistic scenarios to help train its peacekeepers in one of the most challenging mandates for modern missions: the protection of civilians (POC). Some of the many scenarios and vignettes could eventually include: stopping an armed group that is moving along a road to attack and sack a nearby town (e.g. in retaliation for an attack that came the other way weeks earlier); stopping raids on cattle or other strategic resources in conflict zones; escorting women refugees on fire-wood duty from a refugee camp; halting the burning of a village; confronting a child soldier committing atrocities – an especially challenging dilemma for the use of force; protecting the UN's aid convoy from being stopped and looted; dealing with road-block extortion by illegal armed groups or corrupt police; confronting an angry mob protesting in front of UN offices; tracking the movement of refugee columns; assisting displaced persons to move back to their homes, where they encounter new neighbours from a hostile tribe or ethnic group; preventing cross-border military or militia forays and use of proxy forces by neighbouring states; and disarming a community or rebel group as part of a peace agreement.<sup>39</sup> There are dozens of scenarios that can be played out within this proposed training domain.

The training games mentioned above, such as the initiatives undertaken by Trinity College Dublin, are valuable and serve as pioneering work, but they do not offer general peacekeeping scenarios or ones focused on POC more generally. They are designed to improve training for specific challenges faced in some deployments. This is essential, but a more general training video game, that immerses the gamer in the mission with the many challenges, complexities and interactions, is still lacking. This could provide an educational experience to prepare a peacekeeper for the types of scenarios that might be faced in the mission and help build the skill sets needed to meet those challenges. The player will have had time to think about the scenarios and the possible options for action.

## The Effects of a Peacekeeping Game

The scenarios that should be played out in a peacekeeping game are much more complex than that typical FPS games. Typically, games require fighting to get from Point A to Point B and to complete the mission, or to hold out against waves of adversaries. Many games are linear in play with possibly only narrow variability when it comes to the conclusion of the game. The premise is that if you survive or defeat an enemy, you win; if you die or lose to an enemy, you lose the game. This may work for basic

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<sup>39</sup>These scenarios are drawn from the "UN Tactical Level Protection of Civilians Training Modules," which introduce scenarios drawn from UN missions in Congo, Central African Republic, South Sudan, Darfur and Côte d'Ivoire. See, for example: United Nations Department of Peacekeeping Operations, Integrated Training Service, "Tactical Level Mission-Specific Training Modules on Protection of Civilians."

gaming and military training games where victory or survivability is the objective. However, for a peacekeeping game, or even for a game based on counter-insurgency operations, there are other potential endings: you survive, and yet you still lose, because, for example, the conflict has not ended; you die but the peace is won; or you live and peace is established. Obviously, the latter is the preferred outcome!

The most important feature is that the player learns about the various avenues to success in peace processes and peace operations. In order for video game to become an effective training tool, there needs to be a level of in-game adaptation that challenges the player with multiple avenues to success.<sup>40</sup> In an education or training setting, debriefing at the end of the game or at the end of segments could be extremely instructive, allowing players to reflect on the actions of themselves and others.

The US Department of Defense's Defense Advanced Research Projects Agency (DARPA) supports the development of more games with sophisticated, real-life games with non-linear story lines. DARPA has already put out a Request for Information for 'scalable, interactive gaming or wargaming approaches simultaneously spanning a large number of space and time scales with the goal of assessing a wide range of possible competitive outcomes and strategies using a range of human decision-making strategies.'<sup>41</sup> Some games could incorporate artificial intelligence (AI) that is adaptive to provide an additional challenge.

Moreover, DARPA is looking into the development of real-time simulations, and tactical shooter games that would not only encompass tactical training but also include operational and strategic elements. This is part of an effort to develop games to increasingly mimic the turbulent and complex reality that is modern war. The evolution of an adaptive AI and non-linear storyline can bolster player empathy for the video game's environment and characters. For example, depicting a village's daily struggles during a conflict within a video game may generate empathy in the gamers and cause them to change their belief that all villages are under insurgent control, or that the worst atrocities, e.g. genocide, are taking place. Emotional involvement is key for any simulation that involves teamwork or depicts social inequality.<sup>42</sup> This empathy effect could have an effect on the player-soldier, possibly looking at the long-term effects of killing. Having scenario alternatives based on players' decisions will help instruct the players on the possible consequence of their actions.<sup>43</sup>

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<sup>40</sup>Montserrat, Lavoué, and George, "Adaptation of Gaming Features for Motivating Learners."

<sup>41</sup>Defense Advanced Research Projects Agency, "Request for Information: Innovative Concepts for Multi-Resolution Interactive Wargames."

<sup>42</sup>Crookall, "Peace, Violence, and Simulation/Gaming."

<sup>43</sup>Darvasi, "Empathy, Perspective and Complicity," 12.

Players who want to use the game for instructional purposes will see the game through different eyes than those seeking to be entertained by any violence that may transpire in peacekeeping games. In addition, the players' avatars would be rewarded for peace-promoting activities, while their character could be punished for serious misconduct. The wanton use of force could also result in an early end to the game, with the player's character sent to a court martial. On the other end of the spectrum players would also have to bear the burden of their conscience in cases of under-use of force in the face of atrocities against civilians when the peacekeeping force had the means to intervene but failed to do so.

The complexity of peace operations requires a level of cultural understanding, communication and conflict resolution and not just the gun-blazing tactics of many FPS games. This is why the complex AI algorithms can be particularly useful in future e-games. Fortunately, these AI capabilities are increasingly being found in commercial gaming. New levels of gameplay are now possible that better mirror modern day conflict zones. The AI can also help show how conflict resolution is a necessary part of peacekeeping: both to achieve the mandate but also as an exit strategy for international forces (or game completion).

If players in the general public, especially game-playing youth, become more aware of the goals and activities of peacekeeping, they will be better able to serve in peacekeeping and, more broadly, be able to engage intellectually with such issues and support the goals relating to peacekeeping. The more knowledgeable both local populations and world populations become, the higher will be the levels of understanding and support.

For peace operations especially, a highly desirable characteristic is empathy for all concerned. As Farber and Schrier point out videos can serve as 'empathy machines' and foster a relationship between the gamer and all aspects of the video game, including the main character, non-playable characters (NPCs) and interactions with the environment.<sup>44</sup> A heightened sense of empathy in the gamer creates a more immersive experience and amplifies the overall interaction, especially if the player were able to identify with the in-game persona.<sup>45</sup>

There are video game precedents to build upon for future peacekeeping games. If games like *America's Army: Proving Ground*,<sup>46</sup> billed as 'the official game of the US army,' can attempt to re-enact the heroic deeds of soldiers in modern combat missions, then a future official peacekeeping game could do the same. The gamer could interact with a realistic and evolving

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<sup>44</sup>Farber and Schrier, "The Limits and Strengths of Using Digital Games as 'Empathy Machines.'"

<sup>45</sup>Farber and Schrier, 7–8.

<sup>46</sup>United States Army, "America's Army"

environment. Ultimately, for peacekeeping, it could improve how people around the world view peacekeeping and create more interest.

## UN Responsibilities and Requirements

At the United Nations, the Integrated Training Service (ITS) of the Department of Peace Operations (DPO) is the main body responsible for the conception, production and evaluation of training tools distributed to local (national) training facilities. But it has not yet developed digital games to support its training programme.

The ITS leaves most of the training of military forces to the troop-contributing nations, and it has asserted that its training should focus more on improving cultural awareness in order to improve the quality of the response of peacekeepers, on teamwork, and the transfer of knowledge among peers.<sup>47</sup> While it has so far lacked the time and resources to create digital peacekeeping games, its current repertoire of materials and scenario-based exercises could be leveraged for developing such games. The call for innovation, as made in the UN Secretary-General's Strategy on New Technologies, could certainly apply to enhanced peacekeeping training.<sup>48</sup>

The Office of Information and Communication Technology (OICT), within the UN Secretariat, provides assistance with technological innovation, including for peace operations. In late 2019, it began to explore the possibilities of peacekeeping games, including through its new Technology Innovation Lab (UNTIL) in Finland. One possibility to explore is the inherent tension in the POC mandate, when the attackers of civilians are also participants in the peace process. This is an important but controversial aspect of modern peace operations, so it is all the more important that the UN explore the range of dilemmas and options for peacekeepers.

It is possible that ITS, OICT, and other parts of the UN system could liaise with the video game industry (or vice versa) or independent ('indie') developers in order to create video games that would enhance training for current and potential future peacekeepers and, in a releasable version, improve the peacekeeping brand around the world. Thus, such simulations could accomplish the two goals at once – peacekeeping training and public education. By releasing peacekeeping e-games, the developer would not have to charge large fees to institutions like the United Nations to recoup development expenses. All peacekeeping institutions could have access to the games and safeguard their use as a wide-reaching training tool in both the developing and developed world. The second goal would be that the e-games would provide an educational tool to the wider e-gaming audience, including one or more for

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<sup>47</sup>United Nations Department of Peacekeeping Operations, Integrated Training Service, "Training."

<sup>48</sup>United Nations Secretary-General, "United Nations Secretary-General's Strategy on New Technologies."

use as a massively multiplayer online game (MMOG). The games could potentially serve not just as entertainment for younger people, but as a means to foster international humanitarianism and conflict resolution within a new generation of global citizens who are technologically savvy.

## Peacekeeping in Virtual Reality?

Fortunately, with the advent of virtual reality (VR), realistic simulation is rapidly becoming cheaper and easier to develop. VR headsets and games are penetrating the mainstream videogames market, and some national forces are recruiting gamers and training them with warfare simulation games, including to develop skills to manipulate drones and long-range weapons. The US Army is already extensively using VR simulation for soldier training using the ‘Synthetic Training Environment’, with the help of Bohemia Interactive.<sup>49</sup> VR e-gaming is relatively new but the technology is being quickly adopted by both commercial and military markets. There are also new opportunities for a change of culture and the production of strategy-focused peacekeeping electronic games. This might foster peacekeeping techniques as a more efficient response to various situations in conflict zones.

Thanks to the advent of portable VR technology, players may now use VR headsets to have a more realistic feeling of ‘being there’ in the virtual 3D environment, which can be modelled on actual locations, in combination with headphones and a microphone that allow them to communicate with each other and cooperate. These are no longer exclusive to expensive hardware-software packages used by the army, but are now part of the mainstream video games market.

The International Committee of the Red Cross (ICRC) has a VR Unit in Bangkok that is developing combat simulation/games that focus on the principles of International Humanitarian Law.<sup>50</sup> Also in Bangkok, the United Nations has a VR unit that is looking at VR techniques for basic equipment training (e.g. use of fire extinguishers).

Because of recent developments in consumer technology, commercial video games can reach a level of immersion good enough to train troops, maybe not physically but strategically, operationally, and tactically. Electronic (VR) games can serve as realistic warfare simulators if the designers pay enough attention to detail and realism in the immersive environment.

There is much research in the academic world, however, that criticizes the relative detachment of the drone pilot from the physical target, questioning if the distance provided by the on-screen interface real does dehumanize the target and, consequently, the act of killing itself. There is evidence that the

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<sup>49</sup>Robitzski, “The U.S. Army Is Using Virtual Reality Combat to Train Soldiers.”

<sup>50</sup>Information provided to one of the authors by Christian Rouffaer, Head of Virtual Reality Unit at the ICRC.

detachment is not complete, as it was discovered that many drone pilots end up with a post-traumatic stress disorder as a result of their functions.<sup>51</sup> Peacekeeping games can give a sense of real-world tensions and stresses with much less risk of trauma from the viewing of actual atrocities. The simulations can help prepare peacekeepers for what they may have to witness and to deal with in the field.

In any case, given the interest of both the military and gamers for video-game simulations of warfare, studies can be made to explore the specific features and scenarios that would be most valuable for real-world peacekeeping and which can be effectively represented in peacekeeping games for training, recruitment and even entertainment. The software tools are expanding rapidly to allow a wider range of scenarios and quests.

### **New and Emerging Methods of Game Design and Development**

The technologies and tools for designing new games are getting easier and better, which is especially fortunate for independent (indie) game developers that do not have large studios to do extensive programming, coding, sound engineering and art development. For an open world (FPS/TPS) peacekeeper game, one flexible and newly emerging method to speed up game creation is 'agile object-based game design,' through purchase of malleable characters and game controllers (including all rights), e.g. through the Unity Asset Store. By buying components with complete code-level freedom and borrowing from existing games and developers, i.e. reskinning and partial modifying, with all necessary permissions and acknowledgements, reductive development can lower the development, trial, production, and other costs, as well as reduce the time needed for game development. The specially purposed characters can be unique, as can the storyline, using actual UN scenarios. As the game environment is being programmed, the storyboard, scenarios and dialogue trees can be developed in parallel. This option promises to be cost efficient and fault tolerant, given that most of the technical bugs have been worked out before collections of characters or structures are purchased. Thus, more attention could be placed on the content, rather than on display details. However, the game should be developed in such a way that future versions or episodes could be done in virtual or augmented reality (VR/AG). The possibility of adding some machine learning tools, such as for voice recognition and responsive code changes to game play, can also be explored.

Another possibility is to legally 'mod' a pre-existing game that has been opened for the wider video-game community to develop and introduce their own additions into the game. These could be as small as variations in characters, such as reskinning character outfits in a peacekeeping style, or

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<sup>51</sup>Chappelle et al., "An Analysis of Post-Traumatic Stress Symptoms."

as large as major changes in the missions. For peacekeeping, the goal is not to shoot but to prevent shooting, unless absolutely necessary. Modifications to the original game would be contingent on finding a design community that would be creative yet also able to mirror peacekeeping reality, which requires more familiarity with UN operations than possessed by most gamers or game developers. One downfall of 'modding' is that the game would not serve to be the exact training tool that is envisioned. However, it could serve as one branch of a new genre of peacekeeping games.

### **Conclusion: Future for Peacekeeping Simulations?**

Many new and exciting possibilities for peacekeeping games exist. Developers could offer realistic decision trees with non-deterministic solutions so players have opportunities to experiment with a game that may be played differently at every try, with the ongoing challenge of finding the optimal solution, especially strategies for long-term conflict resolution. The opportunity to try various strategies would allow players to learn from past mistakes and successes and to adapt their decision-making style and skills in order to find the best response to various conflict scenarios. The players can find satisfaction in finding strategies leading to peace. In particular, they can explore the decision space of the conflicting parties and situations of the local populations to better their own peace strategy. Such mirroring can be very useful in training, especially to foster empathy.

Peacekeeping games could use different styles for different audiences than wargames, including some of the styles reviewed earlier. The designers should be able to reproduce at some level the emotions and stress that are involved in real life. To avoid players simply 'gaming the game,' the simulation should be as realistic as possible. If the challenge and the means offered are realistic, the games would attract the interest of a niche of players and educate peacekeepers on the best strategies to adopt in difficult situations. Lessons can be learned for real situations borrowed from the field and applied to the game environment. Given the changing circumstances in the field, peacekeeping games could be useful to train UN peacekeepers during deployment, as well as before.

With challenging games developed to test one's skills at conflict resolution, the gaming culture may even find an element of pacification, or at least questioning violent solutions, which opens more potential for future exploration.

Peacekeeping gaming could be fun and exciting, as well as educational. It certainly offers more constructive and productive aspects than destructive ones for the entertainment industry. For actual peacekeepers, it could be a valuable means of training. So, innovation in peacekeeping gaming offers a potentially valuable training tool for the professional, a good awareness-

raising tool for the general public and a new form of entertainment for ethically-minded game players.

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