Cambridge Centre for Social Innovation

Peaceshaping and Climate Lab

PEACEGAMING:

A BLUEPRINT FOR EVIDENCE-BASED CO-DESIGN

Working paper summary report by
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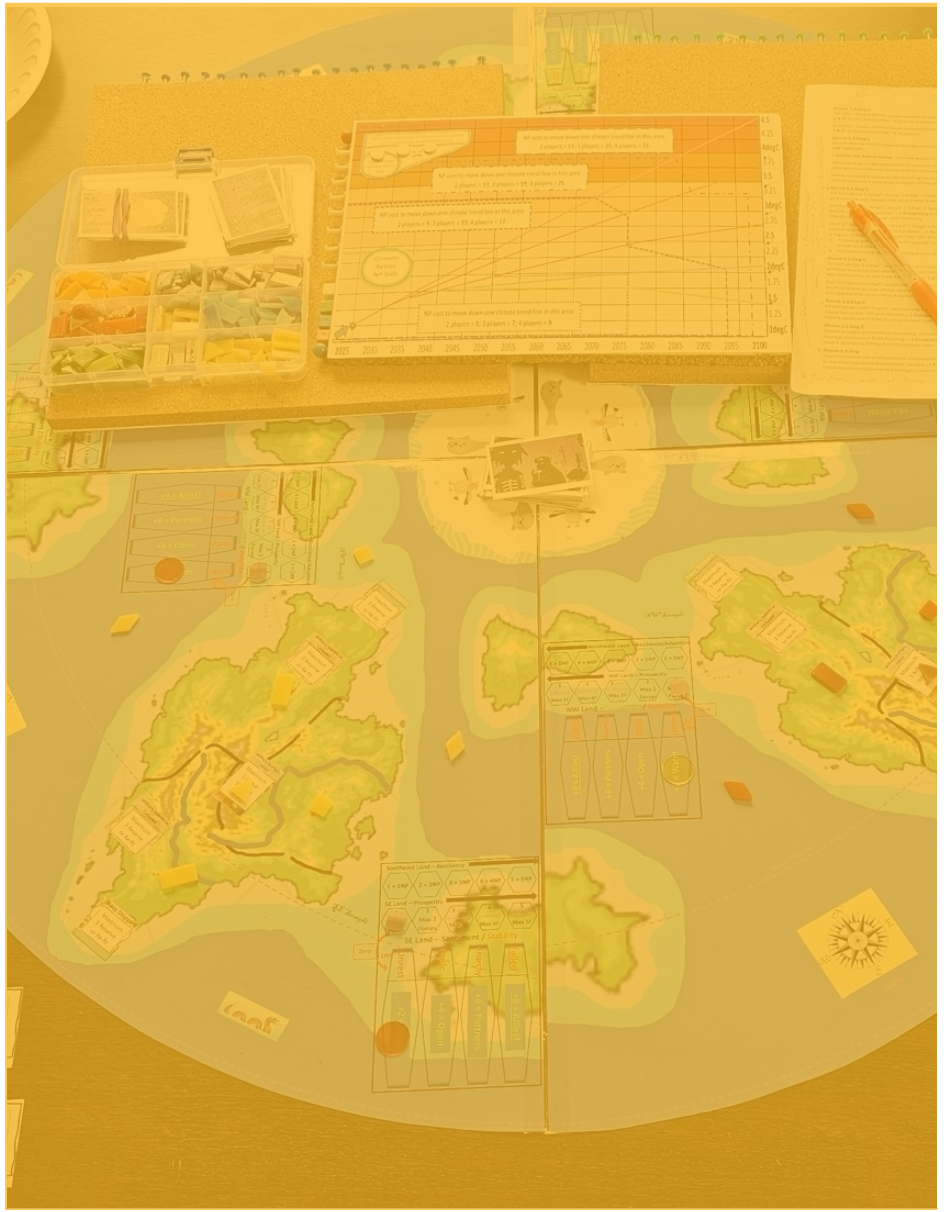
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Introduction

The Cambridge Centre for Social Innovation has commissioned this working paper as part of the Cambridge Peaceshaping Climate and Conflict Lab (CPCL), in collaboration with Falmouth University and UN military advisors. The purpose of the paper is to explore the potential for developing the field of ‘peacegaming’.

The CPCL addresses the intersections of climate, conflict, and peace, investigating how to foster resilient and sustainable practices and collaborations for peacebuilding. As an interdisciplinary space, the CPCL prioritises bridge-building and collaborative action in response to the impacts of climate change on human conflict. In doing so, it aims to provide a relevant and cross-cutting environment for understanding the contemporary context within which we must confront these evolving challenges.

Currently, gaming is widely used in military training to prepare personnel for the operational elements of conflict. While the same considerations can be applied to conflict prevention and post-conflict peacekeeping, this field is relatively underdeveloped. There are examples of the use of games in pre- and post-conflict contexts, but there is considerable scope to extend the field and develop new applications. This development would require collaborative efforts involving game developers, representatives of UN member states, members of at-risk communities, and social innovators.

This summary outlines the scope for future development. It notes examples of existing and future use, recommendations for inter-organisational collaboration, and considerations for those commissioning and designing 'peacegames'. The full paper can be read on the CPCL webpages.



"We need to get better at preventing future conflicts through improved planning and non-military interventions. Peacegaming is an important tool to foster a mindset in which prevention is prioritised."

Prof. Neil Stott, Co-director, Cambridge Centre for Social Innovation



Peacegaming use cases

Analogue and digital games are currently deployed in training scenarios, workshops, and discussions related to peacekeeping and the climate crisis. Simulations, scenarios, and role-play are the most common game types. This summary includes three existing use cases.



PeaceMaker
An open-access simulation game for educational use.



Virtual Vehicle Patrol 2.0
An immersive training simulator for peacekeepers.



Climate M.A.D.
A strategic board game for policy-makers.

Peacegaming use case: PeaceMaker



PeaceMaker: produced by Impact Games, 2007

PeaceMaker is an award-winning, open-access simulation game based on the Israeli-Palestinian conflict. It was developed with input from diverse stakeholders.

Players assume the role of a leader, representing either Palestine or Israel. They can make political, security, and construction decisions. To achieve peace, players must balance the interests of citizens on both sides, as well as world opinion. Gameplay unfolds as news is announced.

- Open access
- Used in schools
- Used in 60+ countries worldwide
- In English Arabic and Hebrew

Existing use

PeaceMaker is available for home use and is currently used as a learning tool in schools.

The game's use of real news adds to its educational value. Students learn about the history of the conflict as well as the complex relationships between internal and external policies, crisis events, and political diplomacy.

Players learn by observing the consequences of their decisions.

Potential for development

The simulation platform has the potential to be adapted to other conflicts and social issues, where players can interact with and learn from current events in the news.

The game can serve as a reference for developing simulations suitable for other conflict-prevention contexts.

Diplomatic use of the game has not been documented.

Peacegaming use case: Virtual Vehicle Patrol 2.0



Virtual Vehicle Patrol 2.0

Immersive training scenarios for the operational aspects of peacekeeping missions include a system with three stations: driver, navigator, and patrol commander, all controlled by an instructor. The driver has basic vehicle control, multiple screens, and binoculars for closer inspection. The instructor has full control of the environment, including weather conditions and scenarios to test the students' understanding of UN procedures.

Avatar-augmented role play can be combined with the game to expand training in negotiation and patrol techniques.

Specialised use

For training purposes

Used by ADF

Designed for use across the globe

Existing use

The driving simulator is used by the Australian Defense Force (ADF) Peace Operations Training Centre to train UN Military Observers in the policies, techniques, and procedures related to conducting patrols in a UN Mission.

The simulator has been designed with a small technological footprint to enable its use by Mobile Training Teams across the globe. It is intended to reduce barriers to training in the operational aspects of peacekeeping missions.

Potential for development

There is potential for the simulator to be used more widely across the globe.

Gameplay can be further extended to include more extensive role play, enhancing the ability to harness technology in support of peacekeeper training.

Virtual Vehicle Patrol can serve as a reference for developing simulations suitable for training in other conflict-prevention contexts.

Peacegaming use case: Climate M.A.D.



Climate M.A.D.

This strategic board game uses UN climate data to provide players with realistic feedback on the long-term global implications of policy and resourcing decisions. Playing the role of a national leader, players rehearse decisions in a controlled environment, balancing national interests with long-term climate consequences.

The game was designed by Jason Baldock in partnership with Harvard Kennedy School and the Massachusetts Institute of Technology.

Currently in prototype

Made for policymakers

Research collaboration

In English

Existing use

Analogue games offer the opportunity for rich learning outcomes, especially in relation to decision-making skills. This game is intended for those developing policy and making decisions at the strategic level.

The game is currently in the prototype stage but demonstrates how real-time data and modelling can be embedded into games to provide an immersive and realistic experience for policymakers.

Potential for development

Climate M.A.D. has the potential to broaden the reach of gaming into the realm of policymaking. Blending traditional security-related characteristics with climate modelling and geo-strategic considerations, the game has broad appeal across the multilateral community.

Future development may focus on producing variants to engage an even wider group of players. This could be achieved by emphasising particular policy issues or enhancing playability, depending on the audience.

Potential for future uses of peacegaming

Agendas

Protection, engagement, and support are crucial elements outlined by UN Security Council mandates. These elements can be effectively translated into gaming scenarios.

There is significant potential for the development of 'serious games' across various levels: for diplomats, decision-makers and policymakers, peacekeepers who operationalise those policies, and educational games incorporating agendas related to peace initiatives.

Themes for development

Conflict arising from climate change

There is a need to better understand and plan for the geopolitical impact of the climate crisis, including the potential for conflict. With enough data, scenarios can be modelled for decision-making practice.

These scenarios should include economic modelling and account for climate change, sea levels, food supply issues, refugees and the movement of people, water, and other resource use.

Tackling disinformation is also an important consideration, particularly in relation to climate change.

Scenarios for national security settings

There is a need for in-training and preparatory resources for diplomats and military forces deployed in peacekeeping missions under the operational command of the United Nations.

These resources can include conflict resolution skills, such as cultural awareness and empathy training, awareness of gendered violence, and post-colonial reconstruction.

They can also include operational training, for example, to onboard new peacekeepers in how the UN and its missions work.



"Military units focus on winning wars rather than preventing conflicts or supporting peaceful reconstruction. Our wargames reflect that. However, there is potential for peacegaming to be used to train troops, diplomats, and policymakers in how to handle pre- and post-conflict situations."

Dr. Jarrod Pendlebury, Military Adviser to the Permanent Mission of Australia to the United Nations, 2021-24

Co-design approaches

Benefit

Co-design is crucial for developing games aimed at change, education, or advocacy. The Experience-Based Co-Design (EBCD) method, inspired by the NHS (2009), involves setting up a steering group, recruiting participants, gathering data, holding stakeholder meetings, and running co-design workshops. This inclusive process ensures a deep understanding of diverse perspectives, leading to more meaningful and human-centred game designs.

By integrating EBCD into the development process, games can be iteratively refined through stakeholder feedback, resulting in a final product that is more impactful and accepted by a diverse audience. This not only improves the game's effectiveness but also fosters rich collaboration and new insights, essential for achieving the transformational goals of peacegaming.

Successful projects highlight the importance of ongoing dialogue and adaptability.

Insights

1

Recruit diverse stakeholders

Ensure a broad representation of stakeholders in the co-design group. Ensure fair representation of the perspectives, concerns, and constraints of those most affected by the issues..

2

Evaluate continuously

Data from game use can provide insights into player engagement patterns and emerging trends and issues. Use data analytics for ongoing evaluation to inform all stages of game development,

3

Allocate sufficient resources

Effective co-design requires thorough preparation, including budgeting for participant involvement and ensuring the development team's commitment to flexibility.

4

Be transparent

Provide thorough onboarding to align stakeholders with project goals and processes. Establish transparent processes for data gathering and decision-making to maintain ethical standards.



"Co-design can be tricky when working across diverse sectors, disciplines, and locations, but it is crucial for developing peacegames because they need to be informed by a deep understanding of all sides. We advocate using the Experience-Based Co-Design method for developing peacegames, as stakeholder engagement is key to success."

Prof. Tanya Krzywinska, MBE. Professor of Digital Games at Falmouth University

Considerations for designers

Consistent with traditional wargaming, peacegaming can inform the tactical operations of peacekeepers, as well as the strategic decision-making of leaders. Existing genres, grammars, and game mechanics can be repurposed. However, care should be taken to tailor games to specific contexts, being mindful of cultural and political sensitivities. Stakeholder involvement is key to achieving this.

SKILLS AND TRAINING

Games can rehearse effective ways of reducing the risk of conflict and rebuilding fractured societies post-conflict. Gaming technology can support the integration of live (real actors in real settings), virtual (real actors in simulated settings), and constructed (simulated actors in simulated settings) activities into coordinated operational activity. This can enable targeted training and development.

STRATEGY AND DECISION MAKING

Strategy games can assist policy makers and practitioners develop effectiveness in reducing the risk of conflict. Analogue games can be better suited to developing negotiation and conciliatory skills. Decision-making algorithms can be usefully employed. However, there should be due consideration of the opacity of game logics. Hidden game logics can disengage players, but explicit logics remove the necessity to learn by doing. Delayed consequences should be timed carefully.

WINNING CONDITIONS

Traditional wargames have strict winning conditions that condition player behaviour, limiting agency. Peacegames must reframe gaming tactics to align with peace objectives: promoting social justice, stabilisation, and regeneration. To achieve this, it is essential to go beyond rigid win/lose conditions.

While traditional games have a clear end-point, peacegames may use open-ended play (Sutton-Smith 1997), and aim to maintain an equilibrium state. For example, long-term objectives could include sustaining equitable resource availability in a changing landscape. A holistic approach, blending structured and free-form play, can foster creative problem-solving and enhance individual agency. Intermediate goals, with feedback mechanisms such as progress bars and visual or auditory cues, can create a more engaging and transformative gaming experience.

SPECTACLE & NARRATIVE

While spectacle and conflict effectively create engaging scenarios, their use in wargames raises concerns about glamorising war and masking the human experience. Designers of peacegames must carefully contextualise and mobilise spectacle to support non-violent, constructive narratives, such as civilian protection.

The challenge lies in adapting the compelling elements of wargaming's spectacle and feedback mechanisms to fit peacegaming's goals. This involves recontextualising the foundational grammar of wargaming to serve peace-oriented stories and activities, using familiar game components in innovative ways to develop an attractive and engaging peacegaming experience.

Considerations for commissioning partners

Commissioning partners such as UN agencies play a key role in translating real problem spaces into gamable ones for training and development.

REASONS TO ENGAGE

There are barriers to engagement in peacegame development, such as potential risks and sensitivities concerning work done in support of planning for real-world contingencies and potential conflict. However, gaming offers an opportunity to create safe "sandbox" environments and to circumvent national sensitivities by de-contextualising peace work, while still bringing to life abstract strategic, operational, and tactical problems.

Another key benefit of the digital transformation of gaming and simulation technology is the ability to network users in real time.

PRE-DESIGN ENGAGEMENT

Pre-design meetings between commissioning partners and designers provide an opportunity to plan for future expansion of the scope.

NETWORKED PEACEGAMING

The US Military's VIRTUAL FLAG exercises offer an example of how technology can support the integration of live (real actors in real settings), virtual (real actors in simulated settings), and constructed (simulated actors in simulated settings) activities into coordinated operational activity.

Live, Virtual, and Constructed (LVC) peacegaming could help overcome one of the key physical disadvantages of the peacekeeping system: the wide geographical distribution of personnel and equipment. It would also enable targeted training and development at the strategic, operational, and tactical levels of peace operations, as any element can be taken 'offline', providing the opportunity for retraining in a given area.

MODULARITY

Modular design of games would aid repurposing and adaptation to different contexts. Rather than focus on isolated elements of peacekeeping, partners can consider whether they could be components of a bigger activity. However, careful consideration should be made when using elements in new contexts. It is essential to involve partners with experience of the context, as there may be unforeseen differences or sensitivities.



"Future networked possibility could enable simulated peace exercises with large number of actors in real-time. This type of exercise offers a chance to address some of the deep-seated challenges of multilateral peacekeeping, by bringing together key peace actors to rehearse peace in a way that military allies and partners have traditionally used to practice war."

Bill DeMarco. Director of Innovation and Analysis A39 (AUiX) United States Air Force, Air University

References

NHS Institute for Innovation and Improvement (2009) The EBD Approach: Using patient and staff experience to design better healthcare services. Available at: https://nhselect.nhs.uk/uploads/files/1/EBD%20Guide_single.pdf [Accessed 16 September 2024].

Sutton-Smith, B. (1997) The Ambiguity of Play. Harvard University Press.



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