

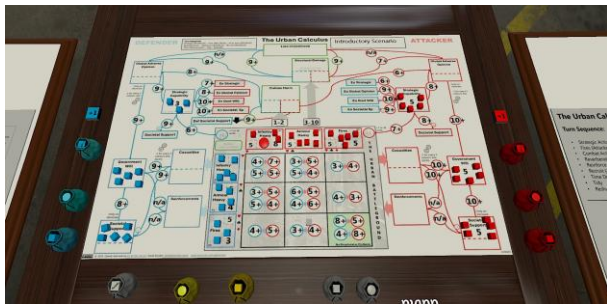
Wargaming Urban Conflict PhD

May 25

This is a summary of where I am in my work on a PhD in Wargaming Urban Conflict, which I'm doing under Dr John Curry at Bath Spa University. It highlights the main activities I've completed this period, and what I plan for the next few months. Any questions or comments please get in touch at david.burden21@bathspa.ac.uk.

Late 2024 and early 2025 were a bit slow PhD-wise with various professional and other commitments (see below on a couple of them), but the last few months have been very productive with a variety of things getting pushed over the line. I am now very much in the transition between writing and data collection, and getting The Urban Calculus formally released into the wild has been a big milestone. There is still writing and desk research to do, particularly taking my new urban elements model (see below) and using that to more formally assess existing wargames, and then to use that to drive improvements in my games.

I'll be at King's Wargaming Week, COW2025 and DSET, and hopefully showing games at all three. Otherwise if you'd like a demo of one of my games, and particularly if you can provide formal feedback plays on them, then please do get in touch. The panel below summaries where I am with my four main PhD games, and the pages that follow highlight other key developments.



The Urban Calculus (TUC), my strategic-level, socio/pol-mil abstract "playable systems model". It's now up on BoardGameGeek (BGG) and available in print'n'play and playable Powerpoint, with Tabletop Simulator (TTS) to follow by end May 2025. More details on the next page.



OPUC – Operational Level Urbanised Campaigning – my new Corps/Div level game, initially set in Estonia. It's trying to make towns more than a +1 and looking at where all the civilians go. One "innovation" is that towns/cities are represented by separate "beer-mat" map displays.



City & CEMA, my 2023 Bde/Bn level game is being significantly overhauled and including learnings from the Bn/Coy level game I developed and playtested last year. It follows NATO's USECT urban doctrine and has capability cards for non-organic assets. First outing of the updated game should be at COW2025.



Rubble Town – my solo, Pl/Coy level "beer and pretzels" card-based urban wargame. In this photo of the COW session two teams of 2 are each playing their own solo game – but it makes for nice competition! This should be up on BGG as print'n'play and on TTS by end May/early June.

More information on all the games on my [wiki](https://www.wikipedia.org/wiki/David_Burden). If you'd be interested in playtesting/evaluating any of them – formally or informally - then do get in touch. All ethics and assessment forms are now on-line for easy completion.

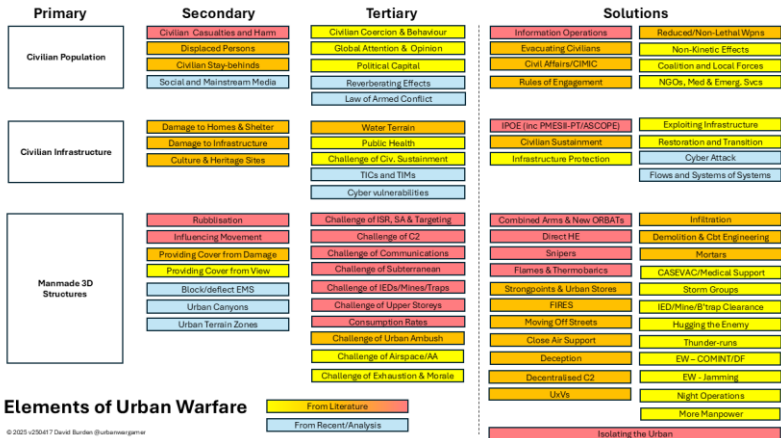
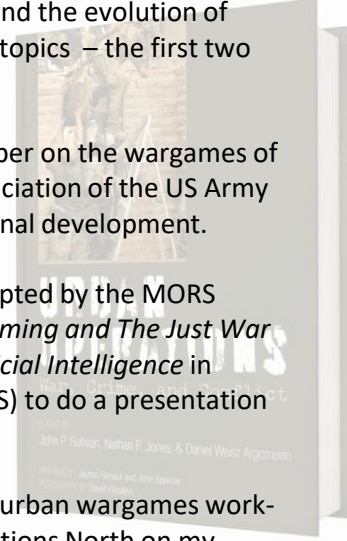
And, in amongst all this lot, please don't forget that I'm available for consulting and project assignments within the areas of wargaming, conversational AI, and virtual/mixed reality and the metaverse. Just email me at david.burden@dadn.co.uk. Coffee chats always welcome!

Since 2022 I've been posting "first-bites" of my PhD chapters up onto the [Wiki](#). These now cover urbanisation, a history of urban warfare, a historiography of urban warfare and the evolution of urban doctrine. I've also started adding "Research Notes" on more focussed topics – the first two are covered in the next section below.

The [Urban Operations](#) book that was published last year and features my paper on the wargames of the Battle of Hue has been selected for the "elite Book Program" of the Association of the US Army (AUSA) which supports U.S. Army troops and their educational and professional development.

My second paper, on [Building an Urban Wargames Database](#), has been accepted by the MORS Journal of Wargaming and is still awaiting publication. My chapter on [Wargaming and The Just War](#) should be published by Taylor & Francis in a new book on [Just War and Artificial Intelligence](#) in 2H25. I'm booked in to the Georgetown University Wargames Society (GUWS) to do a presentation on the chapter on 19 Aug 25 at 1700 GMT+1 – [sign-up to attend](#).

I delivered a presentation at [ConnectionsOz](#) on my civilian representation in urban wargames work-in-progress (mentioned last newsletter) and did a 5 minute video for Connections North on my views on urban wargaming.

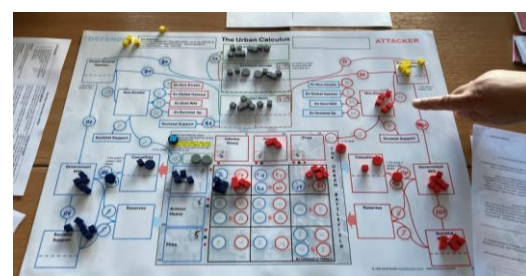


My biggest task over the last few months has been to develop an evidenced-based list of what seem to be the most important elements of urban conflict. To develop this I created a database of over 1000 items of evidence drawn from across 7 comparative urban warfare studies, covering 44 different, and informative, battles. I then used the US doctrinal Urban Triad as my main analysis framework, and also separated the features and challenges of the environment from the military solutions.

The resultant chart is basically a heatmap of the 72 different elements identified, some aggregated, whose mentions represent more than 1% of the evidence base. The blue items are those representing more recent analysis which could not be expected to score highly on research dating back to World War 2, but which are commonly identified as key modern issues. You can download the [Research Note](#), and also a Research Note on a precursor study I did to identify [the most "informative" urban battles](#) from the same sources.

A bit later than I'd hoped, but on 25 Apr 25 I finally published the print'n'play and playable Powerpoint versions of The Urban Calculus (TUC), so anybody can now download and play the game. There are also 3 introductory/tutorial videos up on YouTube. My thanks to Mick and Mike for blind-playtesting the game to make sure that rules, boards and other assets all made sense and giving me such useful feedback. By mid-May the Tabletop Simulator version of TUC will be out, making it even easier to play! Download the game and watch the videos at: <http://www.taunoyen.com/games/tuc>.

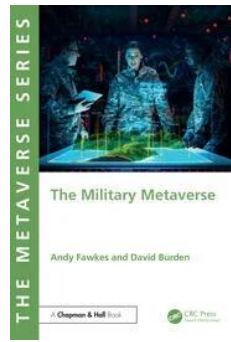
Of course all this is aimed at getting formal plays of the game that I can then analyse for the PhD. If you and/or your organisation would be willing to play the game and provide feedback please get in contact.



The new book by Andy Fawkes and I on The Military Metaverse was published on 1st May! This is the third book in The Metaverse Series that I’m co-editing for Taylor & Francis, with other authors contributing the rest of the series. You can read about the book at [The Metaverse Series website](#), and order from [Routledge](#) (20% discount with code 25AFly1 before 30 Jun 25) or Amazon.

We also believe in practicing what we preach, so we’re building a Military Metaverse microverse on the [Frame](#) platform to help people explore the book and get some idea of what metaversal spaces can offer. After the launch event (see below) the space will be linked in to the [microverse](#) we already have for the whole series.

STOP PRESS: We are having the Virtual Launch for the book in our Military Metaverse Microverse on 7th May, from 1200 – 1900 GMT+1. It’s a drop-in event, so you might just have time to sign-up now on [Eventbrite](#).



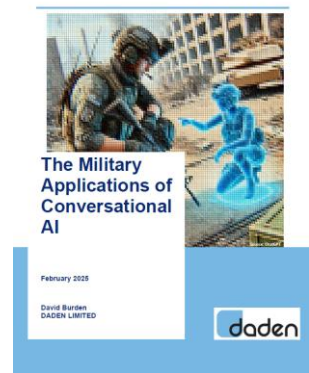
No-humans	Matrix Game Simulation	Simulation
Humans	Free Wargames	Rigid Wargames
	Free models	Rigid models

I’ve continued the work on using LLMs to run matrix games in totality that I described last issue and which I call [Matrix Game Simulaton \(MGS\)](#). I developed a couple of new scenarios, one around Trump’s interest in Greenland, and another around Asteroid 2024 YR4 (remember that?).

I’ve also been experimenting with running MGS on different LLMs, including Sensay (see below). Of particular interest has been [running it on Ollama](#). Ollama is a “container” for LLMs, with different ones to choose from, but which runs on your own PC, behind a firewall. It’s definitely not as good as the latest ChatGPT at running MGS, or any task, but it does let you experiment in a completely offline environment.

I presented on MGS at the recent Virtual Conference of Wargamers, and a video of that presentation is available of John’s [History of Wargaming Project YouTube channel](#), and the [slides](#) are on my wiki.

Late last year I was invited to join the Advisory Board of Sensay, a “digital replica” company. Sensay are effectively doing what we tried to do in our MOD Virtual Humans project back in 2017 – looking at how to create virtual copies of the knowledge, insight and ideally wisdom of real people, roles and even projects and platforms. With LLMs instead of technologies like Chatscript they are achieving far more than we could back in 2017-2019. To help paint a picture of what all the implications are for this in the military I’ve put together a white paper on [The Military Applications of Conversational AI](#) – available as a free download. Needless to say it includes an annex on the application of conversational AI to wargaming.



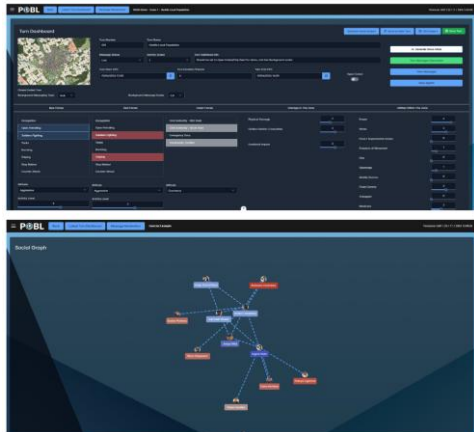
I first ran the Vertical Urban Wargame for the WD’s Virtual Conference of Wargamers (VCOW) in 2023, and since several people had expressed the wish to see it again I ran it again at VCOW2025, and then twice more in the following weeks for other WD and Fight Club members. It is a tactical urban game using 10mm miniatures (1980s Berlin Brigade camouflage!) in a dense 3D city model (courtesy of Dropzone Commander). The main conceit is that all the players see is the view from a mobile phone camera placed behind their commander – the “verticality” of the name taken from the fact that they only see the vertical nature of the environment. I use the Jitsi video conferencing service to provide the feeds, and Zoom to provide the “radio” comms. [Full description and video](#) on the wiki.

Women in Wargaming

Over the last few months I've been part of the team working alongside Dr John Curry, Tess Butler and Ant Sharman delivering the Women in Wargaming project for the Secretary of State's Office of Net Assessment and Challenge (SONAC) at UK MOD. The project was looking at how decision-making was influenced by gender. I facilitated 3 of the games of CONTESTED that were used as a test bed, and then conducted the majority of the qualitative and quantitative analysis of the CONTESTED plays. It was a fascinating project and good to use some of the formal analytic skills that I've been developing through the PhD in a real world setting. Tess is organizing a 'lunch and learn' webinar on the findings of the research in due course – let me know if you'd like to be informed of the date.



Credit: Tess Butler

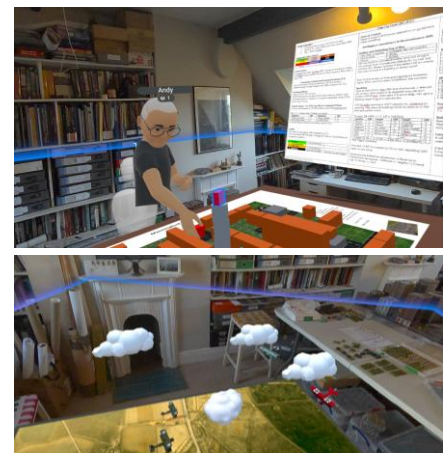


During 2024 I worked with Vindico Limited on a UK MOD DASA project called POBL, which means "people" in Welsh. POBL was the next iteration of the work that I'd done with the ASMSW and AI4II projects in developing synthetic social media and other information feeds that could be generated by CPXs/wargames and virtual training (e.g. VBS/DVS). With POBL we merged the two systems, and extended them to include physical FTxs using remote camera sensors and image recognition. We also brought in LLMs to help with persona and message generation. We presented our work at IT2EC in Oslo in March, and the [slides](#) and [extended abstract](#) are available for download. If you might have a use for POBL to support your training, exercises and wargames then do get in touch.

POBL Information Wrap

Mixed Reality Wargaming

Mixed Reality (MR) is where you put on a "VR" headset and see the real world, but can then add virtual objects into the real space which you can then interact with. More to the point your colleagues can see the same virtual objects but in their physical space, and you can see them as avatars in your physical space. MR has the potential to both deliver a wargaming "Tabletop Simulator on steroids" experience, and to let us rethink how we deliver command and control spaces. The top image here shows Andy, my co-author on The Military Metaverse, experimenting with a simple urban wargame I built - his avatar and the game appearing in my office/wargames room. Whilst MR would work with any 2D wargame the biggest benefit may well be in games which are naturally 3D – such as urban, and the aerial wargame also shown. I plan to have a demo with me at COW and DSET, and more than happy to set up other demos for those interested. More info on [Substack](#).



I'm keeping my [Wiki](#) up to date with draft material, presentations, AARs and other information. I also post on Bluesky as [@urbanwar gamer](#) and LinkedIn as [David Burden](#).

My key goals for the rest of 2025 are to:

- Make Rubble Town available as print'n'play by end May 2025, and my other PhD games by 4Q25.
- Finish the development of OPUC and update City&CEMA ready for the 2025 conference/demo circuit.
- Start conducting formal plays and feedback collection for my games in earnest.
- Submit my paper on *Representation of Civilians in Wargames* for peer-review, probably to the *MORS Journal of Wargaming*.
- Complete my assessment of how existing wargames model urban warfare, and identify the main gaps.
- Start work on one or both of a paper on Validation in Wargaming and another wargame comparison paper on the Battle of Fallujah.

If you have any questions/comments/just want to chat then please contact me at david.burden21@bathspa.ac.uk.