

Beyond Self-Reporting:

Behavioural matrices used for social identity mapping of multiple social identity expression on multi-platform digital environments.

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Paper presented to the 43rd Australian & New Zealand Association of Psychiatry, Psychology and Law Congress, *Social norms and law reform: Impacts of a changing society on forensic practice*

Hotel Grand Chancellor, Hobart, Tasmania Sat 6 December 2025



Acknowledgement of Country



<https://www.sbs.com.au/nitv/article/explainer-how-tasmanias-aboriginal-people-reclaimed-a-language/1f920kc7> Kunanyi (Mount Wellington)

Acknowledgment of Funding Source



National Intelligence Community Postdoctoral Program

NIPG-2023-015

Measuring reliable behavioural indicators of multiple social identity
and features in real social world settings

- NIPG Post-docs
- Encouragement for ARC NIDG applications
- Briefings about the National Intelligence Community (NIC)
- Closed conference attendance in US (2024) and Canberra (2024; 2025)
- Support for negative vetting applications
- Research advisor from the NIC
- Minimum 30% funding of human behaviour projects

Acknowledgment of Funding Source



National Intelligence Postdoctoral Grant
Round 3 – 2022-2023

Reference Code: NIPG-2023-015

Measuring reliable behavioural indicators of multiple social identity and features in real social world settings

Research Topic Description, including Problem Statement:

While social identity has been extensively researched, many studies simplify measurement to a few pre-determined features. For example, static or binary identification scenarios are common, with one group membership having more salience than the other in the experimental paradigm. Though this offers a more objective representation for study, it may lack subjective relevance or broader ecological validity.

Social identity is complex, multifaceted and dynamic. Less attention has been paid to how we might observe and measure a variety of features of social identity in the real social world, where multiple social identities are naturally reactive and meaningfully compete for salience and fit in shifting social contexts. Some steps have been taken towards a more integrated approach though these typically rely on self-report. Self-report is not always available, possible or reliable in applied settings, however.

Acknowledgment of Funding Source



Problem statement:

- What are reliable behavioural indicators that enable us to observe, measure and understand the dynamic scope of an individual's subjective multiple social identities, including self-categorisations?
- How can behavioural indicators be used to determine which of several possible social identities is salient or influential at a point in time, as well as those that are more frequently salient or generally preferred by an individual?
- What are the early behavioural indicators (cf. outcomes) of poor compatibility across an individual's important group memberships? How might each of these features intersect with interpersonal connections?
- In what ways do individual factors (e.g. personality, attachment style, core beliefs about efficacy, trust or risk, actual trustworthiness and impression management) and superordinate factors (e.g. collective culture) dynamically interact with patterns of social group identification, salience and fit?
- How might these various indicators and factors be translated into automated models or tools that could enable understanding and mapping of the salience, compatibility patterns and behavioural effects of an individual's social identities?

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Example Approaches

Social Identity Mapping has been developed to engage an individual in comprehensively representing their subjective social world, but requires self-report. Solutions to the current problem may consider semantic content of verbal communication but should incorporate more diverse aspects of communication and behavioural indicators, across different data types and multiple data sources. Ideally, indicators should not be dependent on particular platforms and should be either agnostic to specific social identities and language, or widely account for differences.

Relevance to the Intelligence Community

Understanding an individual's social identity map commonly relies on self-report. However, it can be necessary to reliably and accurately map the scope of social identity in the real social world, without direct interaction or self-report from individuals or groups. People may also seek to obscure or misdirect observations of their multiple social identities. The purpose of mapping identity (not just relationship networks) is to enable systematic comparisons and inferences regarding loyalty, motivation, social influence and risk.

If you have questions, send an email to NIPG@oni.gov.au. Please include the reference code for this opportunity in your email.

From PhD to NIPG: Dr Peita Richards



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From PhD to NIPG: Dr Peita Richards



The Aryan Spring: Twitter and the resurgence of racially-based far right extremist belief systems in the United States of America

Peita Richards

Centre for Law and Justice

Research output: Thesis › Doctoral Thesis

336

Downloads
(Pure)

[Overview](#) [Fingerprint](#)

Abstract

This research engages secondary archival data, occurring at the time of affirming and confronting events which would activate a salient identity in those who possess a racially based far right extremist identity. Anchored in the United States of America, and with a focus on the social media platform Twitter, the research develops a novel method to establish relevant, unique and replicable data sets from a positivist approach, including the development of original source code. It further extends this novel method through the creation of behavioral typologies within Twitter, as a means to measure engagement by individuals who have been identified within the data sets as expressing racially based far right extremist sentiment.

The research draws on a rich foundation of social identity theory and the social identity model of deindividuation effects (SIDE) in order to analyze how Twitter assists in the performance of social identity during times of salient social identity affirmation and salient social identity threat. Whilst it was hypothesized that the findings would replicate those of opinion-based groups with a hierarchical structure and face-to-face contact, (i.e., that those with greater influence would extend direction and influence to ingroup members), in contrast the data contradicted these hypotheses. Indeed, the research identified greater deindividuation in times of group threat, with an increased mobilization of in-group members classified as possessing a lower overall degree of engagement. These individuals indeed were more active in creating messaging and directing behaviors in an online community.

These findings extend existing applications of SIDE to computer-mediated communicates based research, as well as opening opportunities for future research into online mobilization of extremist groups.

Access to Document

[The Aryan Spring: Twitter and the resurgence of racially based far right extremist belief systems in the United States of America](#)

Final published version, 1.6 MB

Licence: Other

From PhD to NIPG: Dr Peita Richards



Method Development

PhD	NIPG
Single Salient Identity	Diverse Potential Salient Identities
Single Platform	Multiple Platforms
Quantitative/Big Data	Qualitative Data
Group Identity Focus	Individual Identity Focus*
NLP → Behavioural Matrices	NLP → Behavioural Matrices
Expression and Maintenance of Identity	Objective Markers of Identity

** Pilot Case Study used both Group and Individual Identity Maps to establish behavioural matrices*

Social Identity Mapping: Self-Report In Person



The social identity mapping tool has been psychometrically validated to measure social connectedness, and in a way that is engaging and accessible to a range of populations. The online version of the tool is now undergoing redevelopment to extend its functionality - capturing other dimensions of group life, such as group category, and centrality.

Publications:

- [Social identity mapping online.](#)
- [Social Identity Mapping: A procedure for visual representation and assessment of subjective multiple group memberships.](#)

Project members



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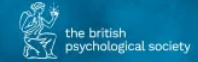
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British Journal of
Social Psychology



Original Article | [Full Access](#)

Social Identity Mapping: A procedure for visual representation and assessment of subjective multiple group memberships

Tegan Cruwys , Niklas K. Steffens , S. Alexander Haslam , Catherine Haslam ,
Jolanda Jetten , Genevieve A. Dingle

First published: 31 August 2016 | <https://doi.org/10.1111/bjso.12155> | Citations: 134

[Correction added on 19 October 2016 after the first online publication: The third author name was changed from Stephen Alexander Haslam to S. Alexander Haslam]

SECTIONS

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Abstract

In this research, we introduce Social Identity Mapping (SIM) as a method for visually representing and assessing a person's subjective network of group memberships. To provide evidence of its utility, we report validating data from three studies (two longitudinal), involving student, community, and clinical samples, together comprising over 400 participants. Results indicate that SIM is easy to use, internally consistent, with good convergent and discriminant validity. Each study also illustrates the ways that SIM can be used to address a range of novel research questions. Study 1 shows that multiple positive group memberships are a particularly powerful predictor of well-being. Study 2 shows that social support is primarily given and received within social groups and that only in-group support is beneficial for well-being. Study 3 shows that improved mental health following a social group intervention is attributable to an increase in group compatibility. In this way, the studies demonstrate the capacity for SIM to make a contribution both to the development of social-psychological theory and to its practical application.

<https://sign.centre.uq.edu.au/project/social-identity-mapping>

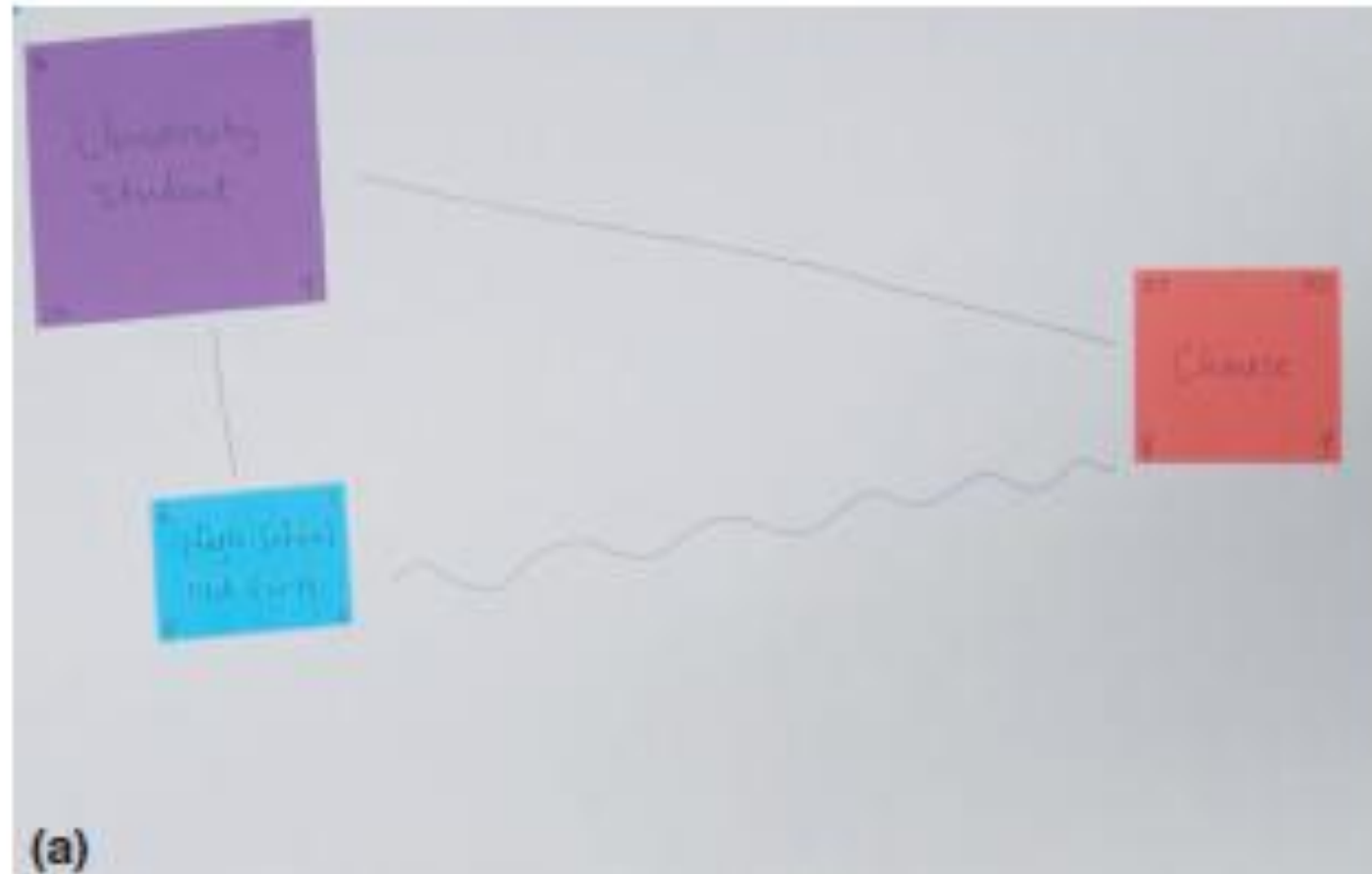
Social Identity Mapping: Self-Report In Person (pSIM)



618 Tegan Cruwys et al.

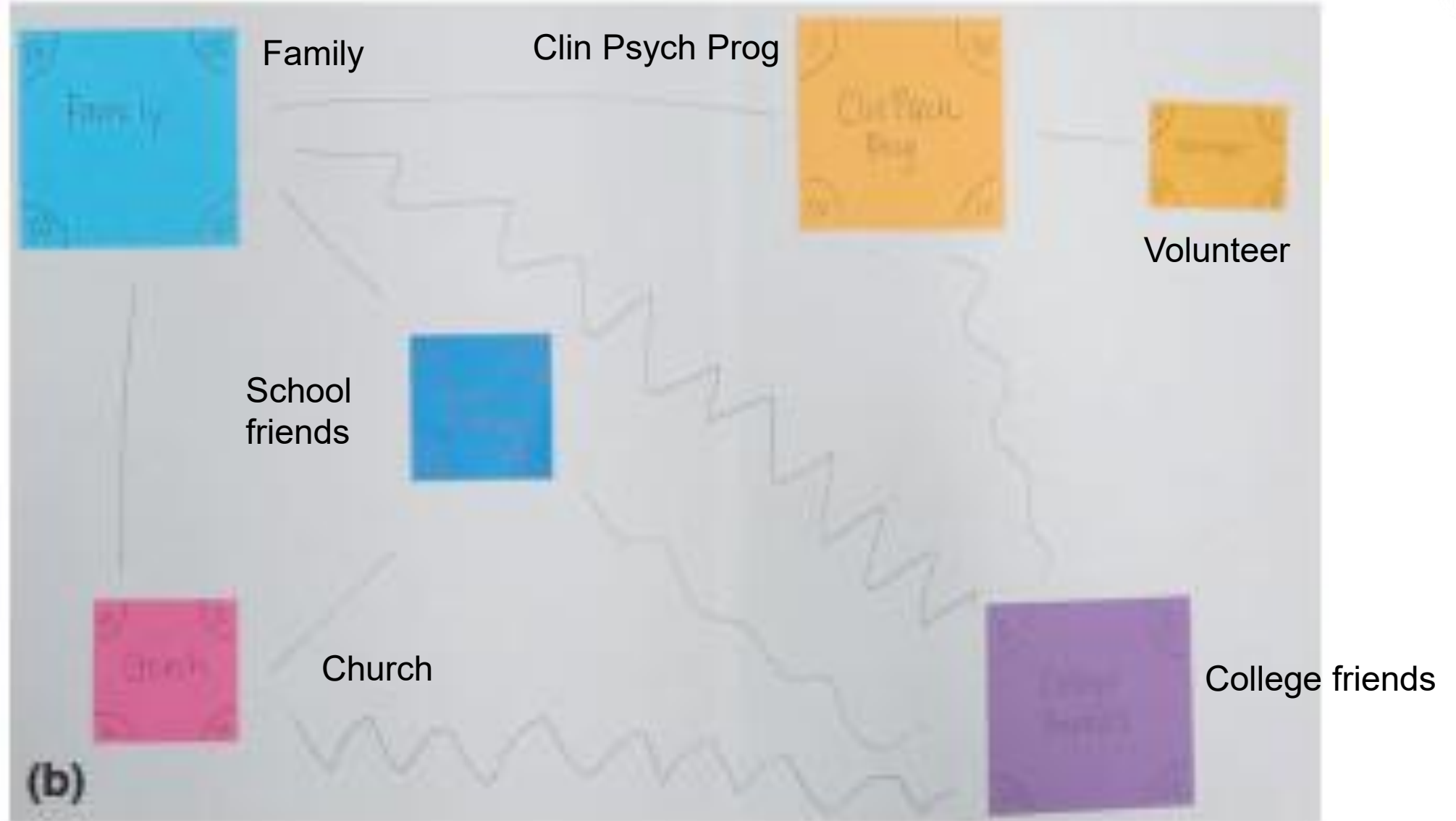
University student

High School Old Girls



Chinese

Social Identity Mapping: Self-Report In Person



Social Identity Mapping: Self-Report In Person



Figure 1. Three illustrative social identity maps: Representations of (a) low, (b) moderately, and (c) highly complex networks of subjective group memberships.

Social Identity Mapping: Self-Report Online (oSIM)

<https://sign.centre.uq.edu.au/project/social-identity-mapping>


<https://osim.psy.uq.edu.au/>

Bentley, S. V., Greenaway, K. H., Haslam, S. A., Cruwys, T., Steffens, N. K., Haslam, C., & Cull, B. (2020). Social identity mapping online. *Journal of Personality and Social Psychology*, 118(2), 213–241. <https://doi.org/10.1037/pspa0000174>

oSIM Online Social Identity Mapping

Online Social Identity Mapping

Online Social Identity Mapping (oSIM) is a psychometrically validated tool with which to map out, measure, and assess people's psychological worlds. Built upon decades of social identity evidence-based research, oSIM was designed to capture, investigate, and understand the multi-dimensional nature of social connectedness. However, oSIM can also be used to explore a range of other psychological constructs and processes. Furthermore, oSIM can be used in a number of different settings — as a psychometric tool for researchers, a scalable intervention for organisations, a clinical aid for practitioners, or an assessment protocol for educational settings.



Participants and End-users

If you are a participant wishing to create a map, you'll be able to log in once you've been sent your account details from your oSIM provider. Contact your oSIM provider for more details, or if you wish to make a general enquiry, please send us an email to: osim@uq.edu.au.

If you already have your details, you can log in here.

Log in

Researchers and Practitioners

oSIM can be used for research purposes, or can be delivered in applied settings, such as in clinical practice, educational domains, and organisational context, for instance as a leadership tool.

When used for research, whether experimental, survey-based, or within an intervention, oSIM can be integrated into other platforms, such as the survey platform Qualtrics. All information about oSIM, such as how to use it, how to integrate into other platforms, how to download data, as well as recommendations for research designs, is covered in the oSIM Manual. If you would like to license oSIM, please click here for [more information](#).

If you already have a license, log in here.

Log in

The need for moving beyond self-report

Problem statement:

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NIPG Research Case Studies



Israel v Hamas
October 2023 to December 2023

Platforms:



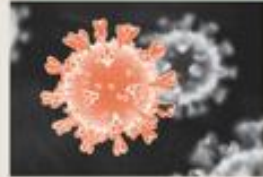
Wieambilla

Platforms:



Curtis Cheng Assassination / Alameddine Family

Platforms:



The 'Novel Coronavirus'
February 2020-March 2020

Platforms:



Wakeley Stabbing

Platforms:

Platforms for Research Data

Facebook | Instagram | X | YouTube | Reddit | Telegram | Discord



Israel v Hamas October 2023 to December 2023

Platforms:   

Digital or analog ethnography (Forberg & Schilt, 2023)

- multiplatform engagement of a similar group of users on open channels on Reddit, Telegram, and X
- first week of Oct: selection of groups and channels with references made to Australia, then followed those selected groups/channels up to end of Dec
- Peita as ethnographer then spending min of 2 hours per day live following selected groups and channels across platforms
- determination that groups (of minimum 10) were making substantially-similar points and advancing substantially-similar causes/agendas

The Washington Post
Democracy Dies in Darkness

October 9, 2023 More than 2 years ago

 4 min    61



Israeli troops inspect the hang glider that a Palestinian guerrilla used to infiltrate Israel from Lebanon in an incident now known as the "Night of the Gliders" near Kiryat Shemona, Israel, on Nov. 25, 1987. (Ofer Arbiv/Israel Defense Forces)

<https://www.washingtonpost.com/history/2023/10/09/israel-night-of-the-gliders-2023/>



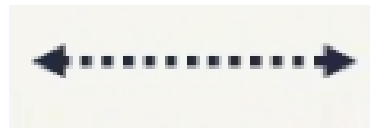
Israel v Hamas October 2023 to December 2023

Platforms:

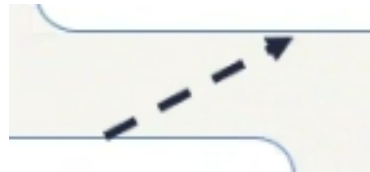
Legend for objectively-constructed group-level social identity map (next slide)



compatible
(eg. can be allies)



incompatible
(eg. not allies)



mixed compatibility
(eg. sometimes allies?)

Mixed compatibility reflects when positions and agendas may or may not be compatible but, in any event, are not uniform.

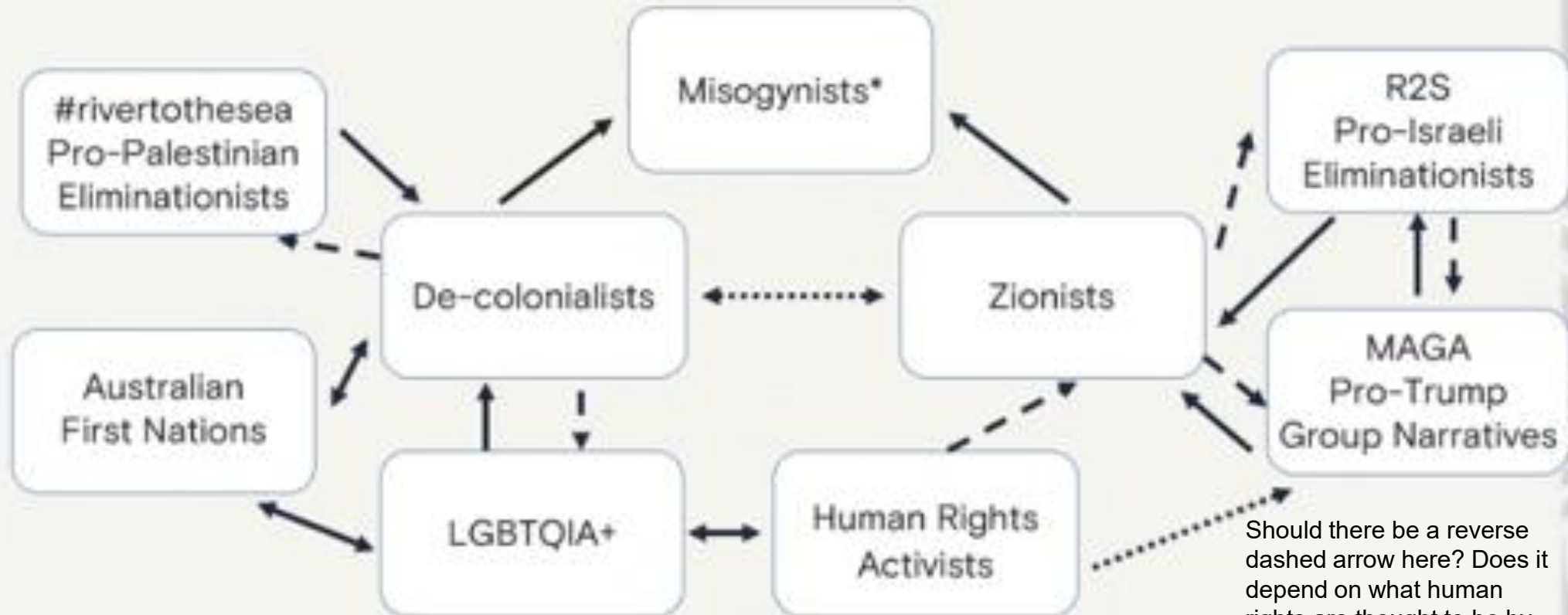
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Israeli troops inspect the hang glider that a Palestinian guerrilla used to infiltrate Israel from Lebanon in an incident now known as the "Night of the Gliders" near Kiryat Shemona, Israel, on Nov. 25, 1987. (Ofer Arbiv/Israel Defense Forces)

sub-Reddit r/Israel_Palestine and Telegram channel Israel v Hamas (now archived)



Should there be a reverse dashed arrow here? Does it depend on what human rights are thought to be by MAGA?

All "groups" are based on Self-Categorisation except denoted *

Examples of identity (in)compatibility: thematic analysis

- noting that **behavioural matrices used in analyses in other case studies were not fully developed** at this stage of the project so this was a **thematic analysis *and not* an analysis using objective behavioural markers** of identity expression
- this was a **deliberate and convenience pilot** (based on 20 years experience and professional work in Middle-East politics) **to test ability to analyse groups across platforms** but also **to document generic online behaviours being used across platforms that can be developed into behavioural matrices**

Engagement between De-colonialists (“#rivertothesea” / “R2S”) and Zionists as incompatible, and these dynamics seen on relevant Telegram and sub-Reddit channels:

Use of dehumanising language by De-colonists describing Zionists as cockroaches who had survived the gas chambers

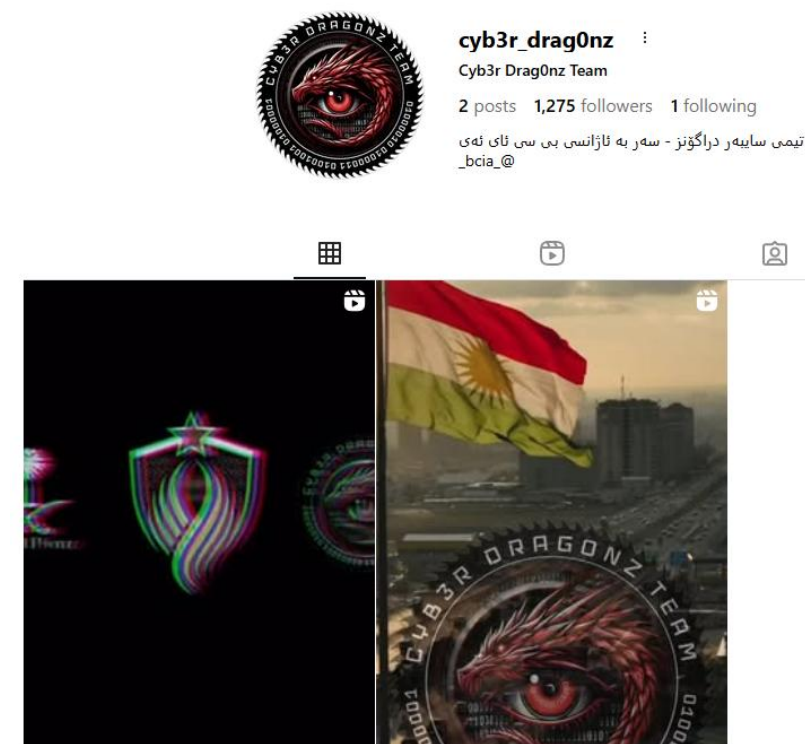
BUT then when

On the 24 Oct 2023 (AEDT) CNN announced that the Queen of Jordan, Rania Al Abdullah, (a Palestinian refugee who relocated to Jordan with her family during her childhood) would be interviewed by esteemed British Persian foreign correspondent Christiane Amanpour on TV about the conflict, then *both* groups unified around a misogynist approach to criticise that move by Queen Rania of Jordan

Who did not engage with others?: Cyb3r Drag0nz

- Cyb3r Drag0nz interested in recruiting, on their Telegram channel, those from Australia's timezone willing to launch DDOS strikes to bring down Israel's "Iron Dome" missile defence shield
- sentiment analysis showed that they could not be included in the group-based social identity map as their cause and identity was isolated and they explicitly did not want to recruit anyone who had any political affiliation with Palestine, Hamas or Israel
- their identity being expressed for 10 weeks was defined by enhancing their cyber and hacking skills, and, they expressed a desire to remain apolitical despite accepting the challenge of taking the "Iron Dome" offline
- when unsuccessful with the "Iron Dome" attacks, they switched focus for the last weeks to DDOS attacks on news outlets that demonstrated a bias to any identity on our social identity map above; competing somewhat with hackers from Anonymous Sudan who were targeting publications with DDOS attacks who were deemed to be spreading "Zionist propaganda"

Instagram



https://www.instagram.com/cyb3r_drag0nz/?hl=en

Other Analytical Tools of Use



Linktree*

<https://www.receptiviti.com/liwc>

<https://communalytic.org/>

<https://linktr.ee/>

Access challenges for the public domain researcher



- **accessibility and reporting restrictions** set by each platform
 - e.g. restrictions on API access such as CrowdTangle applications that need to meet a platform's current priority areas
- **access fees**
 - utility of Commanalytic to preview data before you purchase the data, ie. estimating the number of available posts based on keyword searches and during a time period
- **coding language of the API data** (eg. Python but changes from R)
- **need for manual capture of metadata** from some platforms including with NVivo NCapture

- **content take down order laws** and researcher exemptions

- e.g. *Online Safety Act 2021* (Cth); *Criminal Code* (Cth), Division 474 Subdivision H & Subdivision HA and relevant data possession defences for researchers

M Smith, M Nolan & J Gaffey, 'Online Safety and Social Media regulation in Australia: eSafety Commissioner v X Corp' (2024) 33(1) *Griffith Law Review*
<https://www.tandfonline.com/doi/full/10.1080/10383441.2024.2405760>

Peita Richards & Mark Nolan, 'Abhorrent Violent Materials: Regulations, Responsibilities and Restrictions on Access for Researchers vis-à-vis Commercial Actors'. Paper presented to Exploring Intersections of Media, Law, Communication and Crime, Murdoch University, 25 September 2024.

Future Directions

Automating Behavioral Matrices for Early Detection and Intervention

The first area focuses on the development of automated behavioral matrices capable of detecting both rapid and gradual shifts in online behavior. By leveraging machine learning and natural language processing, there is the potential to create an online profiling tool that can identify significant changes within online communities. The success of a trial application of markers of personality lends confidence to the potential for automation of the behavioral matrices. This will enable broader, scalable detection of behavioral change where traditional, resource-intensive risk assessments are not feasible.

From Objective Markers to Predictive Psychological Models

The second research focus seeks to transform the identification of objective markers, such as motivation, trust, loyalty, intent; and the preliminary markers of potential deception; into robust, predictive models of psychological phenomena. This research would employ a mixed-methods approach, engaging human participants to triangulate online behavioral data with offline self-reporting. By embedding these markers within a predictive framework, the research would aim to move beyond context-specific findings toward generalizable models that can be replicated across alternative data sources and settings.

Current Research

From Experts to Algorithms: How Technology Facilitates and Amplifies Sources of Trust, Influence, and Attitudes Towards Institutional Engagement

This project looks at how changing trust dynamics influence collective movements, anti-government attitudes, and considers the role of technology in the spread of dis- and misinformation. Deliberate acts of foreign interference to influence belief systems and amplify institutional distrust are also coded into the data set. Collectively, it is hypothesised that these elements will evidence a normalisation of extremist belief systems, and societal pivot from expert to experiential sources of trust; whilst simultaneously facilitating the development of the first markers of predictive psychological phenomena.



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