### Methodology and methods

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<th>Applicability to studying power in HPSR</th>
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<td><strong>Ethnography</strong></td>
<td>The study of how humans in groups interact, behave, experience and perceive; and how meaning and value are established.</td>
<td>Ethnography seeks to build rich and holistic understanding of people’s perspectives, practices, and cultural context (Hammersley and Atkinson 1995) and focuses on depth over breadth, immersive observation in natural settings (e.g., non-experimental conditions), exploratory (rather than hypothesis testing) research, and efforts to identify and analyze the meaning and function of human action in context (Creswell and Poth, 2017, Agar 1997). Ethnography can thus examine how power is manifested through, for example, the unequal distribution of resources, the privilege or denigration of individuals or sub-groups, and the development and normalization of forms of knowledge (Jain and Jadhav 2009). Ethnography can expose power’s function in key HPSR spheres, such as policymaking processes (Irwin and Smith 2019; Nambiar 2013), healthcare decision-making in the home (Nyamongo 2002), relationships among actors in healthcare settings (Kaplashrami and McPake 2013), and informal practices that shape the delivery and receipt of health care and other social services (Pigg 2013). Ethnography has been shown to enable research on political issues of legitimacy, moral universes, tacit knowledge, and local discourses (Hagene 2018). While ethnography has its origins in the colonial project and has been frequently used to “study down” (Nyoka 2019), more recently, ethnography has been employed to “up, down and sideways” (González and Stryker, 2014), wherein researchers focus on the practices and moral worlds of the powerful, providing insight into how power is constructed, solidified, and wielded (Mishra and Nambiar 2018).</td>
<td>Who gets ‘to do’ ethnographic research should also be recognised as a matter of power and position. In their analysis, researchers must also be attentive to whether people can choose to participate in ethnographic research, dispute the conclusions made, or influence how ethnographic research findings are shared and used.</td>
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<td><strong>Case study</strong></td>
<td>A form of empirical inquiry characterised by an “intense focus on a single phenomenon”</td>
<td>Case studies are particularly useful in situations where boundaries between the phenomenon of interest and the context are blurred. In relation to power in</td>
<td>Case studies are ubiquitous in public health, but are often a summary of a program, rather than the intended in-depth exploration of social</td>
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within its real life context” (Yin 2014)

HPSR, case study research has most commonly been used to produce explanatory accounts focussing on different actors’ expressions of power (both formal and informal, overt and covert) to answer ‘how?’ and ‘why?’ certain health policy or system features exist, and to assess efforts to change power dynamics (L Gilson, Orgill, and Shroff 2018; Shiffman and Smith 2007). Since case studies typically draw on and triangulate between multiple sources of data, this approach may be equally useful for exploring sources of power (how power emerges) and dimensions of power (how power is channelled) within a health system or health policy sphere, including across time (Sriram et al. 2018).

Discourse analysis

The study of how language and structures of meaning -- whether written or spoken -- are used in social contexts.

This research method can illuminate the construction and communication of health systems “software”, such as values, beliefs, and assumptions (Sheikh et al. 2011) through word choice, linguistic style, conversational codes (taking turns, interrupting, reacting) and non-verbal components of speech (pauses, tone of voice, gestures).

In closely examining the use of language in texts (such as laws, policy and national strategy documents, news media articles) and oral communication (such as transcribed interviews, debates or speeches) discourse analysis brings attention to the ways in which communicative acts construct shared understandings of what is normal (Steel, 2019, Sacks, 1995) and what is possible, legitimate, or true (Foucault 1972). Discourse analysis includes the study of omitted meanings and tracks contents and references that phenomena. Researchers seeking to employ case studies should be particularly attentive to aligning the purpose of enquiry with case selection, and ensuring rigor in examination of the case as well as in the application of the particular methods chosen (e.g. in-depth interviews or observation). It is also important to appropriately ‘bound’ the case in such a way that one can focus on the phenomenon at hand, but also understand the deeper mechanisms of power at play. Analysts should also ensure that there is sufficiently rigorous interpretive analysis (Yin 2014).

Discourse analysis is often conducted together with other methods. While it produces important observations on the trajectories taken by conceptualizations, from inception to oblivion, and the central role they may play in shaping policies initiatives, Discourse analysis needs to be complemented (corroborated or invalidated) with observations of
are kept hidden or are altogether avoided (Sieleunou et al. 2017; Yazdannik, Yousefy, and Mohammadi 2017). Discourse analysis can problematize dominant paradigms in global health, such as the ways that standard epidemiological “exposures” and factors can obscure the role of power asymmetries.

### Political economy analysis

An approach that focuses on power (state structures, government and the law) and resources (labour, capital, trade and production) how they are distributed and contested in different country and sector contexts, and the resulting implications for policy and development outcomes (Reich 2019).

Political economy can draw on both quantitative and qualitative methods to: i) explore the nature of the political landscape through mapping the power and position of key actors and ii) how the distribution of power and resources influence processes that sustain and transform patterns of relationships and through this, the feasibility of policy reform over time (Collinson 2003; Reich 2019). Political economy analyses may also be applied to strengthen policy processes by, for example, surfacing potential allies or opponents for policies and developing strategies to engage politically with key stakeholders (Reich 2019).

Political economy analysis is particularly appropriate for exploring the role of material and productive power in the development, implementation of (and interaction between) national and international health policies and systems (Reich, 2019), and for illuminating the intent behind particular policies (i.e., political power, financial motives, etc). Political economy analysis can reveal contradictions between political declarations and actual practices; as in the analysis of informal illegal fees charged to patients, that in some contexts are fundamental for the economy of the system, despite the official declared intentions to stop them (Croke 2012).

When using political economy to analyse power in health systems, researchers should be aware of the risk of an objectivist application of this methodology that could mask the researchers’ own positionality. Researchers should also be aware of the tendency in global health to view issues as apolitical or ahistorical, and should seek to embed examination the historical and structural reasons behind inequity.

### Participatory Action Research

PAR seeks fresh insight into injustice by positioning those By exploring and recognising different sources of power (e.g. social position, cultural knowledge) Applying PAR to study power demands that researcher /
Aims to understand and improve the world by changing it; this is accomplished by overcoming the separation of researcher (subject) and people being studied (object).

**Actor Interface Analysis**
Focuses on individual actors and their power struggles, which are embedded in the often-neglected lived experiences of the policy actors (Long 2001; Schutz 1962).

When used to study health policy, Actor Interface Analysis examines how interactions between experiences among different types of actors and in the context of certain policies, shape the implementation and outcomes of the policy. Where actors interact, power struggles such as collaboration, contestation, conflict or resistance can be located and analysed.

This methodology brings an ‘actor-centric’ lens to the study of power in policy implementation as compared to other (more institutionally-focused) methodologies and helps to examine how policy related decisions and action are shaped by the actors’ struggles or their power practices set against their lived experiences (Long 2001; Lehmann and Gilson 2013). This approach thus provides a robust conceptual as well as methodological entry point for the examination of the expressions of power (power dynamics), their underpinning elements, and their impacts on the policy process.

This methodology requires the researcher to develop a detailed understanding of the policy, and a deep understanding of the lived realities of all actors (not just their understanding and perspective on the policy issues). The very precise focus of analysis (specific actors, in specific relationships, reacting to specific policies) may limit analytic generalisation.

**Stakeholder analysis**
Explores the positions, interests, relationships

Stakeholder Analysis is an actor-oriented methodology. This methodology is useful for

Stakeholder analysis is most commonly used prospectively, as a tool for researchers and practitioners seeking to understand the feasibility

Assessing power and interests of stakeholders requires ‘interpretive judgements’ (Lucy Gilson et al. 2012)
and power relations of different stakeholders in a particular policy or practice context.

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<th>Big data analytics</th>
<th>Examines high volume, high diversity, biological, clinical, environmental, and behavioural information collected from single individuals to large cohorts at one or several time points (Auffray et al. 2016)</th>
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<td>Big data analytics can demonstrate patterns in health outcomes, decision making and behaviours (OECD 2014), health policy (e.g. resourcing, implementation fidelity and outcomes (Schintler and Kulkarni 2014) and health system function (e.g. patient and provider behaviours) (Pastorino et al. 2019; Shaqat et al. 2020)</td>
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<td>When applied in conjunction with a power lens big data analytics can reveal important (and often masked) trends or patterned experiences, prompting further explanatory work or evaluative action (Kolkman 2020). For example, Yu et al (2019) use big data analytics to explore the influence of private medical providers in promoting unnecessary medical interventions (Yu et al, 2019); while Santana show how health insurance data can be modelled as a social network to reveal the role of physician networks in referral decisions (Santana et al. 2018). Big data analytics could also help identify systemic discrimination, information asymmetry, patient-provider dynamics and their influence on care quality and responsiveness. Galetsi et al observe their potential for traditional decision making within the doctor-patient relationship (Galetsi et al., 2019). Shah et al, too demonstrate how</td>
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| Given its volume and velocity, as well as its potential interest to profit seeking entities, big data presents unique challenges for ethics, boundaries, and reflexivity. In particular, researchers should consider the potential mis-uses of the data, the extent to which the data manipulated accurately represents the factors of interest (construct validity), and which individuals and groups are overlooked in analyses that focus on the mean (or median), a challenge that is inherent to most quantitative analyses (Vayena et al. 2018). Adaptations of the objectivist life-cycle of big data research (formulate question / data collection / data
### Social network analysis

The quantitative study of relationship patterns among actors, i.e., people, groups or organizations (Blanchet and James 2012; Hawe, Webster, and Shiell 2004)

This methodology draws from sociology and mathematical foundations of graph theory to examine the structure and patterns (Borgatti et al. 2009). Social network analysis can enable the study of power by illuminating how the nature of actors and connections (number, strength, type) enable forms of power such as money, pressure, influence, and knowledge to be concentrated, spread, blocked or engaged. In addition to helping understand the nature of relations between and among actors in a system, social network analysis supports examination of how relationships influence the structure of a system (Borgatti et al. 2009).

The value of SNA lies in its ability to illuminate underlying structures and networks that formally and informally influence practices, policy and programs (Blanchet and James 2012). Examples of the application of SNA to investigate power include understanding health sector reforms (Wang 2013), identifying institutional networks and their involvement in the devolution of financial resources (Etemadi et al. 2017) and exploring the relative importance of personal relationships as compared to formal hierarchical positions (Shearer, Dion, and Lavis 2014).

Quantifying relationships can be resource intensive and mask nuances in the relationships and dynamics between actors. Reflexivity in conducting social network analysis demands that researchers are self-critical and transparent about their decisions on boundaries for which actors they will include and exclude and how they choose to measure and define connections (Laumann et al., 1989).

### Social epidemiology

A subfield of epidemiology concerned with the relationships

Techniques from epidemiology are productively applied to questions of power in health systems by

For example, research into the impact of the U.S. Civil Rights Act revealed how elevated maternal mortality rates among Black women in the U.S. south was due in part to hospitals denying them

The use of epidemiological methods to study power requires careful thought about how constructs are defined and measured, such as, for
between social factors, including social hierarchies and social phenomena, and health. Examining the impact of health and social policy on health status. Indicators of health status are the primary outcomes of interest, and can be used to explore and highlight policy priorities for health system actors such as health service coverage, financial protection, and inter-personal quality of care (Berkman, Kawachi, and Glymour 2014).

### Historical research

**Historical research aims to generate systematic explanatory narratives relating to past events, places or people.**

Historical evidence includes visual, audio and text-based materials (archival material, communications, policy documents and project reports) and first-person accounts (oral histories). Principles from case study research such as process tracing, entry (Almond and Chay 2006). Other quantitative and mixed methods research has shown how insurance, user fees, fee exemptions and other mechanisms for payment influence inequities in health care access and utilization (Atchessi, Ridde, and Zunzunegui 2016; De Allegri et al. 2015).

The inclusion of historical methods can surface underlying structures and systems of power as they have developed over time. In the context of HPSR, social historians may focus on the ways that health and other social policies and systems shape inequities (Szreter 1988) or, the ways that different groups accepted, adapted, and subverted the dictates of colonial medicine (Anderson 2014; Sivaramakrishnan 2006) or neo-colonial or internal colonial forms of public health practice (Cueto and Palmer, 2015; Stepan, 1991. Economic and political historians trace the impact

The study of history can illuminate broad power-related themes that continue to be relevant, such as the interface between individual liberty and domestic governmental health objectives (e.g. Colgrove, 2004); medical experimentation, social control, and scientific racism (Gutiérrez and Fuentes 2009; Reverby 2012); corporate profit-making, governmental interference, and population health (Reubi and Berridge 2016); and global health as a vehicle for state-craft, diplomacy, population control, and Western-centric conceptions of charity (Birn 2014; Chorev 2012; Connelly and Connelly 2009; Packard 2016; Quevedo Velez 2001).

Such themes have immediate relevance as they shape phenomena such as how vaccination and example, making “experience of caste-ism” or “experience of racism” as the exposure of interest, rather than caste or race (O’Brien et al. 2020).

Moreover, it is important to avoid “black-box epidemiology” which detects associations between exposures and outcomes, without adequate theorizing and measurement of the mechanisms and explanation for these outcomes (Jackson and Arah 2020; Wemrell et al. 2016).

Using a power lens in the approach to archival research requires a consideration of “how attentions were trained and selectively cast” in the storing and cataloguing of material remains (Stoler, 2009, p. 1); relationships of power shape what is saved in official archives versus what is lost or destroyed. Insofar as traditional historical approaches can privilege written work, it may elide the perspectives of historically oppressed groups. To combat this tendency, alternative methods such as participatory oral historical or community-based sourcing of visual, audio and text-based records not
| discourse analysis, and other methodologies and methods delineated here could inform how the material is both sourced and analysed. | of policy and political changes on health status (e.g. as a social determinant of health), or on the development of institutions (including formal institutions, such as WHO, and institutions as ‘rules of the game’) on the consolidation of prevailing assumptions and approaches to health policy and service delivery (Agyepong 2018; Woolcock, Szreter, and Rao 2020). | family planning interventions are perceived by those groups who have been on the receiving end of past state-sanctioned abuses. They also offer broader explanatory value as ‘cases’ for the development of theory related to power (Szreter and Woolcock 2004) and as case studies for contemporary policy debates. | located in ‘official’ repositories, would open up alternative analytical possibilities. Finally, the tendency in global health to extract “lessons” from history or to use history to justify certain courses of political action, can obfuscate the dynamics of power that shape the creation of historical narratives and their translation into HPSR debates. |
References


O’Brien, Rourke, Tiffany Neman, Nathan Seltzer, Linnea Evans, and Atheendar Venk...


