

The Information Lever of Power

Keith Slack



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Abstract

Politics and grand strategy are dependent on effective power projection. This projection relies upon levers of power that can be pulled to achieve the desired outcomes and influence. The traditional levers of diplomatic, military and economic power, or DME, are the mainstay of 'traditional' power projection. Information, however, has appeared later, making DIME, despite having been recognised by authors of war and strategy throughout history. The information lever of power is harder to understand and inherently more difficult to quantify. Despite this, we all recognise its pervasiveness and supremacy. We are wholly dependent on it, constantly seek it, feel lost without it, and use it in many different ways to substantiate our viewpoint. It flows faster and further than ever before, providing abundant opportunities, as well as risk.

This paper posits a 'non-traditional' view of information power, where information is no longer viewed simply as the lever that enables the other levers of power, or even as a lever in its own right. It goes one step further, presenting a conceptualisation where all the other levers ultimately contribute to and enable the information lever of power. Activities in the physical and virtual dimensions achieve the greatest level of influence in the cognitive through the projection of information. Furthermore, to aid our understanding, the paper puts forward six characteristics of information power to highlight its importance, which include: *intangibility*, *dynamism*, *amplification*, *ubiquity*, *relational* and *entropy*. Everything that has ever been thought, said or done – and even that which did not happen or was not said – harnesses and projects information power that achieves influence. Understanding the information lever of power and how to make the most of its characteristics will result in greater comparative information advantage, and by extension more robust decision advantage.

Introduction

*'Information is a tricky business'*¹

Information is indeed a 'tricky business'. The concept of an 'information lever of power' is equally problematic and difficult to define. This is because, in isolation, the terms 'information', 'power', and what constitutes a 'national lever' are contested and somewhat nebulous. The rapid development of technology and its impact on the information environment has further contributed to this issue. As deftly encapsulated by Nik Gowing, 'by the day and by the hour the information dynamic dives and soars, at times almost defying all efforts to capture the essence.'² Capturing the 'essence' of the information lever of power as the 'information dynamic dives and soars' is the main aim of this paper. It will explore the terms 'information', 'information power' and the 'information lever of power' – each section building greater understanding.

It will analyse traditional concepts of 'levers of power' in classical works on war and strategy to frame the contemporary analysis. This analysis will identify that politics and grand strategy have historically depended on, and projected power through, 'levers of power'. These levers have typically been categorised as diplomatic, military and economic, or DME, with information subsequently included as the 'I' in DIME. However, this paper will identify that the information lever of power is nothing new; authors of strategy, politics and war have long recognised its importance and utility. The information environment has changed dramatically in recent decades and enabled a realisation, reach and utility of classical theories of power projection in ways the authors could have never imagined.

This paper will highlight significant debate regarding the contemporary definition of the information lever of power and which capabilities are included. It is all too easy when discussing information and power to lurch into a tech-focussed analysis of social media, artificial intelligence, cyber and tweets, becoming bogged down in the minutiae of the medium. This paper will argue that it is more advantageous to understand the utility of information power through its conceptual characteristics as opposed to definitions or specific capabilities. Returning to basic principles and concepts, six characteristics will be posited: *intangibility, dynamic, amplification, ubiquitous, relational* and *entropy*.

It will conclude that in contrast to the 'traditional' view of information power as subsidiary to the diplomatic, military and economic levers of power, or even the contemporary or independent views of information power where it comes into its own, we must go further and adopt a 'non-traditional' view that conceptualises the three 'traditional' levers as contributors to information power. This conceptualisation is crucial to attaining information advantage, enabling decision advantage, and competing persistently and successfully in the information age.

Context

Projecting power has been a defining feature of kingdoms, dynasties, empires, states and non-state actors since time immemorial. The context has changed, as have the capabilities, and 'power' remains a 'contested concept'.³ The Oxford English Dictionary (OED) defines power as 'the capacity or ability to direct or influence the behaviour of others or the course of events'.⁴ Coherent with this definition but with regards to international politics, Carr viewed power as the 'ability of one state ... to get another state to do what it otherwise would not do'.⁵ Taking this further, Professor Sir Lawrence Freedman viewed power in terms of *putative* power, which includes capabilities with latent potential, and *actual* power, which includes utilising action to achieve effects.⁶

A review of the strategic studies literature and philosophical texts identified that traditional concepts of levers of power generally fit into two categories: direct power through the use of strength, action and force, and indirect power through the use of information, knowledge and deception. Greek mythology contrasts these concepts in the qualities of *bie* and *metis*, embodied in Homer's Achilles who utilised strength and force and Odysseus who used words and deception.⁷ Professor Sir Lawrence Freedman deftly summarised this contrast:

The most powerful dichotomy in all strategic thought was the one introduced by Homer as the distinction between *bie* and *metis*, one seeking victory in the physical domain and the other the mental, one relying on being strong and the other on being smart ... one facing the enemy directly and the other approaching indirectly, one prepared to fall with honor and the other seeking to survive on deception.⁸

Clausewitz favoured the direct approach and focussed on the employment of direct, hard military power. He emphasised the importance of information to understand the enemy but he downplayed the significance of *metis*-like activity, or in his parlance, *stratagem*.⁹ He argued that this activity had 'so little effect in the strategic field', that 'these qualities show themselves but little in history' and 'the chief actor in War ... has no desire to play at tricks of agility'.¹⁰ He did, however, emphasise that *stratagem* has greater utility when one's adversary has the upper hand: 'the more helpless the situation ... the more readily stratagem comes to the aid of his boldness'.¹¹ This is in contrast to Sun Tzu, who emphasised the importance of military and political power but placed greater emphasis on the indirect approach. He argued 'that an indispensable preliminary to battle was to attack the mind of the enemy'¹² and that 'warfare is the way (tao) of deception'.¹³ He strongly emphasised the importance of information to war, stating 'that one who knows the enemy and knows himself will not be endangered in a hundred engagements'.¹⁴ With regards to coordination of the levers of power, Sun Tzu was also clear that the 'one who excels at warfare seeks [victory] through the strategic configuration of power (shih), not from reliance on men'.¹⁵

The political theorist Niccolo Machiavelli bridged Clausewitz and Sun Tzu: 'both statesmen and general are principally concerned with devising and using instruments by which they can exert their will over the will of others: those of violence, deception, manipulation and control'.¹⁶ Violence and control arguably represent as military and political levers, whereas deception and manipulation represent metis, exerted through psychological or information levers. Liddell Hart also argued for the importance of a version of information power when commenting on the horrors of the First World War: 'a more truly original and plausible suggestion is that war will be waged by suggestion – by words and not by weapons, propaganda replacing the projectile'.¹⁷ The French philosopher Michel Foucault's notion that 'ideas convey power' expands greatly on the concept of an information lever of power, implying that it consists of more than just deceiving one's adversary.¹⁸ He conveyed a more enlightened, truthful and progressive approach to projecting power through an exchange of ideas to achieve long-term strategic influence.

Before analysing information power, it is necessary to briefly discuss the nature of the current information environment and the projection of power. Firstly, the increased number and bandwidth of communication channels has flattened traditional hierarchies and resulted in a diffusion of information power. Anyone with access to relatively cheap technology can record, upload, post, blog, comment and tweet, and there is minimal, if any, scrutiny of this information as the best photo, most shocking video or outrageous vitriol dominates the narrative. As early as 1986 Debray argued that 'power today is becoming based less on physical and material parameters (territory, military forces) and more on factors linked to the capability of storing, managing, distributing, and creating information'.¹⁹

Secondly, levers of power are more interconnected and interrelated in the information age due to globalisation and enhanced communication technology. Ever since 'shock and awe' was televised in the 2003 Iraq War, images of warfare have been consumed globally with propensity for the extreme or fabricated to challenge directly the credibility and legitimacy of a state.²⁰ The information lever of power is fast becoming an outlet for the other levers whilst the information environment exposes all actors to an online community who act as judge, jury and executioner for projected narratives, truths and untruths. Ronfeldt and Arquilla neatly summarised the challenges, constraints and opportunities for power in the information age:

Given the explosive growth in the means of communication in recent years, versus the inherent constraints on either the use of force or economic coercion, it may well be that policymakers will increasingly want to resort to information strategies, before, or instead of, more traditional approaches to statecraft.²¹

Thirdly, as a result of these challenges, other forms of power have emerged in the information age literature. Nye concluded that the information age has embodied an 'era of "reduced tangibility" of power, and a rise in the importance of its "softer" side'.²² As a result, the concept of soft power has emerged, which can be defined as the 'ability to get what you want through attraction rather than coercion'.²³ It is included as a key capability within UK Fusion Doctrine²⁴ and alluded to during a speech by James Mattis, former US Secretary of Defense, in 2018: 'the open exchange of ideas ultimately is our greatest security'.²⁵ The term 'smart power' has also been introduced, which is defined as 'learning better how to combine our hard and soft power'.²⁶ Sun Tzu would have recognised the indirect approach of soft power as a tool of influence to achieve strategic configuration of power and remarks by Mattis that 'ideas convey power' could have been delivered by Foucault.

Analysis of the utility of information as a lever of national power would be incomplete without epistemological considerations. The OED defines epistemology as 'the theory of knowledge, especially with regard to its methods, validity, and scope, and the distinction between justified belief and opinion'.²⁷ Philosophers such as Jean Jacques Rousseau, David Hume, Friedrich Nietzsche and Jacques Derrida argued for the importance of intuitive reasoning, subjective feeling and emotion as the basis for truth. Conversely, the rationalist perspective, put forward by Confucius, Plato, Aristotle, Immanuel Kant and Rene Descartes, focussed on the importance of logic, rationality, facts and absolute truth.²⁸ More recently, the pragmatic theory of truth put forward by William James rejected the rationalist view and argued that 'truth is something that happens to an idea, rather than being a fixed property of an idea which we are trying to uncover'.²⁹ Therefore, in relation to the information lever of power, it could be argued that 'truth, then, is not something static and unchangeable: instead, it grows and develops with time'.³⁰

The concept of 'post-truth' challenges the relevance of truth in the current age.³¹ It is defined by the OED as 'relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief'.³² This is not necessarily a new phenomenon. In a recent RUSI article, 'The Taming of the Shrewd', Neil Verrall and David Mason reference Marcus Tullius Cicero who is attributed as saying, 'there is no such thing as objective truth', and Friedrich Nietzsche who stated, 'there are no facts, only interpretations'.³³ The significant difference highlighted by Verrall and Mason is 'that the modern connected world can maximise this at speed and scale'.³⁴ The UK's concept note on *Information Advantage* also referenced this challenge: 'experts are out, opinion is in; it matters not how verifiable the assertion, it only matters that it attracts attention – true believers, sceptics, conspiracy theorists and artificial intelligence can do the rest'.³⁵ In *Likewar*, Peter Singer described this as the extension principle whereby salacious accusations in the virtual dimension 'work like barbed arrows, spreading more infection and rot even as the victim struggles to remove them'.³⁶ Lord Peter Ricketts concurred:

People can tell blatant, bare faced lies, with an aura of confidence, and at least half the media outlets who happen to agree with them will accept them. There are as many truths as you want to consume really. This echo chamber, where lies are accepted as long as they are what you want to hear and the objective standard of fact and truth is being lost, is really worrying.³⁷

This is important. It gets to the heart of the debate we are not having. The true power of the information lever exists somewhere in between the long-term, Foucaultian projection of truth, liberal ideas and trustworthy information and the short-term salacious, false, disinformation that can be exciting, conspiratorial, inciteful and, most importantly, consumable. If embarking on the latter is unpalatable for a liberal, democratic and accountable government, how do they compete in the short-term? Especially because according to Clausewitz it was the short-term collapse of the truthful basis of one's information that could be the difference between victory and defeat:

By the word 'information' we denote all the knowledge which we have of the enemy and his country; therefore, in fact, the foundation of all our ideas and actions. Let us just consider the nature of this foundation, its want of trustworthiness, its changefulness, and we shall soon feel what a dangerous edifice War is, how easily it may fall to pieces and bury us in its ruins.³⁸

The 'nature of this foundation' is an extremely important factor. It could be extremely unstable if a society lacks trust in its sources of information and instead chooses content that reinforces existing biases and opinions. The result could be a society that is more susceptible to adversaries prepared to engage in an aggressive form of information warfare, as has been reported extensively in recent years. As Hannah Arendt stated in the 1970s:

A people that no longer can believe anything cannot make up its mind. It is deprived not only of its capacity to act but also of its capacity to think and to judge. And with such a people you can then do what you please.³⁹

We must take Clausewitz and Arendt seriously. The traditional concepts of direct versus indirect power, *bie* versus *metis*, and Clausewitz versus Sun Tzu, remain highly relevant in the information age. The information age has had a significant impact on the traditional diplomatic, military, economic and levers of power but it is the information lever of power that has experienced the greatest change. It has resulted in a dramatic realisation of Sun Tzu's indirect theory to attack the mind of the enemy, achieve deception and enable strategic configuration of power, which is arguably more achievable and important now than ever before. To do so, we must be clear what we mean by the information lever of power.

What is the information lever of power?

What is information?

An accepted definition of information is difficult to establish and subject to significant debate. In isolation the word 'information' lacks context. Adding technology, warfare, operations, environment or security – as well as many other terms – has created 'powerfully resonant tropes that enabled *information* to become the key word of our time'.⁴⁰ However, in so doing it has added additional complexity to the definition. As argued by Zorkovcy and Heap, 'the cause of this diversity in the common usage of the term is that information is essentially intangible'.⁴¹ In an attempt at simplification, the OED defines information as 'facts or knowledge provided or learned'.⁴² This definition, however, leads to a wider issue of how information relates to other connected terms such as facts, data, knowledge and communication. An article by Jennifer Rowley, entitled 'What is Information?', analysed the use of information across numerous disciplines and professions. She concluded that there are degrees of distinction between data, information and knowledge and argued that 'we derive information from data', 'we convey information by communication' and 'knowledge is the result of information that has been communicated'.⁴³ Thus, viewing it as a linear process consisting of data, information and knowledge, enabled or projected by communication, is somewhat helpful.

Other authors have also attempted to add coherence. Kline simplified the definition of information as the 'action of informing' and of 'knowledge communicated'.⁴⁴ He also argued that perspective is important: scientists and engineers view information as 'a mathematically defined, non-semantic quality'; information scientists regard it as 'between data and knowledge'; whereas businesses and bureaucracies view it as something that is 'transmitted, stored, and processed by computers, communications systems, living things and society'.⁴⁵ Eaton and Bawden emphasised the nature of information as a resource but, in contrast to Kline, viewed it more dynamically: 'information is a dynamic force for change in the systems within which it operates and must be viewed within an organisation as a formative organisational entity, rather than an accumulated stockpile of facts'.⁴⁶ Ronfeldt and Arquilla bridge Kline, Eaton and Bawden, as they conceptualised information as a *message* with content, a *medium* that provides a conduit for information, and a *physical commodity* that can be handled and observed, similar to energy and matter.⁴⁷ As a 'dynamic force' they argued that 'information may be viewed as something that, like mass and energy, can be literally hurled at an enemy'.⁴⁸ Indeed, as early as 1964, Michael McLuhan argued that conceptualising information as a resource that could be hurled at an enemy made perfect sense.⁴⁹

Information theory and the mathematical concept of information provide yet another angle. An article by Adami, entitled ‘What is Information?’, provides an overview of the mathematically defined concept of information and entropy. In simple terms, he stated that information is what we know and entropy quantifies what we do not know.⁵⁰ Or, rather, entropy should be regarded as ‘potential information’ because it quantifies how much you could *possibly* know, not what you *actually* know.⁵¹ He built on work by Weiner and Shannon in the 1940s that developed mathematical theories related to information and entropy. Shannon focussed on positive entropy to explain the amount of disorder or unpredictability in the communication of a message; conversely, Weiner focussed on negative entropy to explain the amount of order or predictability.⁵² Understanding entropy as part of the battle in the virtual dimension is of the utmost importance:

A key goal will be minimizing one’s own vulnerability to disruption and disorganisation – i.e., to entropy – while fostering it in an enemy’s systems. The strength of a system will be a function of not only how much mass, energy and information it embodies, but also how vulnerable, or resistant, it is to “entropizing”.⁵³

This is starting to get to the importance of information power. The extent to which information is ordered or disordered, predictable or unpredictable, is crucially important in this regard. To take Donald Rumsfeld’s well used axiom, the *known-knowns* could be regarded as the amount of information in a system, whereas the *unknown-unknowns* and *known-unknowns* could be viewed as the amount of entropy. Of course, there is also another category, the *unknown-knowns*. These are things that you know, but your inability to correctly manage, store, retrieve, analyse and understand this information means you do not know that you know. Or perhaps the context has not developed in which a piece of information presents itself as being required and useful.

This review has highlighted that across the different definitions of information there are two broad identifiable categories. First, information can be regarded as derived from data to contribute to knowledge as a supportive element to other activity; it therefore enables other outputs or functions. Second, information can be regarded as something more dynamic that can be projected independently of, or communicated by, other activity or inactivity. These two categories will be taken forward to support analysis of the information lever of power.

The information lever of power

The discourse on information power and the numerous derivatives that include information operations and information warfare are extensive. However, as Professor Dennis Murphy made clear in 2010, there is limited official documentation that specifically deals with the utility of information as a lever of national power. He argued that the literature ‘allude[s] to different aspects of information but without a holistic, overarching strategy or definition’.⁵⁴ Professor Murphy highlighted the only discernible definition of the information lever of power, which was put forward by Dan Kuehl and Bob Nielson in 1999:

use of information content and technology as strategic instruments to shape fundamental political, economic, military and cultural forces on a long-term basis to affect the global behavior of governments, supra-governmental organizations, and societies to support national security.⁵⁵

This is a good start, but there are three issues with this definition. The first is the reference to the use of information content and technology as ‘strategic instruments’. Whilst instruments of information power can be employed at the strategic level, it is certainly not the sole preserve of this level. Information content and technology are employed at all levels of statecraft and tactical employment of information power can have significant strategic ramifications. Photos from Abu Ghraib are a case in point. Second, the definition as posited only refers to the enabling or supportive aspect of information power as it ‘shapes’ the political, economic, military and cultural elements. This only includes half of the definable features of information and not the view that information can be projected independently. Finally, whilst the information lever of power can be used to achieve influence on a ‘long-term basis’, the speed and reach of communications in the information age also needs to be reactive and have utility in the short-term.

Information power was analysed by Ronfeldt in a paper published in 1991 entitled *Cyberocracy, Cyberspace and Cyberology: Political Effects of the Information Revolution*, and subsequently with John Arquilla in *Athena’s Camp* published in 1997. They concluded information power was transformative and ‘agreement is spreading that information should be viewed both as a new source of power and as an agent for transforming one kind of power into another’.⁵⁶ Their analysis emphasised three different views of information power. First, the ‘traditional’ view of information as a subsidiary to the other levers, which has largely been rejected following advances in information technology. Secondly, the ‘contemporary’ view that information has ‘transcendent, overarching effects’ on the other three levers. Thirdly, the ‘independent’ view contends that information is a lever of power in its own right. Ronfeldt and Arquilla recommended a hybrid option that included the contemporary and independent views: ‘information should now be considered and developed as a distinct fourth dimension of national power – an element in its own right, but still one that functions synergistically to improve the value and effects of the others’.⁵⁷

In Joint Doctrine Note 1/18, *Strategy*, the US included informational power as the fourth lever of national power. It falls under the executive branch of the US intelligence community and includes intelligence processes, communication synchronisation, informational activities to protect systems and support decision making, the reliability of information, support to democratic processes and even activity to 'disrupt knowledge'.⁵⁸ The US has also recognised additional non-traditional levers of power under a new acronym, MIDFIELD, which includes military, informational, diplomatic, financial, intelligence, economic, law and development power.⁵⁹ Donald Bishop's characterisation of US informational power is much broader. He included a large number of cultural instruments that cannot be directly leveraged: higher education, the media, entertainment and film, advertising, content on the internet, libraries, museums, non-governmental organisations, endowments and foundations, and the growing status of American English as a world language.⁶⁰

NATO has also adopted information as a lever of power but it only includes strategic communications and overt messaging.⁶¹ Intelligence, information activities, disrupting knowledge and cultural instruments are not included in the NATO definition. This might be down to appetite for employing the information lever of power as well as stark differences between a national and alliance approach. The US use of the term 'informational' versus NATO's use of 'information' may also explain the different approaches. The addition of *-al* is a small but potentially significant addition to information, transforming it from a noun with a degree of specificity to a term related to or characterised by a broader category. Informational power therefore has the potential to include many more activities than information power by viewing it as a descriptor around which informational capabilities coalesce as opposed to information itself.

The UK has historically not formally declared information as an independent lever of power. Instead, it has previously been regarded mainly as *putative* power under the contemporary view to enable other levers of power. According to Joint Doctrine Publication (JDP) 0-01, *UK Defence Doctrine*, Edition 5: 'National strategy directs the coordinated use of the three instruments of national power: diplomatic, economic and military. The three instruments of power are underpinned by information.'⁶² It is anticipated that *UK Defence Doctrine*, Edition 6, will include it as a lever in its own right in line with Joint Concept Note (JCN) 2/18, *Information Advantage*, which stated that: 'Information is no longer just an enabler, it is a fully-fledged national lever of power, a critical enabler to understanding, decision-making and tempo, and a "weapon" to be used from strategic to tactical level for advantage.'⁶³ Indeed, the recently released MOD paper on the *Orchestration of Military Strategic Effects* confirmed information alongside the other three traditional levers of power.⁶⁴

To introduce a degree of confusion, the UK's Fusion Doctrine does not explicitly include information as a capability alongside the other levers. With reference to national security capabilities, Fusion Doctrine 'will ensure that in defending our national security we make better use of all of our capabilities: from economic levers, through cutting-edge military resources to our wider diplomatic and cultural influence on the world's stage.'⁶⁵ The traditional DME levers are present in this statement, but information is omitted altogether. 'Cultural influence' is referenced, and the private sector is included in the economic capabilities, over which the government has limited direct control. Influence capabilities include communication, social policy and soft power. Diplomacy is also included as an influence capability, but it is relegated from being a lever in its own right. Furthermore, the armed forces are subsumed into security capabilities alongside border controls, law enforcement and 'covert', the latter possibly relating to intelligence, special forces or perhaps cyber operations. More recently, when announcing the outcome of the Integrated Review in March 2021, Dominic Raab, the Foreign Secretary, did not include information at all but referenced culture as a source of power, stating: 'without power, without economic, military, diplomatic, cultural clout, we can do nothing'.⁶⁶

This paper has not evaluated the use of the information lever of power by non-democratic and non-western countries or organisations because there is already extensive research in this area. However, it has identified that defining and bounding the information lever of power is extremely challenging. In some respects this might be beneficial, as argued by Brigadier John Ridge, during his tenure as Commander Joint Force Operations (CJFO): 'I prefer more blurred boundaries. Otherwise you get yourself to, I am now doing an information thing or I am now doing a military thing.'⁶⁷ Discussing the existence of an information lever of power, a similar view was expressed by an MOD official: 'there is such a thing as information power. Information has power, but it is not separate.'⁶⁸ A senior military officer also commented, 'I don't know how I would define it ... whether it stands alone, or whether it is in support, or encompasses, or underpins, where you would draw it I don't quite know.'⁶⁹ The same official went on to add: 'it is everything to everybody, but that is not to say that information activities are not valuable alongside any other levers we might pull. Or we pull another lever and communicate it across the information domain.'⁷⁰ Admiral Tim Fraser, at the time of interview the Chief of Joint Operations (CJO), also added: 'whether you call it a lever of power, an instrument, it is part of the tools and toolkit that we have and it has become more and more important.'⁷¹ In some respects, defining it might be the problem itself. It might be that information power is so amorphous, intangible and all-consuming, that providing a definition and strict boundaries might be unnecessary and unhelpful.

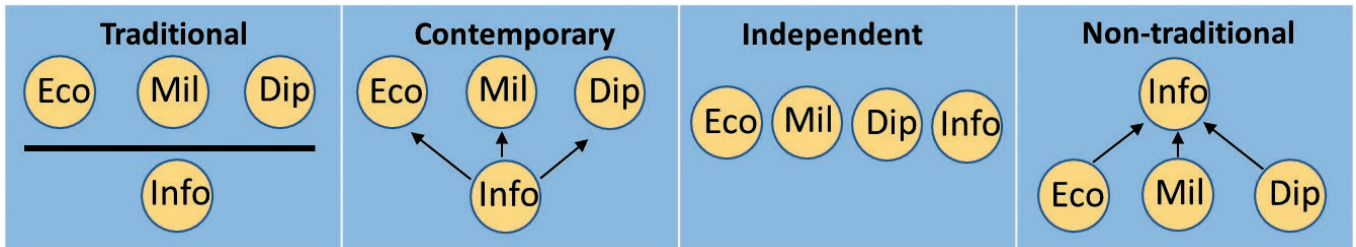


Fig 1. Conceptual views of the information lever of power.

Based on this analysis, views expressed and the rapid development of technology in the information age, this paper posits a fourth perspective to build on the traditional, contemporary and independent views. If the traditional view is that information power is subsidiary to the other three levers of power, this paper puts forward the ‘non-traditional’ view: the 3 traditional levers should be regarded as contributors, perhaps even subordinate, to information power (see Fig 1). Promoting information power from a subsidiary position to a lever in its own right is a positive step but does not go far enough. We must now regard the other levers as tools that deliver activity to achieve outcomes that project, propagate and perpetuate information power to deliver our narrative and achieve lasting influence. Economic, military and diplomatic activity, projected in and through the physical and virtual dimensions, requires the information lever to achieve the desired effect in the cognitive dimension. It is this ‘non-traditional’ view of information power that we should now take seriously, best explained through the characteristics of information power.

Characteristics of information power

Information power is unlike the other levers of national power in its *intangibility*. It cannot be measured in the same way as economic power, in terms of gross domestic product, sanctions or tariffs; or military power in terms of numbers of personnel, ships, aircraft or tanks. Even diplomatic power is quantifiable in the sense that diplomats conduct engagements and represent states and governments in international organisations; broadly the greater the representation and number of engagements the better. You can measure responses in social media, such as likes and shares, but as a lever in totality its measurement is complex, if not impossible. Furthermore, unlike the other levers, there is no budget for information power or a single or identifiable minister, ministry, department or official that employs the information lever. It would be incorrect to oversimplify the other levers of power, but military, economic and diplomatic levers have a degree of tangibility that does not translate directly. To demonstrate this point, an ‘Audit of Geopolitical Capability’ published in 2019 provided an assessment of 20 major powers based on indices related to economic capacity, military might, diplomatic leverage – the DME elements – with additional metrics on national resolve, technological development and cultural influence.⁷² However, there were no metrics specifically relating to information power thereby further reinforcing its *intangibility*.

Second, information power is *dynamic*. It can have transformative effects on and through all other levers of power as well as being projected independently. A military planner, diplomat and treasury official will all emphasise the importance of having access to the required information upon which to make decisions. Information can also be projected independently of the other levers; the notion of ‘hurling information at an enemy’ is a case in point. As per the non-traditional view, information can also be communicated by other activities. As Borer has emphasised, ‘incendiary bombs dropped on London ... during the Blitz were bits of information’, and at the start of the Iraq war in 2003 the ‘shock and awe campaign ... was a package of information meant to influence the Iraqi government’.⁷³ As highlighted by an MOD official, ‘there is an information element to a military activity; there is an information element to an economic activity’.⁷⁴ Lord Peter Ricketts also added the following regarding diplomatic power: ‘for me as a diplomat, information has been my life really. It is what we are paid to do, to collect it, to transmit it, communicate it and present British government views’.⁷⁵ The *dynamic* nature and non-traditional view of information power and its interrelationship with the other levers was best explained by John Ridge: ‘it is probably fair to say everyone plays into information more than everyone plays into the others’.⁷⁶ It must also be emphasised that doing nothing can also convey information that communicates a particular narrative; or, as the JCN on strategic communication argues, ‘we cannot not communicate’.⁷⁷

Third, information power *amplifies* other activities and levers of power. A military activity or diplomatic engagement conducted before the proliferation of global communications was relatively contained. High level political engagements, military operations or economic activities have limited long-term impact unless they are *amplified* by disseminating information through multi-media channels around the world. From a non-traditional perspective, *amplification* is only possible via the information lever of power thereby relegating the action, engagement or transaction itself to be of limited importance in the long-term. Commenting on the deployment of UK forces to the Caribbean under Operation RUMAN following the devastating hurricane Irma in Sept 2017, John Ridge provided an example:

The pictures of UK Marines patrolling alongside British Virgin Islands police officers changed the security environment in an instant. The practical deployment of those Marines was less important than the image of them patrolling.⁷⁸

Nik Gowing has also written about the challenges this can pose to governments. He described a clear threat to a government's narrative from a 'fast proliferating and almost ubiquitous breed of information doers' who can *amplify* false and unfounded accusations.⁷⁹ Governments must respond to this activity through positive *amplification* of their narrative and *de-amplification* of adverse narratives.

Fourthly, information power is more *ubiquitous* than the other levers of power. It can propagate in the physical and virtual dimensions long after its initial projection, again reaffirming the significance of the non-traditional view. The virtual dimension acts as a force multiplier enabling propagation like never before as messages and images are uploaded, liked, shared and re-tweeted. As an example, the Magna Carta is revered today for the principles it conveyed in 1215 but its *ubiquity* is enhanced considerably through online propagation of a document and ideas that have existed for over 800 years. Therefore, unlike the diplomatic, economic and military levers of power, information power has the potential to perpetuate in time and space beyond that which was originally intended, significantly increasing its power. A major disadvantage from its *ubiquity* is the lack of control once released because propagation is at the behest of the 'information doers' – or as David Patrikarakos called them, the 'homo digitalist'.⁸⁰

Fifth, information power is inherently *relational*. A piece of information will mean different things to different people, and even different things to the same person when presented in a different context. Information warning of a terrorist attack involving aircraft would have greater impact, and would probably be taken much more seriously, if received on 12 Sep 2001 rather than 10 Sep 2001. Information power conveyed in Arabic to someone that only speaks Mandarin has no power at all, unless translated. The swastika meant something very different to US Army units that used it as insignia on their uniforms during the First World War, compared to how the US Army viewed it during the Second World War. Military action abroad might provide positive domestic ratings at home but adversaries and the affected country will likely view it very differently. As Douglas A. Borer highlights, 'the point is that information, like power, must be understood as a *relational* concept rather than an absolute one'.⁸¹ From a non-traditional perspective this is extremely important because the power of military, economic or diplomatic activity is *relative* through the information lever to a particular audience at a given time and in a specific context, all of which can change rapidly and unexpectedly. Understanding audiences and how the *relational* characteristic can be leveraged to maximise the effectiveness of a particular narrative and reduce the chance of negative messaging that may cause offence is essential.

Finally, information power can be conceptually understood in terms of its degree of *entropy*. Its relative relationship to the spectrum of order and predictability, truth and untruth, with *entropy* and *negentropy* at opposing ends, provides a useful conceptual framework. A piece of information that might be propaganda, a half-truth or disinformation would arguably be more toward the *entropic* end of the spectrum. A piece of information that was the result of significant collection, cross referencing and analysis to establish its verifiability and reliability would arguably be toward the *negentropic* end of the spectrum. However, just when a degree of simplification was in sight, the epistemological challenges of the post-truth era introduce another variable. Due to the characteristics of the post-truth environment and the difficulty in attaining objectivity, the same piece of information might be believed as *negentropic* by one audience but dismissed as *entropic* by another.⁸² With regards to the non-traditional view, it means every action – military, economic or diplomatic – must be conducted with a clear understanding of how it will be communicated and then perceived, across many audiences, some intended and others unintended.

These characteristics suggest that it might be somewhat unhelpful to view information as a 'lever' or 'instrument' of power at all. A lever is something that is pulled to turn something on or off. Similarly, an instrument is something that you pick up, utilise to perform a task, and then put down again. As has been described and characterised, information power cannot be turned off; it is on, permanently. Even when you are not communicating, you are communicating. Once created, information exists in the physical and the virtual dimension indefinitely and continues to generate influence. The cognitive dimension is constantly active with different perceptions and opposing opinions, beliefs and inherent biases, all formed through the relational interaction one has with the information we receive and have previously received. It is the lifeblood of modern society and a battleground that cannot and will not cease. As stated by Infowars: 'There's a war on ... for your mind'.⁸³ It is a war that is being fought permanently. Understanding its characteristics to maximise its utility is crucial to win the battle (of the narrative), and the 'war'.

Conclusion

*'We're all islands shouting lies to each other across seas of misunderstanding'*⁸⁴

Rudyard Kipling

It comes down to this – what is the information lever of power? Nobody seems able to clearly explain what it is and fully agree its fundamentals. It is everything but also nothing, everywhere but nowhere. It is specific yet general; omnipresent yet invisible; permanent yet fleeting; truth to some, but falsehood to others. So perhaps we should start with what it is not. It is not a domain, like air, land, maritime, space and cyber. It is not something that is rooted physically or virtually, nor is it the sole purveyor of the cognitive. It is not a suite of capabilities, specific technologies or equipment programmes that depict or rely upon a definable medium. It is not cyber – or any other descriptors therein – and it is not simply a matter of communication and social media. It is not just about a message or narrative. It is not as simple as a tweet, social media, books, printed leaflets or morse code – these are things, mediums and resources that contain and convey information.

It is also different insofar as every other lever of power can be controlled and projected at will, as intended, to achieve desired effects, with greater assurance than information power. Military power, diplomatic power and economic power have ministers and ministries. They are tools that only governments can truly wield at scale and do so decisively. Non-governmental organisations can achieve a huge degree of power and influence on the international stage, non-state actors can unleash great death and destruction, and large corporations are hugely influential in financial markets, but nothing is quite as destructive as a war between states, recognised and legitimate governments alone wield diplomatic influence on the international stage and markets respond to currency valuations, government stimulus packages and fiscal policies. Conversely, whilst there are clear opportunities, no matter how hard a minister, government or official tries to mediate, explain, control or communicate by utilising the information lever of power, the risks can be high, the unintended consequences immeasurable and the blowback immediate. The 'authority' is easily blamed, mocked and rejected through the projection of information power – populations revel in finding someone to blame and can easily wield the power in their pockets. It must, therefore, be projected accurately and widely, timely, and focussed on the long-term but reactive to the short term, to enhance the effectiveness of its output alongside the other levers of power.

It follows, therefore, that information power is the degree to which an *agitator* (an image, word, event, or action) causes *agitation* (a thought, emotion, transaction, or reaction), as perceived in the eye of the beholder. The degree of *agitation* will vary hugely and is dependent on many factors rooted in the characteristics described. There are, therefore, degrees of information power that can differ enormously between two individuals viewing the same *agitator*. It is this potential that is so appealing to all who attempt to wield information power.

Clausewitzian *stratagem* or the concept of *metis* are fundamentally easier to wield in the information age, but sowing discord or *entropy* is easier to achieve where one's character or reputation do not matter. *Entropic* approaches are risky and all who drink from this cup must proceed carefully. A politician, minister, or official walks this perilous path only where anonymity is an option, they are not held accountable in their political system or when other options have fallen by the wayside; or as Clausewitz described it, when the situation becomes otherwise helpless.

The broad concept of an information lever of power has been recognised by strategists and authors of war throughout history. The traditional view of information power as a subsidiary has largely been rejected. Instead, a combination of the contemporary and independent views of information power – as an enabler for other levers and a lever in its own right – has aligned with Professor Freedman's view of both *putative* and *actual* power. It is recommended that a 'non-traditional' view should now be considered – the other three levers should be regarded as contributors to information power. It is accurate that 'actions speak louder than words' but only when propagated through the information lever. This view is underpinned by the six characteristics of information power, including information's: inherent *intangibility* compared to the other levers; its *dynamic* relationship with other capabilities; its specific *relation* to an audience in a given context; its ability to *amplify* and *de-amplify* other capabilities and levers; its prevalence for *ubiquity* once created and disseminated; and its *entropic* or *negentropic* nature. Understanding these characteristics leads to the conclusion that anything – indeed, perhaps everything – projects information power in some way, including of course doing nothing. The long-term, truthful, trustworthy and *negentropic* projection of information power must remain the focus whilst effectively combatting salacious disinformation in the short-term.

The information lever of power is therefore a bit like the air we breathe. Air and the information environment are owned by nobody, but both can be used and exploited by everybody. They are both pervasive and exist everywhere, utilised at will, and seamlessly integrated into our daily life very often with little thought. If you suddenly lose your breath, panic sets in immediately; if you cannot breathe, you die. If information power is lost resulting in information impotence, panic can also follow; if a state, government, or organisation cannot achieve the right degree of influence, it too can wither on the vine and die. So, what to do? The fitter you are, the easier it is to breathe when your body is under stress and physical exertion. Similarly, the greater your relative information advantage and the more resistant you are to network attack and disinformation, the more agile and fleet-footed your response will be and the greater resilience you will have when under pressure. Staying alive without the ability to breathe is indeed a tricky business; the same is true of projecting information power, perhaps the trickiest business of all.

Endnotes

- 1 Interview with Senior Military Officer, Ministry of Defence, 8 January 2019.
- 2 Nik Gowing, *"Skyful of Lies" and Black Swans: The New Tyranny of Shifting Information Power in Crisis* (Oxford: Reuters Institute for the Study of Journalism, University of Oxford, 2009), 82.
- 3 Michael N. Barnett, *Power in Global Governance* (Cambridge: Cambridge University Press, 2008), 2.
- 4 Oxford English Dictionary, 3rd ed. (Oxford: Oxford University Press, 2010).
- 5 Michael Barnett and Raymond Duvall, *Power in Global Governance* (Cambridge: Cambridge University Press, 2005), 2.
- 6 Lawrence Freedman, *Strategy a History* (Oxford: Oxford University Press, 2015), 372.
- 7 Freedman, *Strategy*, 23.
- 8 Freedman, *Strategy*, 42.
- 9 Carl Von Clausewitz, *On War* (London: Penguin Books, 1982), 162.
- 10 *Ibid.*, 275.
- 11 *Ibid.*, 276.
- 12 Samuel B. Griffith, *The Art of War* (Oxford: Oxford University Press, 1971), 41.
- 13 Sun-Tzu, Ralph D. Sawyer, and Mei-Chun Sawyer, *The Art of War* (Colorado: Westview Press, 1994), 168.
- 14 *Ibid.*, 179.
- 15 *Ibid.*, 188.
- 16 Niccolo Machiavelli, Neal Wood and Ellis Farnsworth, *The Art of War* (Cambridge, MA: Da Capo, 2001), 1xiv.
- 17 Liddell Hart, *The British Way in Warfare* (London: Faber & Faber, 1932), 125.
- 18 David Ronfeldt and John Arquilla, *In Athena's Camp*, (Santa Monica: RAND, 1997), 152.
- 19 David Ronfeldt, *Cyberocracy, Cyberspace, and Cyberology: Political Effects of the Information Revolution* (California: RAND, 1991) 5.
- 20 Gowing, *"Skyful of Lies"*, 49.
- 21 Ronfeldt, *Athena's*, 421.
- 22 Ronfeldt, *Athena's*, 152.
- 23 United States of America, Joints Chiefs of Staff. Strategy, Joint Doctrine Note 1/18 (Washington DC: Department of Defense, 2018). http://www.jcs.mil/Portals/36/Documents/Doctrine/jdn_ig/jdn1_18.pdf?ver=2018-04-25-150439-540 (accessed 12 November 2018), II-8.
- 24 United Kingdom, Cabinet Office, *National Security Capability Review*, March 2018, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/705347/6.4391_CO_National-Security-Review_web.pdf (accessed 13 November 2018).
- 25 James Mattis, "Remarks at International Institute for Strategic Studies", 27 October 2018, <http://go.galegroup.com/ps/i.do?p=STND&u-jscscoll&id=GALE|A560274564&v=2.1&it=r&sid=ebsco> (accessed 26 November 2018).
- 26 Alan Chong, "Smart Power and Military Force: An Introduction," *Journal of Strategic Studies* 38, vol. 3 (2015): 236.
- 27 OED, 2010.
- 28 Neil Verrall, and David Mason, "The Taming of the Shrewd," *RUSI Journal* 163, no. 1 (February/March 2018): 21.
- 29 Richard H. Popkin, and Avrum Stroll, *Philosophy* (Oxford: Made Simple Books, 1993), 330.
- 30 *Ibid.*, 330.
- 31 Verrall, "Taming Shrewd", 20.
- 32 OED, <https://en.oxforddictionaries.com/word-of-the-year/word-of-the-year-2016> (accessed 1 February 19).
- 33 Verrall, "Taming Shrewd", 20.
- 34 *Ibid.*, 27.
- 35 United Kingdom, Developments, Concepts and Doctrine Centre, *Information Advantage*, Joint Concept Note 2-18 (Shrivenham: DCDC, 2018), 1.
- 36 P.W. Singer and Emerson T. Brooking, *Likewar: The Weaponisation of Social Media* (Boston: Houghton Mifflin Harcourt, 2018), 209.
- 37 Interview with Lord Peter Ricketts, former National Security Adviser, 11 February 2019.
- 38 Clausewitz, *On War*, 162.
- 39 Hannah Arendt, "Hannah Arendt: From an Interview," *The New York Review of Books* 25, no. 16 (October 26, 1978), <https://www.nybooks.com/articles/1978/10/26/hannah-arendt-from-an-interview/>.
- 40 Daniel R. Headrick, *When Information Came of Age: Technologies of Knowledge in the Age of Reason and Revolution, 1700-1850* (Oxford: Oxford University Press, 2000), 204.
- 41 Jennifer Rowley, "What is Information?," *Information Services & Use* 18, no. 4 (October 1998): 245.
- 42 OED, 2010.
- 43 Rowley, "Information?", 243-254.
- 44 Ronald R. Kline, *The Cybernetics Moment: Or Why We Call Our Age the Information Age* (Baltimore: Johns Hopkins University Press, 2015), 203.
- 45 Kline, *Cybernetics*, 203-204.
- 46 Rowley, "Information?", 249.
- 47 Ronfeldt, *Athena's*, 144-149.
- 48 *Ibid.*, 158.
- 49 *Ibid.*, 158.
- 50 Christoph Adami. "What is information?," *Philosophical Transactions Royal Society A*: 374 (2016): 2.
- 51 Adami. "Information?", 11.
- 52 Kline, *Cybernetics*, 15.
- 53 Ronfeldt, *Athena's*, 156.
- 54 Jeffrey L. Caton, Cori Dauber, Jeffrey Groh and David Smith, eds., "Information as Power", vol. 4, US Army War College, 2010, http://www.au.af.mil/au/awc/awcgate/army-usawc/info_as_power_v4.pdf (accessed 1 February 19), vii.
- 55 Caton, "Information as Power", vii.
- 56 Ronfeldt, *Cyberocracy*, 5.
- 57 Ronfeldt, *Athena's*, 419.
- 58 *Strategy*, JDN 1/18, II-6.
- 59 *Ibid.*, VIII.
- 60 Donald M. Bishop, "DIME, not DiME: Time to Align the Instruments of U.S. Informational Power", *The Strategy Bridge*, (20 Jun 2018), <https://thestrategybridge.org/the-bridge/2018/6/20/dime-not-dime-time-to-align-the-instruments-of-us-informational-power> (accessed 22 Jan 19).
- 61 North Atlantic Treaty Organisation, *Allied Joint Doctrine*, AJP-01, Edition E, Version 1, February 2017, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/602225/doctrine_nato_allied_joint_doctrine_ajp_01.pdf (accessed 12 November 2018): 1-3.
- 62 United Kingdom, Developments, Concepts and Doctrine Centre, *UK Defence Doctrine*, Joint Doctrine Publication 0-01, 5th ed. (Shrivenham: DCDC, 2014), 12.
- 63 *Information Advantage*, JCN 2-18, iii.
- 64 United Kingdom, Developments, Concepts and Doctrine Centre, *Orchestration of Military Strategic Effects* (Shrivenham: DCDC, 2021), 2.
- 65 UK, *National Security Capability Review*.
- 66 Dominic Raab, "Dominic Raab claims role for UK as a 'force for good' in world in which democracy is in retreat", *Independent*, 17 March 21, <https://independent.co.uk/news/uk/politics/dominic-raab-china-integrated-review-b1818099.html> (accessed 20 March 2021).

- 67 Interview with Brigadier John Ridge, Commander Joint Force Operations, Northwood Headquarters, 11 January 2019.
- 68 Interview, Military Officer.
- 69 Interview, Senior Military Officer.
- 70 Interview, Senior Military Officer.
- 71 Interview with Vice Admiral Tim Fraser, Chief of Joint Operations, Permanent Joint Headquarters Northwood, 5 February 2019.
- 72 James Rogers, *Audit of Geopolitical Capability* (London: Henry Jackson Society, 2019).
- 73 John Arquilla and Douglas A. Borer, *Information Strategy and Warfare: A Guide to Theory and Practice* (New York: Routledge, 2007), 237.
- 74 Interview, Military Officer.
- 75 Interview, Ricketts.
- 76 Interview, Ridge.
- 77 United Kingdom, Developments, Concepts and Doctrine Centre, *Defence Strategic Communication: an Approach to Formulating and Executing Strategy*, Joint Concept Note 2-19 (Shrivenham: DCDC, 2019), 3.
- 78 Interview, Ridge.
- 79 Gowing, "Skyful of Lies", 1.
- 80 UK Parliament, Defence Committee, Global Islamist Terrorism Enquiry: How has social media changed the battlefield, 15 January 2019, <https://www.parliamentlive.tv/Event/Index/33431372-d5b6-4558-b459-c54a5e68ee9a> (accessed 21 January 2019).
- 81 Arquilla, *Information Strategy*, 236.
- 82 Verrall, "Taming Shrewd", 20-21.
- 83 Singer, *Likewar*, 208.
- 84 United Kingdom, Developments, Concepts and Doctrine Centre, *Understanding and Decision Making*, Joint Doctrine Publication 04 2nd ed. (Shrivenham: DCDC, 2016).

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