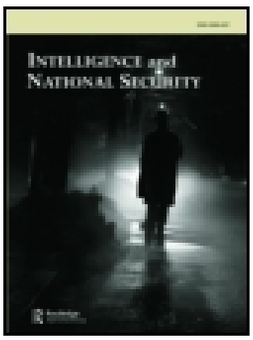

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ARTICLE

Strategic intelligence as an art and a science: creating and using conceptual frameworks

Itai Shapira

ABSTRACT

This article describes a major output of strategic intelligence: conceptual frameworks. Drawing on concepts from epistemology, ontology, and analytical methodology, it finds a philosophical foundation for conceptual frameworks in pragmatism and the ideas of Wittgenstein. Through the production and use of conceptual frameworks, strategic intelligence is revealed as both art and science, performing both creation and discovery. The use of such frameworks enables strategic intelligence to notice shifts as they begin to emerge. The article highlights Israeli theoretical perspectives, illustrates the practical utility of conceptual frameworks by applying them to Israeli cases, and suggests that using them contributes to strategy.

Introduction

Western scholars and practitioners of intelligence have produced a rich literature on many facets of their subject, from historical and organizational questions[1] through methodology and tradecraft[2] to current concerns such as big data[3] and cyber.[4] However, less attention has been paid to the theoretical underpinnings. True, many studies stress the need for a new theory[5] – of intelligence, for intelligence or about intelligence;[6] but few go beyond emphasizing the difficulties entailed even in defining intelligence.[7] This is true also with respect to strategic intelligence. While the subject itself receives much attention,[8] the extant literature focuses on the relationship between intelligence and policy[9] or strategy[10] and on organizational issues,[11] with less heed given to philosophical questions. And there is almost no research dedicated to the specific issue of conceptual frameworks in intelligence.

Within Israel, the theoretical discourse regarding intelligence remains scant, and based on outdated empirical data.[12] Israeli experience in intelligence has been discussed in Western literature – especially in studies about the Yom Kippur War in 1973[13] and the revolution in Iran in 1979,[14] and about the Israeli military intelligence acting de-facto as national intelligence.[15] But there is little exploration of Israeli particular philosophical and methodological approaches. More generally, Israel's intelligence culture seems to be an under-researched subject, perhaps reflecting a broader gap in studies of national intelligence cultures outside the Anglosphere.[16]

The present study attempts to bridge some of these gaps. I focus on strategic intelligence, drawing on concepts from epistemology,[17] ontology, and analytical methodology to investigate its philosophical aspects, and highlighting conceptual frameworks as one of its main outputs. In addition, I draw on current strategic questions facing Israel, and engage with the works of several Israeli writers.[18] Therefore, indirectly I highlight some aspects of Israel's intelligence culture.

In terms of theory, this study extends the literature on strategic intelligence, illustrating the relevance of philosophy, and illuminating the role and foundations of conceptual frameworks. For these I find a theoretical foundation in two philosophical schools – pragmatism, and the late philosophy of Wittgenstein.[19] I show that the production and use of conceptual frameworks

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illustrates the nature of strategic intelligence as both an art and a science, engaging in both creation and discovery. On the practical side, by analysing Israel's strategic environment, the study shows how both intelligence and strategy personnel can benefit from using conceptual frameworks. Like others, I attempt to illustrate the interaction between theory and practice.[20]

The paper proceeds as follows. I begin by describing the main characteristics of strategic intelligence, and its dual character as a science and an art. I then describe the philosophical foundations and the pragmatic usefulness of conceptual frameworks. I give flesh to my argument using Israeli strategic case studies. In conclusion, I point to the study's limitations and suggest topics for further research.

What is strategic intelligence?

Sherman Kent, in 1949, described intelligence as having three facets: activity, knowledge and organization.[21] This study is concerned with the former two – namely, the intelligence process and product – focusing on the analytical component of the 'intelligence cycle'.[22] Our specific focus is strategic intelligence, which is strategic in light of its object of analysis (the strategic environment, or the strategic decision making echelon of enemies, rivals and friends); the process it is integrated in (strategy); and the echelon that uses it (strategic).

Let us distinguish between strategic and tactical intelligence,[23] and between their outputs.[24] Lanir stressed that national intelligence – for this article's purposes, strategic intelligence – is not just the 'linear continuation' of tactical intelligence.[25] Hence it is relevant to remind here that the purpose of tactical intelligence is usually to reveal secrets hidden by the enemy[26] The questions it engages are ones for which answers exist, even if the enemy conceals them. It is concerned with matters that are physical, concrete, technological,[27] or relatively universal in their patterns of behaviour.[28] But strategic intelligence is different.

From an ontological perspective, it is concerned with abstract and conceptual objects, albeit ones linked to the physical objects that are the concern of tactical intelligence. For example, a shift in public confidence in a political leader is an abstract phenomenon which may emerge because of tangible economic issues. The ontology of strategic phenomena is thus based on that of tactical phenomena, without being a mere accumulation of the latter.

Strategic intelligence is also unique from an epistemological standpoint. For example: in order to develop knowledge about a state's approach to the use of military force, or to deterrence – both objects of strategic intelligence – one must analyse cases in which force was used on the tactical level, or in which deterrence was manifested through tactical diplomatic engagements. The epistemology of strategic phenomena is thus dependent on that of tactical phenomena, but the latter is not sufficient for the former.

Tactical intelligence discovers objects rather than creates them. For strategic intelligence, the objects of discovery may be 'strategic secrets' – i.e. some strategic concept or idea that the enemy wishes to conceal. But these can also be 'strategic mysteries or puzzles': phenomena that are emerging, and for which no specific questions – let alone definitive answers – yet exist.[29] Such phenomena might include, for example, trends in the socio-economic environment, or new political considerations that affect strategic decisions. These also have an ontic basis, and the discovery aspect stems from the fact that their emergence creates a new strategic environment.

One of the traditional roles of strategic intelligence, based on tactical intelligence, is to provide early warnings of the enemy's military actions. For Lanir these are 'situational',[30] for Knorr they are 'technical',[31] and for Betts they are 'factual-technical'.[32] Tactical intelligence about the enemy's military capabilities and deployment is their core. But strategic intelligence adds a unique component. It needs to discover the abstract phenomena relating to concepts developed by the enemy's decision maker, and also to discover emerging changes in the way the enemy perceives the environment.

At the same time, strategic intelligence involves creation – of a framework, or a theory, needed for understanding the strategic environment.[33] Lanir, when discussing theories, distinguishes between

'situational understanding' (or analysis) and 'basic understanding',[34] where the former deals with military intelligence (for our purposes, tactical and operational intelligence), and the latter with national intelligence. Situational understanding is based on inductive reasoning, in that conclusions are derived from observations of patterns in collected data. In basic analysis reasoning is deductive, and information is tested in reference to theories. As such, it involves the ability to 'think about situations that have not yet materialized … The words intuition, sudden insight, creativity, imagination … we use them for purposes of theory'.[35]

Granit denies the exclusivity of what he calls the 'realist paradigm' – that is, the common wisdom that the aim of intelligence is to discover and understand entities and facts that exist 'on the other side'.[36] In Granit's view, intelligence need not, and indeed cannot, infer the strategy of the other side by 'get[ting] into the mind of the adversary', in an objective manner that is detached from the 'blue' perspective. Granit, therefore, underlies creation over discovery.

At this point it is helpful to consider four different categories of strategic intelligence set forth by Matza.[37] The first, 'prophetic' strategic intelligence, is concerned with predicting the future and providing an objective analysis of potential future development. The second, 'strategic intelligence in an operational form', is meant to support decision makers' efforts to shape the operational environment and conduct a successful campaign. The third, which we can term politicized strategic intelligence, exists when intelligence is harnessed to justify the political echelon's decisions and actions already made. This approach contradicts the idea of intelligence as discovering objective truth. The fourth, 'critical' strategic intelligence, emphasizes critical analysis regarding the implications of the decision maker's strategy.

What is, then, the main role of strategic intelligence? Is it intended to create knowledge about the future, namely foresight and prediction?[38] The late Israeli President Shimon Peres claimed that ' … intelligence is responsible for information, that is, for everything that has happened in the past ….'[39] Yet despite the limitations of induction based on past experience,[40] this article maintains that strategic intelligence does need to assess potential future developments,[41] mainly because the strategic decision-making echelon aims to shape the future. Therefore, an important goal of intelligence is reducing uncertainty.[42] Another major role is noticing shifts as they emerge.[43]

Noticing shifts as they emerge

The main challenges in intelligence stem not only from mistaken analysis, but also mistaken identification of the relevant intelligence object. Barnea draws a distinction between 'focused surprises', which are the product of a deliberate project of concealment by the enemy (e.g. the Yom Kippur War), and result from mistaken analysis, and 'dispersed surprises', which emerge in a spontaneous and unexpected manner (e.g. the Arab Spring), and result from mistaken focus of collection and analysis efforts.[44]

Strategic surprises, as manifestations of intelligence failures, are heavily researched.[45] Prominent experts maintain that they are inevitable,[46] for both cognitive and organizational reasons.[47] According to the traditional view, a surprise is a consequence of a failure to notice the development of enemy military capabilities, or intentions to employ them. Wasserman critiqued this approach as reflecting the premise that intelligence knowledge is created inductively, based on past experience, through observation (what he calls inductionism), or by relying on objective facts which are assume to have only one interpretation (naïve realism).[48]

Some surprises still stem from a decision being made 'on the other side' – e.g. state intervention through cyberattacks, to influence the outcomes of democratic elections;[49] o r even emerging readiness for peace.[50] But others do not necessarily result from deliberate decisions: socioeconomic issues,[51] civilian uprisings,[52] unintended escalations,[53] and so on.

Timing is crucial to the success of early warning. Betts, using the term 'doctrinal surprise', argued that intelligence must be prepared to recognize emerging changes in enemies' military concepts and doctrines – implicitly, in time to prevent surprises.[54] And in order to notice shifts one must analyse

trends. Many analytical methods, such as 'horizon scanning',[55] are relevant for this. The business world has been struggling for years with methods such as 'weak signals',[56] 'strategic issue management',[57] and 'strategic issue diagnosis',[58] for adapting to changes in the competitive environment.[59] Data science and technological forecasting also use analysis of anomalies as a tool for noticing shifts.[60]

Still, understanding trends and shifts is not enough. Strategic intelligence needs to be integrated into the specific strategy in question. It does not and cannot be totally objective.

The objectivity of strategic intelligence

Intelligence based on the scientific approach must discover reality from an objective perspective. But from an artistic standpoint, intelligence becomes more subjective, and emphasizes creation, stemming from the unique vantage point of the observer. Other approaches that stress creative and artistic aspects may even manifest a postmodernist and relativist line to intelligence.[61] Granit employs such an approach when discussing systemic intelligence, referencing similar ideas in systemic military thought and art.[62] The systemic approach to intelligence emphasizes the creation of conceptual systems rather than objective discovery of reality. But according to Brun, 'the problem begins when the occupation with conceptualization and with "subjective understanding" comes at the expense of an attempt to understand the complex reality'.[63]

The current study adopts an intermediate approach. It combines the realist paradigm with the systemic approach, and hence it is positioned between objectivism and subjectivism. The critical-realist philosophy also manifests a similar idea.[64] Brun remarks that 'the proponents of this approach are very aware of the possible biases both in producing the raw material and in processing it. Therefore, they believe that the knowledge they possess constitutes hypotheses that are always susceptible to testing and criticism'.[65]

The issue of objectivity also has implications for the relationship between strategic-intelligence personnel and strategists.[66] Jervis, for example, has explained why intelligence and policy people 'clash'.[67] In the US, where experiences such as the mistaken assessments of Iraq's purported weapons of mass destruction in 2003, officials have become wary of the potential for the politicization of intelligence,[68] and sometimes prefer to avoid offering advice which might sound like policy.[69] The phrase 'speaking truth to power' captures this attitude, describing the relationship between the intelligence officer (whose task is to discover truth) and the decision maker (who holds power).[70] Simantov and Hershkowitz, like Kerbel and Olcott, recommend a cooperative approach, implicitly questioning some of the objective and therefore scientific elements of intelligence.[71]

There is, then, a need to look at how strategic intelligence is perceived and used by decision makers. Writing on this issue by decision makers in Israel is relatively sparse.[72] But Hilsman's 1950s description of how US leaders perceived intelligence[73] still seems relevant. Most of the leaders interviewed by Hilsman lacked a clear sense of the added value of intelligence for strategy. Intelligence products were described as lengthy, cumbersome, too academic, and insufficiently practical. The leaders complained that the intelligence they received failed to provide them with knowledge that was sufficiently concrete and relevant to the specific strategic context – a problem that they ascribed, among other things, to intelligence officers' lack of familiarity with strategic dilemmas as experienced by the leader himself. The leaders questioned the ability of intelligence researchers – most of whom were quite young – to understand and contribute to strategy, beyond the leaders' own capacities gleaned from their long experience in strategy and their own contacts with foreign leaders. Some asserted that the knowledge required for strategic decision-making was based mostly on open information, and that the national intelligence apparatus was no better at producing and analysing this information than were the leaders themselves.[74]

I argue that strategic intelligence indeed serves a useful and important role in providing background information for decision makers, as some of them might expect. But I see the a major purpose of strategic intelligence in producing conceptual frameworks. This is one of its added values, and it requires a combination of art and science.

Strategic intelligence: science and art combined

The subject of intelligence as art versus science has already been discussed in the literature.[75] Brun[76] sees intelligence as an 'institution for clarifying reality',[77] and favours the scientific approach. Ben-Israel also emphasizes the scientific aspects.[78] Johnston maintained that intelligence analysis should be seen as a scientific process.[79] The tendency to favour the scientific method has been called 'the myth of scientific methodology'.[80] Some compare intelligence to 'softer' scientific disciplines, such as medicine.[81] Yet, it is harder to find studies pointing to similarities between strategic intelligence and art.[82]

When I refer to 'science', I mean primarily the scientific method – the use of observation and experience to test hypotheses and theories empirically,[83] after breaking down the research question into sub-questions, for identifying objective causal connections and regularities.[84] Ben-Israel describes this approach very thoroughly, referencing the philosopher Karl Popper.[85] When I refer to 'art', I mainly mean subjective creation that is not susceptible to empirical validation or invalidation, essentially holistic and created by intuition. Thus, for this study, the role of science is primarily discovery, while the role of art is primarily creation.

Viewing strategic intelligence as an art does not preclude the use of scientific practice and techniques.[86] It must still make use of qualitative methods[87] from the social sciences and humanities, inductive in nature, such as grounded theory;[88] or of quantitative methods from the natural sciences, deductive in nature.[89] In recent years, social-science methodology has emphasized the constructivist approach,[90] and this trend can also be of use.

For sure, tactical intelligence requires a strict scientific approach: it is based on information and observation (empirical findings), and uses structured analytical techniques.[91] Reasoning can be deductive or inductive, but information has high value. The ontology must be primarily realist;[92] that is, assuming that objects exist in reality and that intelligence can discover them. The epistemology must be mainly positivist;[93] that is, assuming that the world is characterized by a regularity which the scientific method can discover, even when it comes to matters related to human decisions. The use of big data and artificial intelligence instruments can be especially relevant here.

But the more strategic is any intelligence, the greater the role of its artistic aspects, and thus of creativity. The ontological concept will be more idealist – it is the researcher who creates the objects of interest through conceptualization and thought, or who discovers concepts and ideas that exist in reality, but only in an abstract and not a physical manner. The epistemological approach will be more constructivist – the understanding of a strategic phenomenon is relevant only in the concrete context.[94] The role of intelligence will be mainly to solve puzzles and mysteries. Reasoning will be both deductive and inductive, but in the main it will be abductive – producing a general explanation for a phenomenon that deviates from expectations.[95] Raw information, therefore, will have a limited value.

Some have maintained that strategic analysis should even be seen as storytelling.[96] Regardless, it requires the synthetic (holistic) and intuitive observation and creation that characterize art, combined with the analytic and structured observation that characterizes science.[97] Imagination, in that sense, is a fundamental component of artistic and holistic approaches. In a demonstrative example, the investigatory commission after the terror attacks of 11 September 2001, discussed the failure of imagination in the US intelligence community.[98] The need for artistic aspects is evident because strategy itself contains holistic and artistic domains:[99] it is designed not only to understand and conceptualize reality, but to change it.[100] As such, in the world of security as in business,[101] strategy requires creativity.

In sum, there is no need to choose between science and art when discussing and practicing strategic intelligence. Science can help us to understand and discover reality and causality, and to notice patterns. Art can help us to see a holistic and complete picture, to notice shifts and deviations from patterns, and to produce new forms for observation. Likewise, there is no need to choose between induction and deduction in strategic intelligence. Rather, the two can be combined in abduction.[102] Abduction can assist in creating conceptual frameworks.

Conceptual frameworks: one of the key products of strategic intelligence

Conceptual frameworks in the intelligence context can be thought of in terms of Kant's notion of space and time as 'a-priori concepts of consciousness'. These are the 'lens' through which we experience reality, which, according to Kant, is not accessible in itself.[103]

In strategic intelligence, the conceptual framework is the manifestation of the research question through which the analyst tries to give meaning to information. It does not necessarily reflect reality in an objective manner. Lanir put it well: 'The question regarding the basic theory is not whether it is "true" or "false" at a certain point in time, but whether the research program based on it is advanced or productive – in the sense that it leads to new predictions'.[104] Conceptual frameworks, then, should be regarded as an instrument for solving problems. The philosophy of pragmatism, which we will discuss next, also focuses on problem solving.[105]

Pragmatism and the late ideas of wittgenstein: relevant approaches for understanding conceptual frameworks

In this study I rely primarily on William James's writings on pragmatism.[106] This philosophical school opposes dualism between different attributes of reality (spirit and matter) or different forms of reasoning (empirical and conceptual).[107] It criticizes the 'correspondence theory' of truth,[108] according to which a sentence is true only if it exactly represents the reality it describes. Pragmatism asserts that there is a difference between claims and theories only if they produce a difference through their practical application. It scrutinizes claims in terms of their effectiveness or relevance, and regarding their truth value: 'Truth depends on its consequences'.[109] James explains:

> … [T]HAT IDEAS (WHICH THEMSELVES ARE BUT PARTS OF OUR EXPERIENCE) BECOME TRUE JUST IN SO FAR AS THEY HELP US TO GET INTO SATISFACTORY RELATION WITH OTHER PARTS OF OUR EXPERIENCE, to summarize them and get about among them by conceptual short-cuts … . Any idea upon which we can ride, so to speak; and idea that will carry us prosperously from any one part of our experience to any other part, linking things satisfactorily, working securely, simplifying, saving labor. … [110]

Pragmatism also 'has no objections whatever to the realizing of abstractions, so long as you get about among particulars with their aid and they actually carry you somewhere'.[111] I believe the resemblance with conceptual frameworks as a role of strategic intelligence is rather clear.

The late approach of Wittgenstein is also relevant. Wittgenstein maintained that a concept's meaning is determined in light of the concrete context wherein it is used in language:

> But what does it mean to say that we cannot define (that is, describe) these elements, but only name them? This might mean, for instance, that when in a limiting case a complex consists of only one square, its description is simply the name of the coloured square. Here we might say – though this easily leads to all kinds of philosophical superstition – that a sign 'R' or 'B', etc. may be sometimes a word and sometimes a proposition. But whether it 'is a word or a proposition' depends on the situation in which it is uttered or written.[112]

In order to see more clearly, here as in countless similar cases, we must focus on the details of what goes on; must look at them from close to.[113]

Wittgenstein explains that ' – When I give the description: "The ground was quite covered with plants" – do you want to say I don't know what I am talking about until I can give a definition of a plant?'[114] And elsewhere: 'If I tell someone "Stand roughly here" – may not this explanation work perfectly?'[115] Wittgenstein also describes 'language games',[116] in the sense of similarities between different practical manifestations of the same concept. Like the pragmatists, he emphasizes the practical use of theories, and praises vagueness for such needs. These ideas too resemble our notion of conceptual frameworks.

Now we can turn to practical Israeli test cases, in order to show how using conceptual frameworks realizes the ideas of pragmatism and Wittgenstein, and can enable producing better strategic intelligence and strategy.

Strategic intelligence in israel: examples for the use of conceptual frameworks

Some relevant Israeli cases might include:[117] What outcomes are likely from the debates taking place in Iran in the aftermath of the US withdrawal from the nuclear agreement (JCPOA) during 2018? How is Hizballah likely to react after Israel carries out a strike in Lebanon against its precision-weapons project? Which of the various possible scenarios will emerge after Mahmoud Abbas leaves the Palestinian arena?

Let us begin by illustrating the value of information and of tactical intelligence for the production of strategic intelligence, using the question of how domestic struggles in Iran affect its entrenchment in the Middle East. To address this question we must think how these struggles will affect Russian, American, European, and Chinese policy. We must look at events and patterns in the military, diplomatic, economic, and political spheres. More deeply, understanding Iranian entrenchment in the Middle East requires analysing the issues over which the struggle in Iran is being waged. That, in turn, entails in-depth analysis of relations between the Supreme Leader, the Iranian Revolutionary Guard Corps (IRGC), and President Rouhani. These relations exist in reality and can be discovered, even if they are abstract; information about them can be obtained. Likewise, we must examine the military power of the IRGC, ties between IRGC and its proxies (Hizballah in Lebanon, the Houthis in Yemen), and so on. All these also exist, and can be discovered. Some of them are the objects of tactical intelligence.

But we also need an artistic approach and even a 'pragmatic imagination'.[118] Only creative thinking, based on holistic principles, can produce the synthesis needed to transform these into a framework within which answers to the core question can begin to emerge.

'The moderate sunni camp'

Let us take as a first example the idea of a 'moderate Sunni camp'. This refers to a group of Middle Eastern Sunni states that includes Egypt, Jordan, Saudi Arabia, the United Arab Emirates, and to a certain extent also Oman, Kuwait, and Morocco. Clearly there exists common ground among the abovementioned states, and broadly speaking, potential exists for cooperation between Israel and some of them.[119] Clearly there is also great variety.

The nature of this 'moderate Sunni camp', and whether it even exists, is a topic of discussion in Israel.[120] But it seems that the question fails to grasp the nature of a conceptual framework. The camp does not exist the same way that Hizballah's rockets or Iran's nuclear facilities do. Its ontological basis is different. The question of whether a Sunni camp exists depends primarily on what we mean by this concept. Hence, empirical data will not necessarily be of help in answering this question. Even if we notice collaborations between the Emirates and Egypt (e.g. on the Gaza issue); even if we understand the common interests of Saudi Arabia, the Emirates, and Egypt in the crisis over Qatar;[121] even if we observe how far Saudi Arabia and Egypt are prepared to go to reduce the Muslim Brotherhood's influence – this is still not enough. It is more useful to ask how this framework can produce strategic intelligence and strategy.

Specifically, this framework facilitates examining the strategic culture of the Sunni states, and the effectiveness of their means of influence. At least in the case of Saudi Arabia, these mainly consist of economic means. It can also help in formulating Israel's position on the proposed US-sponsored Middle East Security Alliance (MESA).[122] Therefore, it can facilitate clarification of Israeli policy towards the Sunni states. It can underscore the relative weakness of the Sunni states in influencing trends in the Middle East related to Iran,[123] and the Sunnis' lack of coherence compared to that of the Shiite actors.[124]

'Strategic competitions'

A second example is the 'strategic competitions' in the Middle East. This is often used to describe the recent changes in the Middle East – in which Israel does not necessarily take a direct part, but which affect it.[125] A related concept is the 'great-power competition' between the US, China and Russia, a

concept – highly reminiscent of the Cold War period[126] – which appears in the 2017 and 2018 summaries of the US National Security Strategy[127] and its National Defense Strategy.[128]

In the Israeli context, the concept of 'strategic competitions' serves a useful purpose in framing struggles between Iran, the Sunni states, the United States, Russia, Turkey, and Israel itself – over influence, military power, and freedom of action (political and military). In Syria, for example, Israel is trying to counteract Iranian entrenchment and influence;[129] the US sent forces to fight the Islamic State (ISIS) but also to deter the Iranians and the Russians;[130] the Russians are trying to deepen their economic, political, and military influence; Turkey is seeking to create zones of influence, and so on.

But this conceptual framework too has more to do with a conceptualization projected onto reality than with an objective discovery. Using empirical data to assess whether competition has intensified, or whether the situation of a given state has improved or worsened, is difficult. How can we judge, for example, whether the competition between Saudi Arabia and Iran over influence in Lebanon has intensified? How should we assess whether the Russians or Iranians are winning the competition over Syria's economic rehabilitation?

Specifically, the conceptual framework of strategic competitions allows Israel to weigh the merits and success of the IDF's two-tier strategy of prevention and influence;[131] and how it is helped by the US to contend with Iranian (and Russian) influence. The framework can guide Israel to decide which of the means at its disposal[132] will be most effective, and most in accord with Israeli strategic culture.[133] More specifically, it makes clear that the Iranians and Russians possess more relevant and effective means of influence in the Middle East than the Sunni states, and to some extent also than the United States. This might be because Iran and Russia are willing to use direct military force along with proxies, engage in information warfare in all its various aspects, make sophisticated use of economic resources to generate influence, employ hard power for deterrence but also soft power to shape the preferences of third parties,[134] while the Sunni countries and the US rely mainly on economic and diplomatic means whose effectiveness is limited.

Furthermore, the US too is engaged in 'great-power competitions', outside the Middle East, mainly with China and Russia.[135] And whereas Israel sees the 'campaign between the wars' – i.e. ongoing low-grade military competition – as a key tool in its strategy of prevention and influence, and as a component of strategic competition,[136] the US view of 'grey-zone competition"[137] is different. The use of the 'strategic competitions' framework helps us to understand these differences.

Conclusion

In this study I sought to illustrate a potential philosophical basis for conceptual frameworks, and to show how implementing them in practice holds potential for improving strategic intelligence and strategy. I recommended that strategic intelligence be considered in light of pragmatism, and the late approaches of Wittgenstein. I drew from these philosophies three main ideas: (1) the role of theories, specifically of conceptual frameworks in intelligence analysis, is not necessarily to discover some objective truth or reality, but rather to help in solving concrete problems; (2) the meaning of concepts, specifically of conceptual frameworks, is created by how they are used in language and concrete contexts, not by universal definitions; and (3) strategic intelligence must take the middle path between empiricism and rationalism. I also argued that strategic intelligence is both an art and a science, its products being both creation and discovery. Creating conceptual frameworks, and then using them to discover unique phenomena and to identify shifts in trends as they begin to emerge, is a manifestation of this combined approach.

This study has several limitations. First, I did not explain in depth what I meant by 'art' and 'science' in the intelligence context. I only touched on the form of reasoning called abduction. While abduction strategies are sometimes discussed in relation to fields such as medicine and law,[138] their relevance to intelligence needs further research. In addition, the present study does not fully answer the 'so what?' question: why and how does a philosophical discussion, and the use of conceptual frameworks, improve strategic intelligence and strategy?

Measuring the quality of intelligence is complicated. Scholars and former practitioners have struggled with this problem,[139] and have mainly fallen back on the simplest and most straightforward measure, namely accuracy in prediction.[140] I believe that is also a scientific way of looking at intelligence. This article has called for a more balanced approach. Since conceptual frameworks are not meant to discover or reveal a hidden reality, accuracy of forecasts cannot be their sole or even main test. But what criteria should we use to assess whether we have indeed improved our strategic intelligence? I offer the pragmatic principle as an initial answer.

I hope this study creates a desire to delve into the philosophical foundations of strategic intelligence, just as writers in the business world have begun to integrate philosophical thought into business intelligence,[141] management and organization.[142] I also hope that it encourages interaction between practitioners and theoreticians. Intelligence practice that lacks consideration of its epistemological, ontological, and methodological foundations[143] is deficient and partial, and may have difficulties coping with changes in the environment. Over recent years, intelligence communities both globally[144] and in Israel[145] have been discussing a 'revolution in intelligence affairs' (RIA).[146] This study recommends that theoreticians and practitioners engage in reflection[147] and dialogue, which might serve as tools to generate this revolution.

This study might also contribute to bridging one of the gaps in intelligence studies set forth by Phythian – the need to establish a research agenda.[148] In this respect, I explicitly recommend putting more emphasis on methodological and philosophical concerns.

Many studies have examined the influence of strategic intelligence on decision-making, with pessimistic conclusions.[149] Some argue that intelligence does not influence American foreign policy,[150] being 'drawn along' by current and operational-level analysis.[151] Some think that in the post-modern era, strategic intelligence has lost its monopoly over many aspects of its added value to decision makers.[152] Others maintain that the current challenges in the US[153] and UK[154] have more to do with counterterrorism and operational issues than with strategic ones. The current study, naturally, has a different view. This might be the worst of times, but also the best of times, for strategic intelligence.

Notes

1. Johnson, *Preface to a Theory*, 638–63; and Dexter et al., *The What, Why, Who*, 920–34.
2. Coulthart, "Why Do Analysts Use," 933–48.
3. Lim, "Big Data," 619–35.
4. Simantov and Alon, "Cyber Requires and Makes," 67–82.
5. Gill et al., "Developing Intelligence Theory," 467–71.
6. Gill et al., *Intelligence Theory*.
7. Warner, "Wanted," 15–22.
8. Johnson and Wirtz, *Strategic Intelligence*.
9. Kuosa, *Towards Strategic Intelligence*.
10. Handel, *War, Strategy and Intelligence*, 81–104.
11. Johnson, "Sketches for a Theory," 33–53.
12. For a more positive view, see Pascovich, "Security and Intelligence Studies," 134–148.
13. Handel, "The Yom Kippur War," 461–502.
14. Bar Joseph, "Forecasting a Hurricane," 718–42.
15. Pascovich, "Military Intelligence and Controversial Political Issues," 227–261.
16. Aldrich and Kasuku, "Escaping from American Intelligence," 1009–28; and Johnson and Shelton, "Thoughts on the State," 109–20.
17. Herbert, "The Intelligence Analyst," 666–84; Rønn and Høffding, "Epistemic Status of Intelligence," 694–716.
18. Granit, "Development of the Idea"; Bar Joseph, 'Israel,' in Dover et al, *Routledge Companion to Intelligence Studies*; Lanir, *The Basic Surprise*; Harkabi, *Intelligence as a State Institution*; Ben-Israel, *The Philosophy of Intelligence*; and Brun, *Intelligence Analysis*.
19. For an interesting analysis of the link between the two theories see Goodman, "Wittgenstein and Pragmatism," 91–105.
20. Treverton, "Theory and Practice," 472–78.
21. Kent, *Strategic Intelligence*. This view has also been adopted in Israel. See Harkabi, *Intelligence as a State Institution*.

22. This is the traditional model for the intelligence process. In recent years much criticism has been directed at it: Granit, "Development of the Idea"; Simantov and G., 27–42; and Hulnick, "What's wrong with the Intelligence," 959–79.
23. Heazle, "Policy Lessons from Iraq," 290–308.
24. Pillar, "Great Expectations," 16–21.
25. Lanir, *The Basic Surprise*, 11.
26. Brun, *Intelligence Analysis*, 83–85. National intelligence is intended for use by the political echelon, and deals with formulation of grand strategy with respect to national security and national policy. Strategic intelligence is intended for use by the general staff of the military, and deals with formulating and implementing defense and military strategy. Operational-level intelligence is intended for use by the general staff and combatant headquarters, and deals with formulating operations for defeating a rival and reaching decisive victory. Tactical intelligence is intended for use by air, land, sea and cyber forces, and deals with the actual employment of military power. In this article, I refer to both national- and strategic-level intelligence as 'strategic intelligence.'
27. For a comprehensive analysis of technological research, see Lorber, *Technological Intelligence.*
28. Granit, "Development of the Idea".
29. Brun, *Intelligence Analysis*, 58; and Hulnick, *Fixing the Spy Machine*, 43–62.
30. Lanir, *The Basic Surprise*, 133.
31. Knorr, "Failures in National Intelligence Estimates," 455–67.
32. Betts, "Intelligence Warning," 26–34.
33. Lanir, *The Basic Surprise*, 136.
34. Ibid., 139.
35. Ibid., 145.
36. See note 28 above.
37. Matza, "Four Paths in the 'Orchard'."
38. Granit describes (2006) how the American intelligence community developed an aspiration to create a scientific basis for intelligence that would enable forecasts about the future.
39. Peres, "Advantages and Disadvantages," 96–103.
40. Hume, *A Treatise of Human Nature.*
41. Kent would probably call this 'speculative-evaluative' (Kent, *Strategic Intelligence*). But Kent's approach – which was largely based on the social sciences, and regarded prediction as one of intelligence's tasks – also drew much criticism. See Kendall, *Function of Intelligence*, 542–52.
42. See, for example, Fingar, *Reducing Uncertainty*. In this context, it should be noted that Fingar is a former head of the U.S. National Intelligence Council (NIC).
43. Brun, *Intelligence Analysis*, 119.
44. Barnea, *This We Did Not Expect*.
45. For some examples see: Wirtz, "Indications and Warning," 550–62; Bar Joseph and McDermott, *Intelligence Success and Failure*; and Ben-Zvi, "Hindsight and Foresight," 381–95.
46. Betts, "Analysis, War and Decision," 61–89.
47. Chan, "Intelligence of Stupidity," 171–80.
48. Wasserman, "Failure of Intelligence Prediction," 156–69.
49. Office of the Director of National Intelligence, *Assessing Russian Activities*.
50. Kravis, *How Israel Intelligence Dealt*.
51. Pascovich, "Intelligence Assessment," 84–114.
52. Dvir, "Post Factum Clarity," 576–94.
53. Harel, "Intelligence War."
54. Betts, "Surprise Despite Warning," 551–72.
55. Alon, *In-Depth Study No. 4*.
56. Ansoff, "Managing Strategic Surprise," 21–33.
57. Ansoff, "Strategic Issue Management," 131–48.
58. Dutton et al, "Toward Understanding Strategic," 307–323.
59. Rossel, "Early detection, warnings," 229–39.
60. Kim and Lee, "Novelty-focused weak signal," 59–76.
61. Rathmell, "Towards Postmodern Intelligence," 87–104.
62. Naveh, *The Art of Campaign*.
63. Brun, "Approaches to Intelligence Research."
64. Kurki, "Critical Realism and Causal Analysis," 361–78.
65. Brun, "Approaches to Intelligence Research," 148.
66. Hulnick, "Intelligence Producer," 212–33.
67. Jervis, "Why Intelligence and Policymakers," 185–204.
68. Bar Joseph, "Politicization of Intelligence," 347–69.
69. Lillbacka, "Outline of a Clausewitzian Theory," 494–523.

70. Morrell, "Director of National Intelligence."
71. Simantov and Hershkowitz, "'Cooperative Approach' to Relations," 77–93; and Kerbel and Olcott, "Synthesizing with Clients."
72. For a rather unique example see Ya'alon, *Intelligence from the Standpoint*.
73. Hilsman, *Strategic Intelligence*.
74. It seems that intelligence always has to 'compete' with national leaders' direct access to open information. See Miller, "Open Source Intelligence," 702–19.
75. Marrin, "Intelligence Analysis," 529–45.
76. See note 63 above.
77. Brun turned my attention to the term 'institution.' It does not refer to the intelligence organization, but to the orderly social mechanism within which the intelligence officer operates.
78. Ben-Israel, *The Philosophy of Intelligence*.
79. Johnston, *Analytic Culture*.
80. Cooper, *Curing Analytical Pathologies*.
81. Marrin and Clemente, "Improving Intelligence Analysis," 707–29.
82. For an article which maintains that intelligence is an art and not a science see Denece, "Revolution in Intelligence Affairs," 27–41.
83. Additional functions of science are to produce universal theories inductively, and to produce forecasts of the future by using the same theories deductively. In the case of strategic intelligence, these roles are less relevant – and in general, in the social sciences and the humanities, which I view as domains strongly connected with intelligence research, the ability to produce forecasts about the future is relatively limited (because of the nature of human reality, which is not predictable). With regard to the distinction between the social sciences and exact sciences, see: Berlin, *Sense of Reality*. In the context of the logical invalidity of induction see Hume, *A Treatise of Human Nature*.
84. Leibovitz and Agasi, *Conversations About the Philosophy*.
85. See note 78 above.
86. Such as ACH (analysis of competing hypotheses), which Brun refers to quite often. It was also mentioned in the seminal work by Heuer, *Psychology of Intelligence Analysis*.
87. Walsh, "Improving Strategic Intelligence," 548–62.
88. A well-known method in the social sciences for producing theories, though its scientific validity sometimes comes under criticism. For a description of its relevance to intelligence, see Zohar, "Intelligence Analysis," 130–60.
89. An interesting example of the use of quantitative methods for military intelligence research can be found in Bang, "Pitfalls in Military Quantitative," 49–73.
90. Charmaz, "Power of Constructivist," 34–45.
91. Also see the way in which the US intelligence community defined its method for using such techniques: Office of the Director of National Intelligence, "Intelligence Community Directive 203."
92. Lillbacka, "Realism, Constructivism and Intelligence Analysis," 304–31.
93. Manjikian, "Positivism, Post-Positivism," 563–82.
94. There were also those who pointed to the limitations of positivism with regard to strategic intelligence research, but proposed an alternative that is not constructivist. Ben-Haim, "Positivism and its Limitations," 904–17.
95. Abduction is sometimes related to the pragmatic philosophy. It does not receive much attention in intelligence studies. In any case, on the different methods of reasoning, see: Behfar and Okhuysen, "Perspective," 323–40; Staat, "On Abduction, Deduction, Induction," 225–37.
96. Trevetron, "Theory and Practice," 475.
97. It is interesting to look into the etymological aspects of the word 'analysis,' which is based on the idea of disassembly. The opposite of analysis is indeed synthesis, or formation. Hence there is apparently a contradiction between analytical research and holistic observation. For an interesting description of how phenomena are commonly perceived analytically in the West and holistically in the East, see Nisbett and Miyamoto, "Influence of Culture," 467–73.
98. https://www.9-11commission.gov/report/911Report.pdf.
99. Brodie, "Strategy as an Art," 26–38.
100. Israel Defense Forces (IDF), *Introduction to 'Operational Art'*, 16. For a similar idea in the business context, see Hamel and Prahalad, "Competing for the Future."
101. Brandenburger, "Strategy Needs Creativity," 58–65.
102. Hintikka, "What Is Abduction?" 503–33.
103. Kant, *Kant's Prolegomena.*
104. Lanir, *The Basic Surprise*, 174–75.
105. For an example from the field of business management, see Ansell and Boin, "Taming Deep Uncertainty," 1–34.
106. Pragmatism is also identified with Dewey, Peirce, and Schiller, and Rorty.
107. James, *Pragmatism*.

108. For analysis of different theories of truth, see Foulkes, "Theories of Truth," 63–72.
109. Porrovecchio, "F.C.S. Schiller's," 96.
110. James, *Pragmatism*, 44.
111. Ibid., 54.
112. Wittgenstein, *Philosophical Investigations*, 24[e].
113. Ibid., 2G[e].
114. Ibid., 33.
115. Ibid., 4[i].
116. Ibid., 5.
117. These issues are formulated as research questions. In my view, strategic analysis cannot provide answers similar to those that tactical analysis does. Its importance lies, to a great extent, in the formulation and conceptualization of the questions themselves. Regardless, these issues were relevant at the time this article was written, during 2018.
118. Alexander, "Pragmatic Imagination," 325–438.
119. Ya'alon and Friedman, "Historic Opportunity."
120. Krasne, *'Moderate Sunni Camp'*.
121. Tharoor, "Persian Gulf Crisis."
122. McElroy, "Mesa."
123. Shine, "Sunni Axis," 129–135.
124. Yadlin and Guzanky, *Saudi Arabia*.
125. Spyer, *Israel*.
126. The concepts of 'strategic competitions' and 'competitive strategy' are part of an entire strategic domain, and are very much present in the business world too. See another piece by the current author: Shapira, *Security Strategy*, 480–81.
127. https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf.
128. https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf.
129. Amidror, *Iran's Behavior in the Middle East*. English version available at https://jiss.org.il/en/amidror-the-logic-of-israels-actions-to-contain-iran-in-syria-and-lebanon/.
130. Karam, "General Votel Visits."
131. IDF, *The IDF Strategy* .
132. Useful here is the accepted US terminology of DIME: diplomatic, informational, military, or economic.
133. The term *strategic culture* refers to characteristics of behavior in the strategic context. Adamsky, *Culture of Military Innovation*.
134. Nye, "Get Smart."
135. An example of this can be found in two recently published studies that illustrate the extent and intensity of the US occupation with creating deterrence toward China and Russia: Mazaar et al., *What Deters and Why*; and Hicks et al, *Zone Defense*.
136. IDF Chief of Staff's Office, *The IDF Strategy* (April 2018), https://www.idf.il/media/34416/strategy.pdf (accessed 12 July 2019).
137. Votel et al., "Unconventional Warfare in the Grey Zone."
138. Walton, *Abductive Reasoning*.
139. Marrin, "Evaluating CIA's Analytical Performance," 325–39.
140. Mandel and Barnes, "Accuracy of Forecasts," 10,984–89.
141. Buytendijk, "Philosophy of Postmodern," 51–55.
142. Haridimos and Chia, *Philosophy*.
143. For an interesting work that addresses these three perspectives see Cavelty and Mauer, "Postmodern Intelligence," 123–44.
144. Lahneman, "Revolution in Intelligence Affairs," 1–17; Barger, "Toward a Revolution."
145. Kuperwasser, "Lessons."
146. Derived from the notion of 'Revolution in Military Affairs' (RMA(.
147. Tan, "Reflective Thinking," 218–31.
148. Phythian, *Framing the Challenges*.
149. See, for example, Leslau, "Effect of Intelligence," 426–48.
150. Marrin, "Strategic Intelligence Analysis," 725–42.
151. For example, some claim that intelligence has trouble noticing cooperative opportunities because the main task of intelligence at the operative and tactical level is to notice threats. Barrett, "Role of the Intelligence," 785–805.
152. Palacios, "Role of Strategic Intelligence," 181–203.
153. Aldrich and Kasuku, "Escaping from American Intelligence."
154. Gibson, "Future Roles," 917–28.

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