

# Do Air Forces Write Cheques They Cannot Cash?

## A Philosophical Challenge to Influence Operations

*Inaugural speech in the RSAWS, Department III, on 8 December 2021 by Michael Palmer*

### Resumé

Doktriner handlar om hur militära organisationer kommunicerar fundamenta och bestående principer till stöd för våra kapaciteter: de informerar beslutsfattare vad militära maktmedel kan bidra med, kopplat till deras målsättningar. Däri luftmakt som kapabel att påverka beteendet hos aktörer genom att skapa specifika och nyanserade psykologiska effekter. Påverkansoperationer är, genom uppenbar lägre risk, lockande att presentera som alternativ för politiska beslutsfattare; frågan är om de kan ge önskat resultat? Genom att undersöka orsaks- och verkanssammanhang, har det visat sig att inte mycket återstår av Aristotles' vidare förståelse av deras inbördes relationer. Vad som istället återstår är en närsynt fixering vid observerbara och mätbara effekter, vilkas orsak felaktigt hänförs till de aktiviteter som vi väljer att engagera oss i. Detta skapar felaktiga orsakssamband och en uppförstorad, missledande tilltro till möjligheterna att uppnå förutsägbara förändringar. Oroande är att, trots explicit bekräftelse av fundamentala brister, så pekar Natos doktrin för gemensamma operationer på att även armé- och marinstridskrafterna ävenledes har krav på förmågor för att kunna generera och orkestrera förutsebara effekter i den icke observerbara kognitiva domänen. Beslutsfattare har pekat på att prioritet vid militär planering måste vara att uppnå de militära målen. Dock, bevis utgående från skrivningen i doktrinerna påvisar att vi inte lyssnar. Konsekvenserna är inte oblodiga.

THE TITLE OF my presentation demands an explanation. Not just because of my use of an English language saying (which means “to make promises one cannot keep”) but because it implies a criticism of my own service, the air force, and I have no such intention. I served in the RAF for 30 years and have only its best interests in mind. My challenge is intended to be a constructive contribution to an important conceptual debate, not an attack on those who have wrestled with what is an extremely complex and testing issue and for whom I have

only the greatest respect. The hope is that the observations contained herein are taken in that spirit.

### Introduction

Why do I single out air forces, and what are the un-cashable cheques that I refer to? It is not, in fact, air forces that are in my cross hairs so much as the Influence Operations that they promote. To be clear, I am taking aim at NATO's doctrine, both Joint, and Air & Space Power, related, because I believe

there is a legitimate challenge to be made on claims contained therein with respect to Influence Operations.

It is a philosophical challenge because I believe that there is evidence in doctrine that the rich understanding of cause and effect, as developed by Aristotle over two thousand years ago, has been stripped down to a more simplified view on cause, as championed by Scottish Enlightenment philosopher David Hume. I need also to be clear from the beginning in what I mean by Influence Operations. Influence Operations are defined as those that 'affect the character or behaviour of an individual, group or organisation; they realise cognitive effects.' This definition is taken from the U. K.'s Development, Concepts and Doctrine Centre (DCDC), which is also, uniquely, one and the same, the Swedish Concepts and Doctrine Centre, with Swedish officers serving on the full time staff. DCDC is responsible for writing and maintaining NATO doctrine and therefore their definitions serve my purpose well.

Equally, I will refer frequently to the cognitive domain so I need to be clear what I mean by that. Again, I take as my reference the same source as does NATO doctrine, i.e. DCDC, who define the cognitive domain as that which

is associated with perceptions, awareness, beliefs and values and where, as a result, decisions are made and impressions formed.

Why is doctrine important? Why do the words matter? Doctrine is how we in the military communicate to our political masters the fundamental and enduring principles that underpin our military capabilities; it lets them know what we in the military can contribute towards their strategic policy goals. If doctrine contains claims of military capability, the military must be ready

to deliver such capability when called upon. If there are fundamental errors of assumption underpinning the capabilities we offer through doctrine to policy makers, we are in trouble. My contention is that such fundamental errors do exist and are pervasive. Moreover, air power, in particular, has gone one step further and literally defined itself based on such errors. So let us consider what it is in air power's history and DNA that has led us to this predicament.

### Over the top

From the very beginning, air forces identified themselves by what they were not; they were not an extension of the horror, the mud and the grinding, stagnant attrition of the trench warfare so epitomised during World War I, and out of which they were borne. The Air Force, all air forces, were born different, fundamentally different from the other armed forces. That difference being that they operated in the third dimension, at speed, from on high and with great reach. As Liddle Hart summed it up in 1925:

Aircraft enable us to jump over the army which shields the enemy government, industry, and people, and so strike direct and immediately at the seat of the opposing will and policy.

Air forces offered policy makers radically new options to the old ways of war fighting and associated mass casualties. Air forces offered politicians hope of achieving their goals faster, more efficiently and with less risk.

Some of those considered to be fathers of air power, such as the Italian general Douhet and the American general Billy Mitchell, were so impassioned, not to say zealous, about the game-changing nature of air power, and in equal measures exasperated at what they saw as atavistic attitudes of their army and

navy counterparts, that they were both court martialled as a direct consequence (Douhet in 1915 and Mitchell in 1925). Grand claims were made by them and others of the capabilities that air power could offer. If some of these claims were grounded in a genuine frustration with the old ways of war, then there was also an element of needing to establish air forces as capable of delivering, independently, strategic effect.

But that was a century ago. What is the relevance of this history to modern air power doctrine and the challenge I make here of fundamental flaws lying therein? Surely, exaggerated claims about the unique capabilities of air power do not persist today.

### Writing the cheque

Or do they? The capstone doctrine for Air and Space Operations in NATO is Allied Joint Publication (AJP) 3.3, signed off by all member states in 2016. In this document, which addresses fundamental principles, of an enduring nature, and which should be considered when developing policy, air power is presented, and indeed *defined*, as:

The ability to use air capabilities to influence the behaviour of actors and the course of events.

Moreover, just so that there is no misunderstanding, the doctrine emphasises that:

While the Alliance can use a variety of military and non-military tools to change the behaviour of decision-makers, states and non-state organisations, the particular attributes of air power offer specific, flexible and responsive ways to create and exert influence; ranging from direct physical attacks to more nuanced, psychological effects.

It is worth pausing here to reflect on the extent of the claims above. The first point to

note is that the ability to influence behaviour, something firmly in the cognitive domain, is not selected as *one* of the capabilities air power has to offer, but *the* capability, to the extent that it defines us. The second point to note, is that advocates have gone to pains to be clear that it is the particular attributes of air power, not possessed by other military and non-military tools, that enable it to deliver not just generic effects but to be able to create *specific* and *nuanced* psychological effects in flexible and responsive ways. This implies that the effects being brought about through air power's actions are predictable, and therefore that causal links to effect can have been established and means adapted in a meaningful timescale in response to, presumably, observable cognitive effects.

If we in the military are not just passive students of what has happened in the past but rather are in the business of 'causing' effects through military action, whether kinetic, lethal or otherwise, then it is necessary to take some time to explore the nature of cause and effect. This entails a short excursion into philosophy.

### From the sublime to the ridiculous

In the mid-18th Century, Scottish Enlightenment philosopher, David Hume, stated that:

...there is no question, which on account of its importance, as well as difficulty, has caus'd more disputes both among ancient and modern philosophers, than this concerning the efficacy of causes, or that quality which makes them follow'd by their effects.

So, this is not a new challenge, or indeed one from the 18th Century, but one that goes back much further in time. More than two thousand years ago, Aristotle wrestled with '*aition*', the Greek word that refers to *anything* that contributes to the bringing

about or maintaining of a particular reality. This can include circumstantial influences, i.e. things that constitute or condition, and thus contribute in a causal fashion as much as the action of active or, as Aristotle termed them, 'efficient' causes. Just a brief note on language is needed here: efficient in this context has nothing to do with how well, or with what economy of effort, something is achieved; efficient in this context refers to being active, the conduct of activities.

For Aristotle, cause can be broken down into four elements, two that can be considered constitutive or intrinsic: these are 'material' ('out of'), and 'formal' ('according to'/structural); and two that can be considered active or extrinsic: These are: 'efficient' ('by which'), and 'final' ('for the sake of').

In the physical world, the two intrinsic causes, material and formal, can be understood quite literally as what material some 'thing', any physical 'thing', is made of and how that thing is structured/designed/formed. That physical thing could be an aircraft, tank, ship, bridge, communication system, any physical entity. Of the two extrinsic causes, one, the 'final' cause, is a little more abstract but refers to the *purpose* of the 'thing' having a bearing on the other causes, by determining material and form. This leaves the only truly *active* cause, termed 'efficient' cause, which is the one that a third party i.e. us/we can initiate, and be part of, in attempting to bring about favourable change. The key here is that the active 'efficient' cause does not stand in isolation. Although it is the only true active cause, it can only activate potential as determined by the 'material' cause, which itself only has meaning and relations determined by the 'formal' cause, which combine to serve the purpose of the 'final' cause. Active 'efficient' cause, or we could say activities, do not 'guide' or, alone, explain anything; they ignite, they are cata-

lysts. Active 'efficient' causes are married to material, formal, and final causes i.e. they are in an intimate relationship where there is nothing done by one without the influence of another.

Even in the physical domain then, it can be seen that what 'causes' something to occur is not a rigid mechanical relationship. So, how then, in the cognitive domain, can Aristotle's concept of cause be interpreted? In terms of societies in conflict, the suggested understanding used in this discussion is as follows:

- 'Material' cause refers to the make-up of particular societies, their demographics, religious bias, ethnic and cultural mix, recent historical experience, and their emotions (fear, anger, despair, hatred, hope....). All of which may inform opinions and perceptions.

- 'Formal' cause refers to how societies are structured, where the power centres lie and, if there are more than one, how they relate to one another, in what way the societies fit in with their allies, their enemies, and the international system as a whole.

- 'Final' cause refers to societies' ideologies, their national ambitions and goals.

Again, as in the physical domain, this leaves the cause that we shall see dominates the thinking of Hume and his followers, 'efficient' cause, or activities. This refers to the tangible actions engaged in by societies in conflict, by one upon the other.

So how did so much of Aristotle's rich understanding of cause become lost? The answer begins with the Enlightenment. Centuries after Aristotle, Galileo embraced active 'efficient' cause so completely that it amounted to, what some considered to be, 'a quietly engineered and....the most pronounced revolution that science has ever known'. In 1638, he published 'Discorsi', which comprised 'two maxims:

One: Description first, explanation second – that is, the “how” precedes the “why”; and

Two: Description is carried out in the language of mathematics; namely, equations’.

David Hume took Galileo’s first maxim to an extreme, arguing that the ‘why’ is not merely second to the ‘how’, but that the why is totally superfluous as it is subsumed by the ‘how’. Or to put it simplistically: Activity A occurs and effect B is observed to follow; the ‘why’ is irrelevant, as one can know that if effect B is observed it was caused by activity A, and that if one wishes effect B to be recreated, conduct activity A. The ‘why’ is irrelevant.

This radically empiricist approach was taken to its extreme by Ludwig Wittgenstein who maintained through his verification principle ‘that all propositions should be analysable by deduction down to simpler *observable* elements. [Moreover,] any non-observation-based statements could be rejected as “meaningless”, since we have no idea of what [they are] supposed to signify’. The European Enlightenment period of the late 17th and 18th centuries, therefore, saw a shift away from faith-based knowledge and authority towards ‘rigorous’ science and facts that were knowable through observation and measurement.

## Crossing the Rubicon

If Galileo and Hume’s treatment of causality during this period resulted in an abandonment of Aristotle’s principles of cause, there was to follow in the 19th and early 20th centuries a fundamentally more radical upheaval in the notion of cause and effect. This upheaval was the hijacking of Natural, physical, Science laws by social scientists. And a key point to emphasise here is that war is a social activity, albeit violent, conducted by people, utilising machines as

tools; but initiated, conducted, and terminated by people, societies. Social scientists like Auguste Comte and Otto Neurath determined that because the laws of social behaviour were *analogous* to natural science laws, social engineering was possible. Not through the understanding of root causes of social phenomena, but by the assumed regularity-deterministic nature of observables. Otto Neurath considered there to be no distinction between natural and social sciences, and ridiculed the use of non-verifiable terminology in social sciences as ‘emotional’ and ‘magical’ and as about as useful to a scholar as a ‘good cup of coffee!’ Consequently, he advocated the abandonment of reference to human consciousness in order to maintain a ‘truly scientific knowledge of the social world’. Non-efficient (meaning non-active), non-observable causes or laws became easily ridiculed and side-lined for convenience to clear the picture and get to the ‘real’ causes.

So, are the stripped down, post-enlightenment, data-focused trends in causality manifest in modern military thinking? There are strong indications that they are. Robert Pape, in his *Bombing to Win*, is crystal clear when he sets out that:

non-military variables, such as domestic political, organizational, and psychological factors – which can also effect outcomes – are treated as exogenous in order to study the specifically military elements of coercion.

Disarmingly honest, perhaps, but nonetheless, by deliberately treating all inconvenient formal, material and final causes as being outside of the system, he immediately invalidates any meaningful conclusions on cause and effect, and certainly they should not be used as a basis for planning future military operations.

The US Army’s Field manual for Information Operations is equally clear in the whole-

sale adoption of post-enlightenment logic in insisting that

the effects of Information Operations must be measurable in terms of criteria of success ... If a task's results are not measurable, the G-7 eliminates the task.

But is this a bad thing, basing judgments on observable and measurable data? No, not in the physical domain. In the physical domain, it is possible to observe and measure the material, formal and final elements of cause and apply physical laws that are, quite literally, universally valid to the physical target in question. With that observed and measured data we can model possible outcomes and adapt our actions. We can be confident of the physical supporting effects that will result, that these will produce the decisive conditions we need and culminate in the operational end state we seek, we are very good at that, in the physical domain.

But, not so in the cognitive domain. In the cognitive domain, it is possible to observe behaviour, but it is not possible to observe and measure the emotional state that drives that behaviour. And if it is not possible to observe and measure these important formal elements of cause, and there are no universally applicable laws to use to model outcomes as the basis for adapting and optimising our active 'efficient' causes, we cannot be confident in the effects we ignite. Deciding what you believe is required to achieve a particular cognitive end-state, decisive conditions, or supporting effects is one thing, predicting the cognitive effects of your activity, once all the potential stored up in material and formal causes are ignited by one's activities, is entirely another. That is to say, when we move from planning to execution.

If one conducts influence activities, a number of effects arise – your desired effect (perhaps), some unintended (desirable and un-

desirable) effects, some permanent, some temporary, some immediate, some latent, some discernible, and some hidden. These cognitive effects interact with those that are a consequence of the activities of others (for example, enemy leadership, neutrals, NGOs, mass media, social media and strategic corporals), over which you have no control. This cascade of consequences combines to form a number of 'conditions' that may be decisive, but not necessarily in your favour, or they could even negate each other. What the end-state is liable to be is impossible to calculate, simulate, or replicate. Influence operations take place in an unobservable cognitive domain, in the minds of people, people whose minds will almost certainly not be in, what one might call, a peaceful state. If we are targeting enemy leadership as individuals, or even collectives, experience shows that they may well be facing annihilation, either at the hands of their own people, or us. These are not arenas that lends themselves to predictable or controllable outcomes.

## Warning signs

Years of experience shows this to be the case, for example: In 1958, William Daugherty produced the 'Psychological Warfare Casebook' and begins candidly by stating that: No problem discussed in this work is more basic than the requirement that periodic attempts be made to assess results obtained in past operations. Yet no requirement is more difficult to implement satisfactorily. Some writers go so far as to say that, if one is completely honest in his answer, he must admit that he can never prove that the propaganda disseminated achieves the results sought.

In 1991, Lee Ross and Richard E. Nisbett published their research into *The person and the Situation: Perspectives from Social Psychology* and examined sixty years' worth

of attempts to “signal” opponents and affect their behaviour, including during the Cuban missile crises, and they found that:

Individuals [do not] reason from a consistent mind-set from one day to the next.

Failures of strategic intelligence (with respect to predicting and assessing cognitive effect) reveal a: “...catalogue of misjudgements”.... the results of attempts (to) “signal” opponents and affect their behaviour... have been overwhelmingly negative. With the benefit of hindsight and access to primary-source materials, historians routinely discover how badly the sides in conflict have misunderstood each other and the meaning of signals (if the signals were even seen).

In 2005, James Vaughan published an assessment of American and British Propaganda in the Middle East and stated that:

The historian who seeks to gauge the effectiveness of propaganda enters a conceptual and methodological minefield.

This led him to study the ‘formulation rather than the reception of Western propaganda and he makes “no claim to have solved the problems inherent in any effort to appreciate the impact of propaganda upon a foreign audience”.

In 2003, the then Secretary of State for Defence, Geoffrey Hoon, when being questioned by the House of Commons Select Committee on Defence, who were investigating the conduct of the first Gulf War, stated that:

I cannot properly answer the impact of information operations without consulting my Iraqi counterpart, and since I have no idea where he is...

place much greater weight in terms of rapidity of effect of the [kintec] operations...

Also in 2003, answering to the same committee, Air Marshal Brian Burrige, Commander of the British Troops in the Gulf, when asked how successful he had found information operations in Iraq to have been, he replied:

It is very difficult to apply measures of effect to information operations. We are really only just learning....how to deliver the effect and it probably is a question of needing to do it over a long period and how to discern and then measure you have achieved that effect.

So let us consider a much longer period, one of many decades in fact, the Cold War. In 1997, the pre-eminent scholar of the Cold War, John Lewis Gaddis, stated that:

Despite recent access to ‘new information drawn from previously unavailable [Chinese and Russian] sources’ that show how ‘old’ Cold War analysts drew false conclusions, ‘new’ Cold War historians should retain the capacity to be surprised.....and ought to be humbled.

...how will the Cold War look a hundred years hence? Not as it does today, it seems safe enough to say, just as the Cold War we now know looks different from the one we knew, or thought we knew, while it was going on.

It can be seen to be clear then that, even if one presumes to be able to devise an Influence Operation plan to affect a targets behaviour, and even if one can observe the *secondary* effect that is behaviour (the first being an invisible change in emotional state), our ability to assess the success or otherwise of our efforts in achieving our desired effects, even when given *decades* of material to review, is literally not good enough.

## Consequences

But some may, reasonably, object and argue that despite the failings listed above, inherent in the very nature of Influence Operations, something has to be done and it is better this than lethal kinetic operations. Unfortunately, Influence Operations are not low-risk, bloodless options. The Select Committee on Defence in 2000, when investigating the conduct of the campaign in the Balkans concluded that:

[w]hen air strikes began on 24 March 1999, NATO's strategy had in a sense already failed, since its purpose had been to persuade Milošević to desist from his brutality without recourse to the actual use of military force.

So, despite, for many years, having the very best of Western air power capabilities massed over, and surrounding, the former Yugoslavia, the number of innocents 'ethnically cleansed', read murdered, during the period of a strategy of persuasion will likely never be known for certain, but it will be considerable. Influence operations are not bloodless options.

Instead of laying claim to be able to bring about changes in behaviour through Influence Operations, armed forces would do well to listen to the concerns of the policy makers whom we serve, who with the benefit of hindsight and detachment, are concerned that we are indeed writing cheques to them we cannot cash. When reporting on 'Cause and Effect' during operations in Iraq in 2003, the Select Committee on Defence commented:

...the argument, that, because military operations can contribute effects to the overall political context, military planning should be aware of and indeed should explicitly seek to create effects that support the over-arching political objectives, *can be taken too far...*

The priority for military planning must be the achievement of military objectives. We are concerned that too great a focus on effects-based planning and on the part military action can play as one component in a spectrum of political and diplomatic activity may further complicate the tasks of military planners and commanders who are already operating in an ever more complex battle space and under more intense and intrusive scrutiny than ever before...

...The risk is that in making that assessment *the military is judged against a range of outcomes which are beyond their control* and which are likely to be too complex and abstruse to be capable of being sensibly made a part of military planning.

## Reprivee?

And so, with decades of experience to draw upon, little of it supportive of Influence Operations, and with this clear warning from the political policy makers we serve ringing in our ears, it would be unthinkable that the armed forces would continue to promote and present such options as deliverable capabilities. Indeed, in 2007 the U.K.'s (and Sweden's) Development, Concepts and Doctrine Centre issued a discussion note that contained equally strong warnings regarding Influence Operations. The discussion note was written in the context of developing doctrine for the conduct of joint operations or Joint Action. In it, they identified three pillars of an enemy system that should be targeted; worryingly two of the three are firmly in the cognitive domain. It states that:

Joint Action seeks to address will, understanding and capability through a combination of physical and cognitive means.

Reassuringly, however, the discussion note, which is designed to precede and shape possible future doctrine, gives clear warning that:

The orchestration... of Influence Activities are especially challenging for a number of reasons:

The sheer number and variety of actors involved tend to frustrate simple causal relations (or at least make them very hard to predict).

Compared to Fires, Influence Activities may only take effect over unpredictable (usually longer) timescales and in unforeseen ways, making effects-based assessment problematic, if not confusing.

Unforeseen, and undesirable, effects of Influence Activities may negate intended effects, or make their achievement too costly. Fires will have negative collateral effects as well, but the pervasive nature of Influence Activities makes unintended consequences especially problematic.

And so, it would be unthinkable that given the explicit acknowledgments and warnings above, any claim to be able to deliver pre-planned, deliberate activities that can be fine-tuned, indeed orchestrated, to affect an enemy's cognitive domain in terms will and understanding would make it into NATO joint doctrine.

## Writing the cheque, again

And yet it has. In 2019, AJP-3 (C) NATO Doctrine for the Conduct of Operations was published. It states:

Joint Action is described as the deliberate use and orchestration of military capabilities and activities to affect an actor's understanding, capability and will, and the cohesion between them.

It claims and promotes the ability to shape perception and affect people's unity, their fighting spirit and their morale. All these factors reside in the unobservable recesses of the minds of people under pressure who have an experiential and emotional history we can only guess at.

If I began by asking whether "air forces write cheques they cannot cash?" I finish by asking the joint forces: what cheque has just been written to our political decision makers and, if called upon, can it be cashed?

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