



**Brunel Centre for Intelligence  
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*The Intelligence Cycle is Dead, Long Live the Intelligence Cycle:  
Rethinking Intelligence Fundamentals for a New Intelligence Doctrine*

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## **Introduction**

In the spring of 2009 the UK Ministry of Defence elected to undertake a review of the existing military Joint Intelligence Doctrine. The existing doctrine, Joint Warfare Doctrine 2-00 (JWP 2-00) *Intelligence Support to Joint Operations* had been promulgated in 2003 largely on the basis of coalition-oriented expeditionary and peace support operations in the Balkans, Middle East and Afghanistan. This had replaced an earlier, first edition of JWP 2-00 issued in 1999. By 2009, the UK's intelligence doctrine had escaped scrutiny for six years, two years longer than its predecessor and under conditions which had witnessed wide-ranging and accelerating changes in the intelligence, surveillance and reconnaissance (ISR) environment and longest interval of sustained, high tempo operations by UK forces since the Second World War. Regardless of how sound a piece of work the 2003 doctrine might have been, too many goal posts had moved too far and there was a widespread and growing dissatisfaction with it.

Given the often radical transformations to ISR and the conduct of operational and tactical intelligence in the decade since the first edition of JWP 2-00, the view was also taken that an equally radical approach needed to be taken in producing the new doctrine. First the new doctrine would be compiled on the basis of widespread, cross-government consultation on key issues and concepts rather than worked up narrowly in-house. Second, that breadth of engagement was to be extended to include the comparatively recently established realm of scholarly intelligence and security studies. Within the UK, the principal team working on conceptual and policy issues in intelligence in the university sector (as opposed to historical work which dominates the so-called 'British school of intelligence studies') was the Brunel Centre for Intelligence and Security Studies (BCISS) based at Brunel University in London. After an initial approach by the Development, Concepts and Doctrine Centre (DCDC) followed by a preliminary, advisory memorandum on military intelligence doctrine produced by the BCISS team<sup>1</sup> a three-way partnership was established between DCDC, Defence Intelligence<sup>2</sup> and BCISS to develop the new doctrine which would go forward under the NATO- and US-compatible designation Joint *Doctrine* Publication 2-00.

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There was range of running debates that the new doctrine would need to address. These included: how to incorporate human terrain analysis (HTA) and its embedded academic subject-matter experts effectively into a doctrine for the armed services (and discomfort with the term ‘terrain’ which seemed too ‘land-oriented’ to two of the three armed services); adjudicating a running and sometimes vituperative dispute over whether the prevalent term for operational and tactical intelligence should be the US and NATO-standard ISR or the prevalent term in British practice of intelligence, surveillance, *target-acquisition* and reconnaissance (ISTAR) <sup>3</sup>; articulating the increasing vertical overlap between national intelligence and ISR/ISTAR activities and products; and trying to locate military and defence intelligence in the fast-changing national intelligence governance structures under the administrations of Gordon Brown and David Cameron. <sup>4</sup>

No single matter of discussion was more earnestly disputed, or more completely divided supposedly ‘progressive’ critics of current practice from ‘old guard’ conservatives, than the status and prospects for the intelligence cycle. Rethinking and revising the intelligence cycle rapidly became one of the central tasks for the JDP 2-00 team. What emerged, and eventually won comparatively widespread support, was an approach designated the ‘core functions of intelligence paradigm’. The core functions approach was intended reckon with the substantive and often well-considered concerns on both sides of the debate. Ideally the new formula would be an emergent property of dealing with those concerns rather than taking one side or another or simply postulating a third alternative that neither side would want or accept. In the event, the ‘core functions of intelligence’ paradigm was adopted for the new intelligence doctrine. As a result, the formula described herein is not a hypothetical proposal but in fact constitutes the accepted doctrinal standard for today’s British armed services, wider UK defence community and is currently being incorporated into the new NATO intelligence doctrine being produced as Allied Joint Publication 2-00.

### **Variations on a Theme**

At the outset it is important to keep in mind that there is some variation in the constituent components of what makes up the intelligence cycle. One of the earliest

public references to the concept appears in the final report of the Church inquiry, subsequently used by numerous authors in which, in Walter Laqueur's words:

...the first stage in the intelligence cycle is an indication by [intelligence] consumers of the kind of information needed. These needs are conveyed to senior intelligence officials, who in turn inform the collectors. The collectors then obtain information, then 'raw' intelligence is turned into finished intelligence which is eventually supplied to consumers.<sup>5</sup>

In US practice, however, at least since the 1990s, the cycle's intermediate process between collection and dissemination has been broken out into two steps, 'processing' and 'analysis', the former referring chiefly to the interpretation of data generated by collection activities and systems the latter identifying its implications for wider judgements and contextual issues that the collected 'raw' intelligence is supposed to clarify.<sup>6</sup> By much the same token, the relatively narrow notion of 'tasking' has been generally supplanted by the broader notion of 'direction' within which the laying of requirements and priorities is but one component part. The resulting formula is often referred to as the DCPAD (deecee-pad) model.

NATO, and consequently UK practice (which frequently takes NATO conventions as the point of departure for sovereign practice), has employed a somewhat simpler four step cycle of 'direction-collection-processing-dissemination' at least since the 1970s. In this formulation, processing subsumes both 'processing' and 'analysis' (figure 1). Slightly confusingly, the DCPD sequence also appears in British operational and tactical intelligence discourse as the 'ISTAR chain'.<sup>7</sup> What is consistent is the degree to which the UK's defence intelligence community is committed to the DCPD convention. Consequently all of the deliberation, and the subsequent formulation of the 'core functions' paradigm, was in terms of the NATO DCPD formulation.

There reasons to suggest, however, that the five-step DCPAD model is a somewhat clearer expression of the process on the grounds that 'analysis' is a fundamentally different task from 'processing'. There are, for example, are some indications that the four-step NATO formulation has been found somewhat limiting by some UK commentators. For example, John Hughes-Wilson, a twenty year veteran of the

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Intelligence Corps, prefers to employ a five-step scheme in which ‘collation’ and ‘interpretation’ are distinct.<sup>8</sup> Alternatively when drafting the first chapter of Lord Butler’s *Review of Intelligence on Weapons of Mass Destruction*, the late Peter Freeman drew a painstaking distinction between ‘analysis’ and ‘assessment’. In this formulation, analysis is examining ‘the factual material inside the [raw] intelligence report ... in its own right’, partly by placing the raw intelligence in a wider context but also as ‘the process required to convert complex technical evidence into descriptions of real-world objects or events’.<sup>9</sup> By contrast, assessment seeks to identify ‘patterns’ and ‘extend a picture’ by taking the available analysed information and forming net judgements about the conclusions it supports *in toto*, marshalling alternative interpretations against accumulations of reporting that may be mutually consistent or inconsistent.<sup>10</sup> In Freeman’s sense, analysis identifies what intelligence reporting *means* and assessment seeks to establish what that reporting *implies*. Such a distinction leans strongly in the direction of a DCPAD approach.

Consequently, considerable thought was put to moving from DCPD to DCPAD by the JDP 2-00 team. However, it was eventually concluded that trying to sell both DCPAD *and* the core functions paradigm in a single revision to the UK’s Joint Intelligence Doctrine would prove, in one participant’s words ‘a bridge too far’. Consequently it was decided to shelve the case for DCPAD at least until the next revision to JDP 2-00 in the second half of the decade. As should become apparent, however, the basic idea of the core functions paradigm is as applicable to DCPAD as to DCPD.

### **Institutional Background: Intelligence Doctrine**

It is important, especially for a civilian readership, to understand what ‘doctrine’ is about and its role in military thought and practice. Common operating standards, common concepts, and a common professional dialect are essential to a community that depends for its effectiveness for quick, clear and effective communication of information and instructions, and which has a high level of regular staff turn-over even in key staff positions. Ambiguity and consequent confusion can have hazardous and potentially lethal ramifications that a conceptual difference in the civilian sector is unlikely to imply. This is the practical context for the internal military discussion of

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whether doctrine is ‘what is taught’ or ‘what is believed’, or as Lt. Gen. John Kiszely has put it, ‘what to think’ as opposed to ‘how to think’.<sup>11</sup> As a common cognitive and communicative framework, doctrine will likely end up as the latter even if intended to be the former. An intelligence doctrine is, therefore, liable to hold a greater intellectual authority (literally and figuratively) with its subscribers than any ‘intelligence theory’ that might be debated in the corridors of the Cabinet Office or Langley, Virginia. Its users will also look to doctrine to mitigate and minimise uncertainty and nuance rather than resting upon them and then articulating them as ‘issues’ or intellectual ‘problems’.

This can also lead to another level of uncertainty about what doctrine ought to provide. If doctrine is expected to articulate common operating standards as well as common concepts then it is not a leap to expect it to articulate common operating *procedures*. Indeed, the British Army’s own *Doctrine Primer* is explicit about this, stating explicitly that ‘higher levels of doctrine establish the *philosophy* and *principles* underpinning the approach to military activity’ while ‘lower levels ...describe *practices* and *procedures* for ... practical application’.<sup>12</sup> And, to a very real degree, single-service doctrine statements such as field manuals exist to do just that. As a result, the earliest and hence most formative perception of doctrine amongst many service personnel is precisely as a guide to specific procedures and practices rather than anything more abstract.

There exist, therefore, both a deeply indoctrinated expectation of procedural guidance from doctrine and a measure of uncertainty amongst many participants about the exact level hierarchy at which doctrine ought to *conceptual* instead.<sup>13</sup> Consequently, throughout the production of JDP 2-00 perhaps the most fundamental difference between the ‘radicals’ and ‘old guard’ was whether the intelligence cycle was supposed to represent a series of standard operating procedures (SOPs) or a conceptual framework that might subsume many different specific SOP schemata under the auspices of an ambient rather than prescriptive logical structure. As we shall see shortly, the distinction between what might be called the *conceptualist* and *proceduralist* views of the intelligence cycle infuses civilian discussion of the intelligence cycle as well. But for the armed services, the need for procedural clarity has an urgency very different from that of any civilian enterprise and consequently the

dispute between conceptual and procedural concepts of the intelligence cycle likewise acquired an amplified sense of urgency and intensity of feeling amongst the disputants.

That need for clarity and prescription has long prompted the chronic concern amongst doctrine writers that, in J.F.C. Fuller's oft-quoted words, 'the danger of a doctrine is that it is apt to ossify into dogma'.<sup>14</sup> And herein lies the critical issue with which the JDP 2-00 team had to reckon, and of which the dispute between the conceptual and procedural 'camps' are essentially restatements. Should the intelligence cycle articulate a descriptive account of 'doing' intelligence? Or should it be a general conceptual expression of basic functions of which the numerous institutional frameworks, like RPSI or CCIRM (now confusingly IRM&CM) in the UK and KIQs, NITs, and 'Needs'<sup>15</sup> in the USA, are just specific cases and applications? In the event, the view taken by the British military generally, and the JDP 2-00 team in particular, was that doctrine, and especially high-level joint doctrine, is about general principles and low-level doctrine and field manuals are about procedure. With this in mind, the resulting approach was to dry and defuse the intelligence cycle debate by making the concept-procedure distinction as explicit as possible and dealing with each concern separately. But to do so the JDP 2-00 team needed to reckon with a significant legacy of debate regarding the virtues or not of the intelligence cycle, a debate not confined to defence circles.

### **Conceptual Background: the Intelligence Cycle Debate**

The value or otherwise of the intelligence cycle is a standard item in the literature of intelligence theory (in Peter Gill's sense of 'theory for intelligence' rather than 'theory about intelligence').<sup>16</sup> One could write (and some have) entire articles on the debate, discussions that can resemble a sports commentator's narrative of the back and forth between the disputants over the last two or three decades. That being said, it is possible to distinguish much the same division between conceptualist and proceduralist approaches to the intelligence cycle in the civilian intelligence discourse. Unsurprisingly, the conceptual camp tends to be less trenchantly dissatisfied with the intelligence cycle than the procedural school although both sides have sought to clarify and improve the schema one way or another. Indeed, one could even argue that we all employ the same four functions when we plan our own personal

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research/investigation and reporting activities. An academic ‘tasks’ himself or herself through a research plan, then ‘collects’ in the archives or through interviews, ‘processes’ the documents and transcripts to understand his object of study and ‘disseminates’ that understanding through writing and publication. Sometimes a scholar farms out fieldwork of data processing to research assistants, but this does not alter the basic logic of the process.

Michael Herman has famously described the intelligence cycle as being a ‘metaphor’ based on the classic cybernetic concept of a feedback loop.<sup>17</sup> This is actually a very apt metaphor for the conceptual approach to the intelligence cycle, especially if one has actually done any software programming or built hardware sensor-actuator loops. In software terms, a feedback loop that appears as a straightforward drawing at the flow-charting stage can easily turn into hundreds or thousands of lines of intricately interwoven code. Printed out and laid across a desk (or several desks), the finished programme bears little resemblance to the neat flow chart diagram pinned to the wall. Thus to look at commentators like Berkowitz and Goodman<sup>18</sup>, Loch K. Johnson<sup>19</sup>, Sir David Omand<sup>20</sup> and, indeed, Herman they look at the cycle as an abstract statement of principles and then deliberate whether this is an accurate or appropriate representation of those principles. Berkowitz and Goodman and Johnson both use it as a diagnostic tool to interrogate specific institutional arrangements and processes but not as a representation of those processes, while Omand and Herman rethink sequencing and basic premises.

The procedural approach tries to correlate specific institutional entities into the steps of the intelligence cycle. The Church Committee allocated tasking to intelligence consumers with senior agency managers receiving those requirements and priorities before passing them on the working level collectors who would then pass what they collected on to specific cohorts of analysts and so forth. Senator Church’s team then became acutely exercised about the fact that ‘in reality this pattern is barely recognizable’.<sup>21</sup> Rob Johnston<sup>22</sup> has sought to ‘test’ whether the intelligence cycle describes what CIA analysts do at their desks and in their teams (unsurprisingly judging that it does not). Likewise both Arthur Hulnick<sup>23</sup> and Mark Lowenthal<sup>24</sup> have elaborated in some detail how the simple framework of the intelligence cycle fails to describe actual processes on the ground in US national intelligence. Given the

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simplicity of the intelligence cycle formula, descriptive and procedural interpretations are naturally more likely to find substantial asymmetry between the neatly drawn flow-chart and the thousands of lines of entangled institutional ‘spaghetti code’.

The kind of dissatisfaction felt in military quarters was been articulated by Geraint Evans, an officer in the UK’s Intelligence Corps, in *Defence Studies* in 2009, just as the JDP 2-00 re-write was in its infancy. While acknowledging that the intelligence cycle is ‘composed of fundamental principles’ rather than specific institutional entities or groups, he also views the relationships between those ‘principles’ as rigidly prescriptive procedural steps ‘upon which the outcome of all ensuing action is determined’.<sup>25</sup> Although Evans acknowledges the conceptual nature of the intelligence cycle, his explicit goal appears to be to find a conceptual framework which can then be implemented explicitly, rigidly and in a manner that suggests (despite invoking Fuller’s warning about ossified doctrine<sup>26</sup>) a certain procedural dogmatism.

Evans then argues that the intelligence cycle is currently under pressure to change as a result of a range of exogenous factors. The first problem the immediacy of consumer demands and consumer expectations with which a step-by-step implementation of the cycle cannot keep pace in practice.<sup>27</sup> This is exacerbated by the information revolution in which intelligence consumers use intelligence differently<sup>28</sup> (although he specifies no exact properties or examples of how that information use is ‘different’), intelligence staffs are confronted with increased risks of information overload because of the volume of data increasingly available<sup>29</sup>, and the availability of information does not conform to putatively ‘traditional military staff silos’ or chains of command.<sup>30</sup>

Evans proposed solution is to expand the intelligence cycle into what he calls the ‘hub and spoke’ model. In this formulation review, planning and direction are broken out into separate functions, collection remains unaltered, and processing, analysis and production are also broken out from the ‘P’ function and dissemination like collection stands unaltered.<sup>31</sup> At the hub of this process would be the J2 cell in receipt of information from all of the various functional stages and conducting continuous and comprehensive review of the process.<sup>32</sup>

Evans acknowledges that the hub-and-spoke formula had already been ‘tested on exercises and operations’<sup>33</sup> which is unsurprising because a version of the hub-and-spoke formula had actually been formulated some four years earlier for the Cabinet Office by Stuart Jack. Stuart Jack is a career Foreign and Commonwealth Office official who had, *inter alia*, headed the FCO Research and Analysis Department (RAD; the UK equivalent of the US Bureau of Intelligence and Research) in the late 1990s. In 2004-5 he was head of the Butler Study Team and had authored a paper entitled ‘Towards Better Analysis’, colloquially known as the Jack Report. As part of this paper, Jack presented a version of the intelligence cycle which placed the analyst in the centre of a DCPD cycle, responsible not only for ‘processing’ but also taking a role in the ‘collection’ phase where raw data requires collating with other sources and even feeding into the tasking process to facilitate consumers’ understanding of what they can reasonably ask of intelligence (figure 2).<sup>34</sup> In short, Evans’ J2 ‘hub’ is a military emulation of Jack’s central, facilitating analysts, and is therefore representative of a direction that wider intelligence thinking was already going in British government circles.

### **The Core Functions Paradigm**

The initial case for the new doctrine explicitly adopting a conceptualist stance as a point of departure for addressing and taking on board proceduralist objections to the intelligence cycle was made in a BCISS memorandum to DCDC circulated in December 2009.<sup>35</sup> A number of the key arguments developed in that memorandum were subsequently carried forward by DCDC and published in a 2010 Joint Doctrine Note, JDN 1/10 *Intelligence and Understanding*.<sup>36</sup> Joint Doctrine Notes ‘do not represent a fully agreed or staffed position, but are raised in short order ... to establish and disseminate current best practice’ and ‘provide the basis for further development and experimentation’.<sup>37</sup> JDN 1/10 was explicitly intended to be a slightly contentious discussion piece, aimed at flushing out lines of dispute and uncertainty rather than trying to identify an easy consensus. Described in its preface as ‘aspirational in nature’ and requiring ‘honest scrutiny appraisal and debate to ensure that it meets its purpose’, JDN 1/10 did just that and was hotly debated in a number of defence quarters.

JDN 1/10 made the case for the core functions paradigm through a series of preliminary steps. The intelligence cycle, it was noted, 'is (and always was) a heuristic concept that describes a set of logical inter-relationships between several types of classes of activity' and therefore 'cannot usefully be turned into a procedural clockwork that serves as a 'quick win for busy analysts.' Indeed, it was further argued, precisely when people tried to use the cycle as 'procedural clockwork' that the weaknesses of thinking of it as a mechanistic cycle were mostly likely to be exposed. While a steady, regular cycle application of the basic activities of direction, collection, processing and dissemination might work for 'long-standing problems' where 'decisions are not required quickly' or likely to take unexpected forms, such an approach lacked agility. It was, therefore, ill-suited to the 'contemporary or anticipated operating environments'. While the four components of the intelligence cycle were essential activities, the 'cycle' or 'process' model 'does not fully represent their role or functionality.'<sup>38</sup>

It is important to appreciate that the goal was not to suggest that the 'core functions' did not or could not have the properties of a cycle under certain circumstances. Rather, the idea was that the core functions paradigm was *more than* a cycle, and that the traditional intelligence cycle could be subsumed by it. Therefore, the next question was how to most usefully represent the 'logical inter-relationships' between direction, collection, processing and dissemination. The Brunel team argued that what was required was an alternative *topology*, and that the most useful topological representation was as an *all-channel network*. In practical terms, direction, collection, processing and dissemination continuously communicated back and forth and across the 'cycle' more like subroutines calling one another in computer software than the prevailing metaphor of electromechanical feedback system. The resulting core function topology was originally represented in rough-and-ready graphical terms (figure 3)).<sup>39</sup> It was in response to the new topology that one of the current authors (Rigden) in his role as head of the JDP 2-00 process coined the term 'core functions of intelligence' to replace the limited and evidently obsolescent notion of an intelligence 'cycle'. This was the topology presented to the UK's defence intelligence community in JDN 1/10.<sup>40</sup> An early promising omen for the core functions topology was a number of senior officials responding in various forms of words equivalent to 'that's what I have been doing throughout my career'.

Under this formula, rather than steps in a sequence, the relationships between the various principal intelligence activities were best visualised as a network of dialogues and sometimes short-circuits across the DCPD framework. Any two, three or even all four functions could be ‘wired together’ in different, often spontaneous ways. Such cross-connections include:

*From Collection to Direction:* The conventional feed-forward role of direction setting requirements and priorities for the collection process is generally viewed as straightforward, but the feedback and dialogue between the two is also essential. There are many situations where collection can and must ‘push’ information to the decision-makers to task it. The collection process can often provide opportunities for collectors to detect activities that are of significance to or threaten the concerns of the consumer and which it may not have occurred to the decision-maker to include in their requirements and priorities. Warning intelligence often takes this form. Under these conditions there needs to be the opportunity for either for collection to short-circuit the processing and dissemination phases to present the evidence to the decision maker *or* for the collector to initiate the processing and dissemination cycle on their own authority to ensure that the decision-maker receives a properly assessed product instead of raw reporting which may be misunderstood or taken out of context. This also conforms to Michael Herman’s alternative to the intelligence cycle<sup>41</sup> in which ‘entrepreneurial’ intelligence collectors anticipate decision-maker needs and seize the initiative to push product to decision-makers. Even the basic tasking relationship requires a real-time dialogue between consumer and collector concerning what *can* be acquired, at what risk, and what direct cost or indirect opportunity cost to other requirements. If not, then requirements become an unrealistic wish-list and collectors overcome with tasks some of which must be allowed to lapse or none of which can be fulfilled effectively.<sup>42</sup>

*From Processing to Collection:* Although typically the intelligence cycle represents tasking coming from the consumer and raw intelligence flowing to the analyst, the connection between analyst and collector is often reversed as the analyst has to reach back to the raw intelligence reporting to assist their assessment process. Raw intelligence reports generally include what the collector thinks the analyst needs to

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know from the source; however, processing the raw intelligence often throws up gaps, ambiguities, uncertainties and conflicts in the raw reporting. In the first three cases, the analyst needs to reach back to the raw intelligence to clarify what has already been acquired but not necessarily circulated or recognized by the collector as in need of circulation, or to consult the raw intelligence in order to make a properly informed appreciation about what judgements can be made on the basis of the available intelligence. Where there are conflicts between the raw reporting the analyst will need to mine down into the validation and evaluation of the original sources to decide how to weight the relative credibility of the sources. By the same token, under such conditions the analyst may end up effectively driving and directing the collection phase, requiring collectors to go back to their sources to re-visit reporting already in hand or to re-task those sources to fill the gaps highlighted by the analyst.

*From Dissemination to Processing:* Much as the analyst may need to reach back to the collector, so the drafter or briefer may need to mine down into the analytical judgements and reasoning undertaken in the possessing stage. Often, of course, the analyst is also the person drafting the disseminated product where written reports are concerned but in verbal briefings the briefing officer may often be presenting a summary or amalgamation of finished materials received from other quarters. Under these conditions, some degree of reach-back to the processing phase and the relevant personnel and/or institutions will be necessary. It is also worth keeping in mind that consumer response to disseminated product will come back to the briefer in the first instance, and find its way to the analytical team via the dissemination team (as opposed to via revised direction and tasking as in the classic clockwork view of the intelligence cycle with feedback taking the form of revised requirements fed forward to the collectors and analysts).

*Between Dissemination and Collection:* Much as the analyst may often need to reach back into raw intelligence, the same may be true of the dissemination needing to consult with raw intelligence in order to aid the formulation and delivery of the finished intelligence product to the consumer. In this case, there must be provision for reach-back *from* Dissemination *to* Collection as and when required. By the same token, collection elements should ideally have a running brief to provide urgent current reporting to the processing and dissemination phases throughout the process.

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Consequently, if a report received at the last is significant to presentation of a finished product to the consumer the collector must be in a position to forward that urgently and directly. This could well be a direct Collection *to* Dissemination short-circuit bypassing routine processing. However, if the product were not completely self-explanatory (such as technical product or a human source with significant attendant validation concerns attached), this might instead take the form of a three-point short-circuit running *from* Collection *to* Processing *to* Dissemination.

*Between Processing and Direction:* The history of intelligence is replete with examples of consumers not merely passively receiving finished intelligence products but insisting on being able to reach back into the analytical process and the combination of reporting and judgements that prompted the appreciation presented to them. It is also worth keeping in mind that in division-of-labour terms, the separation between dissemination and analysis often collapses when analysts double as drafters and briefers on the basis of their own work or that of their team. Likewise, the distinction between direction and analysis can collapse where commanders factor interpreted raw intelligence into their operational decision-making instead of having it cycled through a separate assessment phase. A more widespread example here is probably the most common, and that most intelligence requirements are actually for fully assessed, finished intelligence. Consequently in real terms, must collection tasking results from a three-cornered sequence running *from* Direction issuing requirements *to* Processing followed by analysts forwarding their information needs *to* Collection operators.

*From Direction to Dissemination to Processing to Collection:* While it might seem counter-intuitive, the DCPD cycle can actually run backwards, and often does. Much of the literature on the intelligence-producer/policy-maker relationship is replete with the actual feedback to finished intelligence taking the form of comments and directions from the consumer directly back to the disseminators/briefers. The briefers in turn then take that feedback to the analysts (where they are not one and the same person or entity) asking for the gaps, questions and inadequacy expressed by the consumers be filled by the processing entity. And the analysts themselves more often than not find themselves reaching back to the collectors to fill those gaps – and the collectors themselves may find themselves having to go back to the consumers

requesting clarification or further articulation of the requirements and priorities that started the whole process with which the consumer was so dissatisfied in the end.

Ironically, the only real objections to the core functions paradigm as it was now taking shape were from the defenders of the traditional DCPD formula who could not locate the traditional cycle within the new model. An alternative version was, therefore, presented which superimposed the traditional cycle on top of the new topology, not so much as an additional layer but as a kind of route map through the network (figure 4).<sup>43</sup> Once the ‘latent’ traditional cycle was made explicit most of the resistance from members of the ‘old guard’ intelligence cycle traditionalists abated, apart from occasional grumbling about unnecessary extra complication.

### **Venn Diagram of Functional Overlap**

There then followed a series of ‘thought experiments’ on how to represent the ‘core functions’ of intelligence. The first was an effort to represent the core functions in terms of a Venn diagram of their logical and functional relationships. One of the chronic problems with the classic cycle formula has been the fuzzy boundaries of the various intelligence cycle stages, one of the reasons why there is such a wide assortment of intelligence cycles with slightly different constituent parts. Is collection management a direction or collection function? Are imagery analysis and cryptanalysis collection, processing, analysis or what? To make matters still more uncertain, although Freeman distinguishes between analysis and assessment as logically distinct tasks, he also asserts that ‘assessment may be conducted separately from analysis or as an almost parallel process in the mind of the analyst’.<sup>44</sup> Given the fact that traditionally most assessments have taken the form of written reports given to consumers, is drafting an analytical or dissemination function? This latter problem has been particularly brought to light by Sherman Kent’s classic problem of ‘words of estimative probability’.<sup>45</sup>

The resulting diagram (figure 5)<sup>46</sup> was not expected to appear in any final doctrine text. It was, rather, aimed at helping the drafting team try to work out how to articulate processes and principles along the fuzzier boundaries of the DCPD

functions. It is worth acknowledging that the Venn diagram formulation helps understand the considerations underlying some of the more finely divided versions of the intelligence cycle such as Evans' 'hub and spoke' model. There is a significant number of functions that lie within the intersection sets between the main DCPD categories. Any or all of these could quite reasonably be 'broken out' as separate functions along the traditional loop. And that does give an additional insight into the resilience and longevity of the cycle despite its widespread popularity. It offers simplicity and even elegance that more elaborate alternatives do not. The Venn diagram schema suggests that Evans' outwardly reasonable formulation is actually the start of a slippery slope of breaking out distinct functions that would lead all too easily to intelligence cycle formulations of a dozen or more items or stages. Indeed, one can imagine subdividing the marginal functions on the intersections between the basic four (or five) core functions even more finely. Such an approach would likely introduce more confusion rather than less, and make the resulting schema more rigid and prescriptive rather than more flexible and adaptable.

### **Nested Intelligence Cycles**

If the traditional, doctrinal intelligence cycle could be described as an oversimplification this could hardly be said of the doctrinal attempts to formulate collection management. Most attempts to articulate the processes and procedures necessary to manage the tasking of collection activities and assets might be kindly described as plumber's nightmares. There was also the sense, in some quarters (typically from members of the 'clockwork' school) that there wasn't a *single* intelligence cycle occurring in a single institutional locus but many others spinning away at multiple different levels in different locations. Terms fielded for discussion on the working groups included a notion of 'wheels within wheels' and that intelligence exhibited a 'fractal structure' in which each phase of the intelligence process replicated the topological properties of the whole. The question was how to articulate this much more subtle and fluid concept. As something of a thought experiment, the BCISS team proposed the idea of 'nested' intelligence cycles, or more accurately, nested core functions. According to this formula, one could 'break out' a core functions process from within each individual DCPD element. The resulting scheme (figure 6) was intended to help represent this approach.

*DCPD within Collection*

The idea of nested DCPD functions is most readily illustrated in ‘Collection’ and ‘Processing’ where the internal dynamics are most systematically examined and described. Collection management, for example, can be seen in terms of its own DCPD cycle:

- a. Direction = *Selecting and prioritising* the available databases, platforms, sensor and sources for direction a particular target, or setting a human source with a particular matter to inquire into or report upon;
- b. Collection = *Operating* in the sense of actually deploying the platform/sensor or contacting the agent and exfiltration or retrieval of the resulting information or ‘raw’ intelligence;
- c. Processing = *Interpretation* in the sense of validation, and, in Freeman’s sense, analysis of the generated raw intelligence (e.g. imagery analysis of imagery from a UAV or satellite; decryption, translation and interpretation of an intercept; or debriefing the agent to generate a ‘contact note’<sup>47</sup> HUMINT);
- d. Dissemination = *Collating* the raw intelligence with other reporting and background context to turn turning the imagery analysis, intercept data into SIGINT or contact notes from an agent meeting into a source report.

It is easy to imagine the collection phase’s own subordinate cycle, such as in a HUMINT operation where ‘direction’ is formulating the plan to contact the agent; ‘collection’ is the actual meet, clearing the letter drop or what have you; processing is generating the ‘contact notes’, processing secret writing to make it visible, and ‘dissemination’ is the generation of the contact note or equivalent.

*DCPD within Processing*

In the same way, ‘Processing’ can be broken down for, for example, a JIC national assessment by the Assessments Staff as:

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- a. Direction = Identifying the requirement in question and target audience who have likely laid the requirement, the formulating the paper's Terms of Reference (ToR);
- b. Collection = Requesting and receipt and collation of supporting papers in the form of intelligence reports (e.g. SIS CX reports) and departmental views from other government departments such as DI, the FCO, Home Office and others.
- c. Processing = Collation of raw intelligence reports and departmental views, then forming an estimative judgement by weighing the evidence through traditional or structured analytical methodologies; then;
- d. Dissemination = writing the Preliminary Draft; challenge and review by JIO Challenge team as well as at CIG(s) followed by revision to produce the Final paper (which is the forwarded for publication and distribution under the conventional 'Dissemination' phase one level up).

Equivalent steps could as easily be identified within in any other finished intelligence production process in any other analytical unit, J2, single service intelligence element and throughout what is currently termed 'the wider analytic community'.

### *DCPD within Direction and Dissemination*

Much the same processes go on at the Direction level with the commander or decision-makers deciding what decisions need to be made and what information is needed to make that decision; conducting an audit of their existing knowledge base; effectively conducting a gap analysis of that information and then, on the basis of the gap analysis issuing Intelligence Requirements.

And, likewise, in the classic Dissemination phase at, for example, the national the JIC's Secretariat would maintain a schedule for reports to be produced (direction), receives the Final draft from the Assessment Staff (collection), proofs and typesets the paper (processing) and then actually print the reports and send them out to their readers (dissemination).<sup>48</sup> The briefing officer preparing to present an Intelligence

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Summary to his or her commander would follow similar steps (perhaps substituting working with PowerPoint for the desktop publishing work of their ‘processing’ phase), then actually presenting the information verbally to the commander.

The implication the nested approach was, of course, that one could mine down still further, unpacking DCPD functions from with the ‘broken out’ from the basic framework, right down to the level of the individual officer at a desk asking themselves what do I need to know, finding that information, making sense of it individually, and then communicating at required to whomsoever might need it (potentially just themselves). The goal was not some bewilderingly complex scheme of Copernican epicycles but, rather, to detach the DCPD heuristic from institutional and procedural specifics.

### **A Higher Common Denominator**

With JDN 1/10 in circulation the notion of core functions paradigm, including the network topology, rapidly secured a viable level of consensus and cross-community ‘buy in’. The ‘nest intelligence cycle’ concept received a limited trial in the Study Draft of JDP 2-00 but was quickly abandoned as being far too abstract for doctrine writing purposes. The principle remained, however, with the final version of JDP 2-00 warning the reader that:

While the intelligence cycle outwardly appears a simple process, in reality it is a complex set of activities. It is a continuous process comprising many cycles operating at different levels and speeds. Although the 4 individual tasks are discrete, as information flows and is processed and disseminated as intelligence, the tasks overlap and coincide so that they are often conducted concurrently, rather than sequentially.<sup>49</sup>

The final visual representation of the core functions paradigm presented in JDP 2-00 was essentially that the enhanced core functions topology given in figure 4, that is, with the ‘latent’, traditional intelligence cycle marked out separately and the newer core functions topology inscribed within the cycle. The only notable alteration to the network topology was superimposition of the Jack Report’s continuous review

process over the horizontal and vertical cross-connections in the centre of the diagram (figure 7).

On the whole JDP 2-00 3<sup>rd</sup> Edition has been well-received across the defence community, the most common point of dissent being its length (arising chiefly from the number of relatively detailed ‘vignettes’ or illustrative examples). It is not, of course, a perfect fix. While the ‘core functions of intelligence’ paradigm effectively addresses most of the substantive dissatisfactions with the old intelligence cycle formula it has done so at the potential cost of being a much more abstract conceptual exercise. The new doctrine is intentionally, one might even say *pointedly*, conceptual rather than procedural. Indeed, it is so much an exercise in abstract general principles that no need was seen to subject it to protective document marking and consequently it is the first British military intelligence doctrine to have been published unclassified. The need for both procedure and for a doctrine to speak to more sensitive methods and examples has not been negated. Instead, specific and sensitive matters are being addressed in a series of sub-doctrine statements on matters like HUMINT, SIGINT, GEOINT and so forth<sup>50</sup> many of which will be produced at higher levels of classification. This formulation satisfied the ‘old guard’ intelligence cycle advocates while also meeting the concerns of ‘radical’ critics by making the difference between principle and practice explicit, and providing for separate articulation of procedural specifics at a different (and more appropriate) doctrinal level.

Despite its acceptance across defence and favourable reception in most quarters there is a definite sense amongst those produced the new intelligence doctrine that it is very much an experiment in progress. The case for DCPAD is still a strong one, and collection management remains a plumber’s nightmare.<sup>51</sup> Doctrine is, as it were, always a moving target and whether or not the third iteration of the UK’s Joint Intelligence Doctrine is at least moving in the right direction will be a matter for close scrutiny the next round of comprehensive doctrine review in the second half of this decade.

**Diagrams**

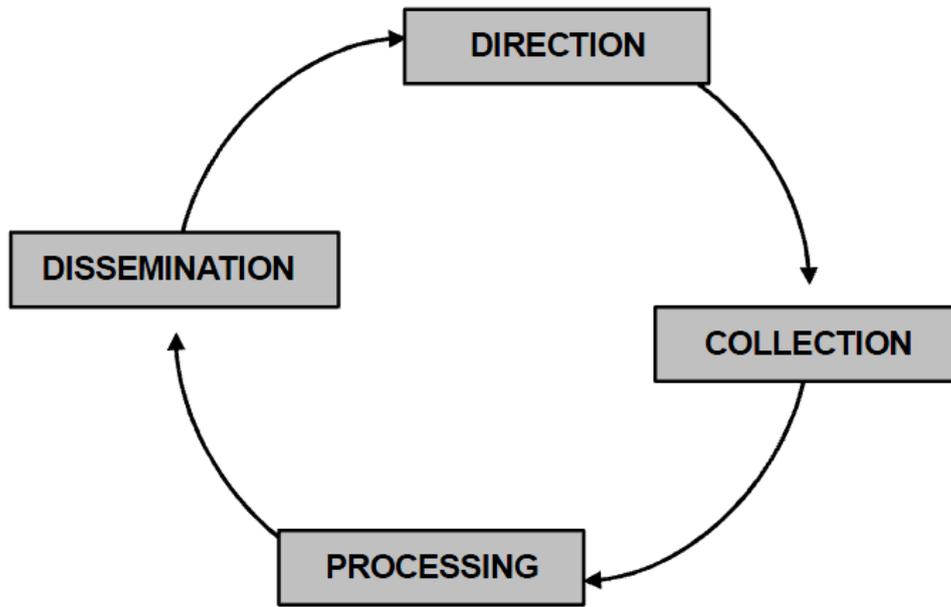


Figure 1: Traditional NATO DCPD Intelligence Cycle  
(Canadian B-GJ-005-200/FP-000, 2003)

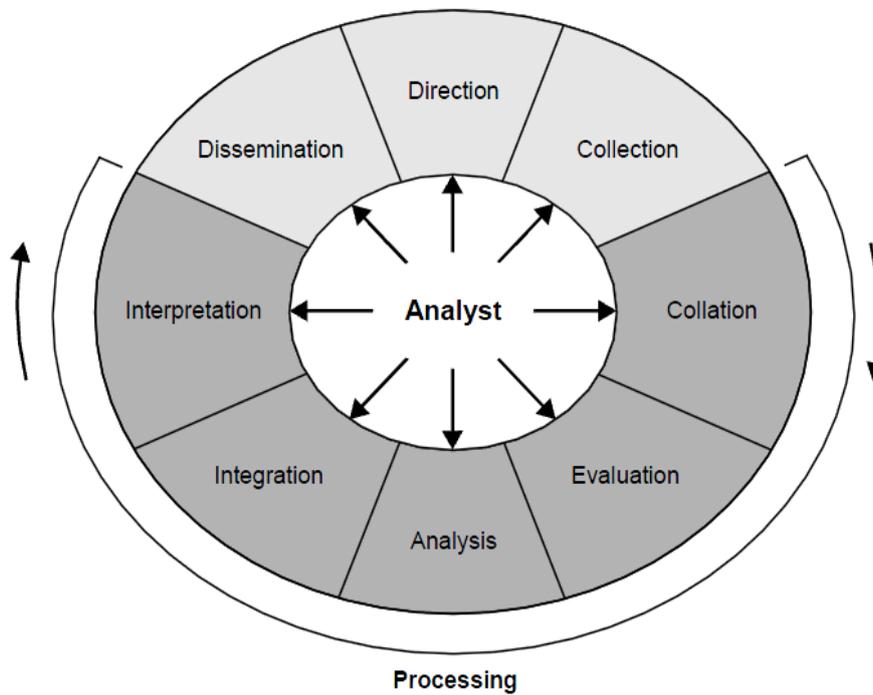


Figure 2: Jack Report Intelligence Cycle (reprinted in JDP 2-00 3<sup>rd</sup> Ed.)

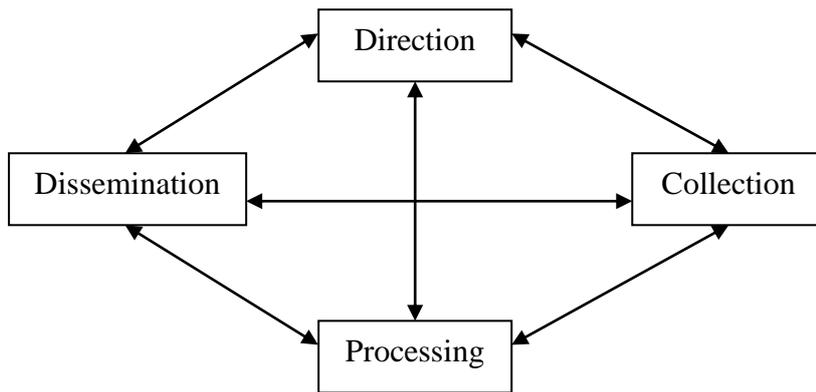


Figure 3: the Original Core Functions Network Topology

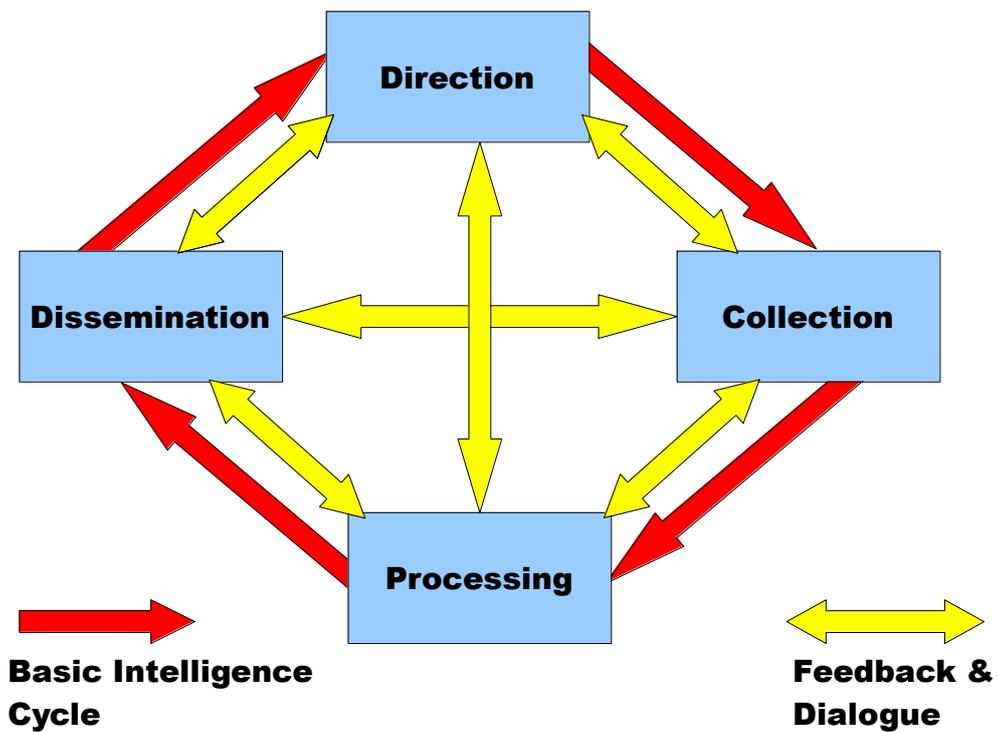


Figure 4: The Core Functions plus Latent Intelligence Cycle

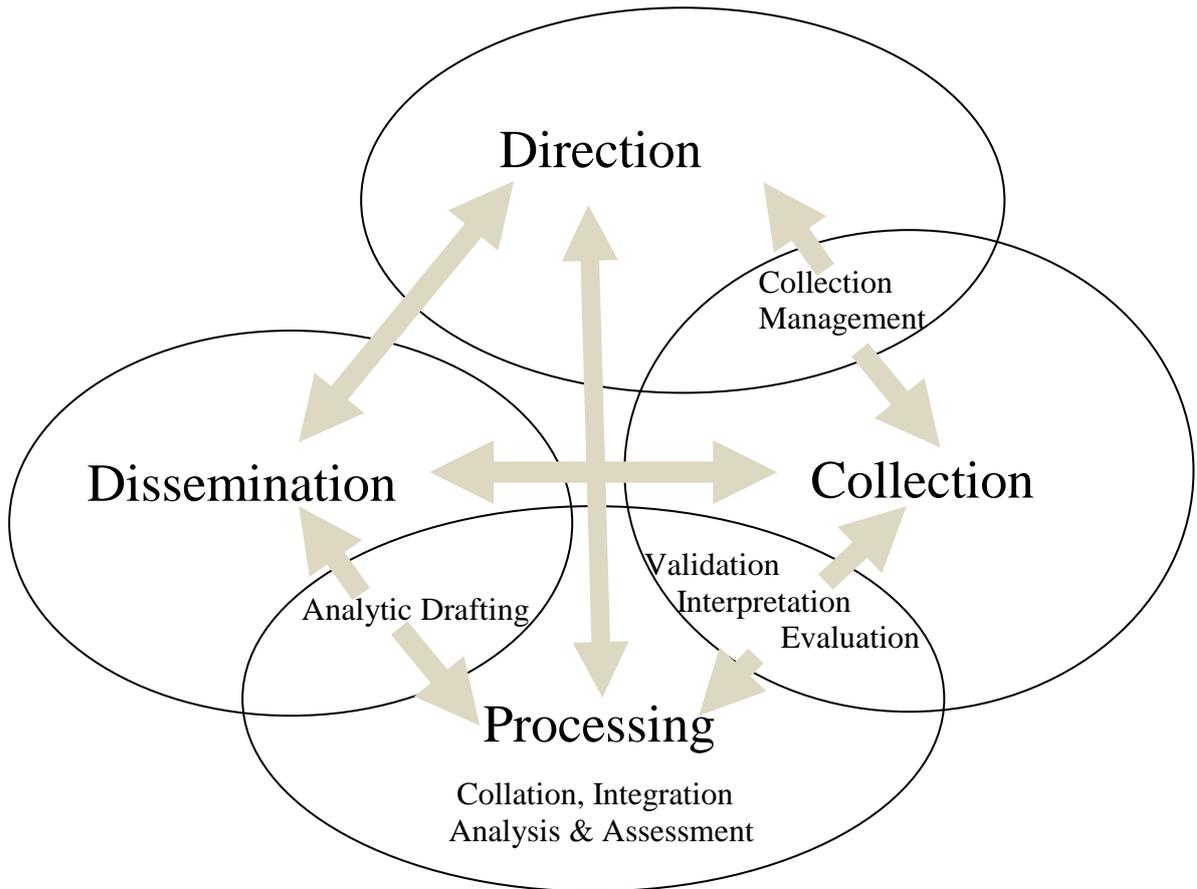


Figure 5: Venn Diagram of Core Functions (revised)

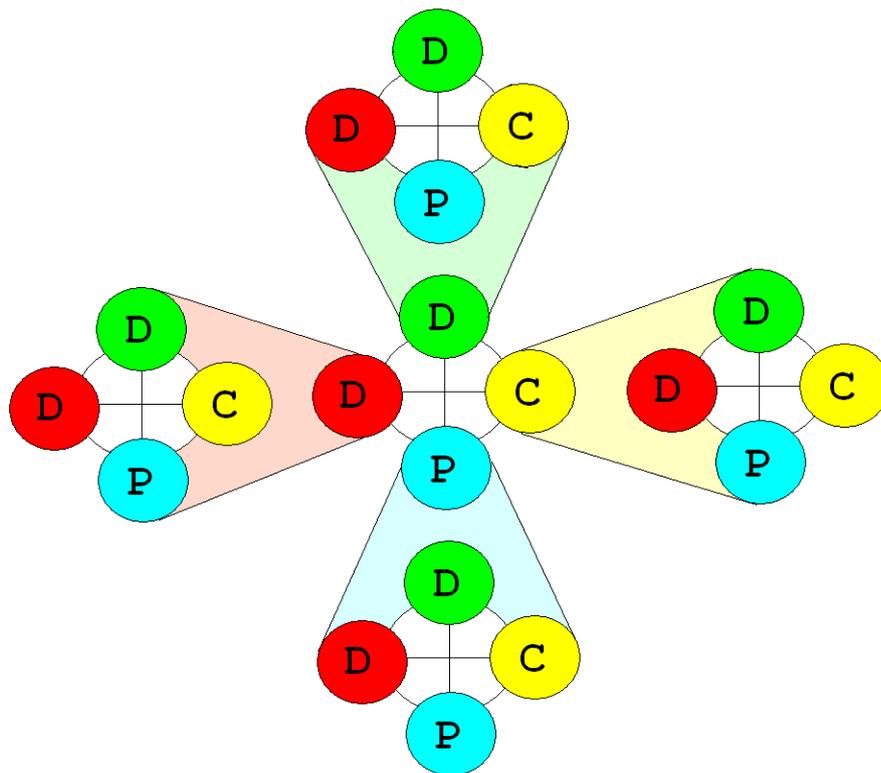


Figure 6: Nested Intelligence Cycles

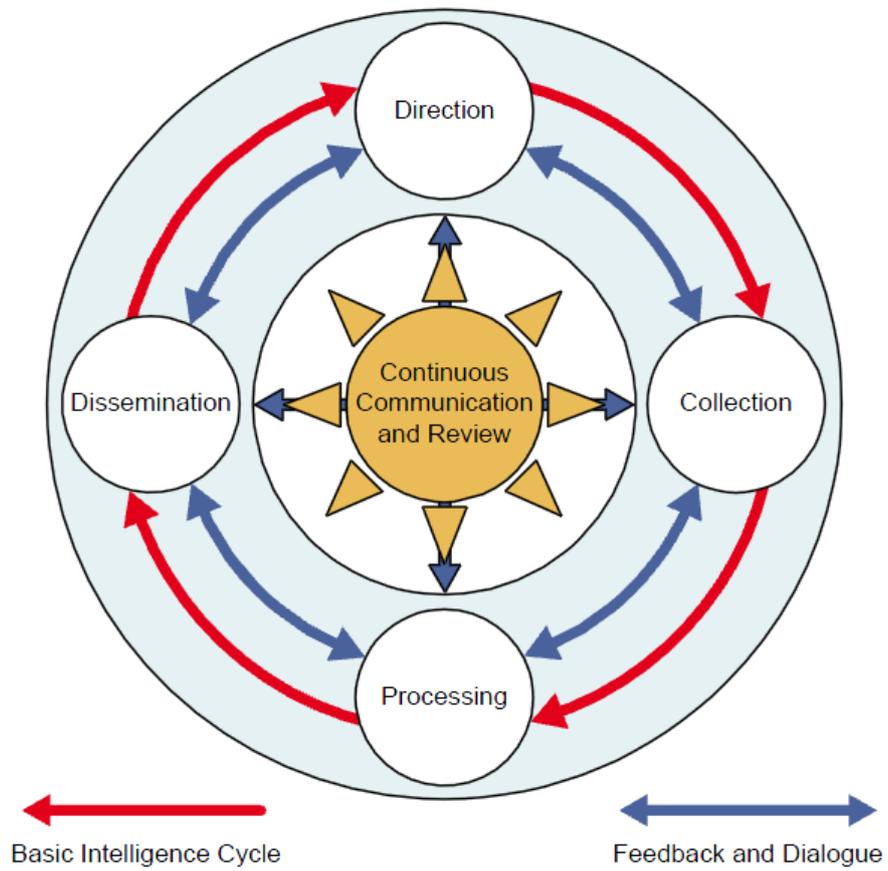


Figure 7: the Core Functions of Intelligence (JDP 2-00 3<sup>rd</sup> Edition)

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<sup>1</sup> BCISS 'BCISS Comments on JWP 2-00 Re-Write Arising from DCDC Intelligence Seminar' 3 December 2009

<sup>2</sup> Formerly known as the Defence Intelligence Staff (DIS).

<sup>3</sup> The distinction is not merely a formal one; arguably ISTAR reflects a potential fusion of J2 analytical deliberations and nominally J3 targeting functions that in other national armed services are often kept nominally separate.

<sup>4</sup> See for example Philip H.J. Davies 'Twilight of Britain's Joint Intelligence Committee?'

*International Journal of Intelligence and CounterIntelligence* 24:3 (Fall 2011).

<sup>5</sup> Walter Laqueur *A World of Secrets: the Used and Limits of Intelligence* (New York: Basic Books, 1985) pp.20-21.

<sup>6</sup> See, for example, Central Intelligence Agency *A Consumer's Guide to Intelligence* (Washington DC: National Technical Information Service, 1993) p.viii-4.

<sup>7</sup> House of Commons Select Committee on Defence *The Contribution of ISTAR to Operations: Eighth Report of Session 2009-10* (London: TSO, 2010), pp.3, 8, 9-11 and *passim*.

<sup>8</sup> John Hughes-Wilson *Military Intelligence Blunders and Cover-Ups* (London: Robinson, 2004) 4-5.

<sup>9</sup> Lord Butler *Review of Intelligence of Weapons of Mass Destruction* (London: TSO, 2004) p.10.

<sup>10</sup> Butler *Review of Intelligence* pp.10-11.

<sup>11</sup> John Kiszely, "Thinking about the Operational Level" in *the RUSI Journal*, Dec 2005, p. 39.

<sup>12</sup> Development, Concepts and Doctrine Centre (DCDC). *Army Doctrine Primer* (Shrivenham, UK: DCDC, 2011) p.3-1.

<sup>13</sup> The *Army Doctrine Primer* was produced roughly in parallel with JDP 2-00 and can, in many respects, be seen as a single-service response to this problem, spending roughly five pages on which levels of doctrine should be practical, conceptual or philosophical – then confusingly putting *joint* doctrine on its own separate level above 'philosophical' (*Army Doctrine Primer* p.5).

<sup>14</sup> *The Foundations of the Science of War* (London: Hutchinson, 1926) p.254.

<sup>15</sup> In order of appearance: Requirements and Priorities for Secret Intelligence; Coordination of Collection and Intelligence Requirements Management; Intelligence Requirements Management and Coordination of Collection; Key Intelligence Questions; National Intelligence Tasks; and the 'Needs process' was an attempt to articulate a real-time requirements and priorities process within the constraints of President Bill Clinton's Presidential Decision Directive 35 (PPD-35). Roughly speaking, RPSI and CCIRM have historically operated with relatively little difficulty and KIQA, NITs and 'Needs' with comparatively little success. See Philip H.J. Davies *Intelligence and Government in Britain and the United States: a Comparative Approach* (Praeger Security International 2012) *passim*.

<sup>16</sup> Gregory F. Treverton, Seth G. Jones, Steven Boraz and Philip Lipsky *Toward a Theory of Intelligence: RAND Worksshop Report* (Santa Monica, CA: RAND, 2006) p.4

<sup>17</sup> Michael Herman *Intelligence Power in Peace and War* (Cambridge: Cambridge University Press, 1996) p.293.

<sup>18</sup> Bruce D. Berkowitz and Allan E. Goodman *Strategic Intelligence for American National Security* (Princeton: Princeton University Press, 1989) pp.30-39, 185-192.

<sup>19</sup> 'A Framework for Strengthening US Intelligence' *Yale Journal of International Affairs* (Winter/Spring 2006) pp.116-121.

<sup>20</sup> *Securing the State* (London: Hurst, 2010) pp.117-120.

<sup>21</sup> Senate Select Committee to Study Governmental Operations With Respect to Intelligence Activities (hereafter referred to as the Church Committee) *Final Report Book 1: Foreign and Military Intelligence* (Washington DC: United States Government Printing Office, 1976) pp.17-18.

<sup>22</sup> Rob Johnston *Analytic Culture in the US Intelligence Community* (Washington DC: Center for the Study of Intelligence, 2005) p.45-60.

<sup>23</sup> Arthur Hulnick 'What's Wrong with the Intelligence Cycle?' *Intelligence and National Security* 21:6 (December 2006) p.959-979.

<sup>24</sup> Mark M. Lowenthal *Intelligence: From Secrets to Policy* 3<sup>rd</sup> Edition (Washington DC: CQPress, 2006) pp.65-67.

<sup>25</sup> Geraint Evans 'Rethinking Military Intelligence Failure – Putting the Wheels Back on the Intelligence Cycle' *Defence Studies* 9:1 (March 2009) p.23.

<sup>26</sup> Evans 'Rethinking Military Intelligence Failure' p.28.

<sup>27</sup> Evans 'Rethinking Military Intelligence Failure' pp.26-27.

<sup>28</sup> Evans 'Rethinking Military Intelligence Failure' p.28.

<sup>29</sup> Evans 'Rethinking Military Intelligence Failure' p.29.

<sup>30</sup> Evans 'Rethinking Military Intelligence Failure' p.29 *infra*.

- <sup>31</sup> Evans 'Rethinking Military Intelligence Failure' pp.41-42.
- <sup>32</sup> Evans 'Rethinking Military Intelligence Failure' p.42.
- <sup>33</sup> Evans 'Rethinking Military Intelligence Failure' p.41.
- <sup>34</sup> Parts of the Jack Report were released by Cabinet Office in 2009 and can be found as appendices to Paul Brelsford 'The Professional Head of Intelligence Analysis', unpublished dissertation for MA in Intelligence and Security Studies, Brunel University, March 2010.
- <sup>35</sup> BCISS 'BCISS Comments on JWP 2-00 Re-Write Arising from DCDC Intelligence Seminar' 3 December 2009.
- <sup>36</sup> (Shrivenham UK: DCDC, 2010). Also downloadable http from the DCDC microsite: URL
- <sup>37</sup> JDN 1/10 p.iii.
- <sup>38</sup> JDN 1/10 p.2-4. The idea of 'anticipated' operating environments refers to a pair of horizon-scanning documents produced by DCDC to guide thinking on matters with medium- or long-term ramifications. These are DCDC *Future Character of Conflict* (Shrivenham, UK: DCDC, 2010) and *Global Strategic Trends out to 2040* (Shrivenham, UK: DCDC, 2010).
- <sup>39</sup> Brunel Centre for Intelligence and Security Studies 'BCISS JDP 2 Note 1' 17 February 2010.
- <sup>40</sup> JDN 1/10 pp.2-4.
- <sup>41</sup> Herman *Intelligence Power in Peace and War* pp.294-295.
- <sup>42</sup> This has been examined in the case of SIS with reference to the public choice concept of 'overgrazing', see Philip H.J. Davies *MI6 and the Machinery of Spying* (London: Taylor & Francis, 2004) pp.342-343.
- <sup>43</sup> BCISS 'BCISS JDP Note 5' 14 April 2010.
- <sup>44</sup> Butler *Review of Intelligence on Weapons of Mass Destruction* p.10.
- <sup>45</sup> Sherman Kent Sherman. 'Words of Estimative Probability' *Studies in Intelligence* Fall 1964
- <sup>46</sup> BCISS 'BCISS JDP Note 11' 21 May 2010. Note that the version presented here is slightly altered from the original 2010 document to reflect later work especially on collection management.
- <sup>47</sup> The contact note-source report-intelligence report referred to here is MI5 HUMINT practice disclosed during the Matrix-Churchill trial in the early 1990s; see David Leigh *Betrayed: the Real Story of the Matrix Churchill Trial* (London: Bloomsbury, 1993) p.133..
- <sup>48</sup> For an account of the JIC Secretariat's work, see Michael Herman *Intelligence Services in the Information Age* (London: Frank Cass, 2001) pp.164-179.
- <sup>49</sup> Development, Concepts and Doctrine Centre *JDP 2-00 Understanding and Intelligence Support to Joint Operations* 3<sup>rd</sup> Edition (Shrivenham, UK: DCDC, 2011) p.3-4.
- <sup>50</sup> DCDC JDP 2-00 p.v.
- <sup>51</sup> DCDC JDP 2-00, 3-12.