Purposeful Assessment
Assessing the Effects of Military Operations

JAN FRELIN

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Sammanfattning

”Purposeful assessment” (ungefär ”målmedveten värdering”) är en nyckelkomponent i det svenska EBAO-konceptet. För att ge militära chefer återmatning från insatsområdet, och för att stödja deras lärande process, krävs en fokuserad värderingsverksamhet.

Traditionell värdering syftar till att värdera den relativt kortsiktiga måluppfyllnaden mot planerade effekter, men målmedveten värdering måste också värdera den långsiktiga dynamiken. För att fånga den långsiktiga dynamiken måste också effekter som inte övervägts i planeringen, men som kommer att uppkomma ändå inkluderas.

Detta koncept för målmedveten värdering bygger på OECD/DAC:s ramverk för att värdera fredsfrämjande verksamhet. Vi understryker behovet av både kvantitativ och kvalitativ värdering, och även behovet av att genomföra ”prövande operationer” i syfte att provocera fram responser till stöd för värderingen.

Centrala rekommendationer är att genomföra värdering av alla insatta medel i ett konfliktområde, att återskapa en fungerande process för verkansvärdering samt att börja utbilda, träna och öva insatsvärdering.

Nyckelord: Värdering, utvärdering, EBAO, BDA, militära operationer, verkansvärdering, fredsfrämjande insatser

Summary

Purposeful assessment is a key part of the Swedish EBAO concept. In order to provide commanders with feed-back on their actions in a mission area, and to support their capability for learning about the environment, a focused assessment activity is required.

Whereas the more traditional measure of progress against the plan will generally focus upon the fast dynamics in the environment, purposeful assessment must also include assessment of the slow processes in the community. In addition, Purposeful assessment must not focus simply on those effects that have been considered within planning but must consider all effects that may have an impact upon the success of the intervention.

Building on the OECD/DAC framework for assessing conflict prevention and peace-building activities, purposeful assessment underlines the requirements for both quantitative and qualitative assessment, as well as undertaking probing actions in order to provoke responses that support assessment.

The main recommendations include the importance of comprehensive assessment, the need to revive battle-damage assessment as well as a plea to start training for assessment activities.

Keywords: Assessment, Evaluation, EBAO, Purposeful Assessment, Military Operations, Battle Damage Assessment, Combat Assessment, Conflict Prevention & Peace-building, Peace Support Operations

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1 Introduction

Since the end of the cold war the number and scope of international engagements in failed or fragile states and conflict-ridden regions of the world has increased significantly. Contemporary conflicts are now more often characterised by collapsed structures, economic inequalities and political mobilisation based on ethnic and religious identities. Furthermore, the number of influential actors within the operating environment has increased significantly and includes, but is not restricted to, other Government departments (OGDs), International Organisations (IOs), private companies and organisations and non-governmental organisations (NGOs).

The Swedish Armed Forces have recognised that the complex nature of these modern crises calls for a more comprehensive response, including multi-dimensional strategies based on 'whole of government' approaches within and across national government supported by a complementary, military Effects-based Approach to Operations (EBAO). In order to facilitate this development, a Swedish concept for EBAO has been developed.[1]

Purposeful assessment is a key part of the Swedish EBAO concept. In order to provide commanders with feed-back on their actions in a mission area, and to support their capability for learning about the environment, a focused assessment activity is required. Purposeful Assessment is considered an enabling concept within the framework of the over-arching EBAO analytical concept.

Whereas the more traditional day-to-day measure of progress against the plan will generally focus upon the fast dynamics in the environment, purposeful assessment must also focus upon the slow dynamics – that is, perceived longer-term and potentially subtle yet significant changes within the operational environment and the underlying reasons for these changes. This must not focus simply on

[1] EBAO Concept: *An Analytical Concept for an Effects Based Approach to Operations (EBAO) Within the Swedish Armed Forces*, (2008)

those changes that have been considered within planning but must consider all changes that may have an impact upon the success of the intervention.

The passive collection and exploitation of information is not the only way of assessing the fast and slow dynamics in the environment, however. The Effects-based methodology identifies and places great emphasis upon the need to take 'probing actions' in the environment, which are specifically designed to generate opportunities for commanders and their staff to learn about the *consequences* of those actions and thereby test assumptions about the environment, which contributes to organizational learning about how the environment is changing over time.[2]

This report seeks to describe the current practise for assessing military operations and civilian conflict prevention and peace building interventions, and to outline how purposeful assessment could be used to meet the assessment shortcomings currently experienced in the field. Further, outline descriptions of candidate assessment activities are included in order to facilitate experimentation with the assessment concept, which will be the next step. While looking into general issues for assessing military operations, the main focus of this report is assessment in support of the commander in the field, primarily at the operational level of war.

How the assessment activities should be organised within the HQ is *not* considered, however, and whether the outlined mechanisms are more related to knowledge support or to execution will be considered at a later stage.

The report has been conducted as a survey of relevant literature on assessment and evaluation issues, in order to describe current practise and look for ideas and insights. To establish some structure on the possible assessment approaches, Agrells[3] four perspectives have been used. The various candidate mechanisms of assessment have then been

[2] EBAO Concept (2008)
[3] Agrell (1997): *Vett och vilja i värdering ledningssystem*, FOA-R—97-00575-505—SE

evaluated against the requirements of EBAO (chiefly the 6 principles outlined in the analytical concept) using Quality Function Deployment.[4] Finally, outline descriptions of the assessment mechanisms have been developed.

The main target audience for this report is the staff at the Joint Concept, Development and Experimentation Centre (JCDEC) of the Swedish armed forces, but the report is also considered relevant for the research community and military practitioners.

[4] Cohen (1995): *Quality Function Deployment: How to Make QFD Work for You*

2 Operational Assessment – Current Practise

This chapter describes how formal assessment activities have been used in both military and civilian interventions in the field, and what challenges have been experienced in conducting these assessments and evaluations.

2.1 Military Practise

Current western practise for assessing the outcomes of military operations is mainly derived from two fairly distinct traditions. The first approach is largely American, known variously as Combat Assessment or Battle Damage Assessment.[5] The second approach is the one developed by NATO, initially by British officers and analysts[6] [7], in various peace support operations initially in the Balkans and continued in Afghanistan. NATO currently uses the term Engagement Space Assessment.[8]

2.1.1 Combat Assessment

According to current US doctrine, combat assessment (CA) is composed of three interrelated components: battle damage assessment (BDA); munitions effectiveness assessment (MEA); and future targeting or reattack recommendations.[9] This activity is part of the targeting process for a joint force, and attempts to evaluate the battle damage sustained by targets in order to support further targeting decisions. The core part of combat assessment is BDA which is the "timely and accurate estimate of damage resulting from the application of military force, either lethal or nonlethal, against a predetermined objective". BDA attempts to make the assessments on the physical, functional and the system level.[10]

BDA is an *intelligence* activity working with various kinds of evidence in order to determine effects on targets, chiefly aerial photography, but also signals intelligence and human intelligence.

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[5] BDA Handbook (2004): *Commander's Handbook for Joint Battle Damage Assessment* (US)
[6] Rose (2004): *Operational Analysis in Support of Recent Military Operations*
[7] JWP 5-00 (2004): *Joint Operations Planning,* Annex E (UK)
[8] ESA Handbook (2007): *Engagement Space Assessment Handbook* (NATO)
[9] BDA Handbook (2004), p. I-1
[10] Ibid.

Experiences from US-led operations since the Gulf war in 1991 suggest that battle damage assessment has largely failed to perform.[11] [12] [13] No major improvements in BDA had been noted in the 2003 attack on Iraq.[14] Attempts to make assessments on the system level have largely been non-existent, while even making assessments of physical damage have proved to be a substantial challenge.[15] [16]

Many explanations have been offered for this state of affairs. They include lack of training and education, problems with information management, problems created by the speed of modern air campaigns, and competition with other intelligence collection requirements.[17] [18]

It has been noted that while the problems experienced with BDA during the Gulf war in 1991 did hamper the allocation of air assets, they did not hinder the eventual successful outcome of the campaign. Rather than relying on the *quantitative* BDA of Iraq's ground forces, the campaign eventually proceeded based on the *qualitative* assessment made by the commanders.[19]

While BDA is currently a joint activity, it was originally called "bomb damage assessment" and was developed to evaluate the effects of air attack,[20] just as the targeting process grew out of the requirements for coordinating a large air campaign.[21] BDA as a term is historically connected with air power, and it seems that it the challenge of assessing outcomes is specifically connected with standoff war-fighting, especially air power. Ground forces in direct contact with the

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[11] Bailey (2001): *Assess for Success: The Role of Doctrine in Effective Combat Assessment*, Air Command and Staff College Air University Maxwell AFB, AL (US)
[12] Janiczek (2002): *Combat Assessment in MEF Battlespace Shaping*, United States Marine Corps Command and Staff College (US)
[13] Allen (2005): *Effects Based Assessment in United States Air Force: Rhetoric or Reality?* School of Advanced Air and Space Studies Air University Maxwell AFB, AL (US)
[14] Allen (2005)
[15] Janiczek (2002)
[16] Bailey (2001)
[17] Curry (2004): "The current battle damage assessment paradigm is obsolete" in *Air & Space Power Journal*, Winter, 2004, http://findarticles.com/p/articles/mi_m0NXL/is_4_18/ai_n9485436
[18] Allen (2005)
[19] Janiczek (2002), pp. 20
[20] Bailey (2001), p. 4
[21] Naisbitt (2003): *Joint Maneuver and Fires Coordination Board: Does the Joint Targeting Coordination Board Need to Evolve?*, US Army Command and General Staff College, Fort Leavenworth, KS (US), p. 21

adversary tend to get an immediate experience of outcomes, while bomb damage assessment has been a challenge for air power throughout its history.[22] [23]

Modern military doctrine stresses the use of the OODA loop, the continuous activity of observation – orientation – decision – action, in order to control a military operation. It seems that this loop is broken, at least as far as air power and targeting of long-range weapons is concerned.

2.1.2 Engagement Space Assessment

NATO's experiences with the challenges of assessing operations started in Bosnia when IFOR took over from UNPROFOR in December 1995. Measures of Effectiveness (MOE) were introduced in 1997 in order to track the improving situation. A system of MOE was eventually chosen in based on Maslow's hierarchy of needs. The measures included security, quality of life, democratisation and displaced persons and refugee returns. The indicator used was scored on a scale of 1 to 5.[24] Similar approaches have been tried in Kosovo with varying degrees of success.[25]

In 2007, NATO released the "Engagement Space Assessment Handbook", which describes current best practises for Engagement Space Assessment (ESA) in NATO operations.[26] While building on lessons learnt from previous NATO operations, it also draws heavily on experiences from the Multinational Experiments coordinated by the US Joint Forces Command.[27]

The assessment approach outlined by NATO is inspired by "results-based management" (RBM), which means the approach is geared towards the formulation of objectives and using indicators in order to measure progress towards the objectives.[28]

The focus of ESA is the development of Measures of Effectiveness (MOE), or indicators, connected to the effects that are developed as part of the operational plan.

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[22] Glenn (2002): "The Challenge of Assessing Effects-Based Operations in Air Warfare", in *Air & Space Power Chronicles,* April 2002, http://www.airpower.maxwell.af.mil/airchronicles/bookrev/glenn.html

[23] Allen (2005)

[24] Griffin (1999): "Operational Analysis in the Frontline - A Progressive Environment", Presented at 16 ISMOR, Session C, 1 September 1999

[25] Rose (2004)

[26] ESA Handbook (2007)

[27] MNE CONOPS 1.0 (2006)

[28] ESA Handbook (2007)

Within ESA, MOE should fulfil the following requirements: [29]

”An MOE must:

- Describe one system element or relationship of interest.
- Describe how that element or relationship is expected to change—the desired trend(s).
- Be observable.
- Be as specific as possible (ensure you are measuring only and exactly what you want).”

“Additionally, an MOE should:

- Be reducible to a quantity (as a number, percentage, etc.).
- Be objective in nature.”

In addition, for each MOE a threshold is chosen in order to determine what level the MOE should reach in order to be considered successful. MOE can be statistics gathered in the field (such as crime-rates), or assessed by subject matter experts on some scale (such as assessing the security situation on a scale of 1-5).

When a set of MOE have been developed, a baseline is taken as soon as possible in order to get an understanding of the state of the system *before* operations commences.

In order to measure the status of own-force actions, measures of performance (MOP) are developed. Rather than measuring outcomes, as the MOE intend to do, MOP seeks to measure to what extent planned actions have been conducted. MOP are used to measure things like the number of air sorties, the number of contacts with the adversary and so on. Just as with MOE, MOP are assigned with thresholds in order to ensure that a minimum level of activity is being conducted.

The ESA approach underlines the requirement to have independent MOE for each level of effects considered in the plan. Even if all the MOE for all sub-effects are fulfilled, you can’t automatically conclude that the main effect is fulfilled.

The ESA Handbook is so new that no experiences on its use have been reported in unclassified sources, but prior assessment activities that NATO has conducted has been a mixed success. A big issue is finding the relevant data. Even if it’s important from an assessment point of view to know what level the commercial

[29] ESA Handbook (2007)

activities has reached in the villages in the area of operations, this intelligence requirement has to compete with all other collection requirements. This problem is similar to the data collections problems experienced with BDA.[30]

In addition, reservations have been raised about using such quantitative MOE. During Desert Storm in 1991, the MOE threshold for the Iraqi forces was that they should sustain 50% losses before the attack. While principally simple, it proved difficult to ascertain what losses had actually been sustained, but it was also unclear what a certain loss-rate actually meant for the Iraqi fighting ability.[31]

2.1.3 Comparing military approaches

Engagement space assessment and combat assessment clearly addresses different levels of analysis, at least in practise. Combat assessment is part of the targeting process, while ESA attempts to address assessment on the campaign level. To this author, the methods seem conceptually complementary rather than competing.

As been seen above, all military assessment methods have met with mixed results at best. While the new NATO Handbook[32] offers some new insights, some of the recommendations retained in the handbook have previously been found to be problematic.

2.2 Civilian Practise

2.2.1 The OECD DAC Framework

The OECD has recently released a report on evaluation of conflict prevention and peace-building activities[33], which primarily addresses civilian efforts, though military peace support operations can be considered part of such an effort. According to this report, these evaluation mechanisms should be used both by strict conflict prevention and peace-building programmes as well as development programmes that also has secondary goals concerned with conflict prevention.

According to the OECD, all conflict prevention and peace-building evaluations should start with a conflict analysis. Ideally, this analysis was part of the

[30] Janiczek (2002), p. 16
[31] Ibid., pp. 17
[32] ESA Handbook (2007)
[33] OECD (2007): *Encouraging Effective Evaluation of Conflict Prevention and Peacebuilding Activities: Towards DAC Guidance*, Off-print of the OECD Journal on Development 2007: Volume 8, No. 3

programme design, but the OECD has found that this frequently isn't the case. Part of the conflict analysis should be uncovering the "theory of change", that is the way(s) with which the programme hopes to affect the conflict situation.

The OECD has identified the following common principles for evaluations:[34]

- *Inclusiveness* – Methodologies should be rigorous about including the full range of points of view.
- *Testing the theory of change* – Methodologies should generate specific data/evidence that tests the assumptions comprising the theory of change embedded in the conflict prevention and peacebuilding activities.
- *Mixed-method approaches* – The evaluation should draw on both qualitative and quantitative methods and evidence. Single-method evaluations are not adequate for conflict prevention and peacebuilding analysis.
- *Rigour of evidence* – The data and information used should be triangulated where possible. Information sources should be transparent and reliable.
- *Unexpected impacts* – Processes and techniques for identifying and assessing both planned and unplanned or unexpected impacts, both positive and negative, should be used.
- *Ethics* – Ethical issues that may arise during the evaluation should be addressed at the outset, in the Terms of Reference.

In addition, the OECD stresses the importance of understanding the level and scope of the evaluation, from a strategic evaluation concerned with the situation in a whole conflict area down to evaluating the local impacts of one specific prevention project. The timing of the evaluation is also important; there is a difference between organising a monitoring system, conducting a mid-course evaluation and evaluating a programme post mortem.

Evaluations can also take several different approaches, including results based evaluations regarding goal fulfilment, goal-free evaluations, where the actual (rather than desired) effects are evaluated as well as theory-based evaluation, were the theory of change behind the programme is tested. The report stresses using both qualitative and quantitative data in the evaluation process.

OECD specifically recommends against using fixed universal indicators of conflict, but instead stresses that the data requirements has to be developed for

[34] OECD (2007), p 48, and slightly abbreviated here.

each evaluation effort, fitting both with the conflict situation and the specific evaluation context.[35]

The OECD report further stresses the importance of what is called "joint evaluations", that is evaluations across several programmes in a conflict area. Conceivably, a military intervention could be considered in such a context.

An OECD evaluation consists of the following steps:

A. Obtain or perform a conflict analysis. Ideally, there should be a conflict analysis connected to the project, but as this frequently isn't the case, the evaluation team may have to obtain their own.

B. Identify intervention goals and assess the theory of change. Theories of change may often be implicit assumptions, and must thus be discovered by the evaluation team.

C. Gather and analyse data/information. This data may be both quantitative and qualitative data. The main method for gathering qualitative data indicated by the OECD report is conducting interviews, and the report stresses the importance of reaching out to all important stakeholders. Data gathering activities may also affect the conflict on their own, it's is important to assess possible impacts of data gathering beforehand.

D. Examine the effort against various criteria. The OECD lists the following criteria for conflict prevention and peace-building interventions: *Relevance/Appropriateness, Effectiveness, Efficiency, Impact, Sustainability, Linkages, Coverage, Consistency with conflict prevention and peacebuilding values* and *Coherence.*

E. Analyse the results chain. This analysis follows the results of the intervention from outputs through outcomes to long-term impacts.

F. Assess for conflict sensitivity. An evaluation should use the Do No Harm framework or a similar tool to assess that dimension.

G. Examine the relationship to policies.

H. Engage in a learning process. Implement the plans (determined in the preparation stage) for follow-up and dissemination of lessons learned. The evaluator/evaluation team may play specific roles in this process, but normally follow-up is mainly the responsibility of the person or unit that commissioned the evaluation.

[35] OECD 2007, p. 52

The author has not found any reported experiences of usage of the OECD framework for evaluations, but the issues it seeks to address include lacking conflict analysis, vague goals, unarticulated assumptions, insufficient focus on unforeseen effects and over-reliance on quantitative assessments.[36] The latter problem has been seen as there is a risk that intervening organisations attempt to fulfil the indicators rather than fulfilling the stated goals of the intervention.[37]

2.2.2 The MPICE Framework

An alternative approach has been launched as the "MPICE Framework", developed with joint backing from the US Army and the United States Institute of Peace (thus, it's not so much a civilian as a comprehensive framework). [38] The purpose of the framework is to "establish a system of metrics that will assist in formulating policy and implementing operational and strategic plans to transform conflict and bring stability to war-torn societies."[39]

The MPICE Framework is based on a specific conflict model which has three stages: stage 0 – Imposed Stability, Stage 1 – Assisted Stability and Stage 2 – Self-Sustaining Peace. In addition, MPICE considers a set of "Major Mission Elements" for addressing the situation, namely Political Moderation & Stable Governance, Security, Rule of Law, Economic Sustainability and Social Well-being. These themes have some semblance with the "Logical Lines of Operations" indicated by the US Army doctrine for Counterinsurgency (Combat Operations/Civil Security Operations, Host Nation Security Forces, Essential Services, Governance and Economic Development).[40]

The main body of the MPICE Framework is a detailed set of objectives and measures for each mission element in each stage of the conflict. There are more than a hundred measures specified. The measures are things like "Extent to which the provisions of the peace settlement have been implemented." Or "Number of foreign fighter killed or captured.". Indications of collection methods and direction of improvement is given for each measure. Basically, MPICE constitutes a generic skeleton evaluation plan.

MPICE have identified 4 specific data collection methods:

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[36] OECD (2007), p. 32
[37] OECD (2007), p. 28
[38] Dziedzic, Sotirin & Agoglia (2008): *Measuring Progress in Conflict Environments (MPICE) - A Metrics Framework for Assessing Conflict Transformation and Stabilization* (Draft, US)
[39] Ibid., p. 5
[40] FM 3-24 (2006) *Counterinsurgency* (US), p. 5-3

- Content Analysis, which entails the analysis of messages from media sources.
- Expert Knowledge, which entails creating a panel of experts to assess a certain measure.
- Quantitative Data, which utilizes a variety of data gathered from the field.
- Survey/Polling Data, which involves conducting public opinion surveys in order to assess how the public views a variety of issues.

2.2.3 Comparing Civilian Approaches

The focus of the OECD approach is to work as a tool for evaluating any peace-building effort, from a single project to a joint evaluation of a whole area of conflict. The focus of MPICE is just the overall level, essentially what the OECD calls a joint evaluation.

Further, the detailed measures and the fixed conflict model outlined in the MPICE Framework are in direct contradiction of one key recommendation in the OECD report, to specifically avoid lists of pre-identified indicators.

2.3 Conclusions regarding current methods

It may be useful to compare the usage of terminology in civilian and military practise.

OECD Report	**EBAO terminology**[41]
Intervention	Campaign, Operation
Programme, project	Operation
Activities, services, products	Action
Outcome	(Direct) effect
Impact	(Indirect) effect
Goal	Objective, end-state
Theory of Change	
Evaluation	Assessment

Table 1: Comparison of civilian and military terminology[42]

In comparing the different methods, the OECD clearly emphasises mixed-method approaches more than the either the battle damage assessment or engagement space assessment does. The OECD approach recognises the limitations of a purely quantitative view, a view that completely dominates ESA. The OECD report is also open for evaluating all means deployed in a conflict situation, not just the military means.

[41] As used in the EBAO Concept (2008)
[42] Adapted from ESA Handbook (2007), p. 6

3 What Purposeful Assessment may deliver

The requirements on purposeful assessment, according to the EBAO concept[43], is to deliver both an assessment of progress against planned objectives, as well as assessing the perceived long term changes in the environment, especially looking for effects that hasn't been considered in the planning. One of the tenets of the EBAO concept is to shift focus towards assessment. Regardless of which methods are chosen for assessing the operation, this means that more resources (money and manpower) have to be spent on assessment than is currently the case.

Assessment is a way of addressing uncertainty in the operational area. Within the framework of assessment, we assume that important uncertainties become knowable *with time*, i.e. what you can't know today will be known (or at least knowable) tomorrow. Thus assessment needs to be an iterative process.

In order to maximise the freedom of action of the commander when facing uncertainty, the "uncertainty triangle" model has been introduced.[44]

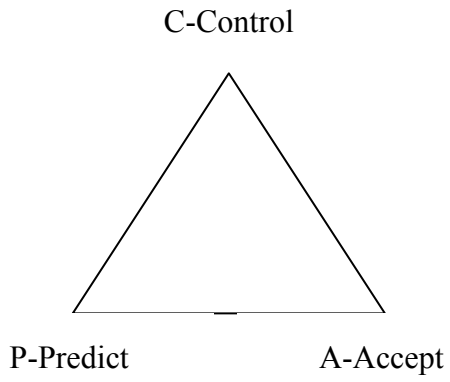

Figure 1: The Uncertainty Triangel

[43] EBAO Concept (2008), pp 27
[44] Dreborg et al (1994): *Planera för det okända? Om hantering av osäkerhet*, FOA-R—94-00005-1.2—SE

The corners of the triangle represent basic attitudes towards uncertainty: we can accept uncertainty, we can attempt to control uncertainty or we can attempt to make predictions when facing uncertainty.

The idea behind the triangle is that a decision-maker should be aware of all these options, and that a mix of all three attitudes may be the most fruitful approach. The conduct of an intelligence estimate *before* commencing an operation is a *predicting* activity, while the ongoing intelligence (and assessment) process during an operation *accepts* uncertainty to some extent, acknowledging that more knowledge may be available with time. That allows an active strategy, when decisions are taken sequentially as more information becomes available, which is acknowledged by the emphasis on dynamic re-planning in the EBAO concept.

Probing actions also introduce an element of a *controlling* attitude into purposeful assessment.

In order to meet all the EBAO requirements on purposeful assessment, Agrells[45] four perspectives have been used as inspiration for a set of views with some modification. These were originally conceived in order to evaluate command and control systems, but are felt to be helpful from an assessment point of view as well. The four perspectives are the *effect, resource, community* and *stakeholder perspectives*. The perspectives and their use in assessment are outlined in the following text.

One key concept for purposeful assessment is the *theory of change*, as introduced in the discussion of the OECD evaluation framework.[46] The theory of change is essentially the assumptions we make on how our actions will contribute to the desirable outcome of the conflict. In an effects-based perspective, the theory of change is the (assumed) connection between actions and effects, or the connection between the resource and effects perspectives as introduced above.

3.1 The Effect Perspective

In this perspective, the subject is *outcomes*, *impacts* or *effects*. Important questions include whether the stated goals of a campaign have been reached, but also what unintended consequences the actions of the force has had. Approaches such as MOE and BDA belong here, but also so-called goal-free evaluations (as

[45] Agrell (1997)
[46] OECD (2007)

goal-free evaluations are designed to assess what consequences actions actually have).

The effects perspective can be considered a *lagging* measure, i.e. the measures that deal with results or output.

3.1.1 Using Measures of Effectiveness

As have been noted in chapter 2, the merits of using quantified Measures of Effectiveness (MOE) have been questioned. However, in order to appreciate the impact of a conflict, indicators such as the number of displaced people, crime-rates for capital crimes and average life-spans still yield important information on the situation.

However, a MOE should be designed to *indicate* the progress of a certain objective, not to *be* the objective itself. If a threshold for acceptable performance is assigned to the MOE, there is a great risk of goal substitution,[47] [48]of the MOE *becoming* the goal. This may lead to sub-optimisations within the operation. This also means that the use of any colour coding connected with the attainment effects should be the outcome of assessment, not just a automatic assignation connected with a certain threshold.

Thus MOE used in purposeful assessment will not have assigned thresholds. Instead, the interpretation of MOE from the Quality Function Deployment (QFD) method will be used,[49] which means that each objective or effect will be assigned with one or more MOE (in QFD, they are known as Substitute Quality Characteristics). For each of these MOE, direction of improvement needs to be defined. For some MOE, more is better (example: GNP per capita), for others 0 is best (number of displaced persons, say). Some MOE may have an optimum value (tax revenue per person, perhaps).

When MOEs are developed, *how* each MOE will be measured should be described. The required sampling frequency needs to be considered. At the operational level, more frequent than daily sampling is hardly relevant, and the slow processes that are being observed may make weekly or monthly sampling sufficient in many cases. In addition, the manpower required to gather the data may dictate a less frequent than would otherwise be desired.

In the NATO ESA framework, MOE are frequently assessed by HQ personnel, on a scale of 1 (worst) - 5 (best). This approach saves work (an important

[47] OECD (2007), p. 28
[48] Janiczek (2002), pp. 17
[49] Cohen (1995), pp. 127

consideration in any operation), but may lead to questions about the validity of the assessment. The other approach is to gather statistics about the situation in the conflict area, which may lead to more valid data, but will be requiring much more manpower. Both approaches can be used with purposeful assessment, but the choice should be made carefully.

If actual statistics is gathered, the option of outsourcing the survey work should be considered. Companies conducting surveys have more expertise on that process than a military HQ, and conducting surveys in-house takes soldiers away from their main mission. Of course, the security situation may anyway require a military survey.

3.1.2 Battle Damage Assessment

As noted in chapter 2 above, the history of battle damage assessment has reported more short-comings than successes. It may be tempting to give up completely on the concept, but if a functional targeting cycle is to be designed, there has to be a way to assess the outcomes of the targeting efforts. BDA thus has to be fixed.

In addition, the requirement to conduct operations "amongst the people" means that the force *has* to know what effects have been sustained by the serviced targets, including any collateral damage that may occur.

Simply put, no target should be serviced unless collection assets can be directed to assess the outcome of the strike.

In a Peace Support context, the tempo in the targeting process may be lower than in a full-scale war, which may make BDA easier to some extent. At the same time, BDA for information operations will remain a big challenge.

Information management for BDA needs to be streamlined so that all relevant BDA information ends up in the right place. BDA for a certain target should be the responsibility of the commander that ordered the target serviced in the first place.

BDA for information operations present a different set of challenges, which is only sketchily covered by current BDA doctrine.[50] Current US doctrine for PSYOPS offer some valuable clues.[51] The main vehicles for gathering PSYOPS evaluation data are surveys and interviews among the target audience, thus

[50] BDA Handbook (2004)
[51] FM 3-05.301 (2003): *Psychological Operations Tactics, Techniques, and Procedures*(US), chap. 7

gathering both quantitative and qualitative data. This approach fits well with the overall methods outlined in Purposeful Assessment. While the data requirements for information operations and overall assessment of the campaign has to be co-ordinated, assessment of information operations probably requires its own set of MOEs and MOPs, as outlined in the next section.

3.1.3 Multi-Level Assessment

The NATO guidance on assessment makes the argument that we can't assume the attainment of effects from the completion of actions.[52] Similarly, just because subordinate effects are achieved doesn't mean that the overall effect is achieved. Thus, every level of campaign effects needs their own assessment.

The minimum amount should be two levels, one level for assessing overall campaign effects and one level for conducting battle damage assessment. If more level of effects are identified in the planning process (or similar planning artefacts, such as conditions or objectives), they should have their own MOE associated with them.

In addition, and in keeping with mission command, each level of command, from the strategic to the tactical, should conduct their own assessment of the situation.

3.1.4 Goal-free evaluation

Goal-free evaluations are activities where the evaluator examines the actual results, outcomes and impacts of interventions rather than verifying achievement of expected results or pre-stated objectives.[53] [54]

This will serve to find out unintended consequences of military actions, and offer an opportunity to learn about the operating environment in a different framework than when using MOE, which are connected to the stated objectives of the operation.

Goal-free evaluation requires an evaluator that isn't "tainted" by the goals of the activity being evaluated.[55] For that reason alone, goal-free evaluation is an activity that is a good candidate for outsourcing. In addition, qualitative

[52] ESA Handbook (2007), p. 17
[53] OECD (2007), p. 47
[54] Scriven (1972): "Pros and Cons about Goal-Free Evaluation", in *Journal of International Evaluation*, Dec 1972, Vol. 3 No. 4
[55] Ibid.

investigation approaches are uniquely suited to goal-free evaluation[56], and the skill in such approaches may not be available within the military organisation.

Goal-free evaluation will present challenges, as the actions taken by a military force cover a wide area, and may have to be covered by an extensive staff of evaluators.

[56] Patton (2003): *Qualitative Evaluation Checklist*, http://www.wmich.edu/evalctr/checklists/qec.pdf

3.1.5 Probing Operations

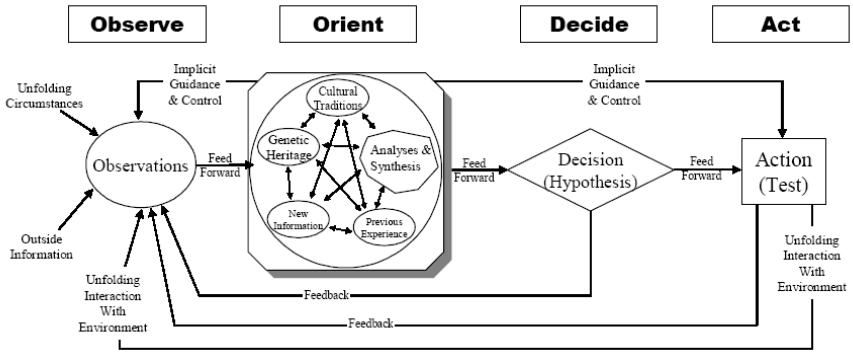

Figure 2: John Boyd's Original Conception of the OODA Loop (After Leedom & Eggleston (undated): The Simulation of Sensemaking and Knowledge Management within a Joint Effect-Based Planning System)

Within the framework of an effect-based approach to operations, the distinctions between regular operation and intelligence operations will diminish. The level of uncertainty is such that *any* action taken will test the hypothesis it is based, at least the theory of change that underpins the action. See figure 2.

The testing of hypothesis may be the main driving force behind the operational design and sequencing of the operation, thus being the main driving force for the conduct of action.

Thus becomes important to gather data from all actions, both data concerning the *effects* of the action and descriptions of the actions, in order to establish connections between the resource and the effect perspective.

Probing operations does not have to be attacks with lethal force (which Rules of Engagement may anyway not allow), but should conceivably be designed as actions that put possible adversaries in a dilemma.

3.2 The Resource Perspective

The resource perspective is where resources are measured; we are asking questions such as how much man-power was used to complete a certain task, how much resources are consumed and how many hours did the completion of a task take. The main objective is to understand how much effort is spent on achieving a certain effect.

The resource perspective can be considered a *leading* measure, i.e. measures of input, effort or cost.

3.2.1 Using Measures of Performance

NATO[57] advocates using measures of performance (MOP) in order to understand how resources are spent in the operation. In practise this is more challenging than it first seems, as many military actions are not easily disassembled into comparable tasks. There is no simple definition on what constitutes exactly one "patrol", for instance.

Using thresholds with MOPs may be even more damaging than using thresholds with MOEs. Primarily, there is no good reason why using more resources to achieve a certain effect is necessarily better – presumably we want to use the least necessary effort to achieve a certain effect. Secondarily, using thresholds with MOP may be at variance with mission tactics. Higher command should refrain from dictating what methods his subordinates choose to use in order to solve a given task. Thirdly, using thresholds have been shown to focus subordinate organisations to focus on fulfilling quantitative thresholds rather than focusing on the actual objectives of the operation.[58]

Carefully designed MOPs may still have their use in order to understand the level of effort and the time it would take to complete certain tasks.

3.2.2 Using reports and returns

Every military unit is required to conduct regular reporting on their situation and tasks. Re-designing the reporting formats to also support the investigation in the resource perspective may be a less intrusive way of getting to grips with understanding the level of effort required to fulfil tasks.

3.3 The Community Perspective

In Agrell's original work[59], he describes the *organisation* perspective that is focused on internal processes, rules and idiosyncrasies. In the context of Purposeful Assessment, this perspective is turned *outwards*, towards the

[57] ESA Handbook (2007)
[58] Woxblom, Holgersson & Dolmén (2008): *Polisens sätt att genomföra och redovisa LAU-tester,* Polishögskolan
[59] Agrell (1997)

community in the operational area (and thus renamed the Community Perspective).

The main issue under consideration is how power and influence is manifested in that society, and how those patterns are affected by the intervention(s) taking place.

3.3.1 Social Capital

A useful definition of social capital is the "relationships among actors (individuals, groups, and/or organisations) that create the capacity to act for mutual benefit or a common purpose."[60] While this definition doesn't immediately lend itself to a measuring approach, considerable effort has been spent on turning the idea of social capital into an operational tool for assessing the state of a society.[61]

A rich body of literature has emerged on this subject; many resources are easily available on the internet.[62] Most relevant for the purposes of purposeful assessment, the World Bank has developed a tool that addresses many key issues regarding social capital in developing countries, the so called SOCAT tool.[63] The tool encompasses several qualitative as well as quantitative investigations, which require field presence in the community itself.

3.3.2 Media Content Analysis[64]

Media Content Analysis involves surveying media publications in order to gauge popular and/or elite impressions of an issue. Media content analysis relies on readily available publications; newspapers, in particular, can be important shapers of public opinion.

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[60] From Schumacher (2007): "What to measure in Peace Operations", in *Measures of Effectiveness: Peace Operations and Beyond,* The Pearson Papers, Vol. 10

[61] Ibid.

[62] For instance Social Capital Gateway, http://www.socialcapitalgateway.org/NV-eng-measurement.htm and Social Capital Initiative Working Paper Series, http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/EXTTSOCIALCAPITAL/0,,contentMDK:20194767~isCURL:Y~menuPK:401035~pagePK:148956~piPK:216618~theSitePK:401015,00.html

[63] SOCAT: Instruments of the Social Capital Assessment Tool, http://siteresources.worldbank.org/INTSOCIALCAPITAL/Resources/Social-Capital-Assessment-Tool--SOCAT-/annex1.pdf

[64] Dziedzic, Sotirin & Agoglia (2008), p 7

3.3.3 Other approaches

The use of criminal profiling techniques has been investigated by the red & green team development effort within the Swedish EBAO Concept. Theses techniques have been found to one way of addressing power and influence issues.

Regular intelligence work will also be useful in the organisation perspective, infiltration operations is one option that could be considered.

3.4 The Stakeholder Perspective

In the stakeholder perspective, stakeholders are offered an opportunity to voice their own concerns. This may include actors from the international community as well as the local population in the conflict area. In a conflict situation, most people present in the conflict zone have a stake in the conflict.

3.4.1 Encourage Comprehensive Assessment

The OECD promotes what they call "Joint Evaluations", evaluating the impacts of actions from several programmes and organisations in a conflict zone together.[65] This approach should be endorsed by the military, in order to establish a full picture of to what extent all the interventions being conducted in a conflict zone add up. This should be helpful to all intervening parties, and may help formulate a common framework for the understanding of the situation.

As the terms "joint" and "evaluation" are used differently in a military context, this activity has been renamed "comprehensive assessment" in this report.

3.4.2 Assessment Workshops

Regardless of whether comprehensive assessment is being conducted, the intervening military force could consider inviting key stakeholders to assessment workshops in order to discuss how situation is progressing. It may not be possible to invite all stakeholders to the same meeting, but several sessions could be conducted in parallel in order to ensure that most stakeholders get the opportunity to assist in the assessment.

This should preferably be a high-level meeting, where the commander and similar representatives from other organisations take part.

[65] OECD (2007), p. 10

This activity also requires that the force has conducted other assessment activities in order to have results to report at the workshops.

3.4.3 Assessment Meetings

In order to solicit deeper viewpoints from key stakeholders, one on one conversations on assessment issues will also be of merit. These could be conducted both between experts in the various organisations, as well as on the commander level. Commander level meetings may have to be preceded by expert meetings. For conducting assessment meetings open interview techniques may be helpful.

3.4.4 HUMINT operations

Some stakeholders will not be available for these open approaches described above. Some won't be invited, and some won't respond. Using regular HUMINT operations is one way of getting a better understating of their point of view.

3.5 Synthesis

To synthesise these perspectives will present challenges. When quantified approaches have been used, such as MOE and MOP, they can be synthesised using regular statistic techniques. If qualitative and quantitative data is being compared, triangulation techniques are often used.[66] As long as no direct contradictions appear, the results of the different approaches may be presented next to each other without problems. The various investigations provide different perspectives on the situation in area of operations. If direct contradictions seem to appear, further investigation is usually required.

3.6 Ethical Considerations

With the participatory approaches included in Purposeful Assessment, a new set of ethical considerations appear.[67] Some individuals approached to be sources in our investigations may take on personal risks if they accept. They may do so knowingly or unknowingly, but it's up to us as assessment professionals to make a judgement about what level of risk is acceptable. Personnel conducting assessment fieldwork, whether from the force or contractors, will also take risks.

[66] Bryman (1995): *Kvantitet och kvalitet i samhällsvetenskaplig forskning*
[67] After Patton (2003)

Other ethical considerations appear in any assessment work, such as depicting the assessed situation as truthfully as possible and understanding what the assessment is to be used for.

4 Mechanisms of Purposeful Assessment

Three main candidate frameworks have been identified for assessment of military operations, the NATO Engagement Space Assessment[68], the MPICE Framework[69], and the OECD/DAC framework for evaluation of conflict preventions and peace-building interventions[70]. As the OECD/DAC framework is a much better fit with the EBAO Principles as outlined in the Swedish EBAO Concept than the other options, it has been chosen as the basis for purposeful assessment. The following paragraphs give an overview outline of the steps in the OECD/DAC framework, as adapted for an EBAO.

The ESA handbook and the MPICE Framework can be used to inform evaluation design, but then the principles of Purposeful Assessment outlined in chapter 3 must be adhered to.

4.1 Obtain or Perform a Conflict Analysis

In the context of the Swedish EBAO concept, products similar to a conflict analysis should already be available as knowledge support or planning products, such as analysis of conflict dynamics.

For purposeful assessment this activity is conducted in close co-ordination with the planning team. In the assessment context, it's especially important to identify stakeholders and key actors.

4.2 Identify intervention goals and assess the theory of change

In the context of effect-based planning, the intervention goals will be the objectives and effects, while the "theory of change" will be the assumptions made regarding how actions will assist in giving the desirable effects.

For purposeful assessment, this step is also the design phase for the assessment process. The following table gives some indication on the design issues that should be addressed for the following assessment.

[68] ESA Handbook (2007)
[69] Dziedzic, Sotirin & Agoglia (2008)
[70] OECD (2007)

Issue	Activities
MOE	What MOE should be used? How should the MOE data be gathered? Which level of planning constructs should have MOE associated with them? (objectives, conditions, effects)
BDA	What capabilities are required for BDA collection? How should the BDA process be organised?
Goal-Free assessment	How should this process be organised? Who should conduct the evaluation?
Probing Operations	Which hypothesis will use probing operations? How will the operation be phased to facilitate this?
MOP	Should MOP be used? If so, which ones? How should the data be gathered?
R3	How should the regular reports from subordinate commanders be formatted to facilitate assessment, especially of own efforts?
Media Content Analysis	What media channels will be covered? What themes will be covered? Who are main “senders” of messages in the media landscape?
Social Capital Measurement	Which areas should be sampled with social capital measurement? How should changes in social capital be tracked?
Profiling	How should profiling be conducted to facilitate assessment?
Intelligence operations	What intelligence operations should be conducted in order to facilitate assessment? On what targets?
Comprehensive Assessment	Can a comprehensive assessment process be organised? If so, who should take part?
Assessment workshops	How should assessment workshops be conducted? Who should take part? How frequently should they be conducted?
Assessment meetings	Who should be approached for assessment meetings? Should expert or commander meeting be conducted?

Table 2: Assessment design considerations.

4.3 Gather and analyse data/information

This activity should start as soon as possible after the assessment design has been made, in order to get a baseline of the conflict situation before the operation starts. Data gathering then continues until the operation is stood down.

Different processes require different sampling frequencies. BDA will be required as soon as possible after a target is serviced, in order to inform further targeting work. MOE might be sampled weekly or monthly, while other efforts might be conducted less frequently. The outcomes of probing operations will be assessed according to the operational plan.

4.4 Examine the effort against various criteria

The OECD has identified a set of criteria for conflict prevention and peace-building activities.[71] While the list is mainly aimed at civilian activities, the same list could be applied to military interventions with little or no modification. The OECD criteria are *Relevance/Appropriateness, Effectiveness, Efficiency, Impact, Sustainability, Linkages, Coverage, Consistency with conflict prevention and peace-building values* and *Coherence.* The following list of issues has been slightly adapted from the OECD/DAC report.

Relevance/Appropriateness:

- Is the intervention based on an accurate analysis of the conflict?
- Does it therefore address key driving factors or key actors in the conflict?
- Is the theory of change on which the activity/policy is based a logical or sensible one in this context at this time?

Effectiveness:

- Has the intervention achieved its stated (or implicit) purpose, or can it reasonably be expected to do so on the basis of its outputs?
- Are the stated goals and objectives relevant to issues central to the conflict?
- Is the effort achieving progress in a reasonable time frame? Is it possible to accelerate the process?
- Should the effort be slowed down for any reason?

[71] OECD (2007), pp 56

Efficiency:

- Does the intervention deliver its outputs and outcomes in an efficient manner (results against costs)? By what qualitative or quantitative measures?
- How does this intervention compare in terms of cost to other options for achieving the same goal?

Impact:

"Impacts" are the results or effects of any intervention that lie beyond its immediate programme activities or sphere and constitute broader changes in the conflict. (See further discussion on assessing impacts in the sub-section on results chains below.)

- What are the primary and secondary, direct and indirect, positive and negative, intended and unintended, immediate and long-term, short-term and lasting effects of the effort? Does the activity impact significantly on key conflict or peace factors?

Sustainability:

- Have those who benefit from ongoing conflict or who would resist movement towards peace ("spoilers") been addressed adequately?
- Will new institutions designed to address conflicts survive? Are they being used?
- Will hard-won improvements in intergroup relationships persist in the face of challenges?
- Will the parties to a negotiated agreement honour and implement it? Are effective mechanisms in place to facilitate implementation?
- Will the resources necessary for implementation be forthcoming from national or international sources?

Linkages

- Are tactical, local actions linked to higher levels (national, regional) and to parallel efforts in other domains (micro-macro, across sectors)?
- Do country-level initiatives account for regional/international dimensions of the conflict or link to efforts that do so?
- Are different efforts contradictory or undermining each other?

Coverage:

- Are there "hidden conflicts" that receive little or no international attention?
- Is sufficient attention being paid to emerging violence and conflict prevention in potentially violent regions?

Consistency with conflict prevention and peacebuilding values:

- Are implementation staff members sensitive to others, unbiased in their judgements, and respectful of people with different opinions or approaches?
- Is the intervention conflict-sensitive, or does it inadvertently exacerbate intergroup divisions and antagonisms?

Coherence:

- Are efforts to co-ordinate/align conflict prevention and peacebuilding programming or policies (across agencies, donor governments, partner governments) resulting in improved effectiveness and greater positive impacts on peace, or not?
- What are the effects – positive and negative – on conflict prevention and peacebuilding activities of "whole-of-government" approaches and policy alignments among diplomacy, security, development and other branches of donor governments?
- How do co-ordination efforts affect local ownership of peace processes (by partner government officials, civil society actors, etc.)?

4.5 Analyse the results chain

This activity analyses the operation bottom up, from the actions that has been performed to whether the conditions and objectives of the plan are being met. Unforeseen impacts are also included in this process.

Within the framework of an operation, these criteria are primarily the objectives of the operation, but it's equally important to assess other impacts that military action may have caused.

This also the activity where all data gathered by various methods needs to be synthesised in order get as broad a picture as the data allows.

4.6 Assess for conflict sensitivity

The "Do No Harm" framework is normally used for assessing the conflict impact of humanitarian and development programmes[72], but may be of merit also in a military context. Some of the required information is already present in an EBAO as planning or knowledge support products.

4.7 Examine the relationship to policies

Determine what policies apply to the intervention being evaluated. Do the actions that are the focus of the evaluation square with the relevant policies? If the operation is judged successful yet does not comply with policies, what does this suggest regarding the effectiveness and relevance of the policies themselves? If the evaluation assesses multiple interventions in the same conflict zone, to what extent do they all comply or not with the policies? What does the success or failure of an activity suggest about the policy? (For instance, if the interventions comply with the policy yet appear to fail, what are the implications for the policy?)

4.8 Engage in a learning process

It isn't sufficient to just present a detailed report on the finding of the assessment activities, if purposeful assessment is to have an impact it must affect decision-making and lead to changes in behaviour.

Results from purposeful assessment must be fed into the various decision processes in the military force. Results must be discussed and presented in ways that facilitate the implementation of meaningful changes to future operations, on all levels of the operation.

While outsourcing of data collection may be desirable from a knowledge and manpower point of view, learning may be facilitated if some assessment activities are kept within the organisation.

[72] *The Do No Harm Handbook* (2004), http://www.cdainc.com/publications/dnh/do_no_harm_handbook.php

5 Conclusions and Recommendations

The OECD makes a plea for conducting “joint evaluations”, bringing as many activities as possible in a certain conflict situation, into the evaluation. This plea is well in line with the aspirations of the Swedish EBAO concept, and is endorsed as an important guideline for purposeful assessment.

The experiences from conducting battle damage assessment in real operations are uniformly fairly negative. In the context of conducting operations “amongst the people”, this is not an acceptable state of affairs. Battle damage assessment needs to be revived, and the investments and processes that need updating should be fixed.

One of the failure points of current assessment doctrine is lack of training, as assessment of any kind is rarely trained in military exercises. The usual military lesson is that you can only do what you’re trained to do. This lesson needs to be applied to assessment activities as well.

One of the tenets of the EBAO concept is to shift focus towards assessment. Regardless of which methods are chosen for assessing the operation, this means that more resources (money and manpower) have to be spent on assessment than is currently the case.

Using thresholds with measures, especially measures of performance, is deemed to be in conflict with mission command and have been shown to risk goal substitution. Thresholds should be avoided.

In order to avoid making implications from assumptions, and in order to test the “theories of change”, multi-level assessment, were several levels in conceptual hierarchy is assessed, should be conducted.

Quantitative and qualitative investigation techniques yield different and complementary results. In a complete assessment process, resources should be allocated to both approaches, allowing a richer picture to emerge.

Whilst not a perfect fit for a military operation, the assessment framework that fits the closest to the aspirations of the Swedish EBAO approach is the OECD/DAC framework for evaluating conflict prevention and peace-building programmes. That has thus been used as the basic framework for purposeful assessment

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