

How might this tradecraft model be used to shape professional development? Traditionally, the professional development of intelligence officers has been shaped by a shopping list of either ‘qualities’ or ‘competencies’, but usually in the context of the technician role. Apart from personal reminiscences, and competition between the so-called ‘Kent’ and ‘Gates’ schools of practice, there is a dearth of literature on the intelligence manager or entrepreneur roles. This tradecraft model would allow a more sophisticated articulation and integration of qualities and competencies in the context of a system of pertinent and interdependent roles. The resulting qualities and competencies would allow the professional development of intelligence officers to move beyond an output-focus with its emphasis on production, to an outcome-focus with its emphasis on effect.

How might this tradecraft model be used to shape organisational development? An individual intelligence officer in any intelligence domain should to some degree be at once a technician, a manager, and an entrepreneur. The efforts of a team of intelligence officers acting as a staff or within an agency should reflect these three roles. Finally, the operation of an intelligence agency, whether involved in collection, analysis or assessment, should exercise these three roles. Albeit at each level of authority, the relative balance between these three roles and their assignment would be prescribed by policy, protocols, and procedures. Also, this approach negates the argument about whether leaders of intelligence teams and organisations should be professional intelligence officers, by moving beyond dichotomous outcomes.

Models are simplifications of the real world that aid in managing complexity. Models identify entities and their relationships to help us better understand behaviour. A tradecraft model provides an intellectual framework for organising a formal body of knowledge, able to inform professional and organisational development. Importantly, a tradecraft model for intelligence officers may be used to guide their self-directed learning—a hallmark of the professional. Ultimately it is up to us to put into practice those tradecraft elements that will promote our profession, contribute to our professional development, and enhance the value we bring to our organisations.

Acknowledgement

Gerber, M.E. (2001). *The E-Myth Manager Revisited: Why most small businesses don't work and what to do about it*. HarperCollins: New York.

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Article

Can we do better than ACH? by Tim van Gelder

The ‘Analysis of Competing Hypotheses’ method, or ACH, is one of the most important tools on the analyst’s bench. It helps an analyst determine which of a range of hypotheses is most likely to be true, given the available evidence. At its heart is a matrix, with hypotheses listed across the top, and items of evidence listed down the left side. There is then a square or cell in the matrix corresponding to every hypothesis/evidence pair, in which one indicates whether the item of evidence is consistent or otherwise with the hypothesis. For more information on ACH, see Richards Heuer’s classic *The Psychology of Intelligence Analysis*.

ACH is based on some fundamental insights, such as the “many-many” relationship between hypotheses and evidence, and the value of structured thinking techniques using external representations.

However, while some intelligence analysts use the ACH technique regularly and perhaps even enthusiastically, apparently most don’t use it unless they really have to. It seems that for them ACH is not worth the effort. In my own experience using ACH, difficulties of various sorts rapidly arise; and as the mental effort involved in struggling with those difficulties mounts up, alternatives, such as “muddling through” without the use of a tool such as ACH, or using some other tool, look increasingly attractive.

In what follows I briefly discuss some problems with ACH and point in the direction of an alternative.

(I) Too many judgements

The number of separate judgements demanded by the ACH technique can very large; for example, with 20 items of evidence and five hypotheses, you’d have to make 100 distinct judgements, each taking some modicum of conscious mental effort. Ugh! To make matters worse, many of these judgements return a “neutral” verdict. In such cases, the mental effort of making the judgement seems to have yielded no immediate progress towards the goal of assessing the relative merits of the hypotheses. It takes serious commitment to crank through dozens of such boring judgements in pursuit of some result at the end of the process. When in the midst of the ACH procedure, being forced to consider every piece of evidence e in relation to every hypothesis h , only to conclude, very often, that it is irrelevant, is a dispiriting activity; it feels like “makework” demanded arbitrarily by a tedious and laborious process.

(2) No e is an island

Superficially, ACH treats an item of evidence as consistent or inconsistent *on its own* with each of the hypotheses. But this is an illusion. The evidential relationship between one proposition and another is always mediated by other propositions. (*Socrates is human* is only good evidence for *Socrates is mortal* if it is also true that *humans are mortal*.) The matrix structure of ACH allows no way to “factor in” these mediating propositions.

(3) Flat structure of hypotheses

Hypotheses can be more or less general or abstract, and a general hypothesis can have sub-hypotheses. In the case of the assassination of Princess Diana, one general hypothesis is assassination and another general one is accident. The general assassination hypothesis can have sub-hypotheses such as assassination by MI5, assassination by mafia, etc.

This is important because distinct items of evidence can count for or against hypotheses at various levels. Thus a bullet hole in the limousine would count in favour of *any* assassination hypothesis (or at least many such hypotheses), while an internal MI5 document might count for or against only the MI5 sub-hypothesis.

The classic ACH matrix asks for all hypotheses to be entered individually across the top row, and then to be compared against all pieces of evidence. But in the case of an hierarchical structure of hypotheses, this will result in an absurd duplication of effort, in which for example a piece of evidence bearing on all assassination hypotheses is compared not only against the general assassination hypothesis but also against all its sub-cases.

(4) Subordinate deliberation

By its nature, being based on a matrix structure, the ACH approach does not consider what is “behind” or “underneath” any given piece of evidence. From a piece of evidence, it looks “forwards” or “upwards” to its bearing on the hypotheses under consideration. However the weight of a piece of evidence depends on the soundness of that piece of evidence, which is judged in terms of information bearing upon it. In the standard ACH framework there is no way to represent or display this layered structure.

(5) Decontextualisation and discombobulation

ACH, in demanding that we make so many judgements even as it strips the context of those judgements away, is constantly asking us to engage in these sorts of mentally taxing, even discombobulating exercises. After an extended bout of ACH, I tend to feel a bit dazed and confused, and have to stave off that feeling with redoubled mental effort to see the sense of the judgements I’m making.

These five may not be the only problems with ACH, but they do at least establish that ACH has some very serious problems.

If you wanted to replace the ACH matrix, what would you use? One candidate is the argument map. However while this method has some great strengths, for hypothesis testing it has a complementary set of weaknesses. But a new type of mapping designed specifically for hypothesis testing can take and blend most of the best elements of both ACH and argument mapping, thus superseding them both. Hypothesis mapping enables users to rapidly and intuitively assemble a (hierarchical) set of hypotheses in relation to some issue, items of evidence bearing on multiple hypotheses, assumptions, and subordinate considerations; and does so in an intuitive and visually appealing way.

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