

WARRIORS AND SOLDIERS

Based on Captain Matt Braid's letter [Vol. 2, No. 4], it is evident that I was not successful in making my argument against the cult of the warrior. The point I apparently failed to make was that the real warrior — the one in the historical record — differed diametrically from the soldier precisely because he would not be bound by laws and regulations. The whole point of the warrior is that he acknowledged no authority other than the allegiance he gave and which he could withdraw at will, and he recognized no restraint on his own autonomy. A warrior who subjects himself to military discipline ceases to be a warrior.

To anyone who thinks you can have warriors and soldiers in the same army, imagine a group of Hell's Angels bypassing enrolment and recruit school and being integrated unconditionally into an infantry battalion. They would subordinate themselves to no authority but their own leaders, recognize no code of discipline but their own arbitrary strictures, wear their own 'uniform' and perform only the work they chose to do. Imagine the effect this group would have on the rest of the battalion. This would appear to be what Captain Braid proposes with his suggestion that the Army should contain both soldiers and warriors. Within a short time, all the soldiers would be Hell's Angels, or the Hell's Angels would become soldiers: there is no third option.

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Greek Warrior

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STRATEGIC RISK ASSESSMENT

I read with some interest the letter by Dr. Jay Adamsson [Vol. 2, No. 4], where he applauds the work of Finan and McNamara ["An Illustrative Canadian Strategic Risk Assessment," Vol. 2, No. 3], but then suggests that the technique they used, the Analytic Hierarchy Process (AHP), "has been discredited in the scientific community." Dr. Adamsson is correct. The AHP is, for the most part, a flawed decision process. However, his assessment of the source of the problem is entirely incorrect.

Adamsson lists two difficulties. The first has to do with the basic measurement problem, one that is common to any numerate approach to decision analysis. He writes: "The process quantifies subjective data, but it does so in an arbitrary manner that is difficult, if not impossible in most cases, to justify logically." I am not aware of a single paper in the operational research literature that faults the AHP on this basis. In fact, most researchers agree that ratio measurement, the hallmark of the AHP, is a strength, not a weakness. Moreover, any numerate approach to tough decision problems will require that decision-makers make complex, subjective judgements. The AHP is hardly unique in this respect.

Adamsson's second difficulty is one he terms a "consistency problem," which he interprets as "[s]mall

changes in the input often result in wide variations in output." Again, I am not aware of a single paper that makes this point. In fact, it is well known that the AHP has a continuity property whereby small changes in the input data always give small changes in the output data. If anything, the AHP tends to dampen large changes in the input data.

The real problem with the AHP is the way it aggregates over levels of the hierarchy. This has been well documented in the work of Jon Barzilai ["On the Decomposition of Value Functions," *Operations Research Letters*, 22, (1998), pp. 159-170], Finan and Hurley ["The Analytic Hierarchy Process: Can Wash Criteria Be Ignored?," *Computers and Operations Research*, 29(8), (2002), pp. 1025-1030], and Belton and Gear ["On a Shortcoming of Saaty's Method of Analytical Hierarchies," *Omega*, 11, (1983), pp. 227-230]. The Belton-Gear example is particularly good. They give an instance of an AHP hierarchy which examines three alternatives: *A*, *B*, and *C*. Their conclusion is that:

$$A > B > C$$

That is, *A* is preferred to *B*, and *B* is preferred to *C*. They then add a fourth alternative, *D*, which they assume to be a copy of alternative *C*. A reasonable decision system ought to return the following rank-order:

$$A > B > C = D$$

This means that a decision-maker prefers *A* to *B*, prefers *B* to *C*, and is indifferent between *C* and *D*. Unfortunately the AHP returns:

$$B > A > C = D$$

Note that *A* and *B* have reversed ranks! That is, by adding a copy of an inferior alternative, the top two alternatives reverse their rank. This phenomenon is called *rank reversal* and most researchers agree that it poses a serious challenge to the AHP. As it turns out, the examples in the Belton-Gear and Hurley-Finan papers are symptoms of the hierarchical aggregation problem Jon Barzilai has identified.

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While Dr. Adamsson [Letter to the Editor Vol. 2, No. 4] may indeed be correct that the Analytic Hierarchy Process (AHP) technique has drawbacks and detractors, I would ask him to offer an alternative means for tackling the complex problem that Finan and Macnamara attempt [Vol. 2, No. 3]. I do not believe that Finan and Macnamara hold that their use of the AHP is the final word on this subject. Rather, what they have done is to structure an otherwise intractable problem in such a way that reasonable people can debate the risks associated with various threats and, more importantly, have a meaningful discussion on what might be done.

I would suggest that in the spirit of true debate, Dr. Adamsson offer an alternative methodology to approaching this problem or we will be no further ahead. I think all would agree that we very much need to make progress on this front.

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INTELLIGENCE ON PEACEKEEPING OPERATIONS

I am a retired Intelligence officer, conducting research towards a PhD at Queen's University on the topic of "Intelligence Support to Multinational Peace Operations."

I am seeking information from CF personnel about their peacekeeping experience, particularly relating to Intelligence in the broadest sense. This could include patrolling, surveillance, taskings and direction, or perceptions about Intelligence during their mission. For combat arms leaders or operations staff, what Intelligence support was available or lacking? For Intelligence troops, what were some of the limitations and/or successes? Do you have insights about the Intelligence system and its operations, both positive and negative experiences, in a multinational coalition? The scope of information I'm seeking is quite broad.

Any assistance members of the CF can provide will be greatly appreciated. When responding, please include information about the position you held and the dates of your service with the mission. Anonymous contributions, unfortunately, cannot be used, but if you do not wish your comments attributed to you in the thesis, please indicate this in your reply.

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