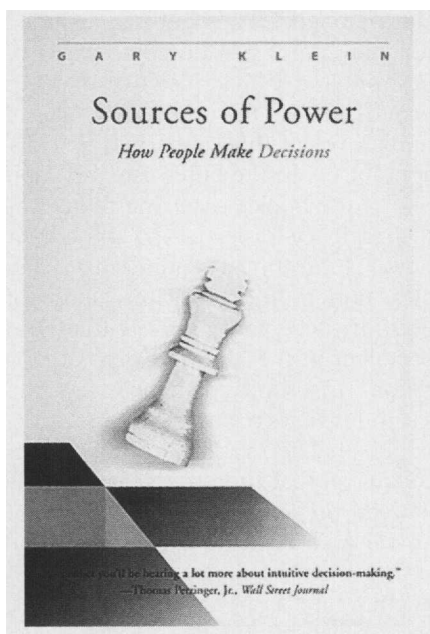


Experts in Action

reviewed by LtCol F.G. Hoffman, USMCR

SOURCES OF POWER: How People Make Decisions. By Gary Klein. MIT Press, Cambridge, MA, 1998, 352 pp., \$44.00 hardcover, 338 pp., \$20.00 paperback. (Member \$39.60/\$18.00)



What the great leaders, Caesar, Napoleon, Wellington, Nelson, Robert E. Lee, and George Patton have in common is a consistent talent for rapidly understanding the context for tactical decisions and an intuitive grasp of events. Napoleon was noted for his quick scan of the battlefield and his innate ability to separate confusion from the truth. Wellington's fans regularly note his bird-like eye for terrain. At the Battle of the Nile, as the British fleet approached the French fleet anchored in Aboukir Bay, Nelson quickly took in the situation and attacked without stopping. Southey, one of his earliest biographers, noted that the "intuitive genius with which Nelson was endowed displayed itself."

Sources of Power is a book that seeks to explain this intuitive genius. It represents the efforts of Dr. Gary Klein, a cognitive psychologist, to determine how people make

decisions and solve problems under natural conditions. Dr. Klein's work and conclusions will be familiar to many Marines, as they have been distilled before into official Marine Corps doctrine and in the pages of the *Gazette* by both Klein and Maj John F. Schmitt, USMCR.

Both business schools and our formal military education programs use case studies and elaborate formal analyses as the basis for training leaders in the art and science of decision-making. Formal analyses of multiple options are fine for schools and for deliberate strategic planning. However, in many more occasions, decisions must be made at the operational and tactical level in the heat of combat, where time is of the essence, and where informational uncertainty is rampant. In such cases, the capacity to make rapid decisions under conditions of uncertainty is paramount. Napoleon called this "a superior understanding," Clausewitz called it an "inner light," and Dr. Martin van Creveld described it as:

one based on training and practice but ultimately relying no less on intuitive judgment than on rational calculation.

According to Dr. Klein's research, expert decisionmakers employ a technique he has described as recognitive decisionmaking. In recognitive decisionmaking or RDM, expert decisionmakers recognize a situation as being similar to a pattern of data or a similar situation that they have faced or studied. They intuitively seek cues about the current context and past experience to determine if it is indeed a similar situation. From this they can determine what goals and options appear feasible, and what actions

might occur next. They rarely have to consider more than one option. The emphasis in RDM is finding a course of action that will work, and putting it into action quickly, rather than assuming that all available information and potential options can be assembled and categorized and assessed. The advantages of this technique are that it is much faster than a computational or formal mode, it copes better with stress and uncertainty, and it realistically addresses the dynamic ambiguity of combat.

The basis for this "superior understanding" and intuitive judgment is not pure genius but the aggregate capability that stems from numerous "sources of power."

- The power of intuition—the use of experience to recognize key patterns that indicate the dynamics of the situation.
- The power of mental simulation—a heuristic strategy that involves the ability to consciously visualize a transition of people and objects into an action sequence.
- The power to spot leverage points—leverage points are the start point for insightful problem-solving and the focus for building effective solutions.
- The power to see the invisible—experts are different, they see things the rest of us cannot—particularly patterns, anomalies, missing events or pieces, very fine differentiations, and the big picture.
- The power of stories, metaphors, and analogues—to organize events into a meaningful framework, as well as help the decisionmaker to identify or flag events and direct thinking, then generate expectancies of what should occur.
- The power to read minds—communicating intent to promote independence and improvisation when local conditions vary with expectancies or when new opportunities arise.
- The power of the team mind—many decisions are the products of teams that assimilate information and learn differently than individuals. Examples include aircraft or tank crews. Team minds generate more creative solutions.

If recognitive decisionmaking is

representative of how decisions are made most of the time, one of the most important questions underlying our approach to war and to command and control must be, "How can we best develop the intuition and RDM skills of our Marines?" How can we improve their judgment and ability to recognize patterns? Dr. Klein offers a number of critical implications for training.

The research strongly suggests that the key to developing intuition or RDM skills lies largely in enhancing pattern recognition. This ability is not a function of intelligence, superior memory, or better knowledge of rules. It is, essentially, the ability to perceive large, meaningful patterns, and do so with such speed that it appears almost intuitive. This is not a God-given ability, but is one honed by extensive effort and study. To be effective, career patterns and military education programs must provide the opportunity for leaders to address numerous problems and generate as wide an experience base as possible. Additionally, they need to formally review these de-

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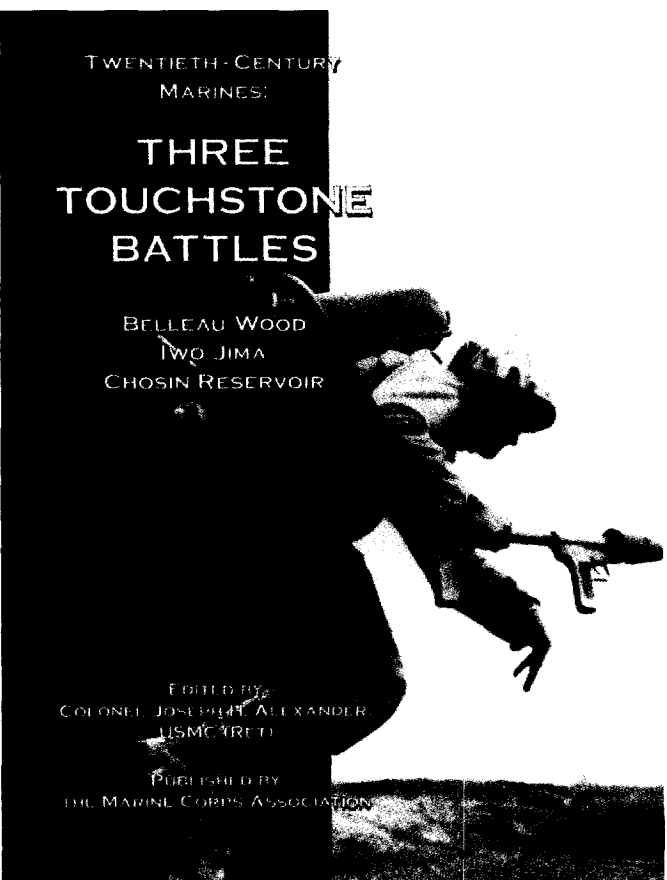
cisions and experiences to learn how to draw on as many “sources of power” as possible. The emphasis in all of these activities needs to be focused on providing a means for daily decision-making practice under the sort of time and information limitations we can expect in combat. The ultimate lesson in *Sources of Power* is that experience counts, experts cannot be made, but that experience and perceptual skills can be generated over time.

A great deal has been said about advances in Information Age technologies and the so-called Revolution

in Military Affairs. The truth is the human brain remains unexcelled at rapid and accurate pattern recognition. Dr. Klein’s book suggests we will get more return on investment on resources spent to significantly improve the training of our commanders and Marines for the “three block war” than in buying more systems and communications gear. *Sources of Power* is a tremendously valuable body of work and offers a rich number of anecdotes and examples of interest to both commanders and educators. It should be promptly examined by all formal school directors and educators to help construct the necessary changes in our formal professional military education programs to ensure that Marines in the future bring their own “intuitive genius” to bear.

US  MC

>LtCol Hoffman is a member of the National Security Study Group, also known as the Hart-Rudman Commission, exploring and designing alternative strategies and structures for the 21st century. He recently served at the Marine Corps Combat Development Command, Quantico, VA.



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