ficial difference in kind must be conceded.

The major part of the book is "a dialectically objective assessment of the research and thinking" that has so far been devoted to this subject. It is fascinating as a display of dialectical skill, and if in the end it leads to no definite conclusion, the failure is to be attributed not to any defect in the argument but to its resolute logic. It is impossible to summarize a process so complex, which takes into account scientific evidence of many kinds, some of it conflicting. Everything centers on whether the power of conceptual thought, possessed by man alone, can be adequately explained by reference to neurological mechanisms and processes or whether, on the contrary, it involves some factor in addition to the action of the brain (a ghost in the machine).

Dr. Adler concludes that this fundamental question cannot yet be answered, but suggests that it may be resolved in the future—not by a more adequate analysis, but by the construction of a *deus ex machina*, that is to say a thinking machine, a robot that not only can answer questions that are "programmed" for it but can be taught to use a language such as English and use it constructively. Such a machine "must be able to learn from its own experience and must be teachable, as the human being is. Like human beings and unlike computers, robots must be capable of making errors that are not wholly explicable by mechanical defects, as are the errors of a programmed computer." Then, and only then, can we conclude that there is no gap in the continuity of nature, no radical or superficial difference between man and other forms of life.

In the final section of his book Dr. Adler considers the implications of such an invention for human thought and action. Instead of summarizing his speculations I would like to state my own objection to his conclusions.

Nowhere does Dr. Adler draw a distinction between conceptual thought and creative imagination. I can admit the possibility of a robot that could simulate human intelligence in its higher reaches—that was capable of intellectual (logical) processes and even of correcting errors. But there is a decisive difference between intellection and imagination. Imagination relies on irrational factors: metaphors (the significant collocation of disparate images), the unpredictable synchronicity of mental events (inspiration), and above all the use of symbols (which cannot be reduced to signs or signals) to represent feelings. Until a robot possesses spontaneous creative powers of this kind, which are distinct from conceptual thought, I shall persist in finding a superficial difference between man and other animals.

Secrets of the Secret Services

***The Espionage Establishment**, by David Wise and Thomas B. Ross (Random House. 308 pp. $5.95), **My Own River Kwai**, by Pierre Boulle, translated from the French by Xan Fielding (Vanguard. 214 pp. $5.95), and **White Tie and Dagger: Inside Embassy Row**, by Andrew Tully (Morrow. 257 pp. $5.95), disclose with varying degrees of authority the inner workings of secret services from our own CIA to Communist China's "Social Affairs Department." An ex-practitioner of intelligence, Ladislas Farago now writes about the practices and ramifications of his former craft. His recent book, "The Broken Seal," describes the intelligence and espionage background of the attack on Pearl Harbor.*

By LADISLAS FARAGO

IT IS a well-known fact in the twilight regions of espionage that the so-called intelligence communities spend far more time spying on each other than in procuring the genuine and really vital secrets of other governments. This, in the lingo, is called "penetration." Every secret service has a special branch within its labyrinth-like organization for the purpose of penetrating rival espionage agencies.

The rather morbid preoccupation with this aspect of the activity redounds to the disadvantage of the governments that hire these secret servants. Their spies usually know quite a lot about one another but amazingly little about the plans and intentions of their employers' adversaries.

It is not too difficult for one secret service to penetrate another. Espionage is part of the pathology of international relations. Its hideouts are crowded with aberrant personalities whose allegiance is frequently available to the highest bidder. There is a steady traffic of defectors commuting from one secret service to another. They take along on their dark journeys the one commodity that renders them important and valuable—some information about the structure, personnel, and operations of the agency they are abandoning.

It is, however, startling and rather reassuring to find outsiders who have managed to penetrate the innermost secrets of the world's great espionage establishments and give us as comprehensive and authentic a report as David Wise and Thomas B. Ross have succeeded in presenting in their book. They went after the secrets of the Soviet, British, Chinese, and American espionage giants with the gusto of explorers and the skill of great reporters, and produced a fantastic mosaic built of a myriad scattered stones, including such chips as the unlisted telephone number of M.I.6, Her Majesty's Secret Intelligence Service, and the ailment from which the wife of the new chief of the KGB, one of its Soviet rivals, is suffering.

Their success in shedding such glaring light on what are supposed to be invisible and inscrutable organizations proves to me two major points. One is that the secret services are no longer as secret as they used to be, are now supposed to be, or ought to be—bearing out Ian Fleming's amusing assessment of the activity. During World War II, when he served in the Admiralty's Division of Naval Intelligence, Fleming carried a slip of paper in his wallet, a typewritten reminder, as he called it, to sustain his sense of proportion and humor. "Never in history," it read, "was so much known about so little to so many."

The other welcome confirmation of one of my old contentions produced by this book is that working newspapermen like Wise and Ross are much better than professional intelligence specialists, by and large, in ferreting out secrets their self-appointed and self-anointed custodians go to extreme lengths in trying to keep. As a result, the two Washington reporters, working with the limited means available to outsiders but with the vast tangible and intangible paraphernalia of seasoned journalists, give us a book that is both fascinating as sheer reading matter and important as a contemporary document.

As they themselves put it, "Since the end of World War II, powerful espion-

age establishments, often consisting of several interlocking yet competitive secret agencies, have grown up in every major country of the world. . . . In the process these intelligence organizations have themselves become great wellsprings of secret power within their own societies." Part of their power stems from the calculated secrecy in which they shroud themselves and their activities, both licit and illicit, both useful and useless, both beneficial and harmful.

Wise and Ross have established themselves as something akin to scourges of the espionage establishments. This was exactly what they set out to become. Their exposés are carried by a thesis and a deeply felt conviction. Their thesis is that the mushrooming spy bureaus are far from being, as it is widely claimed, their countries' "first line of defense in the nuclear age" but, rather, the sources of permanent crisis, "particularly in their ability to provoke events by clandestine activity." Their conclusion is that the proliferation of "espionage," and especially our own particular reliance on it as a national safeguard, infuses the so-called American way of life with a pernicious creeping immorality.

THIS is the definitive book on the espionage establishments of the superpowers, scoring a number of admirable scoops. It strips the centuries-old, carefully cultivated veil from the British secret service combine, whose elaborate secrecy is as much a pageant as the changing of the horse guards in Whitehall. Wise and Ross leave little to imagination or conjecture about the KGB-GRU tandem of Soviet espionage, the vast and insidious apparatus that continues, with the most modern streamlining, the traditions and practices of the tsarist secret services.

The Espionage Establishment affords the first insight into and details about the "Social Affairs Department" of Communist China, as seemingly inefficient and ineffective because of its blind bias and frenzied fanaticism as it is strong nevertheless because of its antlike diligence, lack of scruples, and trigger-happy recourse to violence. And though they wrote *The Invisible Government,* a remarkable "penetration" of the American espionage establishment, the authors still manage to add to the blurred picture of the CIA, revealing, among other new data, that—in apparent violation of the Agency's "charter" and "legal mandate" that are supposed to preclude "domestic operations"—it now has a Domestic Operations Division.

Written in a breezy journalistic style with proper touches of indignation and occasional solemnity, *The Espionage Establishment* is an indispensable guide to a secret world without which our daily readings about spies and their transactions cannot be understood or properly evaluated.

Those who enjoyed the subtle irony of *A Noble Profession* and the high drama of *The Bridge Over the River Kwai* appreciate Pierre Boulle's gift for turning his books on war and spies into real literature. His new book, *My Own River Kwai,* is a sensibly and sensitively, modestly and charmingly written account of his "incongruous adventures" as a Free French secret agent during the Japanese tenancy of Southeast Asia in the Second World War.

Though Boulle warns that he himself was but a minor cog in the huge underground movement that abraded the transient conquerors, his narrative has plenty of what he calls "morbid excitement." It becomes well-nigh breathtaking in the description of his harrowing passage in a raft down the torrential Nam-Na River on a nebulous secret mission that led Boulle, by way of a Vichyite prison in Hanoi, to his new career as the writer of some of the best books on the craft of espionage.

Andrew Tully's *White Tie and Dagger,* on the other hand, is a hash-slinging job, mixing lean facts with a generous seasoning of fancy. Though the jacket blurb suggests that Tully approaches his topic with some xenophobia (by dubbing the book "the story of how foreign embassies spy on the U.S. and influence American opinion, policy and laws"), the narrative itself is about evenly fair (or unfair, as the view may be) to both camps in the Cold War.

I agree with Mr. Tully that his subject is intriguing and that the problem is in urgent need of a more thorough looking-into than was provided by the perfunctory interest in it Senator Fulbright has shown. But I object to the total absence of hard documentation in a book that abounds in huge stories and sweeping statements. Without it, *White Tie and Dagger* often sounds like shop talk at the National Press Club's bar, where, I fear, some of his stories probably originated.

THE current profusion of this sort of book goes far to bear out the regretfully voiced contention of Wise and Ross that the sordid business of espionage has become a permanent fixture in our lives. "There can be," they say, "no turning back to a simpler time when reality could more easily be made to conform to morality." We may, as they phrase it, wake up one day to find that the face in the mirror is no longer our own. "And then the judgment of Jacques Barzun will have come true. 'The soul of the spy,' he has warned, 'is somehow the model of us all.'"

The Super-Sleuths

The Codebreakers: The Story of Secret Writing, *by David Kahn (Macmillan, 1,164 pp. $14.95), an exploration of the "black chambers" of history, details how cryptanalysts have been responsible for the outcome of major battles and diplomatic maneuvers. Paul W. Blackstock, a professor in the Department of International Studies at the University of South Carolina, wrote "The Strategy of Subversion."*

By PAUL W. BLACKSTOCK

IN DEFENSE of this sprawling yet monumental work the author correctly observes that codebreaking is the most important single source of secret intelligence today and that it badly needs a chronicler. Although cryptanalysis made possible the U.S. victory in the battle of Midway Island, which turned the tide in the Pacific and shortened the Second World War by at least a year, the history books have given it no more than passing mention. By sheer coincidence, since the two authors worked independently of each other, David Kahn's *The Codebreakers* and Walter Lord's book on the Battle of Midway, *Incredible Victory,* were published at roughly the same time. Both describe in detail the complex workings of communications intelligence (codebreaking and traffic analysis) on which the victory was based. This is a remarkable breakthrough. For example, Winston Churchill's great history of World War II was carefully "sanitized," and nearly all references to Allied communications intelligence were deleted, although, as Kahn observes, "Britain thought it vital enough to assign 30,000 people to such work."

Heretofore American authors writing on national security and intelligence have been equally circumspect. For instance, in his book on *The Craft of Intelligence* former CIA chief Allen Dulles includes a small purely elementary section on "Codes and Ciphers" but refers only twice to the National Security Agency, which is engaged in breaking