Maxing Out Our Take

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M aximum sustainable yield (MSY) is, for its detractors, an idea that has outlived a usefulness it never had. The idea: A wild population can withstand human extraction, without harm, in perpetuity, up to some maximum amount. MSY’s flaws include its nonconsideration of food webs and its fixation on “maximum.” Quantifying MSY requires data that many fisheries lack. And political exigencies frequently cause fisheries managers to simply set catch limits far higher than the scientifically recommended, formally calculated MSY. But rather than blaming fishery failures at least partly on managers’ frequent refusal to apply the principle, some put all the blame on the principle itself. The author of All the Fish in the Sea is among them.

Carmel Finley (a historian at Oregon State University) dismisses MSY as unscientific: “MSY is, and always has been, policy disguised as science” and “a straitjacket on the ability of scientists to incorporate new scientific understandings.” She also claims that the adoption of MSY set off “a free-for-all to catch the world’s fish stocks.”

Is MSY guilty as charged? Since the 1970s, Alaska’s fisheries managers have generally held catches to scientifically quantified estimates of sustainable yields. Meanwhile, New England’s managers routinely ignored scientists’ recommendations. Alaska maintained robust fisheries. New England’s fisheries collapsed. U.S. law recently limited catch quotas to MSY-based calculations, facilitating some significant recoveries. Perhaps MSY can be useful despite its flaws. The free-for-all that Finley blames on MSY was, in my view, the near-invariable result of a technological explosion in a competitive world that hadn’t found the limits to ocean resources. Fishing nations were simply racing to the fish.

Yet, cutting MSY no slack, Finley dismisses the modest notion that MSY represented an implied acknowledgment that resources have limits. Finley’s finger of blame even lands upon Garrett Hardin. She holds that his “‘Tragedy of the Commons’ paper … implied that it was impossible to control the ‘commons.’ This in turn provided justification for those who opposed … international regulatory regimes. Moreover, by persuading scientists that overuse of resources was virtually a law of nature, Hardin’s analysis drew attention away from the conscious government policies that had helped to produce the prevailing situation.” Well—I doubt many ecologists agree.

The book’s most interesting, tragic, road-not-taken figure is Michael Graham, a Quaker, soldier, farmer, and human ecologist who, after World War II, became Britain’s chief fisheries scientist. Having independently deduced the precautionary principle, he articulated his “great law of fishing: ‘Fisheries that are unlimited become unprofitable.’”

The timing was superb. War had devastated fishing fleets, allowing fish to recover from earlier depletion. Graham correctly saw a go-slow opportunity for “rational fishing.” But the mood was wrong. The United States and other developed nations wanted to stop poorer countries from defensively extending territorial claims seaward. Governments hurriedly expanded fishing fleets to project their nations’ dominance. Foremost was the United States.

As Finley sets it up, Graham’s ideological rival was Wilbert M. Chapman, the U.S. State Department’s fisheries undersecretary, who propounded MSY with evangelical zeal and self-deceiving jingoism. MSY was then merely a concept accompanied by a qualitative curve, with no quantitative parameters and no supporting data. At the curve’s low end, fish were wasted by leaving them in the sea; at its high end, excess fishing drove the population down. But finding that sustainable maximum meant that fishing would not be restricted until the stocks were overfished. Chapman never believed that fishing could deplete a fish population. Others held that bankruptcy following depletion would prevent fish extinction—and they expected MSY to work automatically, in this self-regulating way. Chapman asserted that his policies would “make possible the maximum production of food from the sea on a sustained basis year after year.” His MSY was not really a limit, but a goal to be reached.

Chapman, the American policy-maker, emphasized “maximum.” Graham, the British scientist, believed that “the primary objective of fishery conservation is to control man’s activities” and that “an intermediate rate of fishing gives the best result.” But events drove policy. Latin nations extending territorial claims up to 200 miles from their coasts infuriated American tuna fishermen and, in turn, Chapman and the State Department. The territorial claims were “morally … unjustifiable,” railed Chapman. He saw the Latin Americans as selfish because they would not allow U.S. fishermen to catch the fish.

Chapman’s bluster trumped Graham’s precautions. During a contentious 1955 inter-

Pieter Bruegel the Elder’s Big Fish Eat Little Fish (16th century).
national fisheries conference in Rome, delegates voted that “conservation measures should be applied when scientific evidence shows that fishing activity adversely affects … the resources.” But they intended conservation “to increase, or at least maintain, the average sustainable yield” and “to secure a maximum supply of food.” Thus, wealthy nations granted themselves permission to take vastly more.

Graham had his “great law of fishing.” Chapman had a grand delusion: “There is a crop to be taken in the international common. Each takes according to his ability. When the safe crop is taken, all stop the harvest.”

Finley correctly observes that once fishing power sufficient to catch the maximum sustainable yield has been built, it generates pervasive political pressures that make dialing it back nearly impossible. By the 1970s, over a thousand Communist-bloc ships were fishing off North America. Americans watched helplessly as the policy they championed took their fish. Global fishing capacity far overshot what the fish could bear, and many great fisheries crumbled. Graham’s words resonate most: “I am still teaching this: ‘Find what direction to go in and take a small step that way.’”

Two things led NIH to push its internal system for ethical review onto all medical and behavioral scientists at institutions receiving federal funding: The Tuskegee and Jewish Chronic Disease Hospital scandals increased attention from both Congress and the media. And the growth of NIH’s external research funding increased concerns that NIH could be held liable for the ethical and legal violations of outside researchers. NIH wanted to distance itself legally from the experimentation that it funded. The IRB system of local review provided that protection while demonstrating NIH’s concern for the ethics of the research it supported.

There is, of course, considerable irony in this history. What started out as a means of protecting research from intrusive regulation (and particularly the requirement that subjects sign detailed consent forms) has evolved into precisely what the group consideration process was meant to prevent: an intensive regulatory process that researchers resent as an intrusion on their autonomy. All applications for NIH funding for research involving humans now require a detailed description of how the subjects are to be treated and informed consent obtained. Thus, even the local nature of ethical review is increasingly limited.

Along with the historical account, Stark offers several chapters based on her ethnographic observation of two IRBs at different universities. Some of this interesting material contributes substantially to our understanding of how IRBs make decisions: She describes how committee members persuade one another of their expertise to critique a protocol. She provides a plausible account of why different IRBs generate conflicting reviews even though they have the same basic ethical commitments. And she explores the role of staff-written summaries of reviews in allowing IRBs to develop critical reviews of the ethics of their colleagues’ research.

This book is not without its difficulties. The reader is jolted from ethnography to the historical material with only modest clues concerning how the two sections are connected. Only in the conclusion does the author effectively tie them together. Nonetheless, Behind Closed Doors makes an important contribution to our understanding of IRBs and the ethical regulation of research.