If there is going to be a two-state solution to the Israeli-Palestinian conflict,” says Robert H. Mnookin, “the rough outlines of what the deal might be are not terribly difficult to sketch out. A number of people in recent years have done this.”

He refers, for one example, to the Geneva Initiative, a peace agreement unofficially negotiated by former Israeli and Palestinian officials and unveiled on December 1, 2003, in Switzerland. Under its terms, Israel would withdraw from much of the Palestinian territory it occupied in the 1967 war. The Palestinians would in effect give up their right of return to their homes in what is now Israel but was once Palestine, and they would accept shared sovereignty in East Jerusalem.

“What seems plain to me,” continues Mnookin ’64, LL.B. ’68, Williston professor of law and a student of dealmaking, “is that the problem is not conceptualizing what a deal might be that might over the longer run make most Israelis and Palestinians better off. Instead, the profound question is, can there be developed a sufficient consensus within each group, behind the negotiating table, to accept such an arrangement?”

“On the Israeli side of the table,” he says, everyone knows that “the future of Jewish settlements in the West Bank and Gaza is one of the very core issues and it is highly likely that some of the 225,000 settlers will be required to move as part of any negotiated settlement of the peace process, [but] there has been a nearly total absence of serious public dialogue about fair treatment of those who may have to move.” The situation is potentially incendiary.

Mnookin, a preeminent legal scholar in the field of conflict resolution, chairs Harvard’s Program on Negotiation (PON), based at the Law School. More than a year ago, he conceived of an initiative he has titled “Resettling the Settlers: Laying the Foundation.” Explaining its rationale, he writes: “For Israeli Jews, questions relating to the settlements and settlers are highly emotional and profoundly divisive: they pose existential issues concerning the nature of the Jewish state and the Zionist project, the place of religion in national life, and the country’s security needs. The gulf between supporters and opponents has swallowed any meaningful discussion, and consecutive Israeli governments—all of them uneasy coalitions—have failed to initiate serious dialogue.” As a result, “despite the widely shared perception that some settlements will need to be relocated in the coming years, Israel has no discernible strategy for doing so.”

In an analysis characteristic of the way negotiators dig for interests that might be brought forward and woven into an agreement, Mnookin observes that the settlers themselves are by no means of like mind or motivation. “Some are living in the settlements basically because the housing is cheaper. Perhaps they commute and work in Tel Aviv. They don’t feel a deep ideological commitment to the settlements,” he surmises. “Another group, the ultra-Orthodox, are for the most part not ardent Zionists. While they wanted to live in the Holy Land, historically many of these people didn’t even recognize the state of Israel. A third group of settlers, those of the National Religious Party, are the most tied to the land, especially in the West Bank, because of a combination of their ideological and religious commitments as Zionists and as Jews. For many of them, the settlements are their life’s project. They feel that part of their covenant with God is that Jews should resettle this land.” One young settler near Nablus, asked by Mnookin if he would move for the good of Israel, said, “I’d get a new passport. I’m staying here.”

A continuing absence of dialogue about the fair treatment of settlers may have catastrophic consequences, Mnookin believes. “Unresolved tensions between proponents and opponents of the settlement project jeopardize the very stability of Israeli society,” he writes, citing the assassination of then prime minister Yitzhak Rabin in 1995 as a reminder of what can happen when Israelis are divided about concessions in agreements with Palestinians. “The forcible evacuation of large numbers of settlers is highly likely to result in the destruction of the emotional bond between Israelis that is the basis of Israel’s legitimacy.”
The project aims to launch a serious dialogue about the settlement issue among Israeli Jews.

Mnookin has made several recent scouting trips to the West Bank and consulted widely. He has recruited Ehud Eiran, an Israeli attorney, a career officer in the Israeli army, and former assistant foreign policy adviser to then prime minister Barak, to assist him on the project. Although Mnookin began this work believing that the policy questions he was posing could come to the fore perhaps many years in the future, recent events have heightened his sense of immediacy. “This December the urgent timeliness of the project’s focus was demonstrated by two sharply contrasting political initiatives,” he points out. “The Geneva Initiative, on the one hand, and Prime Minister Ariel Sharon’s announced commitment to a limited unilateral Israeli withdrawal behind a security fence are starkly different. His government rejected out of hand the comprehensive terms of the Geneva Initiative peace agreement. But both proposals would require the relocation of thousands of settlers.” Indeed, Sharon’s speech for the first time raised the possibility that even without a negotiated agreement with the Palestinians, he was prepared to require settlers to move, despite a long history of championing their cause. In February, he said further that he might seek to evacuate almost all Jewish settlers from the Gaza Strip.

“This is a mildly quixotic project,” Mnookin suggests, “but I think it could be constructive. I am very committed to doing no harm. In this sort of work, you’ve always got to be an optimist. You’ve got to be a realist, too. You better not think that the world is just going to conform to what you hope it’s going to be.”

In the Shadow of the Law

Mnookin was born into what he describes as an assimilated, reformed Jewish family in Kansas City, Missouri, where both his parents were born. The field of negotiation was in its infancy, and it and he grew up side by side.

He entered Harvard College in 1960. As a sophomore concentrator in economics, Mnookin took a course on game theory taught by professor of economics Thomas C. Schelling, Ph.D. ’51, whose book The Strategy of Conflict had appeared the year before, and sat in on seminars given by Schelling and associate professor of government Henry Kissinger ’50, Ph.D. ’54. “That’s when I first developed an interest in negotiation,” he says, “and in strategic in-
teration, where what one person is deciding to do very much depends on what he believes his counterpart is going to do, and vice versa.” The Cuban missile crisis occurred in his junior year, and Mnookin found those negotiations riveting.

In the summer before his senior year, he married Dale Seigel, a Boston University student from St. Louis. (Mnookin jokes that he had to ask the master of Leverett House for permission.) After college the couple went to the Netherlands, where he studied econometrics as a Fulbright Scholar. Despite having been admitted to both Harvard and MIT to pursue a Ph.D. in economics on his return, a year of econometrics—and a chance reading of Karl Llewellyn’s Law and Its Study—persuaded him to go to law school. He was captured by Llewellyn’s idea that the study of law should involve trying to understand how law and legal institutions affect human behavior. He claims to have loved law school and was on the Law Review, but the curriculum was wanting. In the preface to his most recent book, Beyond Winning: Negotiating to Create Value in Deals and Disputes (2000), written with his former students Scott R. Peppet, J.D. ’96, and Andrew S. Tulumello, J.D. ’96, Mnookin recalls, “In 1968, when I graduated from law school, there were no courses in negotiation, and scant use was made of economics, psychology, or decision theory either in the law school curriculum or in legal scholarship. How times have changed!”

**Let’s Make a Deal**

The Program on Negotiation (PON), a robust organization headquartered in Pound Hall at Harvard Law School, was founded in 1983 by seven pioneers in what was just then beginning to be recognized as the field of negotiation. Their advice was increasingly sought by individuals, organizations, and governments in conflict, and they wanted a locus and someone to answer the telephone. Today, “as a community of scholars and a renowned teaching center for practitioners, the Program on Negotiation serves a unique role in the world negotiation community,” says Susan Hackley, M.P.A. ’94, its managing director.

PON is an applied research center dedicated to improving the theory and practice of negotiation and dispute resolution. It is an interuniversity consortium of people from a range of disciplines and professional schools at Harvard, the Massachusetts Institute of Technology, the Fletcher School of Law and Diplomacy at Tufts, Simmons College, and other Boston-area schools.

Nine research projects form its intellectual heart. The head of each is a member of the program’s steering committee, of which Robert Mnookin is chair. He directs the Harvard Negotiation Research Project (see article). Other projects include:

- The MIT-Harvard Public Disputes Program, directed by Lawrence E. Susskind, Ford professor of urban and environmental planning at MIT and visiting professor of law at Harvard Law School. The program works to replace “win-lose” outcomes with “all-gain” solutions in controversial and complex public-policy wrangles, such as the effort to develop a national energy policy for the United States.
- The Negotiation Roundtable, directed by James K. Sebenius, Ph.D. ’80, Donaldson professor of business administration. The roundtable is a group of faculty members, graduate students, and negotiation practitioners who meet regularly at the Business School with colleagues from the Kennedy School of Government and elsewhere to discuss the improvement and practice of negotiation in managerial settings.

The final four are the Global Negotiation Project, the Harvard Negotiation Project (see page 55), the Program on Negotiations in the Workplace, and the Project on International Institutions and Conflict Management.

In addition to serving as an umbrella for the research projects, PON acts increasingly as an entity of its own, says Mnookin, for instance by sponsoring his “Resetting the Settlers” project. PON mounts negotiation workshops for students at the law school and semester-long seminars open to the public that offer instruction in negotiation and mediation theory and role-playing learning exercises (for example, a multiday case in which students play lawyers for divorcing spouses with children; actors play the parents.). The one-and-a-half to three-day executive-education programs pay the bills. PON produces the Negotiation Journal and books, working papers, and educational and research materials on dispute resolution and sponsors two or three events a week. Visit its website (www.pon.harvard.edu) for details.
After law school Mnookin spent two years in Washington as a law clerk, first for Judge Carl McGowan on the D.C. Circuit, then for Justice John Harlan on the U.S. Supreme Court. “I had always intended to stay on in Washington for a few years after clerking to work for the government,” he says, “and the only regret I have about my career is that it never happened. In 1970 Richard Nixon was president and John Mitchell was attorney general, and I didn’t find the atmosphere appealing.” The young family (the couple had two daughters by then) went West, to San Francisco, where the paterfamilias worked full time for a medium-size law firm, “always having in mind that I would become an academic.”

In 1971 he joined the law faculty at the University of California at Berkeley. Because of his background in economics, even as a junior professor he was asked to lead the Childhood and Government Project, a foundation-funded effort to deal with school-finance reform.


Mnookin also wrote a consequential article, in 1973, “Bargaining in the Shadow of the Law: The Case of Divorce,” in which his interests in negotiation and family law converged. He asked a question that has intrigued him for much of his career: how does the formal legal system affect out-of-court negotiations? “In the divorce area, as in most areas,” he says, “the overwhelming majority of cases that go to court are not adjudicated, they’re settled. Nevertheless, very little attention has been paid to the effect of the formal system on the informal negotiations.” The law’s shadow came to be seen as a meaningful metaphor not only in divorce, but much more broadly.

A 1993 analysis by Fred Shapiro, J.D. ’77, a librarian at Yale Law School, listed “Bargaining in the Shadow of the Law” as one of the most-cited law-review articles of all time. (Mnookin’s citation record remains strong. University of Texas School of Law professor Brian Leiter’s Internet publication New Educational Quality Rankings of U.S. Law Schools, 2000-2002 ranks him as the most-cited alternative-dispute-resolution scholar.)

Mnookin today speaks of the phenomenon of the vanishing trial; jury trials are rare and most cases settle. “Between 1960 and 2000, the number of filings in federal court has gone up by roughly 500 percent. The number of cases that are tried has gone down by 20 percent. Cases are increasingly getting settled, in part because of alternative-dispute-resolution methods long advocated by the Program on Negotiation” (see “Let’s Make a Deal,” opposite).

### The Equivalent of World War III


From that time on, his teaching and research increasingly focused on negotiation and dispute resolution outside the courts, including such alternatives as mediation and arbitration, collectively some-times known as alternative dispute resolution (ADR). He got involved in a long-term project with developmental psychologist and Stanford professor Eleanor E. Maccoby to follow 1,000 divorcing families as they resolved their conflicts. Of the 1,000 cases, only 15 households ultimately required the court to decide the custody issue. “Almost all the action was not in a trial at the end of the process,” he says, “but with parents, with and without their lawyers, negotiating deals or using mediation.”

Shortly after the move to Stanford, Mnookin plunged into a particularly nasty commercial clash, conducted against the backdrop of trade tensions between the United States and Japan. “I was asked to serve as a neutral in a huge dispute between IBM and Fujitsu over operating-system software. Because IBM had earlier accused Fujitsu of stealing its intellectual property, the parties had reached a ‘settlement’ that provided that if any further disputes arose, they would be resolved not by going to court, but through arbitration.” Further disputes did arise almost immediately, says Mnookin, “because the settlement was very defective in all kinds of ways.” Scores of lawyers became involved on both sides, in what he “calls the commercial equivalent of World War III.”

With the permission of the parties, two of the three neutrals—Mnookin and a man with lots of experience in the software business—mediated and created a framework for the resolution of these disputes, which executives and counsel on both sides accepted even though at the time they viewed each other with hostility and distrust. Subsequently, to implement the resolution, the neutrals were appointed to oversee for a decade a system of rules regulating Fujitsu’s use of IBM materials and procedures for monitoring compliance and handling disputes. In time, former adversaries at both companies became collaborative problem solvers. “Because these were very big companies and this was a very important dispute,” says Mnookin, “this resolution got a lot of publicity and helped establish the importance and legitimacy of ADR, not simply for the settlement of family and labor disputes, where mediation had long been used, but in large, complex, commercial disputes as well.”

In 1988, with a grant from the William and Flora Hewlett Foundation, Mnookin founded the multidisciplinary Stanford Center on Conflict and Negotiation. He was its first director, with four other principal investigators: Nobel laureate and former Harvard faculty member Kenneth Arrow, LL.D. ’53, Lee Ross, the late Amos Tversky, and Robert Wilson ’59, M.B.A. ’61, D.B.A. ’63. “From them I learned,” Mnookin has written, “how the insights of economics, social psychology, cognitive psychology, and game theory could all provide useful prisms for better understanding negotiation.” They studied and then wrote about barriers to negotiated settlement; their work and contributions by others appeared in a book the five scholars edited, *Barriers to Conflict Resolution* (1995).

Life was good in Palo Alto. When Mnookin was asked to be a visiting professor at Harvard Law School in the 1990-91 academic year, he promised his wife that they would have a fun year in old haunts, then go back to California. They did go back to Stanford, for one year. Roger Fisher was becoming emeritus (see “Doctor Yes,” page 55), and Harvard was looking for someone to head the
Program on Negotiation. The Mnookins returned to Cambridge. “If I didn’t want to coast through my fifties,” Mnookin later noted, “what better place to study conflict than the Harvard Law School?”

Dissonance furioso, Harmony tranquillo

Mnookin quotes an experienced labor arbitrator who said 20 years ago that symphony musicians have “the reputation among many of being the angriest and most militant group in the whole field of entertainment and the performing arts.” He now could tell stories of his own on that subject.

The 105 players of the San Francisco Symphony conformed to stereotype when they walked out on strike in December 1996. They demanded better pay, a different pension plan, longer vacations, fewer tours, and the continuation of generous health benefits. Management wanted more Sunday concerts and greater flexibility and refused to pay for the musicians’ health benefits during the strike, partly to pressure them to return to work. In response, bassoonist Rob Weir held his ailing two-year-old son up in front of television cameras to shame management. Finally, after 67 days without pay and 43 canceled concerts, and against the recommendation of a majority of their negotiating committee, the players narrowly accepted a contract that differed little from the one offered before the strike. Everyone lost. Relations were “acrimonious and horrible,” says Nancy Bechtle, then president of the board of governors. Management and the board had kept their finances intact but had earned ridicule in the press and anger from patrons. The musicians broke up into enemy camps, with some of those who had wanted to hold out longer against management feeling betrayed by their colleagues. Says Bechtle, “The musicians were almost angrier at each other than at us.”

The music critic of the San Francisco Chronicle

You Play the Mall Developer

Teachers of negotiation use role simulations, powerful learning devices that help students internalize theory in a compelling way. I play the representative of an opera company who wants to explore a deal to hire a soprano for the lead in an upcoming production. You play the soprano’s agent. Unbeknownst to both of us, the opera company’s management would pay a huge fee for the soprano’s services because they haven’t located any suitable alternative, and the soprano would sing the role for free because she wants the part so badly. This is a negotiation with a broad range of possible agreements. Another teaching exercise might have a narrow, or even nonexistent, range of agreement and pose a challenge to students to learn what the range is.

Negotiation is widely taught at Harvard. In one or another of its aspects, it’s on the menu at the graduate schools of law, business, government, education, design, and public health, and at the Extension School. The law school offers courses on dealing with emotions in negotiation, multiparty negotiation, and mediation, as well as an interdisciplinary research seminar and reading groups. Most unusual are a total-immersion, full-time, three-week negotiation workshop in January and an intensive workshop in the spring.

At the business school, all 900 first-year M.B.A. candidates take a required basic negotiation course, in addition to drill in finance, marketing, leadership, and ethics. “We take a traditional microeconomic, decision-analytic approach, and there’s a lot of power in that model,” says Michael A. Wheeler, LL.M. ’74, Class of 1952 professor of management practice, editor of the Negotiation Journal, and coeditor with Carrie Menkel-Meadow of the forthcoming book What’s Fair: Ethics for Negotiators. But, he says, “The conventional negotiation model is static, so it can only take us so far.”

The business school also offers a set of second-year electives for negotiators, including Wheeler’s “Negotiating Complex Deals and Disputes,” in which he takes a contrarian approach to the subject, exploring the dynamic quality of negotiation.
judged an all-Mozart program conducted by Roger Norrington just after the strike ended to be "ragged," with "general rhythmic uncertainty" and "not much in the way of cohesive ensemble playing."

Bechtle, still on the board today, was its president for 14 years, a period that included three strikes. Peter Pastreich had become executive director of the symphony in 1978 and had played an extremely constructive role in its growth, yet his relations with the musicians had become poisoned. He took strikes as a given. "I had been negotiating with unions for almost 40 years," he says, "and I thought I was pretty good at it, but my way of doing things did lead to strife and adversarial relations." "We were in a morass of mistrust," says Tom Hemphill, a percussionist who chaired the players' committee.

Everyone—players, management, members of the board—felt that the organization had to find a better way to resolve disputes. After some initiatives by Hemphill and Pastreich to explore what might be done, the Hewlett Foundation, a longtime financial supporter of the symphony as well as of conflict-resolution projects, asked Mnookin whether he would undertake to "teach the people at the San Francisco Symphony a better way to negotiate."

Mnookin was hesitant. He had no experience working with symphony orchestras, and he did not consider himself a collective-bargaining expert. Most importantly, he had no assurance that the critical stakeholders were willing to put in the time and effort necessary for change. To solve problems, genuinely committed leaders are required, whether at a troubled symphony, at IBM and Fujitsu, or in the Israeli-Palestinian conflict.

"Negotiation is a fluid process," he says. "I reject the idea that you and I go to the bargaining table with a set of established interests in mind. It's too simple to say that negotiation is basically a question of whether we're collaborative and open, and thus maximize value through creative trades, or we're coy and suspicious and bargain competitively. Instead, negotiation is an adaptive process. We may start with a general sense of our goals, but in the course of interacting, we learn things—maybe it's good news, maybe not—but either way we have to adjust our goals and our strategy. Learning is hard at the bargaining table, however, since the information you get is seldom the whole story."

To give students first-hand experience, Wheeler has them do role simulations such as "Discount Marketplace and Hawkins Development," in which they act as developers or prospective tenants and hammer out a long-term lease for a regional mall. The students e-mail their results to Wheeler, then analyze their experiences in class. They then scrutinize videos of two different pairs of real-estate professionals negotiating the same case. Wheeler uses the videos to emphasize the importance of openings. "In the first 60 or 90 seconds of each of these negotiations, the professionals have extraordinarily different approaches that lead to very different results," he says. "Students see how a veiled threat in one case or a tension-breaking joke in the other set the tone and trigger people's behavior. Video gives students a much better understanding of the process of negotiations than just looking at the terms they happen to reach." (A video of Wheeler teaching this segment of his course appears on the Program on Negotiation website, www.pon.harvard.edu. It is part of PON's negotiation pedagogy video series and includes an after-class interview with Wheeler about his methods, for the benefit of other teachers of negotiation.)

Wheeler seeks fresh metaphors to elucidate negotiation dynamics from a variety of disciplines and fields—from chaos theory and military strategy to jazz. "Improvisational jazz is not made up as you go along," he says. "There are underlying structures and conventions. But musicians are always adapting and play off one another, leading in some instances, supporting in others. The same is often true in negotiation."

Thanks to colleagues in fields other than his own, he says, he continues to go to school himself, particularly to study psychology, from which he has learned about the so-called "endowment effect." Wheeler explains: "Experimenters ask people to assemble for an experiment. Their reward will be that they get a school coffee mug. The experimenters deliberately run out of mugs, and so they give some people cash instead. When the experiment is supposedly over, they ask the people who got the mugs how much they would sell them for, and they ask the people who got cash how much they would pay for a mug. The people who got mugs typically say, 'I'd sell mine for, oh, $8.' The people who got cash say, 'I'd pay $2.50 for a mug.' The notion that it's your mug is important. People can feel just as possessive about an idea—or a bargaining position. Good negotiators recognize this and find ways to let people save face so that they don't feel that they've been stripped of their possessions, including their self-respect."
Mnookin taught players' leaders, Pastreich and his staff, and some board members. In the first workshop, with the aid of role-playing exercises, they had to manage all three tensions more effectively.

"I thought he was arrogant and difficult," Pastreich recalls, "and he was totally unknowledgable about symphony contracts and the difficulties orchestras face. I was highly skeptical. But I figured he had one thing going for him—the musicians liked him immediately and trusted him."

Mnookin and his team conducted a series of meetings, some intended to help repair shattered relations among the players. The musicians' leaders faced the most challenging assignment of all of those attempting to bring peace to the symphony because, says Mnookin, "they had to manage the enormously complicated process behind the table to both represent their constituents effectively and to have a mandate that permitted them to engage in problem-solving negotiations rather than just positional bargaining."

The team mounted two two-day workshops attended by the players' leaders, Pastreich and his staff, and some board members. In the first workshop, with the aid of role-playing exercises, Mnookin taught the critical importance of adequate preparation; the need to focus on interests and not simply formulate "positions" or demands; and the importance of paying attention to process. Positions and demands are what people say they must have, while interests are the underlying reasons, needs, or values that explain why a person takes the position in the first place.

Mnookin stressed that, "Adequate preparation requires consideration not only of your own interests, but also those of the other side..."

The second workshop used an extended negotiation simulation to demonstrate the connection between what is done behind the table with one's own constituents and what happens across the table with the other side.

"All my experience of studying conflict and working as a neutral to help resolve it reinforces the idea that people enmeshed in disputes haven't tried to understand their differences and what they have in common and what alternative futures might be," says Mnookin. He quotes Pastreich as saying, "I came to understand how important it was for me to listen to the other side...It became clear to me that one of the things that the musicians were angry with me about was they felt...I wasn't even listening to what they were saying. And I think it is true. Nor do I think they were listening to us."

"In the dispute between IBM and Fujitsu," says Mnookin, "many within those organizations held views of the motivations and goals of the other side that were almost caricatures of reality," much as did the San Francisco Symphony antagonists. Profoundly different though the issues are, he says, "I think it's not different among Israeli Jews who are pro or con the settlements. It's not as if people haven't staked out public positions; they have. But most haven't had any deep or serious problem-solving conversations about their shared problems."

What San Francisco's SPUR, a nonprofit public-policy think tank for the city, would in the end call "the symphony miracle" was an arduous achievement. Yet, in late 1998, musicians and management were again at the bargaining table.

"This time the result was a true collaboration, one that won management ongoing fiscal health and a more flexible concert schedule, and won musicians better pay and pension benefits, a continuation of excellent health-care coverage, and an innovative system of 'string relief' to reduce the risk of repetitive-motion injuries to string players."

Did Mnookin's lessons stick? Had he succeeded in making himself expendable?

"Bob did an amazing job with the symphony. It's a real love in right now between management, the players, and the board," says Nancy Rechle. "Of course there are some players who will never be happy—the toxic 10—but the others feel they're well taken care of."

"It's still very challenging to build consensus among the players," says Chris Gilbert, chair of the players' committee today, "but in dealing with management on the many issues that come up, we've all tried to avoid the old confrontational habits."

"The San Francisco Symphony still practices interest-based bargaining and knows that it would be foolhardy to go back to the old ways. It was an enduring change for the orchestra and a life-changing experience for me," says Pastreich. "I had thought that much of what went wrong at the San Francisco Symphony was the musicians' fault, but I learned that much of it was mine. He is no longer with the organization. "What I learned from Mnookin I practice," he says, as he consults with other symphony orchestras. "Mnookin came to understand the issues in front of us, and he showed us that we had many underlying common interests. We let him instruct us, even push us around. He's not a man who is afraid of anyone." Mnookin, he adds, "risked alienating us. If he thought we weren't behaving well, according to the rules of interest-based bargaining, he called us on it—management, musicians, board members. He (please turn to page 99)
Resistance training can also help people who are dieting—which can actually lower the metabolic rate, through mechanisms very like the atrophy that Goldberg and Sacheck study—by increasing or maintaining muscle mass. When muscle mass is lost, the body’s energy requirements go down, requiring even further reductions in caloric intake in order to lose weight. (Physicians like JoAnn Manson—who will actually write an exercise prescription for her patients—usually recommend starting with easy or moderate-intensity exercise and then practicing caloric restriction.) Resistance exercise also helps prevent osteoporosis, a condition that ultimately affects 50 percent of all American women, and is increasingly common among men as they, too, live longer lives.

“Older patients with rheumatoid arthritis can also benefit from exercise,” says Maura Iversen, S.D. ’96, a clinical researcher at Brigham and Women’s Hospital and instructor in medicine at HMS. “The concern,” she says, “has been whether weight-bearing activity on a joint with minimal cartilage would benefit the joint or wear it out.” With the advent of magnetic resonance imaging, it is now possible to measure changes in cartilage and the joint surface itself. This is an area of new and growing exploration. What researchers have found is that in healthy joints, “when you move, you actually improve the lubrication of the joint,” she says. “Movement leads to better cellular turnover in the synovial fluid, which provides nutrition to the cartilage and maintains cartilage health. We know that exercise can improve physical function and now have the capability to examine its impact on cartilage.”

Iversen recently completed a pilot study of chronic low-back pain in elderly patients and found that a 12-week program of endurance exercise on a stationary bicycle led to modest improvements in patients’ ability to perform the activities of daily living. The exercise program also led to enhancements in mood.

Exercise, it turns out, is particularly useful in treating the mild depression often experienced by elders due to declining function and increasing isolation. “Keeping your heart and body in shape is a side benefit to exercise’s major effects on the brain,” asserts John Ratey, an HMS associate clinical professor of psychiatry. “The brain is where all the action is.” During exercise, “the increase in cerebral blood flow creates more capillaries, more conduits for blood to flow in the brain. So you are building a reservoir and protecting the brain, in a way, from strokes in the future.”

The increase in cerebral blood flow causes many interesting things to happen. Exercise increases production of a growth factor called BDNF, or brain-derived neurotrophic factor. “I call it Miracle-Gro, brain fertilizer,” Ratey says, “because it keeps the neurons young and healthy and makes them more ready to connect with each other. It also encourages neurogenesis—the creation of new nerve cells.” This may have a cognitive benefit. Studies have shown that older adults with higher levels of cardiorespiratory fitness experience a slower rate of cognitive decline over time.

But exercise does more than just maintain the health of the brain. “In a way, exercise can be thought of as a psychiatrist’s dream treatment,” says Ratey. “It works on anxiety, on panic disorder, and on stress in general, which has a lot to do with depression. And it generates the release of neurotransmitters—norepinephrine, serotonin, and dopamine—that are very similar to our most important psychiatric medicines. Having a bout of exercise is like taking a little bit of Prozac [an antidepressant and anti-anxiety agent] and a little bit of Ritalin [which boosts the attention system], right where it is supposed to go.” He says there are now many studies which show that “exercise is as good or better than some of our antidepressants.”

Why? When we move, we have a sense of purpose, of competence, and of accomplishment. “People don’t get the fact that our frontal cortex evolved to make us better movers,” Ratey points out. “The higher functions—the executive function, thinking, abstraction, and philosophy—all evolved from the moving brain.”

“We’re animals,” he says. “We should be moving.”

Jonathan Shaw ’89, managing editor of this magazine, once ran a marathon, but is now a long-distance cross-country skier.

**PEACEMAKERS**

(continued from page 60)

has about him a strong sense of intellectual honesty. He’s a tough, smart guy.”

**Lawyers as Peacemakers**

“What drew me back to Harvard,” says Mnookin, “were, first, it’s my school, and, second, because of the work of Roger Fisher, Howard Raiffa, Jim Sebenius, Bruce Patton, Bill Ury, and others, the Program on Negotiation had an international presence and a potential impact on the profession that was irresistible.”

Today, as director of the Harvard Negotiation Research Project, one of nine such projects at PON, Mnookin is helping to train a new generation of scholars who want to do research in negotiation and dispute resolution. The Hewlett Foundation has once again chipped in, funding a fellows program that each year brings up to seven young scholars to PON.

Part of his project’s mission is to strengthen the theoretical underpinnings and empirical scholarship related to his field. He is at work on a book about the limits of negotiation. “I have spent the past 15 years of my academic career studying negotiation, and, like other negotiation imperialists, I find negotiations omnipresent and have a strong preference for resolving conflict through negotiations,” admits Mnookin. “But I do not believe that it always makes sense to negotiate. This book asks how one should think about whether to enter into negotiations or instead refuse to negotiate.”

He and others are devising new negotiation and ADR teaching units with the long-term goal of reorienting the traditional curriculum of American law schools. He wants graduates of any of them to have the intellectual and interpersonal skills they need to help clients solve problems more effectively, to know how to give their clients assistance that goes far beyond the advice that lawyers typically give in litigation and in managing corporate transactions. He wrote Beyond Winning “primarily for lawyers who feel seduced by the trench warfare and exhausted by cases that drag on unnecessarily for years, lawyers who want to change the way things work but don’t know how—lawyers who even wonder whether they picked the right profession.”

Early in the book, Mnookin sets out a guiding principle: “Because of their skills and experience, lawyers have what Abraham Lincoln described as a ‘superior opportunity to do good.’ They can be peacemakers.”

Christopher Reed is executive editor of this magazine.