Books & arts

LUCY NICHOLSON/REUTERS/ALAMY

US prisons hold ten times as many people with mental illness as do state psychiatric hospitals.

Ex-US mental-health tsar calls for care overhaul

Thomas Insel advocates better social policy, not just more brain research. **By Alison Abbott**

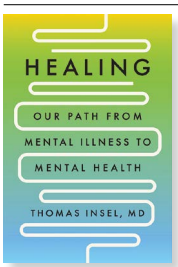
A kidnapper holds a psychiatrist and a cardiologist hostage. He pledges to release the one who has done most for humanity — and shoot the other. The cardiologist explains that drugs and procedures in her field have saved millions of lives. The psychiatrist begins ruminatively: "The thing is … the brain is the most complicated organ in the body." "I can't listen to this again," says the cardiologist. "Shoot me now."

This is one of the jokes that Thomas Insel, former head of the US National Institute of Mental Health (NIMH), scatters through early chapters of *Healing*, his probing analysis of what has gone so wrong with the treatment of people with mental illness in the United States. Therapies have been scientifically proven to tackle symptoms for at least some. So why, Insel asks, have rates of suicide, early death, homelessness and unemployment among people with serious mental illness not improved?

In his readable and persuasive book, Insel answers his own question through personal tales and statistics. He sets out a recipe for better care and access to that care. It's a call to politicians to invest much more in mental-health support, and to do so much more wisely.

Insel knows what he is talking about. After his stint at the NIMH from 2002 to 2015, he led the mental-health team at Google's life-sciences spin-off company, Verily in South San Francisco, California. In 2019, he was mental-health adviser to California's governor, scoping out the state's many problems in care.

There are 47,000 suicides in the United States each year. At least two-thirds involve people with a serious mental illness such as depression or schizophrenia. The rate of deaths from suicide is three times that of deaths by homicide, and is steadily rising — even as it falls in other countries. On average, people with severe mental illness die from other causes, such as heart disease or cancer, around 20 years earlier than the general US population, because they don't get medical treatment. In terms of life expectancy, they live as if they were in the early 1920s.



Healing: Our Path from Mental Illness to Mental Health
Thomas Insel
Penguin (2022)

The cardiologist in Insel's joke was right to claim success. US rates of death from heart disease have more than halved since the 1950s, in large part thanks to drugs that lower cholesterol and act against hypertension. Therapies for serious mental illnesses are much less effective. Just one-third of people treated respond sufficiently, and one-third don't respond at all. The thing is — and don't shoot me — the brain really is complicated. Neuroscientists, with their sketchy understanding, struggle to find precise targets for treatment.

Access to care

Until therapies improve, Insel argues, we can do much more by increasing access to appropriate care, and boosting the quality of that care. Only around 40% of people in the United States with a mental illness are in any form of care and, of these, just 40% or so receive evidence-based treatment. Insel suggests as a model the treatment of childhood acute lymphoblastic leukaemia, which had a 90% death rate in the 1970s and now has a 90% survival rate, thanks to better management of the same drugs. Similar improvements could come from embedding drugs and psychotherapies for serious mental illnesses in a broad care programme.

One challenge is that the US system developed mainly to deal with mental-health crises, not provide longer-term management and recovery. The first antipsychotic drugs were introduced in the 1950s, allowing some severe symptoms to be controlled, and people to be released from often-brutal psychiatric institutions. The 1963 Community Mental Health Act established treatment at local health centres as an alternative to institutionalization. But little funding emerged, and tens of thousands of people ended up in communities not equipped to deal with their conditions.

Medicaid — the US public health-insurance system for people with limited incomes, introduced in 1965 — would not (and will not) pay for adults to stay in mental-health facilities with more than 16 beds. Those who could turned to private facilities; others ended up incarcerated or on the streets. Jails and prisons have become

de facto mental hospitals, writes Insel. A 2014 survey found that there were ten times as many people with severe mental illnesses in US prisons as there were in state psychiatric hospitals (see go.nature.com/3kccfca).

Poor investment in mental-health care is not unique to the United States, and many countries released people from institutions once drugs were available. But most rich democracies have stronger cultures of social welfare.

Insel advocates broad care involving integrated teams of psychiatrists, psychologists, primary-care nurses and social workers. Just getting a person through a mental-health crisis doesn't necessarily help their long-term prospects. They need support to stay on their medication, to look after their general health and to get their personal lives back on track.

Insel describes programmes that tick many of those boxes — some in other countries (the United Kingdom, for example) and others around the United States. He admires the NIMH's Coordinated Specialty Care initiative for people experiencing their first episode of psychosis, in which specialists collaborate to personalize care, providing psychotherapy, medication management, family education and support, and work or education support. It is being rolled out across the country after promising early results.

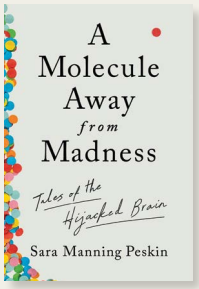
Quality of care must also improve. Most psychiatrists have sound scientific education, but fewer than 40% of US psychology and master's-of-social-work programmes train students on scientifically based therapies. Only 18% of psychiatrists and 11% of psychologists routinely administer symptom-rating scales to monitor patients' progress.

Few would disagree that politics could and should turn around the grim situation for those with mental illness. However, funding better care should not cut into the US government's strong investment in basic neuroscience. This includes the BRAIN (Brain Research through Advancing Innovative Neurotechnologies) Initiative, worth an estimated US$6.6 billion from 2017 to 2027. That figure dwarfs similar programmes in other countries.

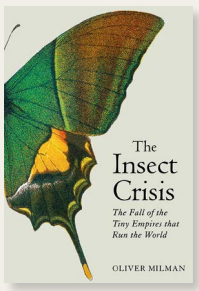
Such generosity is needed. The patchy performance of current therapies can be improved only through a more complete understanding of the brain, which will take time. Insel makes this point but doesn't elaborate. He's served his time in basic research, after all, and this book reflects his almost Damascene realization of its limitations in the face of racism, inequality, poor housing and education and the breakdown of community.

Alison Abbott covered neuroscience, and much else, for decades as *Nature*'s Senior European Correspondent. She is based in Munich, Germany.
e-mail: alison.abbott.consultant@springernature.com

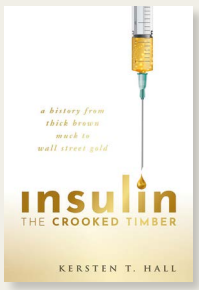
Books in brief



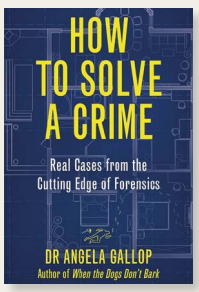
A Molecule Away from Madness
Sara Manning Peskin *W. W. Norton* (2022)
Even before COVID-19 increased the risks of cognitive impairments, it had been estimated that 152.8 million people globally would be living with dementia by 2050. Yet treatment for Alzheimer's disease has hardly improved since it was discovered in 1901, notes neurologist and dementia specialist Sara Manning Peskin. Now, most clinical trials tackling dementia are "deeply rooted in molecular data". Peskin's powerful study — immersed in her patients' stories — analyses neurology's attempt to reach oncology's molecular understanding.



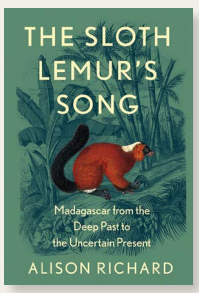
The Insect Crisis
Oliver Milman *Atlantic* (2022)
Insect decline is obvious — but hard to quantify. Environmental journalist Oliver Milman suggests a drop of more than 90% in some places, in his vivid alarm call. The causes are unclear, but include habitat destruction by intensive farming, pesticide use and climate change. Insects' "intricate dance" with Earth's environment makes them crucial to human food supplies. We should learn to eat them, not meat, suggests Milman: that will help to save them by freeing farmland from crops needed to feed livestock.



Insulin — The Crooked Timber
Kersten T. Hall *Oxford Univ. Press* (2022)
Insulin was first used to treat human diabetes 100 years ago, after it was isolated by two medical scientists in 1921. Historian of science Kersten Hall describes this transformative event, together with insulin's development as the first drug produced by genetic engineering and its lucrative exploitation — using a blend of profound research, lively writing and personal knowledge of diabetes. He argues that the history is a tale not of geniuses or saints, but rather one of "monstrous egos, toxic insecurities and bitter career rivalry".



How to Solve a Crime
Angela Gallop *Hodder & Stoughton* (2022)
More than a century ago, criminologist Edmond Locard established forensic science on the principle that "every contact leaves a trace". The field's current sophistication and contribution to justice would be beyond his "wildest imaginings", writes forensic scientist Angela Gallop. She tells gripping stories from her own and others' experience, beginning with thirteenth-century Chinese investigator Sung Tz'u. He identified a farmer's killer by asking fellow villagers to put their sickles on the ground; flies alighted on one blade bearing traces of blood.



The Sloth Lemur's Song
Alison Richard *William Collins* (2022)
Anthropologist and conservationist Alison Richard has been absorbed by Madagascar for half a century. She writes that the country's "animals and plants offer a wonderful array of rabbit holes down which a person fascinated by the natural world could disappear for a lifetime". Why, for example, does its largest lemur sing spellbindingly across the treetops with its mate for many minutes? And what environmental conditions created the island's unique — now disastrously threatened — biodiversity? **Andrew Robinson**