

Blurring the Boundaries

ANNE DUFFY

There has been a significant shift over the last several decades in the broad field of mental health from a focus on the diagnosis and treatment of established psychiatric illnesses to a focus on mental health problems, an area encapsulating all manner of distress starting from the transient and normative.

This shift reflects the influence of a number of forces including a movement away from a traditional medical model of mental illness and an evolving and previously neglected focus on anti-stigma initiatives.¹ However, despite the good intentions and progress on these fronts, there is no convincing evidence that this shift of focus has improved care or outcomes for individuals at risk for or experiencing a serious mental illness.² And an unhelpful consequence of this conceptual shift has been a further blurring of the boundaries around what constitutes a psychiatric illness and how this differs from transient or situational psychological distress, challenges with behaviour, and the attainment and maintenance of a sense of well-being. One could argue that in the needed effort to focus on prevention and reduction of stigma associated with mental illness, an unexpected consequence may have been a blurring of the boundaries between mental health, mental health problems, and serious mental illness – related but distinct aspects of the complex problem of retaining or restoring mental health.

A contributor to the shift away from a traditional medical focus may be the stalled or slow rate of progress in advances leading to an improved understanding of the causes of serious and persistent or recurrent illnesses such as melancholic depression, bipolar disorder, and schizophrenia. Unlike more traditional neurological illnesses or neurodevelopmental disorders, neuroimaging and genetics research focused on the onset of mood and psychotic disorders has not yet provided reliable findings that can improve estimates of individualized risk and prognosis with precision or advance the identification of biomarkers or novel treatment targets. While progress has been made in terms of mapping these prototypical illness trajectories and providing risk estimates based on clinical data,³ a lack of a major breakthrough in understanding the pathophysiology of psychiatric illnesses has meant that diagnoses cannot be objectively validated or differentiated from other non-disease-based symptoms or emotional difficulties.

This stalemate has an essence of Catch-22. That is, the DSM diagnostic classification system defies a traditional medical approach by not taking into account all information important to making a valid diagnosis. As articulated by Robins and Guze,⁴ a valid diagnosis should be based on the following: a

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Welcome to the fall/winter 2018 edition of *Synergy*.

The essays included share the theme of questioning how we think and what we do as clinical psychiatrists.

Dr. Anne Duffy is an authority on the early clinical course of bipolar disorders, and here applies her years of research and clinical work to the question of how we think about mental illness itself. What is illness and what is, as she writes, “all manner of distress starting from the transient and normative”?

Our second essay is an extended book review and, as is the case with all good book reviews, not only is the content of a quite remarkable book summarized, but the ideas are applied to other areas—in this case the practice of psychiatry. And, of course, this causes us to question how we currently think and behave.

We hope you enjoy the prose and, as always, welcome your comments.

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characteristic clinical description, stability of diagnosis over time, family history of illness, exclusion of other diagnoses, associated laboratory/biological markers, and treatment response. Therefore, DSM-derived diagnoses yield broad heterogeneous constructs that do not map onto treatment response, a predictable course, or biomarkers. DSM emphasizes symptoms, and does not consider the familial risk, the trajectory of developing illness, risk exposures, and context. Symptoms in and of themselves are non-specific, change over the course of illness and, without context, are difficult in cross-sectional assessment to differentiate from transient or normative variants.

DSM was originally meant as a short-hand communication between experienced and trained experts in psychiatric disease who had completed a comprehensive longitudinal assessment of patients using all available relevant information. Over the last decades, it has become a checklist typically administered by variably trained mental health clinicians, a cross-sectional assessment of the patient not taking into account other validating information such as developmental and family history, collateral history, clinical course, and other possible mediating factors such as medical disease and risk exposures.⁵ As Kendler stated, “since DSM III, our field has moved toward a reification of the DSM that implicitly assumes that psychiatric disorders are just the DSM criteria. That is, we have taken the index of something for the thing itself.”⁶ The DSM has, therefore, contributed to broad layered or comorbid diagnoses that do not map to underlying and specific biomarkers or predict treatment response.

As mentioned, longitudinal and family studies have been very informative in psychiatry. Longitudinal studies of the high-risk offspring of parents with schizophrenia and bipolar disorder have described developmental patterns, including global developmental difficulties, soft psychotic symptoms, and declining social and academic performance in psychotic illnesses compared to normative developmental, school, and social functioning prior to illness onset in mood disorders.⁷ Family studies have identified which illnesses segregate in relatives of classical bipolar and schizophrenia patients—in the former, episodic mood disorders including recurrent depression; in the latter, chronic fluctuating disorders including anxiety, autism spectrum, and chronic atypical/negative depressive syndromes.⁸ This information is helpful in identifying the emergent course of illness in young people at confirmed familial risk and with persistent or recurrent psychopathology. Rather than layering “comorbid” diagnoses, taking the approach of medicine, which assumes a primary underlying illness and associated complications, a clinician can identify an evolving pattern or trajectory of illness onset and try then to mitigate progression and associated complications such as substance abuse.

While the effort to prevent and de-stigmatize mental illness and raise awareness is an important aspect of the collective effort to improve early detection and mitigate the associated illness burden, it will not succeed as a stand-alone approach. This would be akin to focusing on healthy lifestyle while not working to advance early detection and identification of various forms of heart disease or cancer. Psychiatric illness such as schizophrenia and recurrent mood disorders have been part of the human experience since antiquity and, untreated, account for a substantial proportion of years of life lost and years of life lived with

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disability.⁹ This commentary is to raise awareness of the need to improve precision in thinking and diagnosis in psychiatry in order to better differentiate transient distress from emerging psychiatric illness and to improve pathways to care that would provide the appropriate expertise on a timely basis – rather than a “one size fits all” model. In addition, precision in psychiatric practice needs to start with the approach we take to diagnosis – getting back to a medical model of taking all predictive information into account for individual patients based on a comprehensive assessment.

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BOOK REVIEW

Why Psychiatry is Unique and Misunderstood

Meltdown: Why Our Systems Fail and What We Can Do About It

BY CHRIS CLEARFIELD AND ANDRÁS TILCSIK
PENGUIN CANADA, 2018. \$34.95

ERIC PROST

1

If you haven't worked in an emergency department in a Canadian hospital, chances are you've probably visited one to lie prone on a gurney while someone lanced your anal abscess or to sit next to your aging father who can't remember you or to weep while telling a social worker about your failing relationship. And, though you may have waited longer than you liked, you got what you needed after interacting with a competent and highly-trained team. In short, the system worked. All the parts of a complex system functioned. You were not given the wrong medication, the power did not go out during your visit, the hospital did not run out of IV tubing, you were not treated by a fraudster masquerading as a doctor, and your health card was accepted. There was no meltdown.

The two authors of *Meltdown: Why Our Systems Fail and What We Can Do About It*—Chris Clearfield, a former derivatives trader and pilot from the U.S., and András Tilcsik, a Canada Research Chair in Strategy, Organizations, and Society at the University of Toronto—do not use hospital emergency departments as case studies. They do use nuclear reactors, plane crashes, accounting scandals, Academy Awards snafus, corporate embarrassments, and the failure of Target's expansion into Canada to illustrate their thesis: Because of rapidly increasing complexity, we are in the "Golden Age of Meltdowns" when many diverse types of systems are in the "danger zone," and our "ability to manage them hasn't quite caught up."¹ The authors are optimistic, though, and, in sunny prose, attempt to explain how we can save this precarious situation.

As I read this book, I wondered why most of our systems do not fail most of the time. According to the definitions in *Meltdown*, almost anything can be called a "a system," and, after learning a little about nuclear reactors and commercial air travel and the number of moving parts involved (both literally and metaphorically), it seems a miracle that radiation and falling 747s are not everywhere. This, however, is not how the authors would have us think. All these things are within our control, they say. Yes, systems are complicated, but with some straight-forward planning and monitoring, we can be in true control and systems will improve. (Given my own dim view of human nature and the fact that most people cannot explain how a flush toilet works despite its elegance and simplicity, I still have reservations. But I do have to concede that the hospital emergency department, a system with which I have some familiarity, does seem to work most of the time.)

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Clearfield and Tilcsik rely on the pioneering work of Charles Perrow 40 years ago when he analyzed the famous accident at the Three Mile Island Nuclear Generating Station in Pennsylvania as well as hundreds of other accidents. His book, *Normal Accidents*, outlined the startling conclusion that it is small failures rather than glaring engineering errors, earthquakes, or other catastrophes that explain major meltdowns. He found culprits like “a plumbing problem, a stuck valve, and an ambiguous indicator light.”² Sounds scary.

Perrow identified two factors that make systems vulnerable: their complexity and how “tightly coupled” they are.

Complexity has a specific definition. Here it means systems that are not linear but designed more like webs or networks where the parts and workings are hidden out-of-sight and there are many sub-systems. The authors use automotive assembly lines as examples of systems that are not complex. They are sophisticated for sure and have high-tech machinery; however, the system is linear with a “predictable sequence”. When this type of system fails, the authors say, it will be easy to pinpoint where the failure occurred. The consequences, too, will be predictable, as cars will not arrive at the next station on the line. When I was an undergraduate I worked in a large print shop during the summers. One particularly splendid machine, rife with mechanical moving parts including a conveyor belt, blades, pistons, and gears was, in the Chicago heat and humidity, prone to breaking down. And it was indeed always easy to see where the failure was: pages of books would begin to jam in the gears, blades would slice through covers, gears would grind as the pile-up became obvious. The system was completely linear and all the stages of production (even the gears themselves) were visible to all the workers. Unlike a nuclear plant, it was not complex—not because it was mechanical, but because it was linear and transparent.

In the authors’ definition of complexity, an operator can’t directly see what is going on inside. In a nuclear plant, we have to rely on indirect indicators such as “pressure indicators” and “water flow measurements,” and then piece things together, making inferences, and then using our knowledge of the system, good logic, and critical thinking to make, hopefully, accurate predictions and right decisions. Finally, in these complex systems, little changes not only have big effects (something that was true even with the machine in Chicago when one skewed sheet of paper caused a pile-up), but little changes can have seemingly unpredictable effects: like “the idea that a butterfly flapping its wings in Brazil might create the conditions for a tornado in Texas...we simply can’t understand enough about complex systems to predict all the possible consequences of even a small failure.”³

The second factor that makes a system vulnerable is whether it is “tightly coupled”. The authors explain this as a system having very little slack. It’s unforgiving. If there is slack, the failure of one part of the system doesn’t affect the rest very much. The whole survives. When I lived in Central Asia I once fired

a Kalashnikov rifle. That the AK-47 design is still in use after 70 years is probably testament to its loosely coupled design and its imprecision. A minimally trained security guard in Tashkent who seldom cleans his submachine gun can, nevertheless, be confident that his gun is in working order and will fire when necessary. The AK-47 is (perhaps unfortunately) quite forgiving. Equivalent American military arms are more precise and more accurate, but need maintenance and care. They are tightly coupled: if one small part rusts or malfunctions, the gun won't fire or is dangerous or inaccurate.

In tightly coupled systems absolutely everything must always work well. And usually the tightly coupled design means that time is precious. As these systems run, there isn't time to redo a task or try a different method or shut the whole thing off to stop and think. We can't hit "pause" on a nuclear reactor that is operating and overheating even though we'd like to. Problems need to be fixed immediately. The authors contrast this with airplane manufacturing, an example of loose coupling: different parts are made separately at different plants; if they don't fit or are made incorrectly, parts are stored, revisions made; it doesn't even really matter which parts are made first.⁴

You can thus plot various systems in relations to these two variables—how complex they are and how tightly coupled. Clearly, the least likely to meltdown are the non-complex and loosely coupled. Post offices and assembly lines are like this, according to this book. The most susceptible to meltdown are systems that are both complex and tightly coupled such as nuclear and chemical plants. Then we have simple yet tightly coupled. The authors suggest traditional dams are like this in that they are quite straight forward, linear, and obvious in their functioning and how they direct water and generate power, but are tightly coupled in that their parts are fast-moving, one malfunction will affect the whole, and they are unforgiving with little slack. The final category is the highly complex system but that has slack and is loosely coupled. Universities fit here as they are complicated but the parts often work independently—a scandal in the law school might not affect the department of microbiology.

I think most of the practice of medicine falls in these last two middle categories.

3

Psychiatrists often say that others don't perceive them as real doctors. Most laypeople don't know the difference between a psychiatrist and a psychologist, and other physicians view psychiatrists differently from their other medical colleagues. Despite 4 years of medical school and then usually a year of residency training that encompasses intense hands-on training in such fields as internal medicine, neurology, paediatrics, and emergency medicine, and despite prescribing a greater range of medications than many other specialities, psychiatrists are viewed as something other than medical doctors. I think this has roots in how complex and how tightly coupled psychiatry is when compared to other medical specialities.

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To say that internal medicine—the practice of the medicine of the heart, lungs, kidneys, and other internal organs—is not complex seems ludicrous. Of course the physiology of the human body is complicated. After all, it has taken centuries to discover the circulation of the blood and that germs exist. Anatomy and physiology might seem more like a web or network of unseen moving parts than a transparent, linear, and predictable system. However, in clinical practice, many doctors, with their knowledge, technology, and confidence do view the body as non-complex. In 1700 it was an unseen mystery, but in the 21st century the heart is a pump, the lungs bellows, the kidneys filters, and the circulation of the blood quite a predictable system of plumbing with flow, turbulence, valves, and leaks. We can take detailed pictures of what was once hidden, and test the body's interior with chemistry, biopsies, and ultrasound. So even if it is intricate, the confidence of modern medicine has rendered it non-complex in practice.

Psychiatry, however, does not fit with this. Despite more than a century of psychiatry as a specialty, and despite the “decade of the brain” (the 1990s), psychiatry and mental illness are still complicated in the sense discussed in *Meltdown*. The brain, while we are learning more about it, will probably never be a linear system or viewed as following a predictable sequence. It is still a lump of jelly. It is still mostly hidden, despite the excitement of neuroscientists at imaging that shows which parts of the brain consume the most sugar. And if the brain is complex, what about the mind? Just like the complicated systems in *Meltdown*, all is hidden. The psychiatrist must make diagnoses and decisions based on inferences, critical thinking, and extrapolation. He cannot actually observe the mind at work, so he describes a patient's thought process by what can be observed—how she strings thoughts together, how she uses language, and whether she is different from her usual self. It is very much like imagining what is going on inside a nuclear reactor by looking at the surface valves and gauges, indicators that may or may not be reflective of the hidden reality.

This makes psychiatry unique among modern medical specialties. We do not have five causes to rule in or out as we might when a patient's calcium is low; it is hard to follow algorithms when assessing patients with mental symptoms; and it is notoriously difficult to predict suicide, the one major area that others depend on psychiatrists for. We all know our moods can change based on whether we find a dollar on the sidewalk or a friend fails to text us back quickly. If a patient is vulnerable to thoughts of low self-worth and strong emotions and he has had a stressful day, suicidal thoughts may return, despite a recent risk assessment by a psychiatrist that was conducted well to the current evidence-based standards and that accurately concluded the risk was low. It is very much like the Brazilian butterfly causing a Texan tornado.

This reality makes psychiatry different from cardiology or respirology, and thus misunderstood. Other doctors understandably wonder why psychiatrists can't be more black and white or why their patients don't always get better quickly or why the psychiatrist sometimes says she has nothing else to offer even though the patient is still symptomatic. It's because the psychiatrist can't control for the patient's turbulent lifestyle, ongoing trauma, the effects of poverty, the flapping butterfly.

While psychiatry is complicated while much of the rest of medicine is uncomplicated in this sense, psychiatry is loosely coupled while the rest of medicine is tightly coupled. This compounds misunderstanding.

If the cardiologist knows that a lack of blood flow to the heart muscle causes the heart tissue to die (cause and effect, a predictable sequence made directly observable by angiograms and thus non-complicated), she must act quickly to intervene. Time is certainly precious when blood flow is blocked—minutes, seconds count—and there is little time to think, certainly none to press pause and step back to methodically discuss next steps. Everything must also work well once the action starts. Even a little mishap like a blocked tube or an ambiguous blood test let alone a flat tire on the ambulance can cause chaos and a bad outcome, a meltdown. It is all tightly coupled.

As the psychiatrist assesses his patient, he can be direct and efficient and ask only pertinent questions in order to make a diagnosis, and yet the system is never tightly coupled. If he asks a low-yield question or is misunderstood, he can rephrase; if he gets called out of the interview part way through, he can return and resume where he left off. The system is forgiving. Even if the medical student asks the patient questions that cause a rift in rapport, it might be saved by the supervising psychiatrist taking over. It is not life and death. The psychiatric interview is a beautiful process if done well with skill and insight, but if done badly there is still no meltdown. The rusty Kalashnikov still fires.

All this causes tension, misunderstanding, and frustration in other doctors. If the emergency physician and the emergency charge nurse expect that a psychiatric assessment will lead to a straight-forward treatment plan that can be executed immediately and will bring predictable, visible, and satisfying results for their patient, no wonder they are frustrated when it takes time to coax the symptoms out of the 16-year-old in distress, or when a change in the patient's suicidal thinking only comes gradually with painstaking rapport-building, reassurance, and psychotherapy—all done on-the-fly in the emergency room with skill and efficiency, but all-in-all taking hours.

If the other medical specialties diagnose and treat with confidence, working with input from a linear and transparent system of physiology and investigations, psychiatry does this with humility, tentatively, by making inferences about the unseen from an array of partially reliable clues. If other medical specialties then execute their treatments and procedures rapidly and with aplomb, making no errors (because none are allowed in a tightly coupled system), psychiatry may appear to take unnecessary time, stepping back to rethink and reflect, appearing to have all the time in the world and the luxury of a system with a lot of slack where errors can be forgiven. This is a recipe for misunderstanding. The cardiologist would seek to understand the sociologist or the artist if her system was vastly different, but psychiatrists are fellow doctors: why are they functioning in such a different system?

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If the principles of *Meltdown* are indeed relevant to psychiatry, what are the implications? And are there any solutions?

First, the implications.

Gone are the days when a psychiatric patient could easily get a bed and then stay in hospital for a long time. The word “asylum” when applied to a hospital building has a pejorative connotation but originally meant a place where shelter and protection were offered to the mentally ill (part of this meaning is still preserved in the political term “asylum seekers”). These days, hospitals have

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relatively few psychiatric beds, and the psychiatrist perpetually has the task of managing the bed count and making decisions, sadly, based on their availability. A system that is inherently loosely coupled and that enviably has slack built into its practice has been rendered artificially tightly coupled by the shortage of hospital beds. A speciality that needs time to think and time for patients to get well, has been converted into a tightly coupled endeavour, always pressed for time and with more than a whiff of urgency about it. Persuasion, gradual calm, changes of mind, and changes in emotions all take time. The pressure to get psychiatric patients out of emergency departments and the pressure to discharge patients from inpatient psychiatric wards imposes a tightly coupled system upon one that is naturally the opposite. Suddenly there is the need for immediate decisions and the need for quick treatments and thus for the practise of psychiatry to be error-free. To quickly discharge a patient who is talking about suicide or exhibiting psychotic symptoms requires the clinician to make a rapid decision rather than observe how the symptoms evolve, and it also means the decision must be the correct and safe one. This might sound like a good thing but, given the nature of the specialty, is it possible?

Another implication of psychiatry being inherently complicated but loosely coupled is that psychiatrists can be barely competent and still do no harm. Since the mind is so complex and still little understood in concrete terms, the psychiatrist can reasonably plead ignorance of the workings of his organ of study. Since much depends solely on observation and inferences in day-to-day practice, if the psychiatrist can make a case, however sloppily, for a particular diagnosis and treatment plan, there is usually no troubling consequences in the future. This is not the case with other specialities. Wrong diagnoses in endocrinology and surgery are more easily identified quickly and accurately. Incompetent cardiologists are more easily identified. And because psychiatry is also loosely coupled, the practitioner seldom has to perform under intense pressure or make snap decisions. His executive functioning, in short, can be mediocre, and yet this may never become apparent. It may be harder to be an excellent psychiatrist than an excellent internist, but it is much easier to be a mediocre one and get away with it.

Second, the solutions.

I see a finite number of solutions if the model of Clearfield and Tilcsik fits with the practise of psychiatry. (1) We can make psychiatry more like other fields of medicine by rendering it less complicated. This would entail learning more about the brain and mind that is not only illuminating to neuroscientists but also clinically relevant. This is not going to happen soon. Research takes time and I have seen very little neuroscience that is clinically relevant lately. (2) We can accept that psychiatry is loosely coupled and in fact needs to be, and then try to remove the artificial tight coupling that has been imposed upon it by the hospital bed crunch. (3) We can accept the fact that psychiatry is unique among the specialities and then attempt to get other doctors and stakeholders to understand this and accept it. All medical specialities don't need to be the same despite similar initial training and vocabulary. This doesn't mean we should abandon a medical model in psychiatry, but just realize where psychiatry diverges from much of medicine in its day-to-day practice. Perhaps this essay will go a little way towards this end.

There are two other solutions that this book reveals. Both are simple, can be inserted directly into the practice of psychiatry, and can make the complexity of psychiatry a little more straight-forward.

The first is what the authors call “bringing daylight into a system.”⁵ The example they use is the design of the cockpits of two types of airplanes. The new and sleek Airbus A330 has a beautiful cockpit (and Chris Clearfield the pilot probably knows). When I picture a traditional cockpit I imagine walls of buttons and lights and then two yokes or sticks rising out of the floor, one for the pilot and one for the co-pilot. These huge controls rising from the floor on three-foot-tall columns between the pilots’ legs move back and forth to raise and lower the nose of the plane. But the important part of all this is that the two yokes move *together in unison*. This I knew.

In the new Airbus 330, however, these yokes have been replaced by small joysticks on the outer console of each pilot’s seat. If one pilot adjusts his joystick, the other wouldn’t know it unless he was actually looking across his colleague and noticed this imperceptible manoeuvre as it was actually occurring. In a traditional cockpit, however, the two pilots always know exactly what each is doing with the controls because a huge control column is quite literally pressing into one’s own stomach as one’s colleague pulls on his control. This “reduces complexity because it makes what’s happening clearly visible.”⁶ The authors then cite examples of fatal crashes because of the little joysticks: one pilot didn’t know the other’s error or even what he had done because of the near-invisible joysticks. The authors conclude: “There is tremendous value in being able to see the state of a system by simply looking at it. Transparent design makes it hard for us to do the wrong thing—and it makes it easier to realize if we *have* made a mistake. Transparency reduces complexity and gives us a way out of the danger zone.”⁷

How can this be applied to psychiatry, the complex medical speciality?

As math teachers always say, *Show your work*. As psychiatrists, we need to show our clinical thinking. This makes for good medico-legal documentation, but it also makes for fewer errors, tighter diagnoses, and better understanding amongst colleagues.

If I explain in numbered points how I was thinking when I made the diagnosis of Obsessive Compulsive Disorder, if I explain step-by-step to the referring family physician why I do not think the diagnosis of Bipolar Disorder fits, complexity is reduced. The whole endeavour is not yet linear but it is rendered simpler and more linear. This is the value of classification of mental illness in the first place. When the first psychiatrists struggled to categorize manic-depression versus schizophrenia years ago, they were doing just this—bringing daylight into a system. We can continue this by showing our work, our clinical thinking, to all. We will then be able to see if we are doing the right thing, if our formulation of the patient makes any sense. And, as the authors predict, it will make it easier for us and others to know when we *have* made a mistake.

Related to this is another solution that is elegant and easily applied to psychiatry: The Pre-mortem.

If hindsight is 20/20 but never useful because, by definition, it’s hindsight, why not try to harness it? We can try to imagine that a bad event has already occurred and then try to brainstorm why it turned out that way. Let’s take a psychiatric patient who has presented in the emergency department as an example. If we assess his risk of suicide and violence and competently compile his symptoms, we may possibly think of all relevant factors that should be considered before making a disposition decision—admit or discharge—for him. However, we will probably come up with more factors—and more relevant ones—by conducting a pre-mortem on him.

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Here's how it might work. Before the disposition decision is made, as a team of clinicians (psychiatrist, resident, medical student), and maybe with a whiteboard, we say, "So, now let's imagine we have discharged this patient. Tomorrow, he comes back to the hospital with absent vital signs. What happened?" The answers will be the result of a process that has spurred creativity and extra thinking that would not have occurred had we thought only in reality and from present to future rather than imagining a scenario and thinking in reverse. "He probably overdosed on his lithium that I know he has a lot of, and no one found him because he has no social support." Well, we may still discharge the patient, but we may give him limited supplies of his medication and set him up with a service that will check in on him. The pre-mortem is an elegant solution and is inexpensive and brings transparency, thus reducing complexity.

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Hospital emergency departments are highly complicated systems that are often tightly coupled. In Canada, thankfully, they often run well, avoiding meltdowns and maybe even staying out of the danger zone. Psychiatry though is unique within medicine and is often misunderstood, and no place is this more apparent than when psychiatrists and psychiatric patients meet in emergency departments. A complex and loosely coupled system abuts linear but tightly coupled ones. And while I'm not a sunny optimist like the authors of *Meltdown*, I do acknowledge that solutions are usually possible and that psychiatry can do better and be better understood.

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