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SPECIAL ARTICLE

CRIMINALIZATION OF MEDICAL ERROR: WHO DRAWS THE LINE?

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As stakeholders struggle to reconcile calls for accountability and pressures for increased patient safety, criminal prosecution of surgeons and other health-care workers for medical error seems to be on the rise. This paper examines whether legal systems can meaningfully draw a line between acceptable performance and negligence. By questioning essentialist assumptions behind 'crime' or 'negligence', this paper suggests that multiple overlapping and partially contradictory descriptions of the same act are always possible, and even necessary, to approximate the complexity of reality. Although none of these descriptions is inherently right or wrong, each description of the act (as negligence, or system failure, or pedagogical issue) has a fixed repertoire of responses and countermeasures appended to it, which enables certain courses of action while excluding others. Simply holding practitioners accountable (e.g. by putting them on trial) excludes any beneficial effects as it produces defensive posturing, obfuscation and excessive stress and leads to defensive medicine, silent reporting systems and interference with professional oversight. Calls for accountability are important, but accountability should be seen as bringing information about needed improvements to levels or groups that can do something about it, rather than deflecting resources into legal protection and limiting liability. We must avoid a future in which we have to turn increasingly to legal systems to wring accountability out of practitioners because legal systems themselves have increasingly created a climate in which telling each other accounts openly is less and less possible.

Key words: accountability, negligence, professional misconduct, retrospective moral judgement, surgical error.

INTRODUCTION

Criminal prosecution of medical personnel in the wake of an adverse event is still rare. But it may be on the rise, as consumer groups and other stakeholders seek accountability and retribution in response to failure.[1,2] Letting a criminal court draw the line between acceptable surgical performance and criminal negligence may seem to offer advantages (e.g. courts are impartial; public trust could be helped by them holding doctors accountable). But these advantages are mostly illusory, and criminal prosecution of practitioners has been shown to have overwhelmingly negative effects.

This study aims to create some room for alternative responses to failure that both satisfy calls for accountability *and* maximize the opportunity to learn from failure. It first breaks open the supposedly essentialist notion of 'negligence' or 'crime' – the idea that crime or negligence have an immutable identity independent of the observer or the language used to describe the observed, if only we look carefully or methodically or disinterestedly enough at a piece of performance. It then investigates what happens when we let criminal courts draw the line between normal and negligent behaviour and how irrational outcomes (e.g. the prosecution and conviction of an individual medical worker for entire health-care system failures) can logically be produced by a putatively extremely rational system such as a criminal court. It then shows how alternative readings of the same act can be just as 'true' and possibly more constructive in supporting safer practice.

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DEFINE NEGLIGENCE

'All negligent error', said Edmund Pellegrino recently about adverse medical events, 'is morally blameworthy'.[3] A truism like that is easy enough to accept. If surgeons make errors that are negligent – if their performance has crossed that line – they should be considered morally blameworthy. And perhaps, the surgeon should even face the consequences of her or his negligence. This works, however, only when we can agree on the meaning of 'negligence'. Here is a definition:

> Negligence is conduct that falls below the standard required as normal in the community. It applies to a person who fails to use the reasonable level of skill expected of a person engaged in that particular activity, whether by omitting to do something that a prudent and reasonable person would do in the circumstances or by doing something that no prudent or reasonable person would have done in the circumstances. To raise a question of negligence, there needs to be a duty of care on the person, and harm must be caused by the negligent action. In other words, where there is a duty to exercise care, reasonable care must be taken to avoid acts or omissions which can reasonably be foreseen to be likely to cause harm to persons or property. If, as a result of a failure to act in this reasonably skillful way, harm/injury/damage is caused to a person or property, the person whose action caused the harm is negligent.[4]

This definition does not provide any answers as to what negligence is. Rather, it lays out an array of new questions and judgements that we must make. What is 'normal standard'? How far is 'below'? What is 'reasonably skilful'? What is 'reasonable care'? What is 'prudent'? Was harm indeed 'caused by the negligent action'? It is not that we cannot, in principle, come to answers to these questions. But no definition of negligence captures the essential properties of 'negligence', so that we could grab negligent behaviour and put it on the unacceptable side of the line. The questions generated by any definition of negligence are judgement calls. As such, the answers to them are intractable and infinitely negotiable.

It is attractive, of course, to think that once we weed through the questions surrounding an unwanted act and its negative consequences, we can 'really' discover whether there is negligence behind it. For this, we turn to a good method; in many cases, that method has become a criminal trial. We believe that courts can tease out that reality, that truth. The US Supreme Court put it most bluntly in 1966: 'The basic purpose of a trial is the determination of the truth.'[5] We expect a court to apply reason, and objectivity, and come up with the real story, with the truth. And then mete out consequences for those responsible for the outcome. From a distance, it may well come across this way. A disinterested party takes an evenhanded look at the case. The appropriate person gets to be held accountable. Appropriate consequences are meted out. Truth and justice have been served. This is a firmly modernist stance, one that has dominated science for centuries and one not foreign to surgery. Negligent errors, in this sense, are a kind of Durkheimian fact.[6] Reality exists, the truth can be found, just cut deep enough.

Naive realism

The problem is that neither empirical work (evidence-based studies, if you will) nor the general thrust of science today is on the side of this realist position any longer. Studies that ask individuals to judge whether an error occurred (and how negligent that error may have been) never fail to show the profound negotiability of the existence of that error – let alone its gravity.[7] For example, Hollnagel and Amalberti asked observers to count errors and categorize them using a particular taxonomy.[8] This was tested in a field setting by pairs of psychologists and practitioners who studied persons doing actual work in real time. Despite common indoctrination, there were substantial differences between the numbers and kinds of errors each of the two groups of observers noted, and only a very small number of errors were observed by both. The practitioners relied on external working conditions (e.g. interfaces, personnel and time resources) to refer to and categorize errors, whereas psychologists preferred to locate the error somewhere in presumed quarters of the mind (e.g. working memory) or in some mental state (e.g. attentional lapses).

Moreover, persons who actually did the work could tell the error coders that they both had it wrong. Observed 'errors' were not errors to those 'committing' them, but rather deliberate strategies intended to manage problems or foreseen situations that the error raters had neither seen nor understood as such if they had. Such normalization of actions, which at first appear deviant from the outside, is a critical aspect of understanding human work and its strengths and weaknesses. Some realists may argue that the ability to discover errors not seen by persons themselves confirms the superiority of the method. But such claims of epistemological privilege are hubris. Trying to study or judge the gravity of a socially constructed phenomenon like 'error' independent of meanings attached to it runs the risk of abstracting some essentialist definition of error that bears no relation to the practices and interpretations in question. In fact, it runs the risk of imposing one's own subjective interpretation under the guise of detached, blind legal judgement.

At first glance, studies such as those by Hollnagel and Amalberti raise the question of whose standard is right. If there is disagreement about what an observation means (i.e. whether it is an error or not or negligence or not), the question becomes one of arbitrage. Who can make the strongest epistemological claim? Many would probably put their bet on the practitioner. Others would prefer a disinterested peer. Yet others would put their faith in a judge or a jury. But this misses the point. If particular observers describe reality in a particular way (e.g. this was a 'negligent error'), then that does not imply any type of mapping on to an objectively attainable external reality – close or remote, good or bad. The reality of an observation is socially constructed. An error becomes visible, true (and then perhaps negligent) only because a community of specialists have developed tools that would seem to make it appear and have agreed on the language that makes it visible. There is nothing inherently 'true' about the error or its negligent nature. Its meaning is entirely produced, enforced and handed down through social and professional systems of language and institutions:

> …deviance is created by society…social groups create deviance by making the rules whose infraction constitutes deviance and by applying those rules to particular persons and labeling them as outsiders. From this point of view, deviance is not a quality of the act the person commits, but rather a consequence of the application by others of rules and sanctions to an 'offender'. The deviant is the one to whom the label has successfully been applied; deviant behaviour is behaviour that people so label".[9]

The social construction of negligence

What counts as negligent is the outcome of processes of societal negotiation, of social construction, by which an act is turned into negligence. But where does that leave the 'truth'? If the rational, measured, well-documented process of a legal system does not produce a veridical account of a human error but rather an absurd, irrational one, then what does? The sheer quest for a veridical account is steeped in assumptions about history and reality that we rarely examine because they seem so self-evident. One is that we, using rational methods, actually *can* find a story about what really happened. We assume that there is a reality, out there in some past, that exists independently of our attempts to uncover and describe it. This notion has been at the centre of the most fundamental debates in science and elsewhere during the past century. It was Einstein who maintained that there is such a thing as an autonomous reality, despite his caveat that theory determines what facts can be uncovered about reality. It abides, he argued, by certain immutable natural laws that do not depend on who the observer is or where he or she stands. There is an objective reality behind the appearance of the world.[10] Einstein may have straddled two eras. In one, Newtonian laws of physics had comfortably explained all observable relationships between cause and effect for 200 years – relationships that indeed seemed

to point to a real, stable world out there, independent of the observer.

The era unfolding around (and partly because of) Einstein, however, was making forays into the subatomic world that refused to behave according to Newton's predictions. Novel ideas such as quantum theory could better deal with the newly observed phenomena, but introduced contradictions and uncertainties that would not yield to a single description. Niels Bohr, initially a friend and colleague of Einstein but gradually an estranged foe, suggested how quantum systems demanded the overlapping of several complementary descriptions. When taken together, these would appear paradoxical or even contradictory, but they would all be necessary to form a description about the newly unlocked world. Rather than one rendition giving an exhausting account of the world, Bohr argued for drawing a series of maps – at different resolutions and foci, showing different features, and never completely overlapping – to even begin to approximate a description of reality.[10]

Einstein would not budge. Beyond a multiplicity of appearances, but may be just within reach, lay an objective, singular account of reality. He insisted that the universe had an existence, an underlying structure, totally independent of us. All we needed to do was to leave it alone, to not disturb it (e.g. by probing it for observation). Einstein would admit that arriving at an objective truth – the Enlightenment ideal – would become impossible as soon as you tried to do so (as your observation would introduce disruptions and change the very phenomenon you wanted to observe). But that did not mean there is no objective reality. Bohr's objection was subtle. The very act of observation, he argued, was not only disruptive of the phenomenon you wanted to learn about, it was constitutive of that phenomenon. Without your observation, there would not even be a phenomenon. But observing is made with particular instruments and particular questions in mind – hence they determine, or bias, what you will see. Every act of observation, Bohr said, is an act of interrogation. And the answer you receive depends on what you ask and how you frame the question.[10]

Crime as construct

Consider what this means for putting somebody on trial for 'human error'. The question asked frames the search for and interpretation of findings: did this error amount to a crime? Remember that the notion of error is already deeply troublesome – a negotiated construction rather than a simple, observable reality. In judging whether a 'human error' is a crime, then, individuals try to see whether one social construct can get construed to be another. Just as the properties of an error are not objective and independently existing, so a crime arises out of our ways of seeing and putting things. What ends up being labelled as criminal does not inhere in the act or the person. It is, just like Bohr's universe, designed (or 'constituted', as Niels Christie put it) through the act of interrogation:

> The world comes to us as we constitute it. Crime is thus a product of cultural, social and mental processes. For all acts, including those seen as unwanted, there are dozens of possible alternatives to their understanding: bad, mad, evil, misplaced honour, youth bravado, political heroism—or crime. The same acts can thus be met within several parallel systems as judicial, psychiatric, pedagogical, theological.[11]

The same unwanted act (or 'error'), in other words, can be construed to be many things at the same time, depending on what questions you asked to begin with. Ask theological questions and you may see in an error the manifestation of evil or the weakness of the flesh. Ask pedagogical questions and you may see in it the expression of underdeveloped skills. Ask judicial questions and you may begin to see a crime. Unwanted acts do not contain something 'criminal' as their essence. We make it so, through the perspective we take, through the questions we ask.

A 'negligent' surgeon in New Zealand

A British cardiothoracic surgeon, who had moved to New Zealand, was charged with manslaughter of three patients who had died during, or immediately after, operations that he had carried out.[2] A preceding inquiry had pointed to deficiencies in the surgeon's work. These cases were subsequently investigated by the police, which triggered criminal prosecution. Saying that the surgeon's acts amounted to 'incompetence', which in turn motivated criminal charges that converted those same acts into 'manslaughter', is one extreme way of dealing with medical failure. Other ways are possible too. For example, one could see this as an issue of cross-national transition (are procedures for doctors moving to Australia or New Zealand adequate? And how are any cultural implications of practising there systematically managed or monitored, if at all?). One could see it as a problem of access control to the profession (do different countries have different standards for who they would want as a surgeon and who controls access and how?), as one of training or proficiency checking (do surgeons submit to regular and systematic follow up of critical skills, such as the half-yearly proficiency check for professional pilots?), as an organizational one (the absence of regular junior staff to help with operations, and to being obliged to work with medical students instead) or as sociopolitical (how is the assignment of resources and perhaps even oversight governed in facilities outside the capital?). It may well be possible to write a compelling argument for each of these explanations of medical failure – each with a different repertoire of interpretations and countermeasures after it. Access and proficiency issues get controlled away. Training problems get educated away. Organizational issues get managed away. Political problems get elected away. A crime gets punished away. The point is not that one interpretation is right and all the others wrong. The point is that multiple overlapping interpretations of the same act are always possible and that they have different ramifications for what individuals and organizations should do to not have that act happen or lead to bad consequences again.

The notion that crime is just one construction of an act, out of many possible ones, is perhaps not easy to accept. We would think that a crime, of all things, must make up some essence behind a number of possible descriptions of an act, especially if that act has a bad outcome. We seem to have great confidence that the various descriptions can be sorted out by the rational process of a trial, that it will expose as patently false Christie's 'psychiatric, pedagogical, theological' or organizational explanations (I had failure anxiety! I wasn't trained enough! It was the Lord's will! I had lousy assistance, bad light, lack of sleep!). Like a scalpel, the application of reason will strip away the noise, the decoys and the excuses and arrive at the essential story: whether an act was negligent or not. And if negligence turns out *not* make up the essence, then there will be no bad consequences. It should be that simple.

It is not. When we find an essence behind the complexity of an unwanted act with a bad outcome, it is not because that essence is there – independent and stable and waiting for us to cut down to it – but because we created it as a result of the questions we asked and because we stopped looking any further once our construction was complete and fulfilled the social or political purposes we had in mind for it. As Christie argued, negligence, or 'crime', is not an essence that we can discover behind the inconsistency and shifting nature of the world as it meets us. 'Crime' or negligence itself is that flux, that dynamism, that inconstancy, a negotiated arrangement, a tenuous and temporary stability achieved among shifting cultural, social, mental and political forces. Concluding that an unwanted act is a crime is not the outcome of high-acuity observation. It is an accomplished human project, a social achievement.

So who gets to draw the line?

The question, then, is not where the line between acceptable and unacceptable performance goes (as Pellegrino presumes and definitions of negligence suggest is answerable). The very multiplicity of lines drawn shows that these are lines based on our observations, our languages and our judgements. It does not make one particular line the only possible one, or even desirable one, and it certainly does not make it 'true'. The question, instead, is who gets to draw the line? Who, in a country, or a profession (such as surgery), has the legitimated authority to assert primacy in drawing that line in a particular forum and impose its interpretation of the line on to others? The surgeon's peers in a Mortality and Morbidity conference? A judge or jury in a criminal trial? Let us turn to the latter. After all, more and more individuals seem to be doing just that.[2,12,13]

RATIONAL SYSTEMS THAT PRODUCE IRRATIONAL OUTCOMES

One of the more grating aspects of putting a doctor or other health-care worker on trial is the isolation of that person and her or his acts away from the context from which the act sprang and in which it was embedded. This context always involves more acts, more actors. Indeed, one of the consistent findings of safety research over the past 30 years is that failures are not the outcome of individual incompetence, but of an entire system not adapting quickly enough to cope with the changing complexity of the world it is designed to manage and control.[14] Adverse events are systematically connected to features of the entire system, pointing wide and far to policy implications, training issues, design problems, scheduling constraints, interpersonal collaboration and coordination and much more. Adverse events emerge from a multitude of such factors and their interactions, as a normal by-product of pursuing success in resource-constrained circumstances. Just as it almost always takes an entire surgical team (and surrounding hospital) to succeed, it also typically takes teamwork to fail. It is, of course, the whole point of legal proceedings to focus on a few acts by a few individuals or even a single individual. By its very nature, however, this contradicts what we know about accident causation in complex, dynamic systems. As said above, many factors, all necessary and only jointly sufficient, are needed to push a basically safe system over the edge into breakdown. Although focusing on an individual would appear a convenient idea (one that surgery, with its emphasis on individual competence, may find attractive or logical), the research base tells us something different: single acts by single culprits are neither necessary nor sufficient to create patient harm.[12,15]

So in prosecuting, and perhaps convicting, an individual surgeon, how can a supposedly rational judicial process often come to the exact opposite conclusion? Intense attempts at deploying rationality, the German sociologist Max Weber warned over a century ago, quickly deliver the opposite. The output of supposedly rational institutions is often – quite naturally, necessarily – irrational.[16] The accounts of human error that a legal system produces can be so bizarre precisely because of its application of reason: the way judicial proceedings rationalize the search for and consideration of evidence, closely script the turn-taking in speech and form of expression, limit what is 'relevant', are institutionally limited in their deferral to domain expertise and necessarily exclude the notion of an 'accident' because there is no such legal concept.

Trials and 'truth'

Many of the trappings of the criminal justice system are designed to impart an image of rationality, of consideration, objectivity and impartiality (just think of Lady Justitia's blindfold). As with most rational systems that produce irrational outcomes, the legal system is obsessed with bookkeeping, protocol, logic and bureaucracy, as if these were the chief guarantors of reason. The pace of judicial proceedings is measured, the tone solemn. The uniforms and settings and language invoke some kind of otherworldliness, of not exactly belonging to the daily, messy hubbub of the real world out there. In fact, the buildings are often designed so as to be set apart from the rest of the world, separated by gates, forecourts, high steps, enormous doors and podia. The rules of proceedings are tight and tightly controlled and designed to de-escalate, to sublimate visceral conflict into intellectual disagreement and to demote high-running emotions down to droning ennui.

Why go through such pains to design and sustain this enlightenment image of neutrality and rationality? Perhaps to escape the system's own conclusions, to belie the fact that truth, even in court cases, is never the reasoned product of the most accurate, objective perspective on reality. The judicial image disguises how truth, even here, is brought into being by historically and culturally located groups of individuals. Legal systems can dress their people up archaically and have them comport themselves peculiarly and have them retreat from the street architecturally, but who are they kidding? There are no truths beyond value, beyond tradition, beyond question, no matter how big the wig, how high the steps or ceilings, no matter how far we set our court buildings from the street.

Truth in a trial – as everywhere else – finds its origins in communal interchanges and the way in which these produce primacy of certain voices over others. Judges or juries do not hold privileged access to a definition of crime – other than what gets agreed in their communities. They are professionals and laypeople, respectively, in defining crime. That does not mean that any of them are 'right' or that a crime was indeed committed. It only means that they are in the position to say so. This cannot mean that some accounts are 'right' and some are 'wrong' in some factual rather than moral sense (e.g. those who maintain that one particular human error amounted to a crime whereas other acts did not). It means that whether there was a crime at all can never be established; it is forever contestable. What matters is the contemporary influence and the legitimated authority of the most

persuasive account. Because *it* gets to pick the route along which tracks for improvement or retribution will be laid.

Most of us cherish those images of Lady Justitia, blindfolded, holding the scales – the embodiment of Merton's ideal universalist, disinterested and organized arbiter, labelling criminal only that which really *is* criminal. But justices are at most organized. They are neither universal nor disinterested. Their view does not come from nowhere, and it is not 'objective'. There is nothing universal or superhuman about Lady Justitia, except for her sculptured ideal. Judges and jury members are localized, unique actors. And, given that they are, or will be, users, they are acutely interested stakeholders in a safe health-care system too. For a court to find negligence, then, and to stigmatize it as illegitimate, culpable, punishable, criminal even is not the product of blind arbitration. It is the negotiated outcome of a social process, not much different (if at all) from any other social process in its influence by history, institutions, hopes, fears and desires.

Any such authority, then – including that of judges or juries – can be subjected to ideological critique, a critique aimed at revealing the interests, values, doctrines or myths that underlie seemingly neutral, objective, impartial claims to truth.[17] In our age of scientific objectivity, we have a hard time acknowledging that truth is socially constructed – a product not of the most accurate mirroring of reality by words, but rather 'one way of putting things'. When we think of truth as accuracy, we think that a particular arrangement of words or events best maps on to the world as it is.[17] Other arrangements, other words (It was all the nurse's fault, the surgeon did her best!) are biased, or exaggerated, or partial. Such arrangements do not map on to reality as well, so they are not true or not entirely true. But not true relative to what? There is no such thing as an objective description of reality. If there was, we could not give it. We only have descriptions of reality that are formed by our own perspectives, captured in our own words.

This is not to deny the relevance or even authority of a legal tradition, at least not in principle. It is, rather, to see it as that: one tradition, among a number of possible alternatives, to help us solve difficult moral and practical problems that surround mistakes and safety. One call of postmodernism is that of reflexivity, a self-consciousness about how ideas and pronouncements reflect back on those who produce them. Reflexivity says that accounts are embedded in the very reality they seek to capture, characterize, record or structure.[18] A legal system can create an account of a surgical adverse event as an error or as a crime not because that is what 'objective' evidence suggests but because those concepts form the universe that the legal system has itself assembled and of which it is now the inhabitant. When a court captures and records an act as a crime, it is because the Aristotelian choice between crime or not crime forms its base reality. This realization should encourage us, said Kenneth Gergen, to put premises into question, to suspend the obvious or taken for granted, to listen to alternative framings of reality and to grapple with the comparative outcomes of multiple standpoints. Subscribing to one truth, just because it is produced by a legitimated authority, will blind us to alternative readings.

CONSEQUENCES OF CRIMINALIZATION

Judicial processes in the wake of an adverse event can be bad for justice, as shown above. But what about their effects on patient safety? One of the most important alternative readings of an adverse event is what lesson it contains. This is often contrary to finding out what culpability it implies. Prosecution of individuals can protect false beliefs about a basically safe system, in which individual humans are the least reliable components that should have some fear of the consequences if they do not do the job right. Learning instead challenges and potentially changes the belief about what creates safety. Moreover, prosecution emphasizes that failures are deviant and that they do not naturally belong in the organization or its practices and turns the actors into unique and necessary agents in the creation of the failure. Contemplating medical failures (which later took her life) ethnographer Marianne Paget called medical work an 'error-ridden activity' precisely because it is inexact, uncertain and practised on the human body.[19] Consistent with her observations (and the body of work on the psychology and sociology of mistake[20]), learning means that failures are seen as normal, as indigenous to the task and as inherent in the pursuit of success in resource-constrained, uncertain environments. Learning encourages organizations to address the real complexity of failures – not succumb to their apparent simplicity. Finally, prosecution is about the search for closure, about moving beyond and away from the adverse event. Learning is instead about continuous improvement, about closely integrating the event in what the system knows about itself.

A summary of adverse effects

Even before a doctor has gone to court, consequences of impending prosecutions spread themselves across them and their colleagues. The stress and isolation that practitioners can feel when subject to legal charges or a trial typically makes them carry out their jobs less well. And investing cognitive effort in considering how actions can get you into legal trouble detracts attention from carrying out quality work.[21] Rather than helping individuals avoid or better manage conditions that are conducive to error, prosecution conditions individuals to not get caught, or to cover themselves sufficiently, when errors do occur. It has been shown that both tort and criminal law encourages the practice of defensive medicine, rather than promoting high-quality care.[22] Indeed, anxiety, or fear of the consequences of error, has no proven value in promoting better performance.

Judicial proceedings can help stigmatize an incident as something shameful. Criminalizing an incident can send the message to everybody in the operational community that incidents are something professionally embarrassing, something to be avoided, and if that is not possible, to be denied, muffled and hidden. The sheer threat of prosecution can also make individuals stop reporting incidents or coming forward with safety-critical information. Judicial proceedings, or their possibility, can create a climate of fear about sharing information. It can hamper an organization's ability to learn from its own incidents.

Judicial proceedings can also interfere with professional oversight. Professional oversight bodies may become more careful in using language such as 'incompetence' or 'deviation' in their reports. If something is a 'deviation' that a professional oversight body takes notice of, it is very likely a deviation from some standard or regulation. And these in turn are enshrined, or have their basis, in law. 'Incompetence' or 'deviations' can then easily become a breaking of the law – a crime – rendering sources at the hospital silent or unwilling to collaborate with investigations into professional oversight. As another consequence, professional oversight bodies can become much less direct about what is wrong and needs to be decided about it. Also, judicial proceedings

in the aftermath of an accident can impede investigatory or professional access to information sources as practitioners may become less willing to cooperate or be forthcoming in the accident probe.[23] This could make it more difficult for investigators to get valuable information, particularly when judicial proceedings are launched at the same time as the safety investigation.

Putting practitioners on trial is almost always counterproductive to finding out why things went wrong and what to do about it so that systematic vulnerabilities get addressed. The biggest problem of a criminal trial in this regard is that it does not really produce accounts of a failure that permit any learning. A legal system holds individuals accountable, but it does not really allow individuals to hold their account. A morbidity and mortality conference at least allows surgeons to hold their account (or a version that is as honest and open as possible, given the context), so others can learn and improve as well.[24] Accounts of failure produced in a courtroom or deposition, in contrast, are almost of necessity defensive, limited, adversarial and self-preserving. They will contain little value for promoting system improvement and learning. Another consequence of the accountability demanded by legal systems is that it is easily perceived as illegitimate, intrusive and ignorant. If you are held 'accountable' by somebody who really does not understand what it means to be a professional in a particular setting, such as an operating theatre, then you will likely see their calls for accountability as unfair, as coarse and uninformed. Indeed, as unjust. Social cognition research shows that this leads to excessive stress, less disclosure and a polarization of positions, rather than an openness and willingness to share and learn for the common good.[21,25]

ALTERNATIVE SYSTEMS OF ACCOUNTABILITY

An act can be construed as a crime, but alternative readings are always possible (e.g. as expression of pedagogical or organizational problems). These alternative readings, however, can easily be seen as exculpatory, as 'mitigating factors', as excuses. Should we not hold surgeons and others accountable when they wreak damage in the lives of other individuals? Calls for accountability are fundamental to social reality, which locks us in reciprocal relationships where we are expected to be able to explain why we did what we did and to face the consequences of those actions. Being able to offer an account for our actions is the basis for a decent, open, functioning society. So accountability is important. Indeed, says Pellegrino, systems are not enough.[3] Of course we should look at the system in which surgeons work, and improve it to the best of our ability. But medical work is unique in that it is ultimately channelled through relationships between human beings – a discretionary space into which no system improvement can completely reach.

A discretionary space for personal accountability

Beyond all the opportunities for action the system creates and beyond all the constraints on action it throws up, there remains a discretionary space, a space that can be filled only by an individual care-giving human, a space with ambiguity, uncertainty and moral choices. Systems cannot substitute the responsibility borne by individuals within that space. But systems *can* do two things. One is to be very clear about where that discretionary space begins. Not giving practitioners sufficient authority to decide on courses of action (such as in many managed care systems), but demanding that they be held accountable for the consequences anyway, creates impossible and unfair double binds. Such double binds effectively shrink the discretionary space before action but open it wide after any bad consequences of action become apparent (then it was suddenly the physician's responsibility after all). The other thing a system can do is decide where a conscious discharge of responsibility inside the discretionary space comes from. Is that source fear or empowerment? Is that source anxiety or involvement?

Criminal prosecution presumes that the conscientious discharge of personal responsibility comes from fear of the consequences of not doing so. But professional opinion seems united behind the idea that neither civil litigation nor criminal prosecution work as a deterrent against medical failure (http://www.womens-health.org.nz/publications/WHW/whwjan97.htm litigation). Anxiety created by these accountability demands leads to defensive medicine, not high-quality care. Anxiety adds attentional burdens and distracts from conscientious discharge of the main care-giving task. In contrast to making individuals afraid, systems could make them participants in change and improvement. There is evidence that empowering individuals to affect their work conditions and to involve them in the outlines and content of that discretionary space, most actively promotes their willingness to shoulder their responsibilities inside it.[26]

Equating blame-free systems with an absence of personal accountability, as some do, is therefore wrong.[3] Blame free means blame free, not accountability free. The question is not whether we want practitioners to skirt personal accountability (few physicians do). The question is whether we want to fool ourselves that we can meaningfully wring such accountability out of practitioners by blaming them, suing them or putting them on trial. No single piece of evidence so far seems to show that we can.

Forward-looking accountability

Calls for accountability are important. And responding adequately to them is too. Calls for accountability are in essence about trust. About individuals, regulators, the public and employees trusting that professionals will take problems inside their practice or organization seriously and do something about them. But this means that *only* responding to calls for accountability (e.g. by putting individuals on trial) can quickly create injustice, decrease trust and interfere with progress on safety.

Instead, we should see accountability as something that brings information about needed improvements to levels or groups that can do something about it. We should see accountability as something that allows individuals and their organization to invest resources in improvements that have a safety dividend, rather than deflecting resources into legal protection and limiting liability. This is captured in what Virginia Sharpe calls 'forward-looking accountability.'[15] Accountability that is backward-looking (often the kind in trials or lawsuits) tries to find a scapegoat, to blame and shame an individual for messing up. But accountability is about looking ahead. Not only should accountability acknowledge the mistake and the harm resulting from it, but also should lay out the opportunities (and responsibilities!) for making changes so that the probability of such harm happening again goes down.

Prosecuting surgeons for their 'negligence' works against this principle. The long-term consequence for society of turning medical mistake into crimes or culpable malpractice could be less safe health care. If they become the main purveyor of

accountability, legal systems could help create a climate in which freely telling accounts of what happened (and what to do about it) becomes difficult. There is a risk of a vicious cycle. We may end up turning increasingly to the legal system because the legal system has increasingly created a climate in which telling each other accounts openly is less and less possible. If they take over the dispensing of accountability, legal systems will slowly strangle it.

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