

ORIGINAL ARTICLE

Deep but Narrow, Wide but Shallow: Unidisciplinary vs Multidisciplinary Knowledge and Decision-Making

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Summary

Modern education and professional training in most fields have followed the *deep but narrow* model, where deep expertise is acquired in a narrow field (e.g. specific area of law), with very few insights incorporated from other disciplines. A common alternative to *deep but narrow* is *wide but shallow*, where experts acquire superficial knowledge from across different disciplines, but without interdisciplinary integration needed to extract true value from these insights. In this paper we argue that recent advances in understanding the human mind, combined with unprecedented changes in accessibility of information enabled by AI, provide an opportunity for shifting to the *deep* and *wide* model of expertise acquisition. Using the legal profession as an example, we discuss how the shift towards *deep* and *wide* model can lead to improvements in decision making and consequent benefits to individuals and societies.

Keywords: interdisciplinary knowledge; unidisciplinary knowledge; decision-making; AI; lawyers' education; knowledge acquisition

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Dangers of *shallow and narrow*

‘A little Learning is a dang'rous Thing; Drink deep, or taste not the Pierian Spring: There shallow Draughts intoxicate the Brain, And drinking largely sobers us again.’ states Alexander Pope in *An Essay on Criticism* (Pope 1758) p10. Other thinkers, such as Socrates ~2500 years ago (Harold North Fowler 1966), and Spinoza around half a millennia ago (Spinoza 1673) – spoke similarly of the dangers of both shallow knowledge and narrow knowledge.

Despite the millennia-long awareness of the importance of *deep and wide* knowledge, the modern educational approaches have persisted with the unidisciplinary model as the default approach to knowledge. This unidisciplinary focus can exacerbate *poor decision-making* evident in all spheres of human function.

Poor decision-making and the justice system

Humans are vested with remarkable analytic powers of the mind that we apply to all spheres of life, from creation to destruction. We occupy all environmental niches, peer into our own cells, examine our own brain and explore the depths of ocean and space. Our overall quality of life has improved, including reduction in child mortality, eradication of some diseases, positive developments in health, materials and societal functions. Yet, individuals, organisations, systems and whole societies make poor decisions in every sphere of life. This is true even of the Justice system which is relied upon to uphold what is right. This poor decision making is evident in crime statistics, sentencing, and legislation – to name just a few elements.

For example, as stated by the President of the United States, Barack Obama ‘The United States is home to 5% of the world’s population, but 25% of the world’s prisoners. Think about that!’ (Obama 2015). Thinking about it is hard, because it does not make sense and this situation should not exist in a just system. Similarly, ‘something is rotten’ in the area of sentencing decision making. For example, a large scale US study on decision-making for life changing matters such as criminal sentencing, examined 149,363 federal cases across 30 cities and found that the length of a defendant’s sentence within a city could vary by as much as 63% – depending on the judge assigned to the case (United States Sentencing Commission 2019). Large scale studies on immigration found that chances of success in the same court for some nationalities were 1% in front of one judge and over 80% in front of another (Foster 2012). A UK study found that 36% of criminal cases in the Court of Appeal had issued unlawful sentences in which the type of sentence imposed was simply wrong in law, beyond being excessively lenient or severe (UK Law Commission 2018).

Similar flaws in decision-making can be seen in legislation. For example, many behaviours are at one time illegal, and at another time decriminalised, or the other way around, such as homosexuality, cross-racial relations, selling people, abortion, forced sterilisation, using mobile phones in schools, smoking – to name just a few. There are many examples of existing laws that are harmful (see Box 1 for an example of a law and its chain reactions).

Such flaws in the justice system partly stem from the severe economic inequality, with for example, 0.001% of the world's population – fewer than 60,000 people – having three times as much wealth as half of all humans (Henley 2025); for a summary see also (Selita and Kovas 2018). Another factor affecting decisions is power inequality of the parties in the justice process, with outcomes depending on the position of the parties on a continuum of power relative to one another – where the chances of obtaining 'justice' change from almost non-existent to almost certain (see also chapter on Advocacy in (Selita and Kovas in Press)). For example, power dynamics have also been linked to the patterns of juvenile and adult incarcerations, including as a function of politics (e.g. see (Newburn 2017)).

Flawed decision-making in the justice system is geographically and historically universal, with the legal systems designed to ensure the status quo favourable to the wealthy and the powerful, exemplified in the lyrics of a popular hymn for children 'The rich man in his castle; the poor man at the gate' (Lambert 2024; Price 2009; *Wikipedia* 2026, 'All Things Bright and Beautiful'). For example, there is recorded evidence of extreme inequality and abuse of population by elites from around 5000 years ago (Institute for the Study of Ancient Cultures (ISAC), University of Chicago). Indeed, many laws and their interpretations historically existed to maintain the desired (by some) balance in society in select circumstances, and have been updated in response to changing culture and societal trends.

Decisions in the justice system are also affected by the way the system is organised. It is uncanny how applicable is today Aristophanes' 2500 year-old description of trials in courts of law in the timeless comedy *Wasps* ('Aristophanes (c.446–c.386 BC) - *Wasps*: Translated by George Theodoridis', n.d.)). In *Wasps*, during the trial, all methods are used to influence the jury. Initially the accused (a dog) is described as a worthy member of society: he is the virtuoso, the genius. When this fails, the dog is described as disadvantaged by circumstances: he is uneducated and had not had the opportunity to learn to play a musical instrument. And when that also fails, the dog's puppies are brought in and asked to cry and howl. The witnesses are pots and pans, and, because they cannot speak, they are represented by another character 'on behalf of the accused'. Finally, cheating is used to obtain the desired outcome – (see parallels in Box 1).

Finally, flawed decisions in the justice system also stem from the way human mind processes information, including attentional problems, conscious and unconscious biases, cultural norms, etc. For example, Sophocles' description of confusions around 'free' will – a core pillar in justice and other aspects – is as timely today as it was 2500 years ago (see examples in Kovas and Selita 2021).

However, despite economic, power-related and mind-related (cognitive, attitudinal, etc.) influences on decision making, recent scientific advances suggest that human decisions *can* improve, provided planned targeted societal efforts take place.

Scientific Advances and Decision Making

After millennia of obscurity, in the 20th century the human brain has taken a centre stage in the quest for understanding human behaviour. Today we know that the brain, the most complex object known in the Universe, processes information and arrives at decisions via a myriad of processes of immense complexity. We also know that each brain is unique in its organisation and function, with its uniqueness stemming from continuous interplay between genetic and environmental influences. The scientific knowledge, generated in the past few decades in genomics, cognitive sciences, neuroscience and psychology, has provided unprecedented new insights into human behaviour, and the knowledge is continuously advancing. This knowledge has direct implications for understanding decision making across different fields, including medicine, education, defence, diplomacy, government, and justice.

Knowledge acquisition

The brain is locked inside the skull and has no direct access to the world. It cannot feel pain, see, hear, smell or sense in any other way. The brain is an information processor, receiving electro-chemically coded signals from the body's sensory machinery, and analysing these coded signals. Every piece of information arriving from the senses is analysed in the context of what is already stored in the brain. Therefore, *what is fed bottom-up* (bottom-up processing) is interpreted within the parameters of expectations, contextual information, existing memory, biases etc (top-down processing).

Unidisciplinary education equips the brain (our 'necktop') with certain knowledge acquisition approaches, certain paradigms and schemas ('apps') – which allows for particular information to be processed in particular ways. The decisions we produce depend on the 'apps' we 'uploaded' and the information these 'apps' will process. Of course, today one can easily access information from any discipline, but without the right 'apps' it cannot be meaningfully processed. To overcome these limitations, professional education must give way to approaches that use multiple disciplines to address complex problems (*multidisciplinary*) and where, in the process of collaboration, disciplines influence each other – borrowing each other's methods, concepts and insights (*interdisciplinary*). Considering the brain can only *see* with what has been uploaded onto it – the deeper and wider the knowledge, the more one can *see* how things are (see also (Big Think 2017)).

One of the key reasons for embracing multi- and inter-disciplinary approaches is that disciplinary boundaries are artificial, and become less and less real the more we learn about the world. As a thought experiment, we could imagine what knowledge would we select to be passed on to people of the future, if by some cataclysm all scientific knowledge is destroyed and only fewest words can be used. For the Physics Nobel prize winner Richard Feynman it would be: 'All things are made of atoms - little particles that move around in perpetual motion, attracting each other when they are a little distance apart, but repelling upon being squeezed into one another' (Feynman 2009). An insight from genomics can be: 'Human body consists of trillions of cells –

‘small rooms’. Most cells contain DNA – a self-replicating multi-billion ‘letter’ text, written in 4 chemical bases arranged in three-letter sequences, like words. Sequences of these ‘words’ form instructions for different processes, including for building proteins – different molecular structures that enable vital functions. Some of the sequences are identical for all humans, and others differ – contributing to similarities and differences among people. The same sequence is usually involved in many different functions and many sequences are involved in each function. All human processes result from these DNA instructions, but how instructions play out depends on an individual’s environment.’ A insight from psychology could be: ‘The brain contains billions of neurons – the cells that interconnect in complex ways that enable our mind – our thoughts, feelings, memories, decisions, actions, consciousness and other psychological and physiological processes. The brain connectivity is malleable, and this ability to rewire enables learning and means that the Self is always evolving, always becoming. Although much of our mind’s working happens outside of our awareness, our mind is so powerful that it allows us to examine itself – to metathink - and this gives us some control over our mind. However, the human mind can trick itself into believing it is always right, even though it has plenty of evidence of being wrong in the past and having updated beliefs on receiving of new knowledge. This quality of the mind can lead even a kind person with good intentions to take bad and even inhumane decisions. Deep and wide knowledge, as well as metathinking can serve as antidote to biases and glitches of the mind’. Together with pieces of knowledge from other disciplines, these insights would form an incredible pool of interdisciplinary knowledge that would equip the people of the future with useful information and powerful information processing competencies.

Another key reason for why multi- and inter-disciplinary approaches are so valuable is that they promote *metathinking* – the ability to think about our own thinking, views, attitudes and behaviour, to analyse the sources and reasons for thinking the way we do. As we exercise metathinking, we learn about what we *knew* and what we *thought we knew*, what we have done correctly and what incorrectly, what our ‘necktops’ are capable of producing and what ‘apps’ we need to upload to expand our understanding. With greater awareness of our own thinking processes, we tend to become more humble and cautious of decisions the brain takes.

The exceptional value of multidisciplinary training and experience has recently been demonstrated in a large review on highest levels of human performance (Güllich et al. 2025). The study examined developmental experiences of more than 34,000 adult international top performers in different domains, including Nobel laureates, the most renowned classical music composers, Olympic champions, and the world’s best chess players. Among many findings, the study showed that Nobel laureates in the sciences, compared with national-level awardees, engaged in more multidisciplinary activities in terms of study, practice, and working experiences, within science and outside of science. Similarly, composers’ success of their compositions correlated with previous experiences in diverse genres rather than specialising within a single genre. ‘Hot streaks’/ bursts of high-impact works produced in close succession – for scientists, artists, and film directors – were often preceded by a period of work in other disciplines, genres, or artistic styles.

Most need, least feed: unidisciplinary focus in the legal profession

Law degrees are known as among the most demanding in terms of learning and among the most rewarding in terms of earning and social status. Obtaining a law degree equips one with tools to navigate the myriads of rules and procedures created in societies (in the UK, one-two Acts of Parliament per week (29 in 2020)). The knowledge ‘uploading’ that takes place during law studies and practice is primarily unidisciplinary, focused on the law and its interpretation. Moreover, in the recent decades, the law profession has moved in the direction of very defined/narrow expertise (Ariens 1994). Interdisciplinary knowledge on human behaviour is not part of the legal training, and professional law libraries usually do not hold such resources on the basis that they are for academics.

However, interdisciplinary knowledge is badly needed in the field of justice, because this field operates with such complex phenomena as *will, intention, capacity, decision-making, consciousness, guilt, remorse, praise and blame, aetiology, reason, morality, social cohesion* and many more – that are explored within other disciplines. Lawyers also play a key ‘referee-like’ role in the relationship between power and rights (see (Selita and Kovas in Press)). Multidisciplinary knowledge in the law profession can ensure *preservation of the status quo* (when appropriate), whilst *providing solutions* which improve life for everyone in a society. There are many examples showing that governments can allow for more rights to people without losing power. As an illustration, countries that are more democratic than others, are not so because their rulers are less able to maintain their power or because they are kinder or fairer, but because *cleverer structures* have been put in place. These structures allow for rulers to maintain their power whilst giving more rights to people than in totalitarian systems.

The *deeper and wider* the knowledge of those involved in designing the systems, the higher the chances of creating structures that allow for more balanced and harmonious societies. If the brain ‘algorithms’ have access to *a system* of reliable data – i.e. if a lot more knowledge were uploaded onto ‘necktops’ of decision makers and their advisors – the outcomes would be better. For illustration, taking decisions about the health of a person as an example, an information processor with access to genetic, medical, behavioural, shopping, communication and other data can make incomparably more reliable decisions than a processor with access only to medial data. If we were to give AI access to only a small ‘pot’ of data, what outcomes would we expect? Similarly, practising in the legal system without knowledge of psychology and behavioural sciences can be likened to prescribing medication without knowledge of illnesses, or cutting grass with a sledgehammer.

But how can one acquire *deep and wide* knowledge, given the limitations of our memory systems and time available? For example, a law degree is already among the hardest degrees due to significant workload, including extensive reading, remembering many cases and analysis of complex legal texts. When can an aspiring lawyer learn about genomics, psychology or cognitive neuroscience? The answer is ‘now’. The latest developments in AI brought about a unique opportunity for

multi/inter-disciplinary focus. For example, today, with a few prompts, a lawyer can access any collection of relevant cases. It is therefore unnecessary to memorise hundreds of cases, procedure or how different parts of different Acts interconnect, e.g. cancelling out or supporting each other. Instead, the focus can be on deeper understanding of human mind and behaviour, and on positive developments in the justice systems that break the perpetual vicious cycles of inequality, frustration and suffering.

For example, with an interdisciplinary approach to human mind, the concept of *free will* within the legal concept would be re-examined. One's *will* is not free from genetic and environmental influences, because *will* is a product of the mind, the mind is a product of the brain, and the brain's connectivity and function are influenced by continuous interplay between genetic and environmental factors.

Building multidisciplinary and interdisciplinary knowledge

The advantage of pursuing multidisciplinary expertise is well established, e.g. see (Qu et al. 2024; Kongkar et al. 2025; Selita et al. 2023). However, embracing multidisciplinary and interdisciplinary approaches requires overcoming a number of cognitive and societal barriers.

Cognitive barriers

Cognitive limitations. Our cognitive processing has many limitations, including attentional resources, working memory capacity, efficiency of encoding and retrieval of information from long-term memory, etc. (Buschman et al. 2011; Sadtler et al. 2014; Marois and Ivanoff 2005; Brod et al. 2013; Inda et al. 2011; Van Kesteren and Meeter 2020). These limitations mean that developing expertise even in one field, such as playing an instrument or coding, typically requires several years of dedicated study and practice (BBC 2014; Kellogg 2008; Wong 2015).

Undervaluing multi-interdisciplinary knowledge. The brain has no way of knowing the difference a new piece of knowledge will make until it has that piece of knowledge. Therefore, we are often unable to understand how knowledge in a different area can be useful to us, until we have gained the new knowledge.

The Curse of Partial Knowledge. Partial knowledge creates an 'invisible mirror ceiling', where you see clearly how things are, but without knowing that everything you see is just a reflection of your knowledge (Selita and Kovas in Press). It tricks you into thinking you know enough to understand things that matter for your work and your life, even in the presence of evidence to the contrary. For an excellent illustration, see interview with Nobel Prize winner Daniel Kahneman by LeadersIn (LeadersIn 2016).

Societal barriers

Deep but narrow is rewarded. Professional systems generally reward specialisation. In academia, for example, when scientists switch fields, they suffer what is known as the ‘pivot penalty’, where they get cited less. This was recently confirmed by a large study of nearly 26 million research papers (Lenharo 2025; Hill et al. 2025). And it is well-known that when one continues with career in one field, they usually progress through the ranks as they gain experience, expertise and respect. This progress is significantly impacted when one retrain in another field – ‘starting again’. This makes the pursuit of multidisciplinary expertise good for the mind but often bad for career progression and financial comfort.

Access to knowledge. Access to reliable knowledge has always been a costly challenge for millennia (e.g. see (Copleston 1993; Berryman 2016)). Today, the abundance of resources and AI has made it more difficult than ever to *identify reliable knowledge* (see Chapter 1 in (Selita and Kovas in Press)). In addition, with education becoming an expensive commodity, knowledge is often viewed as something that can be bought. However, although one can pay for a degree, one cannot buy knowledge because it can only be achieved through effort. Moreover, the proliferation of AI assistance in education means that students outsource the knowledge and knowing, leading to lack of expertise. Moreover, outsourcing knowing leads to an unsatisfied need for cognition that all humans have, in Aristotle’s words: ‘All humans by nature are actuated with the desire of knowledge’ (Aristotle 1857) p105. This *need for understanding* cannot be equated to the knowledge required to get to a target destination, e.g. specific competency or a job. The desire for knowledge transcends any specific task as it includes curiosity about *how everything is interconnected* and the processes through which one can improve one’s thinking.

Overcoming barriers

Both cognitive and societal barriers can be overcome with organised interventions. For example, expertly curated interdisciplinary curriculum/training programmes can enhance understanding of complex concepts. In turn, such enhanced understanding means that more can be learned faster and showcases the value of delving into the depth of knowledge from another discipline.

Law Schools can play the key role to this end, especially because it is difficult for individual lawyers or aspiring lawyers to overcome the barriers without organised support. Law schools can update law degrees accordingly – in collaboration with multidisciplinary experts. Because of the close relationship between law and the science of human mind and behaviour, lawyers should not be able to qualify without some core relevant modules. Law libraries, including those provided by the Inns of Court, should include sources providing knowledge on human mind and behaviour.

Lawyers seeking to uphold justice at the highest level, may have to be prepared to ‘marry up by marrying down’ – obtaining greater interdisciplinary expertise by potentially sacrificing faster career progression and associated benefits. We borrowed this analogy from the reported trend of highly educated people marrying up in wealth

(marrying wealthier people), by marrying down in knowledge (marrying people with less education) (Schwartz et al. 2016) – except in our analogy, *interdisciplinary knowledge is the wealth*. As one's depth and width of knowledge grow, the gaining of new knowledge generally moves from being *hard work* to being an insatiable passion.

Concluding remark

'In this life that lasts only one hour, how much how little is within our power.' (Emily Dickinson, 1865, published 1964) p143.

Imagine a world where every living person does not have to struggle for food, for water, for shelter; where they go about their daily activities feeling that all is okay; a world where other creatures are not abused. And this may be achieved, if more is within our *power* to produce reliable decisions. Reliable decisions can be gained by *deep and wide* knowledge of individuals in a society, especially those holding positions of power. Only a small improvement in human decision making can make an immeasurable difference for the *individuals* (each person's Self), and *other* human and non-human beings.

Box 1. Chain reactions of decision making in law

The work of lawyers (their decisions) plays a primary role in *what should be made law*, and *what behaviour deserves what response/action* (e.g. see (Luban 1988; Rhode 2000; Selita 2020)). The 'uploading' onto the brain that takes place during a law degree and practice equip the brain with the 'apps' needed to assess such things as efficiency of a new law and navigating the legal terrain. However, it often does not equip the brain with the 'apps' needed to calculate chain reactions, for example those following the developing/passing of a new law.

As an illustration, here we examine the chain reaction of the **law on costs at the First Tier Property Tribunals**. This law vests the First Tier Property Tribunal (where most cases end) in England and Wales with absolute power for costs against the public and almost no power against the housing corporations (Selita 2018; The Tribunal Procedure (First-Tier Tribunal) (Property Chamber) Rules 2013 2013). This law is designed such that, at the 'no-costs' Tribunals, a member of society will *almost always pay the legal costs of housing corporations* (added to the service charge), unless they apply to the Tribunal and the Tribunal grants an order against that. Such an order is, however, refused even in circumstances, when landlords are found in serious breach of contract *. Moreover, due to the cascading effects of such a law, when a Tribunal issues such an order, it does not mean that the people will not have to pay the costs.

*In one such case (see (Selita 2018)), the housing association/company sold flats to people advertising them with less than half the actual service charge – concealing the remaining monthly costs. Then, for several years,

they collected the costs for services (the service charge) in two halves: one half in monthly instalments, *as required by the lease agreement*; and the remaining half as balancing (or unexpected) costs, collected well after the close of the financial year, and so in breach of the lease agreement. The housing company suppressed protests of leaseholders, for several years, by using legal threats. *At the Tribunal*, the incurred costs were found to be unreasonable and unnecessary. In addition, in relation to the question why they issued such high additional charges every year, the landlords changed their position several times, from these being unexpected costs, to erroneously ‘undercooked the accounts’, to covering half of the service charge separately because they calculated the spending for half of the services earlier than for others. None of these arguments could stand, considering the actual costs were calculated at the end of each financial year, and for several years. Furthermore, the Tribunal accepted leaseholders’ position that charges were inflated beyond those reflected in invoices, but the landlords rejected this position. After persistent efforts by the Tribunal, it became clear that the charges indeed had been inflated, and the landlords admitted to having inflated the figures. To the question ‘*why*’ they were inflated, the landlords responded, ‘*there is a formula running in the background of the accounts excel sheet*’. However, despite all these facts the Tribunal *awarded legal costs to the landlords*, rejecting Leaseholders’ application against costs. Following this precedent, can Leaseholders ever be safe from incurring housing corporations’ legal costs at the First Tier Property Tribunal?

Such a law sets in motion *a chain reaction of harmful outcomes for people*. Legal costs of corporations are generally high, often amounting to years of savings for people, and costs are an ambush for people without expert legal representation, considering the Tribunal is known as a ‘no costs’ Tribunal. This outcome, *instils fear* and leads to accepting of *suffering in silence*, see for example meta-analysis by (Tannenbaum et al. 2015; Kiewitz et al. 2016). This *suffering in silence* is expectedly widespread: virtually all flat owners the Authors have helped on a pro-bono basis, have expressed to be paranoid of taking legal action for this very reason. Accepting of suffering in silence can lead to *abuses of power* – see a recent example where leaseholders in a London block of flats, for almost three years had to put up with such suffering that one feels uncomfortable to put in words (see media coverage (ITV News 2022)).

The *use of fear* and *lack of accountability* empowers landlords to create unnecessary works – with many such examples published by the media and discussed in Parliament – raising the issue of leaseholders being used as ‘cash cows’ (e.g. see (UK Parliament 2021)). For example, in a recent case, a housing corporation/association misled the Tribunal to obtain permission for conducting works with large costs for flat owners. It did not notify the flat owners of the works and costs, or of the application to the Tribunal, and the Tribunal considered it a case of no-show. When the flat owners learned of this and appealed, the Tribunal had to issue an order against the housing corporation (data available from the Authors)). However, the corporation recovered the costs anyway. The only remaining solution is legal action, but at what risk?

The law also means that housing associations *do not provide information* if they choose not to. For example, several leaseholders in a block of flats in London have been refused for several years all requests for information on how their money is being spent, despite the law requiring housing corporations to provide this information within a month of a request (data available from Authors)). The only remaining ‘solution’ is again legal action, and with the same risks.

For the housing corporations, however, this law sets in motion a *positive chain of events*. It helps them to continuously *gain ‘territory’ from the people*, territories which are then heavily guarded, including due to *loss aversion* (e.g. see (Sokol-Hessner and Rutledge 2019)). For example, until a few years ago in England and Wales, when flat owners sought a breakdown of costs from housing corporations, they would normally obtain them within a month, as provided by the law. But recently, it can take years of persistent requests from leaseholders and often without success (data available from Authors) – something which has led to housing associations regularly conducting works without approval with major costs for leaseholders. It also enables housing corporations ignore directions from Tribunals. For example, a few years after the decision of the Property Tribunal for the case discussed above – the housing corporation had ignored all directions of the Tribunal.

Therefore, the law leads to *greater abuses of power* by housing corporations. For example, in a currently ongoing case, many leaseholders in a block of flats in central London have been suffering from noise nuisance 24/7 for almost 1.5 years – the freeholder blocking access to all engineers sent by the superior leaseholder to assess the noise (data available from the Authors). The noise is caused by machinery newly installed by the freeholder, and is classified as environmental nuisance by the local Council, which has issued several Abatement Notices, but without further progress. The Leaseholders have expressed that based on the current law and its application it is too risky to take legal action against the freeholder. This is because, they would most likely be forced to pay freeholders’ costs via the service charge – a fear which has strong basis, considering that housing associations can get away with refusing to provide a breakdown of costs.

Such a chain of harmful events is avoidable with knowledge from psychology. For example, for the law in question (allowing corporations to collect costs of the case from the claimants), one can assess at drafting stage the chain of harmful events: from *fear*, to *suffering in silence*, *undermining of health and mental health (due to stress, lack of sleep etc.)*, to *increase of abuse of power*, to *higher costs*, and to consolidation of *harmful practices, including due to loss aversion*. One can assess that harm does not end here, but expands long-term, including: *loss of trust in societal structures*; and resulting *loss of social cohesion*. On the other hand, the ability to factor in such chain reactions at the onset of laws, can set in motion a positive chain reaction of events.

References

Ariens, Michael. 1994. ‘Know the Law: A History of Legal Specialization’. *South Carolina Law Review* 45 (5): 1003.

- ‘Aristophanes (c.446–c.386 BC) - Wasps: Translated by George Theodoridis’. n.d. Accessed 15 March 2021. <https://www.poetryintranslation.com/PITBR/Greek/Wasps.php>.
- Aristotle. 1857. *The Metaphysics of Aristotle*. With University of Michigan. London, H.G. Bohn. <http://archive.org/details/metaphysicsaris02arisgoog>.
- BBC. 2014. ‘Can 10,000 Hours of Practice Make You an Expert?’ Magazine. *BBC News*, March 1. <https://www.bbc.com/news/magazine-26384712>.
- Berryman, Sylvia. 2016. *Ancient Atomism*. Winter 2016. Edited by Edward N. Zalta. Metaphysics Research Lab, Stanford University. <https://plato.stanford.edu/archives/win2016/entries/atomism-ancient/>.
- Big Think. 2017. *How Human Consciousness Evolved | Daniel Dennett | Big Think*. 0:00. <https://www.youtube.com/watch?v=c7Ax2BqZo3Y>.
- Brod, Garvin, Markus Werkle-Bergner, and Yee Lee Shing. 2013. ‘The Influence of Prior Knowledge on Memory: A Developmental Cognitive Neuroscience Perspective’. *Frontiers in Behavioral Neuroscience* 7. <https://doi.org/10.3389/fnbeh.2013.00139>.
- Buschman, Timothy J., Markus Siegel, Jefferson E. Roy, and Earl K. Miller. 2011. ‘Neural Substrates of Cognitive Capacity Limitations’. *Proceedings of the National Academy of Sciences of the United States of America* 108 (27): 11252–55. <https://doi.org/10.1073/pnas.1104666108>.
- Copleston, Frederick, S. J. 1993. ‘Democritus of Abdera’. In *A History of Philosophy*. https://penelope.uchicago.edu/Thayer/E/Gazetteer/Topics/philosophy/_Texts/COPHP/16*.html.
- Emily Dickinson. 1964. *Poems Of Emily Dickinson*. With Internet Archive. <http://archive.org/details/poemsofemilydick0000emil>.
- Feynman, Richard P. 2009. *Easy and Not-So-Easy Pieces*. Folio Society Ltd.
- Foster, Michelle. 2012. ‘Refugee Roulette: Disparities in Asylum Adjudication and Proposals for Reform’. *International Journal of Refugee Law* 24 (1): 168–72. <https://doi.org/10.1093/ijrl/ees004>.
- Güllich, Arne, Michael Barth, David Z. Hambrick, and Brooke N. Macnamara. 2025. ‘Recent Discoveries on the Acquisition of the Highest Levels of Human Performance’. *Science* 390 (6779): eadt7790. <https://doi.org/10.1126/science.adt7790>.
- Harold North Fowler. 1966. *Plato*. With Internet Archive. <http://archive.org/details/plato0000oharo>.
- Henley, Jon. 2025. ‘Just 0.001% Hold Three Times the Wealth of Poorest Half of Humanity, Report Finds’. Inequality. *The Guardian*, December 10. <https://www.theguardian.com/inequality/2025/dec/10/just-0001-hold-three-times-the-wealth-of-poorest-half-of-humanity-report-finds>.
- Hill, Ryan, Yian Yin, Carolyn Stein, Xizhao Wang, Dashun Wang, and Benjamin F. Jones. 2025. ‘The Pivot Penalty in Research’. *Nature* 642 (8069): 999–1006. <https://doi.org/10.1038/s41586-025-09048-1>.
- Inda, Maria Carmen, Elizaveta V. Muravieva, and Cristina M. Alberini. 2011. ‘Memory Retrieval and the Passage of Time: From Reconsolidation and

- Strengthening to Extinction'. Articles. *Journal of Neuroscience* 31 (5): 1635–43. <https://doi.org/10.1523/JNEUROSCI.4736-10.2011>.
- ITV News. 2022. 'Housing Group "sorry" after Woman's Body Goes Undiscovered in Flat for Two Years'. London. *ITV News*, July 23. <https://www.itv.com/news/london/2022-07-23/housing-group-sorry-after-womans-body-goes-undiscovered-in-flat-for-two-years>.
- Kellogg, R. T. 2008. 'Training Writing Skills: A Cognitive Developmental Perspective'. *Journal of Writing Research* 1 (1): 1–26. <https://doi.org/10.17239/jowr-2008.01.01.1>.
- Kiewitz, Christian, Simon Lloyd D. Restubog, Mindy K. Shoss, Patrick Raymund James M. Garcia, and Robert L. Tang. 2016. 'Suffering in Silence: Investigating the Role of Fear in the Relationship between Abusive Supervision and Defensive Silence'. *The Journal of Applied Psychology* 101 (5): 731–42. <https://doi.org/10.1037/apl0000074>.
- Kongkar, Ruttanaporn, Suebsarn Ruksakulpiwat, Lalipat Phianhasin, et al. 2025. 'The Impact of Interdisciplinary Team-Based Care on the Care and Outcomes of Chronically Ill Patients: A Systematic Review'. *Journal of Multidisciplinary Healthcare* 18 (January): 445–57. <https://doi.org/10.2147/JMDH.S497846>.
- Kovas, Yulia, and Fatos Selita. 2021. 'Free Will in the Genomic Era'. In *Oedipus Rex in the Genomic Era*, by Yulia Kovas and Fatos Selita. Palgrave Macmillan UK. https://doi.org/10.1057/978-1-349-96048-4_3.
- Lambert, Georgia. 2024. *Bright and Beautiful? Hymn Is Depressing, Organist Peer Groans*. April 29. <https://www.thetimes.com/uk/religion/article/bright-and-beautiful-hymn-is-depressing-organist-peer-groans-9gpds585w>.
- LeadersIn, dir. 2016. *Daniel Kahneman - Full Interview with LeadersIn*. 1:04:04. <https://www.youtube.com/watch?v=CVT7cLhpU1Y>.
- Lenharo, Mariana. 2025. 'The "Pivot Penalty": Scientists Get Cited Less after Switching Fields, Analysis Finds'. *Nature* 642 (8066): 20–20. <https://doi.org/10.1038/d41586-025-01664-1>.
- Luban, David. 1988. *Lawyers and Justice: An Ethical Study*. With University of Maryland, College Park. Princeton University Press.
- Marois, René, and Jason Ivanoff. 2005. 'Capacity Limits of Information Processing in the Brain'. *Trends in Cognitive Sciences* 9 (6): 296–305. <https://doi.org/10.1016/j.tics.2005.04.010>.
- Newburn, Tim. 2017. *Criminology*. 3rd edn. Routledge. <https://doi.org/10.4324/9781315629513>.
- Obama, Barack. 2015. 'Remarks by the President at the NAACP Conference'. *Whitehouse.Gov*, July 14. <https://obamawhitehouse.archives.gov/the-press-office/2015/07/14/remarks-president-naacp-conference>.
- Pope, Alexander. 1758. *An essay on criticism. By Alexander Pope, Esq. 1758*. With Internet Archive. http://archive.org/details/bim_eighteenth-century_an-essay-on-criticism-b_pope-alexander_1758.
- Price, Jon. 2009. 'ALL THINGS BRIGHT AND BEAUTIFUL'. *Earth and Altar*. <https://earthandaltarmag.com/posts/all-things-bright-and-beautiful>.

- Qu, Jiaojiao, Shuming Zhao, Man Cao, et al. 2024. 'When and How Is Team Cognitive Diversity Beneficial? An Examination of Chaxu Climate'. *Heliyon* 10 (1): e23970. <https://doi.org/10.1016/j.heliyon.2024.e23970>.
- Rhode, Deborah L. 2000. *In the Interests of Justice: Reforming the Legal Profession*. With Internet Archive. Oxford; New York: Oxford University Press. <http://archive.org/details/ininterestsofjus000odebo>.
- Sadtler, Patrick T., Kristin M. Quick, Matthew D. Golub, et al. 2014. 'Neural Constraints on Learning'. *Nature* 512 (7515): 423–26. <https://doi.org/10.1038/nature13665>.
- Schwartz, Christine R., Zhen Zeng, and Yu Xie. 2016. 'Marrying Up by Marrying Down: Status Exchange between Social Origin and Education in the United States'. *Sociological Science* 3 (November): 1003–27. <https://doi.org/10.15195/v3.a44>.
- Selita, Fatos. 2018. 'Unrepresented Litigants in Modern Courts – Ordeal by Combat'. *Legal Issues Journal* 6 (1): 1–35. <https://www.legalissuesjournal.com/10-i11-0118/>.
- Selita, Fatos. 2020. 'Justice in the Genomic and Digital Era: A “Different World” Requiring “Different Law”'. *Legal Issues Journal* 8 (1). <https://www.legalissuesjournal.com/article/814/>.
- Selita, Fatos, Robert Chapman, Yulia Kovas, Vanessa Smereczynska, Maxim Likhanov, and Teemu Toivainen. 2023. 'Consensus Too Soon: Judges' and Lawyers' Views on Genetic Information Use'. *New Genetics and Society* 42 (1): 1–32. <https://doi.org/10.1080/14636778.2023.2197583>.
- Selita, Fatos, and Yulia Kovas. 2018. 'Genes and Gini: What Inequality Means for Heritability'. *Journal of Biosocial Science* 51 (1): 18–47. <https://doi.org/10.1017/S0021932017000645>.
- Selita, Fatos, and Yulia Kovas. in Press. *Mastering Public Speaking and Presentations*. 2026th edn. Student Success. Sage Publishing. Sage Publishing. <https://www.sagepub.com/>.
- Sokol-Hessner, Peter, and Robb B. Rutledge. 2019. 'The Psychological and Neural Basis of Loss Aversion'. *Current Directions in Psychological Science* 28 (1): 20–27. <https://doi.org/10.1177/0963721418806510>.
- Spinoza, Benedictus de. 1673. *Tractatus theologico-politicus*. With Nationale bibliotheek van Nederland Koninklijke Bibliotheek. [S.n.]. <http://archive.org/details/ned-kbn-all-00004200-001>.
- Tannenbaum, Melanie B., Justin Hepler, Rick S. Zimmerman, et al. 2015. 'Appealing to Fear: A Meta-Analysis of Fear Appeal Effectiveness and Theories'. *Psychological Bulletin* 141 (6): 1178–204. <https://doi.org/10.1037/a0039729>.
- The Tribunal Procedure (First-Tier Tribunal) (Property Chamber) Rules 2013, Pub. L. No. 1169, PART 2 Rule 13 (2013). <https://www.legislation.gov.uk/ukSI/2013/1169/article/13>.
- UK Law Commission. 2018. *New Sentencing Code to Help Prevent Unlawful Sentences Being Handed Out*. Law Com No 382. <https://www.lawcom.gov.uk/project/sentencing-code/>.

- UK Parliament. 2021. 'Leasehold Reform (Ground Rent) Bill [Lords]'. *Hansard*.
[https://hansard.parliament.uk/Commons/2021-11-29/debates/6ADDA17B-33E3-47D8-B984-4FF9A731D5A3/LeaseholdReform\(GroundRent\)Bill\(Lords\)](https://hansard.parliament.uk/Commons/2021-11-29/debates/6ADDA17B-33E3-47D8-B984-4FF9A731D5A3/LeaseholdReform(GroundRent)Bill(Lords)).
- United States Sentencing Commission. 2019. *Intra-City Differences In Federal Sentencing Practices: Federal District Judges in 30 Cities, 2005 - 2017*.
https://www.ussc.gov/sites/default/files/pdf/research-and-publications/research-publications/2019/20190108_Intra-City-Report.pdf.
- Van Kesteren, Marlieke Tina Renée, and Martijn Meeter. 2020. 'How to Optimize Knowledge Construction in the Brain'. *Npj Science of Learning* 5 (1): 5.
<https://doi.org/10.1038/s41539-020-0064-y>.
- Wikipedia. 2026. 'All Things Bright and Beautiful'. February 3.
https://en.wikipedia.org/w/index.php?title=All_Things_Bright_and_Beautiful&oldid=1336297687.
- Wong, Nathan Colin. 2015. 'The 10 000-Hour Rule'. *Canadian Urological Association Journal* 9 (9–10): 299. <https://doi.org/10.5489/cuaj.3267>.